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As filed with the Securities and Exchange Commission on February 1, 2021.

Registration No. 333-252138

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

AMENDMENT NO. 1
to
FORM S-1
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

SENSEI BIOTHERAPEUTICS, INC.
(Exact name of Registrant as specified in its charter)

Delaware	2834	83-1863385
(State or other jurisdiction of incorporation or organization)	(Primary Standard Industrial Classification Code Number)	(I.R.S. Employer Identification Number)

1405 Research Blvd, Suite 125
Rockville, MD 20850
(240) 243-8000
(Address, including zip code, and telephone number, including area code, of Registrant's principal executive offices)

John Celebi
President and Chief Executive Officer
Sensei Biotherapeutics, Inc.
1405 Research Blvd, Suite 125
Rockville, MD 20850
(240) 243-8000
(Name, address, including zip code, and telephone number, including area code, of agent for service)

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Approximate date of commencement of proposed sale to the public: As soon as practicable after this Registration Statement is declared effective.

If any of the securities being registered on this form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, check the following box. ☐

If this form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	☐	Accelerated filer	☐
Non-accelerated filer	☒ (Do not check if a smaller reporting company)	Smaller reporting company	☒
		Emerging growth company	☒

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act. ☐

CALCULATION OF REGISTRATION FEE

Title of Securities being Registered	Amount to be Registered(1)	Proposed Maximum Offering Price Per Share	Proposed Maximum Aggregate Offering Price(2)	Amount of Registration Fee(3)
Common Stock, $0.0001 par value per share	6,767,750	$18.00	$121,819,500	$13,290.51

(1) Estimated pursuant to Rule 457(a) under the Securities Act of 1933, as amended. Includes offering price of shares that the underwriters have the option to purchase.
(2) Estimated solely for purposes of computing the amount of the registration fee.
(3) The Registrant previously paid $10,910.00 in connection with the original filing of this Registration Statement on January 15, 2021.

The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until the Registration Statement shall become effective on such date as the Commission, acting pursuant to said Section 8(a), may determine.

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The information in this preliminary prospectus is not complete and may be changed. These securities may not be sold until the registration statement filed with the Securities and Exchange Commission is effective. This preliminary prospectus is not an offer to sell nor does it seek an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

PRELIMINARY PROSPECTUS (SUBJECT TO COMPLETION)
Issued February 1, 2021

5,885,000 SHARES

COMMON STOCK

This is an initial public offering of shares of common stock of Sensei Biotherapeutics, Inc. We are selling 5,885,000 shares of our common stock. We currently expect that the initial public offering price will be between $16.00 and $18.00 per share of common stock.

We have granted the underwriters an option for a period of 30 days to purchase up to an additional 882,750 shares of common stock to cover over-allotments, if any.

We have applied to list our common stock on the Nasdaq Global Market under the symbol "SNSE."

Investing in our common stock involves a high degree of risk. See "Risk Factors" beginning on page 12.

We are an "emerging growth company" as defined under the federal securities laws and, as such, we have elected to comply with certain reduced reporting requirements for this prospectus and may elect to do so in future filings.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.

	Per Share	Total
Initial public offering price	$	$
Underwriting discounts and commissions(1)	$	$
Proceeds, before expenses, to Sensei Biotherapeutics, Inc.	$	$

(1) See the section titled "Underwriting" for additional information regarding compensation payable to the underwriters.

The underwriters expect to deliver the shares against payment on or about , 2021 through the book-entry facilities of The Depository Trust Company.

Citigroup **Piper Sandler** **Berenberg**

Oppenheimer & Co.

Prospectus dated , 2021.

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Prospectus

Through and including , 2021 (the 25th day after the date of this prospectus), all dealers effecting transactions in these securities, whether or not participating in this offering, may be required to deliver a prospectus. This is in addition to a dealer's obligation to deliver a prospectus when acting as an underwriter and with respect to an unsold allotment or subscription.

We have not authorized anyone to provide any information or to make any representations other than those contained in this prospectus or in any free writing prospectuses we have prepared. We and the underwriters take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. We are offering to sell, and seeking offers to buy, shares of our common stock only in jurisdictions where offers and sales are permitted. The information contained in this prospectus is accurate only as of the date of this prospectus, regardless of the time of delivery of this prospectus or of any sale of shares of our common stock. Our business, financial condition, results of operations and prospects may have changed since that date.

For investors outside the United States: Neither we nor any of the underwriters have done anything that would permit this offering or possession or distribution of this prospectus in any jurisdiction where action for that purpose is required, other than in the United States. Persons outside of the United States who come into possession of this prospectus must inform themselves about, and observe any restrictions relating to, the offering of the shares of our common stock and the distribution of this prospectus outside of the United States.

Sensei Biotherapeutics, Inc. and our logo are our trademarks and are used in this prospectus. This prospectus also includes trademarks, tradenames and service marks that are the property of other organizations. Solely for convenience, our trademarks and tradenames referred to in this prospectus appear without the ™ symbol, but those references are not intended to indicate, in any way, that we will not assert, to the fullest extent under applicable law, our rights, or the right of the applicable licensor to these trademarks and tradenames.

PROSPECTUS SUMMARY

This summary highlights selected information contained elsewhere in this prospectus. This summary does not contain all of the information you should consider before investing in our common stock. You should read this entire prospectus carefully, especially the risks of investing in our common stock discussed under the heading "Risk Factors," and including the sections titled "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our consolidated financial statements and the related notes included elsewhere in this prospectus, before making an investment decision. Our fiscal year ends on December 31. Unless the context otherwise requires, all references in this prospectus to "we," "us," "our," "the company" and "Sensei" refer to Sensei Biotherapeutics, Inc. and our subsidiaries.

Company Overview

We are a clinical-stage immunotherapy company engaged in the discovery and development of next-generation therapies with an initial focus on treatments for cancer. Our proprietary ImmunoPhage platform is a powerful, self-adjuvanted and highly differentiated immunotherapy approach that is designed to utilize bacteriophage to induce a robust, focused and coordinated innate and adaptive immune response. We are engineering our ImmunoPhage product candidates to directly target antigen presenting cells, or APCs, and modulate the tumor microenvironment, or TME, through the targeted use of nanobodies which further enhances therapeutic activity. We believe our ImmunoPhage platform has the potential to deliver personalized, off-the-shelf product candidates tailored to a patient's specific tumor. The versatility of our ImmunoPhage platform allows us to design product candidates in a modular fashion, based on a cocktail of common and patient-specific antigens built from our proprietary library of ImmunoPhages, which we refer to as Phortress. We are currently conducting an ongoing 30-patient Phase 1/2 clinical trial of our lead product candidate, SNS-301, in combination with the PD-1 inhibitor pembrolizumab, as a potential treatment for squamous cell carcinoma of the head and neck, or SCCHN. As of December 10, 2020, we have enrolled 11 patients in the trial, of which ten patients were evaluable for efficacy. We have observed disease control in seven of the patients evaluable for efficacy, including one patient with a partial response, or PR, and two patients who have achieved longstanding stable disease, or SD, for greater than 36 weeks following treatment. Treatment with SNS-301 has generally been well tolerated. We anticipate reporting topline data from this trial by the end of 2021. If the results of this trial are positive, subject to feedback from the U.S. Food and Drug Administration, or FDA, we intend to initiate a randomized, registration-enabling trial for SNS-301. We are leveraging the insights from our experience with SNS-301 to expand our development pipeline to include SNS-401 for the treatment of Merkel cell carcinoma, or MCC, as well as a human monoclonal antibody, or mAb, program targeting the novel immune checkpoint VISTA, or V-set immunoglobulin domain suppressor of T cell activation.

Monoclonal antibodies targeting the programmed cell death protein 1, or PD-1, and its related ligand, or PD-L1, have emerged as one of the most promising classes of therapeutics for the treatment of cancer. However, in a majority of patients they generally fail to produce meaningful results. Drugs utilizing PD-1 blockade have been approved by the FDA to treat at least 20 different types of cancer and, in 2019, generated sales of approximately $19.4 billion worldwide. By 2024, the total global market for drugs utilizing PD-1 blockade is estimated to exceed $36 billion. Two of the most common reasons for non-response to PD-1 blockade treatment include a lack of tumor infiltrating lymphocytes, or TILs, or the presence of alternate immunosuppressive mechanisms such as VISTA. To address these mechanisms of non-response to PD-1 blockade, there has been considerable focus on the development of therapies that induce the body's immune system to mount a response towards tumor antigen targets. Our ImmunoPhage platform is designed to address the challenges of converting PD-1 blockade non-responsive tumors into responsive ones by triggering the generation of tumor antigen-specific T cells and circumventing immunosuppressive pathways.

Pioneering work with bacteriophage led to our discovery of their utility as a powerful, self-adjuvanted immunotherapy platform. The foundation of ImmunoPhage is the bacteriophage lambda, or lambda phage, which

we selected for its native immunostimulatory capabilities, large and tractable genome, and tolerability profile. The highly immunogenic nature of bacteriophage promotes a balanced, coordinated and robust response by both the innate and the cellular and humoral components of the adaptive immune system. We believe that the unique features of bacteriophage, including the ability to generate both T cell responses and B cell mediated antibody responses, give it the potential to be used in the development of differentiated treatments for cancer. The modularity of the ImmunoPhage platform allows for personalized, dynamic substitution of particular phage components to optimize patient therapy. Our creation of a phage cocktail expressing multivalent antigens along with the integration of nanobody technology is designed to enhance the utility, precision and therapeutic activity of our product candidates. This allows for an adaptive clinical trial design, which we have discussed with the FDA. To date, we have constructed over 25 unique ImmunoPhage configurations in-house in accordance with current good manufacturing practices, or cGMP, and we are continuing to expand our Phortress library of ImmunoPhages.

SNS-301 is an ImmunoPhage product candidate that we are developing as a treatment for locally advanced unresectable or metastatic SCCHN. Head and neck cancer is the sixth most common malignancy worldwide, accounting for approximately 6% of all cancer cases, and is responsible for an estimated 1% to 2% of all cancer deaths. An estimated 650,000 cases of head and neck cancer are diagnosed annually worldwide, including approximately 50,000 cases in the United States. Human papilloma virus, or HPV, infection accounts for an estimated 70% of SCCHN cases in the United States. The current standard of care in our target patient population is PD-1 inhibition as a single agent or in combination with chemotherapy. Despite improvements in diagnoses and disease management, long-term survival rates for patients with SCCHN have not increased significantly over the past 30 years and are among the lowest for major cancers.

We selected SCCHN as our first indication based on a high unmet patient need, robust scientific rationale, a clearly defined regulatory path and accessibility of these tumors for biopsy. SNS-301 has been engineered to produce a targeted immune response against the tumor associated antigen, or TAA, aspartate b-hydroxylase, or ASPH. ASPH is found to be overexpressed in 70% to 90% of human malignancies, including SCCHN. Expression of ASPH is related to cancer cell growth, invasiveness, and disease progression through the Notch signaling pathway. As SCCHN tumors are often lacking intratumoral CD8 T cells, we believe that the addition of SNS-301 has the potential to generate and expand ASPH specific anti-tumor T cells and thereby enhance PD-1 blockade activity.

We are currently evaluating SNS-301 in combination with the PD-1 inhibitor pembrolizumab in a 30-patient Phase 1/2 clinical trial. As of December 10, 2020, we have enrolled 11 patients in the trial, of which ten patients were evaluable for efficacy. The trial includes patients with locally advanced unresectable or metastatic SCCHN who have been treated with PD-1 blockade for at least 12 weeks with the best overall response being SD or unconfirmed progressive disease, or PD. Patients who achieved a PR, complete response, or CR, or confirmed progression on PD-1 blockade, are not eligible. Based on an initial assessment of the ten evaluable patients, SNS-301 in combination with pembrolizumab has been well tolerated and has shown promising anti-tumor activity, including a PR in one patient with a PD-L1 negative tumor who achieved SD as best overall response on PD-1 inhibition alone as well as SD in six patients. Of the six SD patients, one patient previously had PD on PD-L1 inhibition and two patients have achieved longstanding SD for greater than 36 weeks following treatment. We anticipate reporting topline data from this trial by the end of 2021. If the results of this trial are positive, subject to feedback from the FDA, we intend to initiate a randomized, registration-enabling trial for SNS-301.

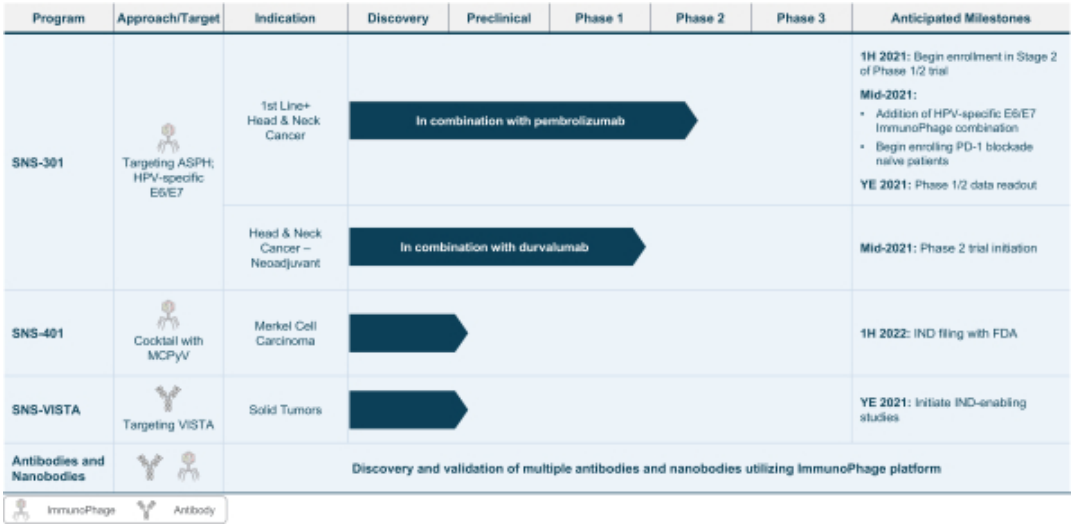
Based on the results we have observed to date, we also intend to evaluate the addition of SNS-301 to pembrolizumab in PD-1 blockade naïve SCCHN patients as part of our ongoing Phase 1/2 trial, with enrollment in this additional treatment arm expected to begin in mid-2021. We intend to use an ImmunoPhage cocktail targeting the E6/E7 antigens of HPV, in combination with SNS-301, in HPV positive patients in our ongoing trial of SNS-301, which we expect to incorporate in mid-2021. In addition, we are currently planning two Phase 2 trials to evaluate the safety and efficacy of SNS-301 in combination with durvalumab for patients with locally

advanced resectable SCCHN in the neoadjuvant setting and ASPH positive patients with locally advanced unresectable or metastatic solid tumors. We intend to initiate the first trial in patients with locally advanced resectable SCCHN in the neoadjuvant setting in mid-2021.

In addition to SNS-301, we are currently developing our next ImmunoPhage candidate, SNS-401, for the treatment of MCC. SNS-401 is in preclinical studies and we plan on submitting an investigational new drug application, or IND, for SNS-401 in the first half of 2022. We are also developing a mAb therapy targeting VISTA. Through the use of proprietary functional and in vivo assays, we intend to select a product candidate and initiate IND-enabling studies for our lead mAb by the end of 2021.

Our Pipeline

We are utilizing our pioneering ImmunoPhage platform, which harnesses the intrinsic immunostimulatory characteristics and capabilities of bacteriophage, to develop a pipeline of product candidates with an initial focus on treatments for cancer. We have worldwide commercial rights for each of our product candidates. Our current portfolio of therapeutic initiatives is presented in the diagram below:



Our Strategy

Our goal is to transform the treatment of cancer and other diseases by leveraging our ImmunoPhage platform to discover, develop and commercialize transformative immunotherapies capable of eliciting a robust, focused and coordinated innate and adaptive immune response. Key components of our strategy include the following:

- Rapidly advance our lead ImmunoPhage product candidate, SNS-301, through clinical development in patients with SCCHN and other solid tumors.
- Leverage our proprietary ImmunoPhage platform and Phortress library to design differentiated product candidates with enhanced activity through a cocktail therapy approach.
- Strengthen our position in the immunotherapy field through the continuous innovation and expansion of our ImmunoPhage platform.

- Expansion of our ImmunoPhage manufacturing capabilities.
- Seek strategic partnerships for selected product candidates.

Our Team

We are led by an experienced team with deep experience in immuno-oncology, biologics, drug discovery platform technologies, clinical development, general management and business development. Collectively, our management team has a track record of managing product development programs that have received regulatory approval and been successfully commercialized, including Keytruda and Kisqali, as well as building companies that have initiated innovative investigational new drug programs.

Summary of Risks Associated with our Business

An investment in our common stock involves numerous risks described in "Risk Factors" and elsewhere in this prospectus. You should carefully consider these risks before making a decision to invest in our securities. Key risks include the following:

- ***Risks Related to our Financial Position***
  - We have incurred significant losses in every year since our inception. We expect to continue to incur losses over the next several years and may never achieve or maintain profitability.
  - Our independent registered public accounting firm has included an explanatory paragraph relating to our ability to continue as a going concern in its audit report included in this prospectus. Even if we consummate this offering, we will need additional funding to complete the development of our product candidates. A failure to obtain this necessary capital when needed could force us to delay, limit, reduce or terminate our product development or commercialization efforts.
  - Our business, operations and clinical development plans and timelines could be adversely affected by the effects of health epidemics, including the recent COVID-19 pandemic, on the manufacturing, clinical trial and other business activities performed by us or by third parties with whom we conduct business.
- ***Risks Related to the Development of our Product Candidates***
  - Our development efforts are in the early stages. All of our product candidates are in clinical development or in preclinical development. If we are unable to advance our product candidates through clinical development, obtain regulatory approval and ultimately commercialize our product candidates, or experience significant delays in doing so, our business will be materially harmed.
  - The development of product candidates with our ImmunoPhage platform represents an emerging approach to the treatment of cancer and infectious diseases and faces significant challenges and hurdles. We may not be successful in applying our ImmunoPhage platform to the discovery and development of commercially viable products.
  - Our business is highly dependent on the success of our lead product candidate, SNS-301 and any other product candidates that we advance into the clinic. All of our product candidates may require significant additional preclinical and clinical development before we may be able to seek regulatory approval for and launch a product commercially. If the clinical trials of any of our product candidates fail to demonstrate safety and efficacy to the satisfaction of the FDA or other comparable regulatory authorities, or do not otherwise produce favorable results, we may incur additional costs or experience delays in completing, or ultimately be unable to complete, the development and commercialization of our product candidates.

- Interim data from our clinical trials that we announce or publish from time to time, such as the data from our Phase 1/2 clinical trial of SNS-301 for the treatment of SCCHN described in this prospectus, may change as more patients are enrolled and additional data become available.
- We depend on timely enrollment of patients in our clinical trials for our product candidates. If we encounter difficulties enrolling patients in our clinical trials, our clinical development activities could be delayed or otherwise adversely affected.
- Clinical trials are difficult to design and implement, can be lengthy and expensive, involve uncertain outcomes and may not ultimately be successful.

- ***Risks Related to our Dependence on Third Parties***
  - We collaborate with third parties in connection with the development of our product candidates, and may depend upon future collaboration partners to commit to the research, development, manufacturing and marketing of our product candidates.
  - We rely, and expect to continue to rely, on third parties to conduct the preclinical and clinical trials for our product candidates, and those third parties may not perform satisfactorily, including failing to meet deadlines for the completion of such trials or failing to comply with applicable regulatory requirements.
- ***Risks Related to Regulatory Approval of our Product Candidates and Other Legal Compliance Matters***
  - Healthcare legislative reform measures may have a material adverse effect on our business and results of operations.
- ***Risks Related to the Commercialization of our Product Candidates***
  - If we are unable to establish sales, marketing and distribution capabilities for our product candidates, or enter into sales, marketing and distribution agreements with third parties, we may not be successful in commercializing our product candidates, if approved.
  - We operate in a rapidly changing industry and face significant competition, which may result in others discovering, developing or commercializing products before or more successfully than we do.
  - Even if any of our product candidates receives marketing approval, it may fail to achieve the degree of market acceptance by physicians, patients, third-party payors and others in the medical community necessary for commercial success.
- ***Risks Related to our Intellectual Property***
  - If we are unable to obtain and maintain patent protection for our ImmunoPhage platform and phase-based cocktail technology and product candidates, or if the scope of the patent protection obtained is not sufficiently broad, our competitors could develop and commercialize technology and biologics similar or identical to ours, and our ability to successfully commercialize our technology and product candidates may be impaired.
  - Third parties may initiate legal proceedings alleging that we are infringing their intellectual property rights, the outcome of which would be uncertain and could significantly harm our business.
- ***Risks Related to our Business Operations***
  - We will need to grow the size of our organization, and we may experience difficulties in managing this growth.
  - Our future success depends on our ability to retain key members of senior management and to attract, retain and motivate qualified personnel.

- ***Risks Related to this Offering, our Securities and our Status as a Public Company***
  - An active trading market for our common stock may not develop and you may not be able to resell your common stock at or above the initial offering price, if at all.
  - The trading price of our common stock may be volatile, and you could lose all or part of your investment.
  - If you purchase common stock in this offering, you will suffer immediate dilution of your investment.
  - If we fail to implement and maintain an effective system of internal controls to remediate our material weaknesses over financial reporting, we may be unable to accurately report our results of operations, meet our reporting obligations or prevent fraud, and investor confidence in our company and the market price of our common stock may be materially and adversely affected.

Corporate Information

We were originally incorporated as Panacea Pharmaceuticals, Inc., or Panacea, under the laws of the state of Maryland in 1999. In December 2017, in order to reincorporate in the state of Delaware, we entered into an Agreement and Plan of Merger, or Merger Agreement, by and among us, Panacea and our wholly owned subsidiary, PPI Acquisition I Corp., a Delaware corporation, or Merger Sub. Pursuant to the Merger Agreement, Merger Sub merged with and into Panacea and Panacea became our wholly-owned subsidiary. In connection with our reincorporation in Delaware, we changed our name to Sensei Biotherapeutics, Inc.

Our principal executive offices are located at 1405 Research Blvd, Suite 125, Rockville, MD 20850. Our telephone number is (240) 243-8000. Our website address is www.senseibio.com. Information contained on, or that can be accessed through, our website is not incorporated by reference into this prospectus.

The Sensei design logo, “Sensei”, “ImmunoPhage”, “Phortress” and our other registered or common law trademarks, service marks, or trade names appearing in this prospectus are the property of Sensei Biotherapeutics, Inc. Other trade names, trademarks and service marks used in this prospectus are the property of their respective owners.

Implications of Being an Emerging Growth Company and a Smaller Reporting Company

As a company with less than $1.07 billion in annual gross revenue during our last fiscal year and since we have not issued more than $1.0 billion of non-convertible debt in any three-year periods, we qualify as an “emerging growth company”, or EGC, as defined in the Jumpstart Our Business Startups Act of 2012, or JOBS Act, enacted in April 2012. An emerging growth company may take advantage of reduced reporting requirements that are otherwise applicable to public companies. These provisions include:

- being permitted to present only two years of audited financial statements and only two years of related Management’s Discussion & Analysis of Financial Condition and Results of Operations in this prospectus;
- not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act of 2002, as amended, or the Sarbanes-Oxley Act;
- reduced disclosure obligations regarding executive compensation in our periodic reports, proxy statements and registration statements; and
- exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved.

We may take advantage of these provisions until the last day of our fiscal year following the fifth anniversary of the date of the first sale of our common equity securities pursuant to an effective registration statement under the Securities Act of 1933, as amended, or the Securities Act. However, if certain events occur prior to the end of such five-year period, including if we become a "large accelerated filer," our annual gross revenues exceed $1.07 billion or we issue more than $1.0 billion of non-convertible debt in any three-year period, we will cease to be an emerging growth company prior to the end of such five-year period.

We have elected to take advantage of certain of the reduced disclosure obligations in the registration statement of which this prospectus is a part and may elect to take advantage of other reduced reporting requirements in future filings. As a result, the information that we provide to our stockholders may be different than you might receive from other public reporting companies in which you hold equity interests.

In addition, the JOBS Act provides that an "emerging growth company" can take advantage of an extended transition period for complying with new or revised accounting standards. This provision allows an emerging growth company to delay the adoption of some accounting standards until those standards would otherwise apply to other public companies that are not "emerging growth companies." We have elected not to "opt out" of such extended transition period, which means that when a standard is issued or revised and it has different application dates for public or private companies, we will adopt the new or revised standard at the time private companies adopt the new or revised standard and will do so until such time that we either (i) irrevocably elect to "opt out" of such extended transition period or (ii) no longer qualify as an EGC. Therefore, the reported results of operations contained in our consolidated financial statements may not be directly comparable to those of other public companies."

We are also a "smaller reporting company," meaning that the market value of our shares held by non-affiliates plus the proposed aggregate amount of gross proceeds to us as a result of this offering is less than $700 million and our annual revenue was less than $100 million during the most recently completed fiscal year. We may continue to be a smaller reporting company after this offering if either (i) the market value of our shares held by non-affiliates is less than $250 million or (ii) our annual revenue was less than $100 million during the most recently completed fiscal year and the market value of our shares held by non-affiliates is less than $700 million. If we are a smaller reporting company at the time we cease to be an emerging growth company, we may continue to rely on exemptions from certain disclosure requirements that are available to smaller reporting companies. Specifically, as a smaller reporting company, we may choose to present only the two most recent fiscal years of audited financial statements in our Annual Report on Form 10-K and, similar to emerging growth companies, smaller reporting companies have reduced disclosure obligations regarding executive compensation.

THE OFFERING

Common stock offered by us	5,885,000 shares
Underwriters' option to purchase additional shares of common stock offered by us	882,750 shares
Common stock to be outstanding immediately after this offering	28,443,200 shares (29,325,950 shares, if the underwriters exercise their option to purchase additional shares in full)
Use of proceeds	We estimate that our net proceeds from the sale of our common stock that we are offering will be approximately $89.6 million (or approximately $103.6 million if the underwriters' option to purchase additional shares in full), assuming an initial public offering price of $17.00 per share, the midpoint of the price range set forth on the cover page of this prospectus, and after deducting estimated underwriting discounts and commissions and estimated offering expenses. We intend to use the net proceeds from this offering to fund the clinical development of SNS-301, the preclinical and clinical development of SNS-401 and SNS-VISTA, the development of our ImmunoPhage platform and other pipeline programs, and for working capital and other general corporate purposes. See the section titled "Use of Proceeds" for additional information.
Directed share program	At our request, the underwriters have reserved for sale, at the initial public offering price, up to six percent of the shares offered by this prospectus for sale to some of our directors, officers, employees, business associates and related persons through a directed share program. If these persons purchase reserved shares, this will reduce the number of shares available for sale to the general public. Any reserved shares that are not so purchased will be offered by the underwriters to the general public on the same terms as the other shares offered by this prospectus. In addition, we have requested that the underwriters make issuer directed allocations to certain existing investors. See the section titled "Underwriting" for additional information.
Risk factors	See "Risk Factors" and other information included in this prospectus for a discussion of factors that you should consider carefully before deciding to invest in our common stock.
Proposed Nasdaq Global Market symbol	"SNSE"

The number of shares of our common stock to be outstanding after this offering is based on 22,558,200 shares of common stock outstanding as of January 14, 2021 (including shares of all of our convertible preferred stock on an as-converted basis), and excludes:

- 2,020,253 shares of common stock issuable upon the exercise of stock options outstanding as of January 14, 2021, under our 2018 Stock Incentive Plan, as amended, or the 2018 Plan, at a weighted-average exercise price of $6.72 per share;
- 469,475 shares of common stock issuable upon the exercise of warrants outstanding as of January 14, 2021, at a weighted-average exercise price of $9.60 per share;
- 5,000,000 shares of common stock reserved for future issuance under our 2021 Equity Incentive Plan, or 2021 Plan, which will become effective in connection with this offering, as well as any future shares, including annual increases, in the number of shares of common stock available for issuance under our 2021 Plan (of which we will grant options to purchase 1,028,117 shares of common stock upon the pricing of this offering at an exercise price equal to the initial public offering price); and
- 333,333 shares of common stock reserved for future issuance under our 2021 Employee Stock Purchase Plan, or ESPP, which will become effective in connection with this offering, as well as any future shares, including annual increases, in the number of shares of common stock reserved for issuance under our ESPP.

Unless otherwise indicated, the information in this prospectus assumes:

- the filing of our amended and restated certificate of incorporation and the adoption of our amended and restated bylaws, each of which will occur immediately prior to the closing of this offering;
- the automatic conversion of all outstanding shares of our convertible preferred stock into an aggregate of shares of our common stock immediately prior to the closing of this offering;
- no exercise of the outstanding options and warrants described above;
- a 48-for-one reverse stock split of our common stock effected on January 29, 2021;
- no exercise of the underwriters' option to purchase up to an additional 882,750 shares of our common stock.

SUMMARY CONSOLIDATED FINANCIAL DATA

You should read the consolidated financial data set forth below in conjunction with our consolidated financial statements and the accompanying notes and the information in "Management's Discussion and Analysis of Financial Condition and Results of Operations" contained elsewhere in this prospectus. The summary consolidated statements of operations data for the years ended December 31, 2019 and 2018 are derived from our audited consolidated financial statements included elsewhere in this prospectus. The summary consolidated statements of operations data for the nine months ended September 30, 2020 and 2019 and the balance sheet data as of September 30, 2020 have been derived from our unaudited interim financial statements included elsewhere in this prospectus and have been prepared on the same basis as the audited financial statements. In the opinion of management, the unaudited data reflects all adjustments, consisting only of normal recurring adjustments, necessary for a fair presentation of the financial information in those statements. Our historical results are not necessarily indicative of the results that should be expected in the future and the results for the nine months ended September 30, 2020 are not necessarily indicative of the results to be expected for the full year ending December 31, 2020 or any other future period.

	Nine Months Ended September 30,		Year Ended December 31,	
(in thousands, except share and per share data)	2020	2019	2019	2018
Consolidated Statements of Operations Data:				
Operating expenses:				
Research and development	$ 8,629	$ 5,925	$ 8,350	$ 8,227
General and administrative	5,007	3,103	4,085	4,513
Alvaxa IPR&D	738	—	—	—
Total operating expenses	14,374	9,028	12,435	12,740
Loss from operations	(14,374)	(9,028)	(12,435)	(12,740)
Other expense:				
Interest expense	(1,635)	(860)	(2,256)	(327)
Fair value adjustments on embedded debt derivatives	995	(71)	(1,973)	—
Gain (loss) on debt extinguishment	45	(75)	(75)	—
Other (expense) income, net	—	(1)	(1)	28
Net loss	(14,969)	(10,035)	(16,740)	(13,039)
Cumulative dividends on convertible preferred stock	(104)	(2,853)	(3,804)	(3,804)
Net loss attributable to common stockholders	$ (15,073)	$ (12,888)	$ (20,544)	$ (16,843)
Net loss per common share, basic and diluted	$ (9.82)	$ (35.10)	$ (55.92)	$ (45.87)
Weighted-average number of shares used in computing net loss per common share, basic and diluted	1,535,033	367,213	367,359	367,213
Unaudited pro forma net loss per share common share, basic and diluted(1)	$ (1.22)		$ (29.98)	
Unaudited pro forma weighted-average shares used in computing net loss per common share, basic and diluted(1)	12,316,554		685,164	

(1) The unaudited pro forma basic and diluted weighted-average common shares outstanding used in the calculation of unaudited pro forma basic and diluted net loss per share attributable to common stockholders for the year ended December 31, 2019 and the nine months ended September 30, 2020 have been prepared to reflect (i) our issuance and sale of 85,499,239 shares of Series AA convertible preferred stock and 165,956,208 shares of Series BB convertible preferred stock subsequent to September 30, 2020, (ii) the redemption of a convertible note in November 2020 for 31,591,824 shares of our Series AA convertible

preferred stock, (iii) our issuance of 1,737,012 shares of common stock subsequent to September 30, 2020 and (iv) the automatic conversion of all outstanding shares of our convertible preferred stock, including the shares described above in (i) and (ii), into common stock immediately prior to the closing of this offering, as if this offering had occurred on the later of the beginning of each period or the issuance date of the convertible preferred stock.

The following table presents our summary balance sheet data as of September 30, 2020:

- on an actual basis;
- on a pro forma basis to reflect (i) our issuance and sale of 85,499,239 shares of Series AA convertible preferred stock and 165,956,208 shares of Series BB convertible preferred stock subsequent to September 30, 2020, (ii) the redemption of a convertible note in November 2020 for 31,591,824 shares of our Series AA convertible preferred stock, (iii) our issuance of 1,737,012 shares of common stock subsequent to September 30, 2020 and (iv) the automatic conversion of all outstanding shares of our convertible preferred stock, including the shares described above in (i) and (ii), into 19,034,069 shares of our common stock immediately prior to the closing of this offering; and
- on a pro forma as adjusted basis to give further effect to our sale of 5,885,000 shares of common stock in this offering at an assumed initial public offering price of $17.00 per share, which is the midpoint of the price range set forth on the cover page of this prospectus, after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

	As of September 30, 2020		
(in thousands)	Actual	Pro Forma	Pro Forma As Adjusted(1)
Consolidated Balance Sheet Data:			
Cash and cash equivalents	$ 3,733	$ 45,193	$ 134,835
Working capital (deficit)(2)	(286)	43,769	133,411
Total assets	5,515	46,975	136,617
Convertible preferred stock	51,788	—	—
Total stockholders' (deficit) equity	(51,681)	44,162	133,804

(1) Each $1.00 increase (decrease) in the assumed initial public offering price of $17.00 per share would increase (decrease) the pro forma as adjusted amount of each of cash and cash equivalents, working capital (deficit), total assets and total stockholders' (deficit) equity by approximately $5.5 million, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. Similarly, each increase (decrease) of 1.0 million shares in the number of shares offered by us at the assumed initial public offering price would increase (decrease) each of cash and cash equivalents, working capital (deficit), total assets and total stockholders' (deficit) equity by approximately $15.8 million. The pro forma information discussed above is illustrative only and will be adjusted based on the actual initial public offering price and other terms of our initial public offering determined at pricing.

(2) We define working capital as current assets less current liabilities. See our consolidated financial statements included elsewhere in this prospectus for further details regarding our current assets and current liabilities.

RISK FACTORS

Investing in our common stock involves a high degree of risk. Before you invest in our common stock, you should carefully consider the risks described below together with all of the other information contained in this prospectus, including our consolidated financial statements and the related notes included elsewhere in this prospectus. If any of the following risks actually occurs, our business, prospects, operating results and financial condition could suffer materially. In such event, the trading price of our common stock could decline, which would cause you to lose all or part of your investment. Please also see "Special Note Regarding Forward-Looking Statements."

Risks Related to Our Financial Position

We have incurred significant losses in every year since our inception. We expect to continue to incur losses over the next several years and may never achieve or maintain profitability.

We are a clinical-stage immunotherapy company and we have incurred significant net losses since our inception. Our net loss was $16.7 million for the year ended December 31, 2019 and $15.0 million for the nine months ended September 30, 2020. As of September 30, 2020, we had an accumulated deficit of $107.3 million. We have funded our operations to date primarily with proceeds from the sale of our equity securities and borrowings of convertible debt.

We have no products approved for commercial sale, have not generated any revenue from commercial sales of our product candidates, and are devoting substantially all of our financial resources and efforts to research and development of our ImmunoPhage platform and SNS-301, and to our other product candidates. Investment in therapeutic product development is highly speculative because it entails substantial upfront capital expenditures and significant risk that any potential product candidate will fail to demonstrate adequate effect or an acceptable safety profile, gain regulatory approval and become commercially viable.

We expect that it will take at least several years until any of our product candidates receive marketing approval and are commercialized, and we may never be successful in obtaining marketing approval and commercializing product candidates. We expect to continue to incur significant expenses and increasing operating losses for the foreseeable future. These net losses will adversely impact our stockholders' equity and net assets and may fluctuate significantly from quarter to quarter and year to year. We anticipate that our expenses will increase substantially as we:

- complete our Phase 1/2 clinical trial of SNS-301 and continue clinical development of SNS-301;
- prepare to file INDs and then initiate clinical development of additional product candidates, including SNS-401 and SNS-VISTA;
- continue the research and development of our other product candidates;
- invest in our ImmunoPhage platform;
- seek to discover and develop additional product candidates or acquire or in-license drugs, product candidates or technologies;
- seek regulatory approvals for any product candidates that successfully complete clinical trials;
- ultimately establish a sales, marketing and distribution infrastructure and scale up manufacturing capabilities to commercialize any product candidates for which we may obtain regulatory approval;
- manufacture our product candidates or otherwise secure the clinical and commercial supply of our product candidates;
- hire additional research and development and selling, general and administrative personnel;
- maintain, expand and protect our intellectual property portfolio; and

- incur additional costs associated with operating as a public company following the completion of this offering.

To become and remain profitable, we must succeed in developing and eventually commercializing products that generate significant revenue. Achievement will require us to be successful in a range of challenging activities, including completing preclinical studies and clinical trials of our product candidates, obtaining regulatory approval, manufacturing, marketing and selling any products for which we may obtain regulatory approval, as well as discovering and developing additional product candidates. We may never succeed in these activities and, even if we do, may never generate revenues that are significant enough to achieve profitability.

Because of the numerous risks and uncertainties associated with the development and commercialization of therapeutic product candidates, we are unable to accurately predict the timing or amount of expenses or when, or if, we will be able to achieve and maintain profitability. If we are required by regulatory authorities to perform studies in addition to those currently expected, or if there are any delays in the initiation and completion of our clinical trials or the development of any of our product candidates, our expenses could increase and profitability could be further delayed.

Even if we achieve profitability, we may not be able to sustain or increase profitability on a quarterly or annual basis. Our failure to become and remain profitable would depress the value of our common stock and could impair our ability to raise capital, expand our business, maintain our research and development efforts or continue our operations. A decline in the value of our common stock could also cause you to lose all or part of your investment.

Our operating history may make it difficult for you to evaluate the success of our business to date and to assess our future viability.

As an organization, we have not demonstrated an ability to successfully complete late-stage clinical trials, obtain regulatory approvals, manufacture our product candidates at commercial scale or arrange for a third party to do so on our behalf, conduct sales and marketing activities necessary for successful commercialization, or obtain reimbursement in the countries of sale. We may encounter unforeseen expenses, difficulties, complications, and delays in achieving our business objectives. Our operating history makes any assessment of our future success or viability subject to significant uncertainty. If we do not address these risks successfully or are unable to transition at some point from a company with a research and development focus to a company capable of supporting commercial activities, then our business will suffer. In addition, we will need to transition at some point from a company with a research and development focus to a company capable of supporting commercial activities. We may not be successful in such a transition.

Our independent registered public accounting firm has included an explanatory paragraph relating to our ability to continue as a going concern in its audit report included in this prospectus. Even if we consummate this offering, we will need additional funding to complete the development of our product candidates. A failure to obtain this necessary capital when needed could force us to delay, limit, reduce or terminate our product development or commercialization efforts.

Our independent registered public accounting firm included an explanatory paragraph in its audit report on our consolidated financial statements as of and for the years ended December 31, 2019 and 2018 stating that our recurring losses from operations and negative cash flows and our need to raise additional funding to finance our operations raise substantial doubt about our ability to continue as a going concern. We have insufficient committed sources of additional capital to fund our operations as described in this prospectus for more than a limited period of time. We will require substantial additional funding to meet our financial needs and to pursue our business objectives. If we are unable to raise capital when needed, we could be forced to delay, reduce or altogether cease our product development programs or commercialization efforts.

We believe that the net proceeds from this offering, together with our existing cash, will enable us to fund our operating expenses and capital expenditure requirements through the completion of several Phase 1 and 2 clinical trials. However, this funding will not be sufficient for us to fund any of our product candidates through regulatory approval, and we will need to raise additional capital to complete the development and commercialization of SNS-301 and our other product candidates and in connection with our continuing operations and other planned activities. Our future capital requirements will depend on many factors, including:

- the scope, progress, results and costs of discovery, laboratory testing, manufacturing, preclinical and clinical development for our current and future product candidates;
- the development requirements of other product candidates that we may pursue;
- the timing and amounts of any milestone or royalty payments we may be required to make or may be entitled to receive under license agreements;
- the costs of building out our infrastructure including hiring additional clinical, quality control and manufacturing personnel;
- the costs, timing and outcome of regulatory review of our product candidates;
- the costs and timing of future commercialization activities, including product manufacturing, marketing, sales and distribution, for any of our product candidates for which we receive marketing approval;
- the revenue, if any, received from commercial sales of our product candidates for which we receive marketing approval;
- the costs and timing of preparing, filing and prosecuting patent applications, maintaining and enforcing our intellectual property rights and defending any intellectual property-related claims;
- the costs of operating as a public company; and
- the extent to which we acquire or in-license other product candidates and technologies.

We cannot be certain that additional funding will be available on acceptable terms, or at all. If we are unable to raise additional capital in sufficient amounts or on terms acceptable to us, we may have to significantly delay, scale back or discontinue the development or commercialization of our product candidates or other research and development initiatives. Any of our current or future license agreements may also be terminated if we are unable to meet the payment or other obligations under the agreements.

Raising additional capital may cause dilution to our holders, including purchasers of our common stock in this offering, restrict our operations or require us to relinquish rights to our technologies or product candidates.

We expect that significant additional capital may be needed in the future to continue our planned operations, including conducting clinical trials, commercialization efforts, expanded research and development activities and costs associated with operating a public company. Until such time, if ever, as we can generate substantial product revenues, we expect to finance our cash needs through any or a combination of securities offerings, debt financings, license and collaboration agreements and research grants. If we raise capital through securities offerings, such sales may also result in material dilution to our existing stockholders, and new investors could gain rights, preferences and privileges senior to the holders of our common stock, including common stock sold in this offering.

To the extent that we raise additional capital through the sale of equity or convertible debt securities, your ownership interest will be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect your rights as a stockholder. Debt financing and preferred equity financing, if available, could result in fixed payment obligations, and we may be required to accept terms that restrict our ability to incur additional indebtedness, force us to maintain specified liquidity or other ratios or restrict our ability to pay dividends or make acquisitions.

If we raise additional funds through collaborations, strategic alliances or marketing, distribution or licensing arrangements with third parties, we may be required to relinquish valuable rights to our technologies, future revenue streams, research programs or product candidates or to grant licenses on terms that may not be favorable to us. In addition, we could also be required to seek funds through arrangements with collaborators or others at an earlier stage than otherwise would be desirable. If we raise funds through research grants, we may be subject to certain requirements, which may limit our ability to use the funds or require us to share information from our research and development. If we are unable to raise additional funds through equity or debt financings when needed, we may be required to delay, limit, reduce or terminate our product development or future commercialization efforts or grant rights to a third party to develop and market product candidates that we would otherwise prefer to develop and market ourselves. Raising additional capital through any of these or other means could adversely affect our business and the holdings or rights of our stockholders, and may cause the market price of our common stock to decline.

In addition, we may seek additional capital due to favorable market conditions or strategic considerations even if we believe that we have sufficient funds for our current or future operating plans. If we raise additional funds through collaboration and licensing arrangements with third parties, we may have to relinquish some rights to our technologies or our product candidates on terms that are not favorable to us. Any additional capital raising efforts may divert our management from their day-to-day activities, which may adversely affect our ability to develop and commercialize our current and future product candidates, if approved. If we are unable to raise capital when needed or on attractive terms, we could be forced to delay, reduce or altogether cease our research and development programs or future commercialization efforts.

Risks Related to the Development of our Product Candidates

Our development efforts are in the early stages. All of our product candidates are in clinical development or in preclinical development. If we are unable to advance our product candidates through clinical development, obtain regulatory approval and ultimately commercialize our product candidates, or experience significant delays in doing so, our business will be materially harmed.

Our lead product candidate, SNS-301, is our only product candidate in clinical development. There is no assurance that this, or any other future clinical trials of our product candidates, will be successful or will generate positive clinical data and we may not receive marketing approval from the FDA or other regulatory agencies for any of our product candidates. With the exception of SNS-301, we have not submitted an IND to the FDA. Our other product candidates are in preclinical development. There can be no assurance that the FDA will permit the INDs for our other product candidates to go into effect in a timely manner or at all. Without the IND, we will not be permitted to conduct clinical trials in the United States.

Biopharmaceutical development is a long, expensive and uncertain process, and delay or failure can occur at any stage of any of our clinical trials. Failure to obtain regulatory approval for our product candidates will prevent us from commercializing and marketing our product candidates. The success in the development of our product candidates will depend on many factors, including:

- completing preclinical studies;
- submission of INDs for and receipt of allowance to proceed with our planned clinical trials or other future clinical trials;
- initiating, enrolling, and completing clinical trials;
- obtaining positive results from our preclinical studies and clinical trials that support a demonstration of efficacy, safety, and durability of effect for our product candidates;
- receiving approvals for commercialization of our product candidates from applicable regulatory authorities;

- establishing sales, marketing and distribution capabilities and successfully launching commercial sales of our products, if and when approved, whether alone or in collaboration with others;
- acceptance of our products, if and when approved, by patients, the medical community and third-party payors; manufacturing our product candidates at an acceptable cost; and
- maintaining and growing an organization of scientists, medical professionals and business people who can develop and commercialize our products and technology.

Many of these factors are beyond our control, including the time needed to adequately complete clinical testing and the regulatory submission process. It is possible that none of our product candidates will ever obtain regulatory approval, even if we expend substantial time and resources seeking such approval. If we do not achieve one or more of these factors in a timely manner or at all, or any other factors impacting the successful development of biopharmaceutical products, we could experience significant delays or an inability to successfully develop our product candidates, which would materially harm our business.

The development of product candidates with our ImmunoPhage platform represents an emerging approach to cancer treatment and faces significant challenges and hurdles. We may not be successful in applying our ImmunoPhage platform to the discovery and development of commercially viable products.

We have concentrated our primary research and development efforts on our ImmunoPhage platform which utilizes the power of bacteriophage to facilitate the creation of vaccines for enhanced immune system activation. Our future success is highly dependent on the successful development and manufacture of our product candidates. We do not currently have any approved or commercialized products. Because bacteriophage-based therapies represent a relatively new field of cellular immunotherapy and cancer treatment generally, developing and commercializing our product candidates subjects us to a number of risks and challenges, including:

- obtaining regulatory approval for our product candidates, as the FDA and other regulatory authorities have limited experience with phage-based therapies for cancer;
- patients receiving chemotherapy in conjunction with the delivery of our product candidates, which may increase the risk of adverse side effects of our product candidates;
- sourcing clinical and, if approved, commercial supplies of the materials used to manufacture our product candidates;
- developing product candidates with desired properties, while avoiding adverse reactions;
- establishing manufacturing capacity suitable for the manufacture of our product candidates in line with expanding enrollment in our clinical studies and our projected commercial requirements;
- achieving cost efficiencies in the scale-up of our manufacturing capacity;
- developing protocols for the safe administration of our product candidates;
- educating medical personnel regarding our phage-based technologies and the potential side effect profile of each of our product candidates; and
- the availability of coverage and adequate reimbursement from third-party payors for our novel and personalized therapies in connection with commercialization of any approved product candidates.

We may not be able to successfully develop our phage-based product candidates or any other product candidates in a manner that will yield products that are safe and effective, scalable or profitable.

Moreover, physicians, hospitals and third-party payors often are slow to adopt new products, technologies and treatment practices that require additional upfront costs and training. Treatment centers may not be willing or able to devote the personnel and establish other infrastructure required for the administration of our therapies.

Based on these and other factors, health systems, hospitals and payors may decide that the benefits of this new therapy do not or will not outweigh its costs.

The regulatory approval processes of the FDA and comparable foreign authorities are lengthy, time-consuming and inherently unpredictable, and if we are ultimately unable to obtain regulatory approval for our product candidates, our business will be substantially harmed.

We do not have any products that have gained regulatory approval. Our business is substantially dependent on our ability to obtain regulatory approval for, and, if approved, to successfully commercialize our SNS-301 product candidate and our preclinical programs. We cannot commercialize product candidates in the United States without first obtaining regulatory approval for the product from the FDA. Before obtaining regulatory approvals for the commercial sale of any product candidate for a particular indication, we must demonstrate with substantial evidence gathered in preclinical and clinical studies, that the product candidate is safe and effective for that indication and that the manufacturing facilities, processes and controls are adequate with respect to such product candidate. Prior to seeking approval for any of our product candidates, we will need to confer with the FDA and other regulatory authorities regarding the design of our clinical trials and the type and amount of clinical data necessary to seek and gain approval for our product candidates.

The time required to obtain approval by the FDA and other regulatory authorities is unpredictable and typically takes many years following the commencement of preclinical studies and clinical trials and depends upon numerous factors, including the substantial discretion of the regulatory authorities. In addition, approval policies, regulations, or the type and amount of clinical data necessary to gain approval may change during the course of a product candidate's clinical development and may vary among jurisdictions. It is possible that none of our existing product candidates or any future product candidates will ever obtain regulatory approval.

Our product candidates could fail to receive regulatory approval from the FDA or other comparable regulatory authorities for many reasons, including:

- disagreement with the design, protocol or conduct of our clinical trials, including with respect to our ImmunoPhage cocktail approach;
- failure to demonstrate that a product candidate is safe and effective for its proposed indication;
- failure of clinical trials to meet the level of statistical significance required for approval;
- failure to demonstrate that a product candidate's clinical and other benefits outweigh its safety risks;
- disagreement with our interpretation of data from preclinical studies or clinical trials;
- insufficiency of data collected from clinical trials of our product candidates to support the submission and filing of a Biologics License Application, or BLA, or other submission or to obtain regulatory approval;
- failure to obtain approval of the manufacturing processes or our facilities;
- changes in the approval policies or regulations that render our preclinical and clinical data insufficient for approval; or
- lack of adequate funding to complete a clinical trial in a manner that is satisfactory to the applicable regulatory authority.

Many of these risks are beyond our control, including the risks related to clinical development. If we are unable to develop, receive regulatory approval for, or successfully commercialize SNS-301 or our other product candidates, or if we experience delays as a result of any of these risks or otherwise, our business could be materially harmed.

The FDA or a comparable regulatory authority may require more information, including additional preclinical or clinical data to support approval, including data that would require us to perform additional clinical

trials or modify our manufacturing processes, which may delay or prevent approval and our commercialization plans, or we may decide to abandon the development program. If we change our manufacturing processes, we may be required to conduct additional clinical trials or other studies, which also could delay or prevent approval of our product candidates. If we were to obtain approval, regulatory authorities may approve any of our product candidates for fewer indications than we request (including failing to approve the most commercially promising indications), may limit indications, may grant approval contingent on the performance of costly post-marketing clinical trials or other post-marketing commitments, or may approve a product candidate with a label that does not include the labeling claims necessary or desirable for the successful commercialization of that product candidate.

Even if a product candidate were to successfully obtain approval from the FDA or other comparable regulatory authorities in other jurisdictions, any approval might contain significant limitations related to use restrictions for specified age groups, warnings, precautions or contraindications, or may be subject to burdensome post-approval study or risk management requirements. If we are unable to obtain regulatory approval for one of our product candidates in one or more jurisdictions, or any approval contains significant limitations, we may not be able to obtain sufficient funding to continue the development of that product or generate revenues attributable to that product candidate. Also, any regulatory approval of our current or future product candidates, once obtained, may be withdrawn.

Our business is highly dependent on the success of our lead product candidate, SNS-301 and any other product candidates that we advance into the clinic. All of our product candidates may require significant additional preclinical and clinical development before we may be able to seek regulatory approval for and launch a product commercially and we may not be successful in our efforts to build a pipeline of product candidates.

A key element of our strategy is utilizing our ImmunoPhage platform to develop what we believe are safer and more effective and personalized phage-based vaccines. We currently have no products that are approved for commercial sale and may never be able to develop marketable products. We are very early in our development efforts, and our product candidates, including SNS-301, are in early clinical development. Because SNS-301 is our lead product candidate, if SNS-301 encounters safety or efficacy problems, development delays, regulatory issues or other problems, our development plans and business would be significantly harmed. By leveraging insights gained from our experience with SNS-301, we have adapted our platform to generate personalized, off-the-shelf product candidates based on a cocktail of common and patient-specific antigens, dosed together as an array of customized, multi-antigen phage configurations in a modular approach. However, we may not be able to develop product candidates that are safe and effective, or which compare favorably with other commercially available alternatives. Even if we are successful in continuing to build our pipeline and develop personalized, off-the-shelf product candidates, the potential product candidates that we identify may not be suitable for clinical development, including as a result of lack of safety, lack of tolerability, or other characteristics that indicate that they are unlikely to be products that will receive marketing approval, achieve market acceptance or obtain reimbursements from third-party payors. We cannot provide you with any assurance that we will be able to successfully advance any of these additional product candidates through the development process. Our research programs may initially show promise in identifying potential product candidates, yet fail to yield product candidates for clinical development or commercialization for many reasons, including the following:

- our ImmunoPhage platform may not be successful in identifying additional product candidates;
- we may not be able or willing to assemble sufficient resources to acquire or discover additional product candidates;
- our product candidates may not succeed in preclinical or clinical testing;
- a product candidate may on further study be shown to have harmful side effects or other characteristics that indicate it is unlikely to be effective or otherwise does not meet applicable regulatory criteria;
- competitors may develop alternatives that render our product candidates obsolete or less attractive;

- product candidates we develop may nevertheless be covered by third parties' patents or other exclusive rights;
- the market for a product candidate may change during our development program so that the continued development of that product candidate is no longer reasonable;
- a product candidate may not be capable of being produced in commercial quantities at an acceptable cost, or at all; and
- a product candidate may not be accepted as safe and effective by patients, the medical community or third-party payors, if applicable.

If any of these events occur, we may be forced to abandon our development efforts for a program or programs, or we may not be able to identify, discover, develop, or commercialize additional product candidates, which would have a material adverse effect on our business and could potentially cause us to cease operations.

If we do not successfully develop and commercialize product candidates or collaborate with others to do so, we will not be able to obtain product revenue in future periods, which could significantly harm our financial position and adversely affect the trading price of our common stock.

We are developing product candidates designed to produce responses against novel targets through a cocktail therapy approach for which there is little clinical experience, and the FDA or other regulatory authorities may not consider the endpoints of our clinical trials to predict or provide clinically meaningful results.

SNS-301 has been engineered to produce a targeted immune response against ASPH. We are also developing a human mAb program targeting the novel immune checkpoint VISTA. There are currently no approved therapies that target ASPH or VISTA in the field of oncology. To evaluate these product candidates, we are also pioneering an adaptive clinical trial design that enables substitution of ImmunoPhage cocktail components throughout clinical development. As a result of the novelty of our targets as well as the novelty of our anticipated clinical trial design, the design and conduct of clinical trials of our product candidates or any future product candidate may take longer, be more costly or be less effective. There may also be inconsistent or contradictory efficacy or safety results amongst different cocktail product candidates for different patients in the same clinical trial. In some cases, we may use endpoints or methodologies that regulatory authorities may not consider to be clinically meaningful and that we may not continue to use in clinical trials or that we may determine after the initiation of the trial to no longer be an appropriate endpoint or methodology. Any such regulatory authority may require evaluation of additional or different clinical endpoints in our clinical trials or ultimately determine that these clinical endpoints do not support marketing approval. In addition, if we are required to use additional or different clinical endpoints by regulatory authorities, our product candidates may not achieve or meet such clinical endpoints in our clinical trials. Even if a regulatory authority finds our clinical trial success criteria to be sufficiently validated and clinically meaningful, we may not achieve the pre-specified endpoint to a degree of statistical significance in any pivotal or other clinical trials we may conduct for our product candidate. Further, even if we do achieve the pre-specified criteria, our trials may produce results that are unpredictable or inconsistent with the results of other efficacy endpoints in the trial. Regulatory authorities also weigh the benefits of a product against its risks and may not view the efficacy and safety results we product with our adaptive clinical trial design as supportive of approval.

We may expend our limited resources to pursue a particular product candidate or indication and fail to capitalize on product candidates or indications that may be more profitable or have a greater likelihood of success.

Because we have limited financial and management resources, we focus on research programs and product candidates that we identify for specific indications. As a result, we may forego or delay pursuit of opportunities

with other product candidates or for other indications that later prove to have greater commercial potential. We currently do not anticipate advancing our SNS-CoV2 product candidate into clinical development absent the receipt of external or grant funding to do so. Our resource allocation decisions may cause us to fail to capitalize on viable commercial products or profitable market opportunities. Our spending on current and future research and development programs and product candidates for specific indications may not yield any commercially viable products. If we do not accurately evaluate the commercial potential or target market for a particular product candidate, we may relinquish valuable rights to that product candidate through collaboration, licensing or other royalty arrangements in cases in which it would have been more advantageous for us to retain sole development and commercialization rights to such product candidate.

If the clinical trials of any of our product candidates fail to demonstrate safety and efficacy to the satisfaction of the FDA or other comparable regulatory authorities, or do not otherwise produce favorable results, we may incur additional costs or experience delays in completing, or ultimately be unable to complete, the development and commercialization of our product candidates.

Most of our product candidates are still in the preclinical development stage, and the risk of failure of preclinical programs is high. Before we can commence clinical trials for a product candidate, we must complete extensive preclinical testing and studies to obtain regulatory clearance to initiate human clinical trials. We cannot be certain of the timely completion or outcome of our preclinical testing and studies and cannot predict if the FDA or other regulatory authorities will accept our proposed clinical programs or if the outcome of our preclinical testing and studies will ultimately support the further development of our programs. As a result, we cannot be sure that we will be able to submit INDs or similar applications for our preclinical programs on the timelines we expect, if at all, and we cannot be sure that submission of INDs or similar applications will result in the FDA or other regulatory authorities allowing clinical trials to begin. It is impossible to predict accurately when or if any of our product candidates will prove effective or safe in humans and will receive regulatory approval. Before obtaining marketing approval from regulatory authorities for the commercial sale of any of our product candidates, we must demonstrate through lengthy, complex and expensive preclinical testing and clinical trials that our product candidates are both safe and effective for use in each target indication. Clinical testing is expensive, difficult to design and implement, can take many years to complete and is uncertain as to outcome. A failure of one or more clinical trials can occur at any stage of testing.

We may experience numerous unforeseen events prior to, during, or as a result of, clinical trials that could delay or prevent our ability to receive marketing approval or commercialize any of our product candidates, including:

- the FDA or other comparable regulatory authority may disagree as to the number, design or implementation of our clinical trials, or may not interpret the results from clinical trials as we do;
- regulators or institutional review boards may not authorize us or our investigators to commence a clinical trial or conduct a clinical trial at a prospective trial site;
- we may not reach agreement on acceptable terms with prospective clinical trial sites, the terms of which can be subject to extensive negotiation and may vary significantly among different clinical trial sites;
- clinical trials of our product candidates may produce negative or inconclusive results;
- we may decide, or regulators may require us, to conduct additional preclinical studies or clinical trials or abandon our product development programs;
- the number of patients required for clinical trials of our product candidates may be larger than we anticipate, enrollment in these clinical trials may be slower than we anticipate, participants may drop out of these clinical trials at a higher rate than we anticipate or we may fail to recruit suitable patients to participate in a trial;
- our third-party contractors may fail to comply with regulatory requirements or meet their contractual obligations to us in a timely manner, or at all;

- regulators may issue a clinical hold, or regulators or institutional review boards may require that we or our investigators suspend or terminate clinical research for various reasons, including noncompliance with regulatory requirements or a finding that the participants are being exposed to unacceptable health risks;
- the cost of clinical trials of our product candidates may be greater than we anticipate;
- the FDA or other comparable regulatory authorities may fail to approve our manufacturing processes or facilities;
- the supply or quality of our product candidates or other materials necessary to conduct clinical trials of our product candidates may be insufficient or inadequate;
- our product candidates may have undesirable side effects or other unexpected characteristics, particularly given their novel, first-in-human application, causing us or our investigators, regulators or institutional review boards to suspend or terminate the clinical trials; and
- the approval policies or regulations of the FDA or other comparable regulatory authorities may significantly change in a manner rendering our clinical data insufficient for approval.

To the extent that the results of the trials are not satisfactory for the FDA or regulatory authorities in other countries or jurisdiction to approve our BLA or other comparable application, the commercialization of our product candidates may be significantly delayed, or we may be required to expend significant additional resources, which may not be available to us, to conduct additional trials in support of potential approval of our product candidates.

Clinical trials are difficult to design and implement, can be lengthy and expensive, involve uncertain outcomes and may not ultimately be successful.

It is impossible to predict when or if any of our current or future product candidates will prove effective and safe in humans or will receive regulatory approval. Before obtaining marketing approval from regulatory authorities for the sale of any product candidate, we must complete preclinical studies and then conduct extensive clinical trials to demonstrate the safety and efficacy of our product candidates in humans. Human clinical trials are expensive, can take many years to complete, and are difficult to design and implement, in part because they are subject to rigorous regulatory requirements. The design of a clinical trial can determine whether its results will support approval of a product and flaws in the design of a clinical trial may not become apparent until the clinical trial is well advanced. As an organization, we have limited experience designing clinical trials and may be unable to design and execute a clinical trial to support regulatory approval. There is a high failure rate for oncology product candidates proceeding through clinical trials, which may be higher for our product candidates because they are based on a new approach. Many companies in the pharmaceutical and biotechnology industries have suffered significant setbacks in late-stage clinical trials even after achieving promising results in preclinical testing and earlier-stage clinical trials. Data obtained from preclinical and clinical activities are subject to varying interpretations, which may delay, limit or prevent regulatory approval. In addition, we may experience regulatory delays or rejections as a result of many factors, including changes in regulatory policy during the period of our product candidate development. Any such delays could negatively impact our business, financial condition, results of operations and prospects.

Success in preclinical studies or clinical trials may not be predictive of results in future clinical trials.

Results from preclinical studies and early clinical trials may not be predictive of the success of later clinical trials, and interim results of clinical trials are not necessarily predictive of final results. While we have received initial data in our Phase 1/2 clinical trial of SNS-301 for the treatment of locally advanced unresectable or metastatic SCCHN, we still need to conduct additional clinical trials prior to seeking regulatory approval. We have also not yet begun clinical trials for our other product candidates. For that reason, we do not know whether these candidates will be effective for the intended indications or safe in humans. Our product candidates may fail

to show the desired safety and efficacy in clinical development despite positive results observed in preclinical studies or having successfully advanced through initial clinical trials. This failure to establish sufficient efficacy and safety could cause us to abandon clinical development of our product candidates.

Additionally, some of our past, planned and ongoing clinical trials utilize an open-label study design. An "open-label" clinical trial is one where both the patient and investigator know whether the patient is receiving the investigational product candidate or either an existing approved therapy or placebo. Most typically, open-label clinical trials test only the investigational product candidate and sometimes may do so at different dose levels. Open-label clinical trials are subject to various limitations that may exaggerate any therapeutic effect, as patients in open-label clinical trials are aware when they are receiving treatment. Open-label clinical trials may be subject to a "patient bias" where patients perceive their symptoms to have improved merely due to their awareness of receiving an experimental treatment. Moreover, patients selected for early clinical studies often include the most severe sufferers and their symptoms may have been bound to improve notwithstanding the new treatment. In addition, open-label clinical trials may be subject to an "investigator bias" where those assessing and reviewing the physiological outcomes of the clinical trials are aware of which patients have received treatment and may interpret the information of the treated group more favorably given this knowledge. Given that our Phase 1/2 clinical trial of SNS-301 includes an open-label dosing design, the results from this clinical trial may not be predictive of future clinical trial results with this or other product candidates for which we conduct an open-label clinical trial when studied in a controlled environment with a placebo or active control.

Interim topline and preliminary data from our clinical trials that we announce or publish from time to time may change as more patients are enrolled and additional data become available, and are subject to audit and verification procedures that could result in material changes in the final data.

From time to time, we may publish interim topline or preliminary data from our clinical trials. Interim data from clinical trials that we may complete are subject to the risk that one or more of the clinical outcomes may materially change as patient enrollment continues and more patient data become available. We also make assumptions, estimations, calculations and conclusions as part of our analyses of data, and we may not have received or had the opportunity to fully and carefully evaluate all data. As a result, the topline or preliminary results that we report may differ from future results of the same studies, or different conclusions or considerations may qualify such results, once additional data have been received and fully evaluated. Preliminary or topline data also remain subject to audit and verification procedures that may result in the final data being materially different from the preliminary data we previously published. As a result, interim and preliminary data should be viewed with caution until the final data are available. From time to time, we may also disclose interim data from our clinical trials. Interim data from clinical trials are subject to the risk that one or more of the clinical outcomes may materially change as patient enrollment continues and more patient data become available or as patients from our clinical trials continue other treatments for their disease. For instance, we have reported interim data from our ongoing Phase 1/2 clinical trial of SNS-301 for the treatment of SCCHN based on our first 11 enrolled patients, of which ten patients were evaluable for efficacy as of December 10, 2020, and the overall results from the Phase 1/2 trial may materially change as we complete enrollment and report results for the full 30 patients that we anticipate enrolling in the trial. Adverse differences between preliminary or interim data and final data could significantly harm our reputation and business prospects. Further, disclosure of interim data by us or by our competitors could result in volatility in the price of our common stock after this offering.

Further, others, including regulatory agencies, may not accept or agree with our assumptions, estimates, calculations, conclusions or analyses or may interpret or weigh the importance of data differently, which could impact the potential of the particular program, the likelihood of marketing approval or commercialization of the particular product candidate, any approved product, and our company in general. In addition, the information we choose to publicly disclose regarding a particular study or clinical trial is derived from information that is typically extensive, and you or others may not agree with what we determine is material or otherwise appropriate information to include in our disclosure.

If the interim, topline, or preliminary data that we report differ from actual results, or if others, including regulatory authorities, disagree with the conclusions reached, our ability to obtain approval for, and commercialize, our product candidates may be harmed, which could harm our business, operating results, prospects or financial condition.

We depend on timely enrollment of patients in our clinical trials for our product candidates. If we encounter difficulties enrolling patients in our clinical trials, our clinical development activities could be delayed or otherwise adversely affected.

Identifying and qualifying patients to participate in clinical trials of our product candidates is critical to our success. We may experience difficulties in patient enrollment in our clinical trials for a variety of reasons. The timely completion of clinical trials in accordance with their protocols depends, among other things, on our ability to enroll a sufficient number of patients who remain in the study until its conclusion. The enrollment of patients depends on many factors, including:

- the patient eligibility criteria defined in the protocol;
- the number of patients with the disease or condition being studied;
- the perceived risks and benefits of the product candidate in the trial;
- clinicians' and patients' perceptions as to the potential advantages of the product candidate being studied in relation to other available therapies, including any new drugs that may be approved for the indications we are investigating or drugs that may be used off-label for these indications;
- the size and nature of the patient population required for analysis of the trial's primary endpoints;
- the proximity of patients to study sites;
- the design of the clinical trial;
- our ability to recruit clinical trial investigators with the appropriate competencies and experience;
- competing clinical trials for similar therapies or other new therapeutics;
- our ability to obtain and maintain patient consents;
- the risk that patients enrolled in clinical trials will drop out of the clinical trials before completion of their treatment; and
- factors we may not be able to control, such as current or potential pandemics, including the COVID-19 pandemic, that may limit patients, principal investigators or staff or clinical site available.

In particular, some of our clinical trials will look to enroll patients with specific limited characteristics. For instance, in our ongoing Phase 1/2 of SNS-301 in SCCHN, we restricted enrollment to SCCHN patients who were treated with PD1 blockade for at least 12 weeks and did not achieve an objective response or confirmed progression, which limits the pool of patients from which we have to recruit trial participants. In addition, because the number of qualified clinical investigators is limited, we expect to conduct some of our clinical trials at the same clinical trial sites that some of our competitors use, which could further reduce the number of patients who are available for our clinical trials in these clinical trial sites. Moreover, because our product candidates represent a departure from more commonly used methods for cancer treatment, potential patients and their doctors may be inclined to use conventional therapies, such as chemotherapy and antibody therapy, rather than enroll patients in our clinical trials.

Delays in patient enrollment may result in increased costs or may affect the timing or outcome of the planned clinical trials, which could prevent completion of these clinical trials and adversely affect our ability to advance the development of our product candidates. In addition, many of the factors that may lead to a delay in the commencement or completion of clinical trials may also ultimately lead to the denial of regulatory approval of our product candidates.

We may seek Fast Track designation for some or all of our current or future product candidates, but we may be unable to obtain such designations or, where obtained, we may be unable to maintain such designations or obtain or maintain the benefits associated with such designations.

We may seek Fast Track designation for some or all of our other current and future product candidates, but we may be unable to obtain such designation or, where obtained, we may be unable to maintain such designation or obtain or maintain the benefits associated with such designation.

If a biologic is intended for the treatment of a serious or life-threatening condition and the product demonstrates the potential to address unmet medical needs for this condition, the product sponsor may apply for FDA Fast Track designation for a particular indication. We may seek Fast Track designation for SNS-301 and some or all of our other current and future product candidates, but there is no assurance that the FDA will grant this status to any of our proposed product candidates. Marketing applications filed by sponsors of products in Fast Track development may qualify for priority review under the policies and procedures offered by the FDA, but the Fast Track designation does not assure any such qualification or ultimate marketing approval by the FDA. The FDA has broad discretion whether or not to grant Fast Track designation, so even if we believe a particular product candidate is eligible for this designation, there can be no assurance that the FDA would decide to grant it. Even if we do receive Fast Track designation, we may not experience a faster development process, review or approval compared to conventional FDA procedures, and receiving a Fast Track designation does not provide assurance of ultimate FDA approval. In addition, the FDA may withdraw Fast Track designation if it believes that the designation is no longer supported by data from our clinical development program. In addition, the FDA may withdraw any Fast Track designation at any time.

The market opportunities for certain of our product candidates may be limited to those patients who are ineligible for or have failed prior treatments and, therefore, may be small, and our projections regarding the size of the addressable market may be incorrect.

Our immunotherapy approach is based on novel ideas and technologies that are unproven and may not result in marketable products, which makes it difficult for us to predict the time and cost of product development and potential for regulatory approval. Cancer therapies are sometimes characterized as first line, second line or third line, and the FDA often approves new therapies initially only for third line use. When cancers are detected they are treated with first line of therapy with the intention of curing the cancer. This treatment generally consists of chemotherapy, radiation, antibody drugs, tumor targeted small molecules, or a combination of these. If the patient’s cancer relapses, then the patient is given a second line or third line therapy, which can consist of more chemotherapy, radiation, antibody drugs, tumor targeted small molecules, or a combination of these. Generally, the higher the line of therapy, the lower the chance of a cure. With third or higher line, the goal of the therapy is to control the growth of the tumor and extend the life of the patient, as a cure is unlikely to happen. Patients are generally referred to clinical trials in these situations.

While we are initially developing SNS-301 as a first line therapy and later lines of therapy for patients with SCCHN, there is no guarantee that it, or any of our product candidates, even if approved, would be approved for an early line of therapy. In addition, we may have to conduct additional large randomized clinical trials prior to gaining approval for the earlier line of therapy.

Our projections of both the number of people who have the cancers we are targeting, as well as the size of the patient population subset of people with these cancers in a position to receive first, second, third and fourth line therapy and who have the potential to benefit from treatment with our product candidates, are based on our beliefs and estimates. These estimates have been derived from a variety of sources, including scientific literature, surveys of clinics, patient foundations, or market research and may prove to be incorrect. Further, new studies may change the estimated incidence or prevalence of these cancers. The number of patients may turn out to be fewer than expected. Additionally, the potentially addressable patient population for our product candidates may be limited or may not be amenable to treatment with our product candidates. Even if we obtain significant market

share for our product candidates, because the potential target populations are small, we may never achieve significant revenues without obtaining regulatory approval for additional indications or as part of earlier lines of therapy.

We are developing SNS-301, and potentially future product candidates, in combination with other therapies, which exposes us to additional risks.

We are developing SNS-301, and may develop future product candidates, for use in combination with one or more currently approved cancer therapies. In particular, we are developing SNS-301 in combination pembrolizumab, an approved anti-PD-1 cancer treatment. Even if any product candidate we develop was to receive marketing approval or be commercialized for use in combination with other existing therapies, we would continue to be subject to the risks that the FDA or similar foreign regulatory authorities could revoke approval of the therapy used in combination with our product candidate or that safety, efficacy, manufacturing or supply issues could arise with these existing therapies. Combination therapies are commonly used for the treatment of cancer, and we would be subject to similar risks if we develop any of our product candidates for use in combination with other drugs or for indications other than cancer. This could result in our own products being removed from the market or being less successful commercially.

If the FDA or similar foreign regulatory authorities do not approve these other drugs or revoke their approval of, or if safety, efficacy, manufacturing, or supply issues arise with, the drugs we choose to evaluate in combination with SNS-301 or any product candidate we develop, we may be unable to obtain approval of or market SNS-301 or any product candidate we develop.

Adverse side effects or other safety risks associated with our product candidates could delay or preclude approval, cause us to suspend or discontinue clinical trials, cause us to abandon product candidates, could limit the commercial profile of an approved label, or could result in significant negative consequences following any potential marketing approval.

Our clinical trials include cancer patients who are very sick and whose health is deteriorating, and we expect that additional clinical trials of our other product candidates will include similar patients with deteriorating health. It is possible that some of these patients may experience similar side effects and that additional patients may die during our clinical trials for various reasons. The causes of death could include receiving our product candidates because the patient's disease is too advanced or because the patient experiences medical problems that may not be related to our product candidate. Even if the patient deaths are not related to our product candidate, the deaths could affect perceptions regarding the safety of our product candidate.

Patient deaths and severe side effects caused by our product candidates, or by products or product candidates of other companies that are thought to have similarities with our therapeutic candidates, could result in the delay, suspension, clinical hold or termination of our clinical trials, the FDA or other regulatory authorities for a number of reasons. If we elect or are required to delay, suspend or terminate any clinical trial of any product candidates that we develop, the commercial prospects of such product candidates will be harmed and our ability to generate product revenues from any of these product candidates would be delayed or eliminated. Serious adverse events observed in clinical trials could hinder or prevent market acceptance of the product candidate at issue. Any of these occurrences may harm our business, prospects, financial condition and results of operations significantly.

Additionally, if one or more of our product candidates receives marketing approval, and we or others later identify undesirable side effects caused by such products, including during any long-term follow-up observation period recommended or required for patients who receive treatment using our products, a number of potentially significant negative consequences could result, including:

- regulatory authorities may withdraw or limit their approval of such products;

- regulatory authorities may require the addition of labeling statements, such as a “boxed” warning or a contraindication;
- we may be required to create a Risk Evaluation and Mitigation Strategy, or REMS, plan, which could include a medication guide outlining the risks of such side effects for distribution to patients, a communication plan for healthcare providers, and/or other elements to assure safe use, such as restricted distribution methods, patient registries and other risk minimization tools;
- we may decide to remove such products from the marketplace;
- we could be sued and held liable for harm caused to patients; and
- our reputation may suffer.

Any of the foregoing could prevent us from achieving or maintaining market acceptance of the particular product candidate, if approved, and could significantly harm our business, results of operations, and prospects.

We may not be successful in achieving cost of goods at commercial scale that provide for an attractive margin.

We have limited commercial manufacturing experience and may underestimate the cost and time required to establish manufacturing capacity at commercial scale, or overestimate cost reductions from economies of scale that can be realized with manufacturing processes. While we are planning to internally develop this capability, including plans for the potential construction of our own manufacturing facility, we have also held discussions with multiple contract manufacturing organizations regarding commercial-stage manufacturing. We may ultimately be unable to manage the cost of goods for our product candidates to levels that will allow for a margin in line with our expectations and return on investment if those product candidates are commercialized.

We may not be successful in manufacturing our product candidates on our own for use in clinical trials and, if approved, for commercial sale.

As we advance into later-stage clinical trials and additional indications, we intend to expand our current manufacturing capabilities to support larger scale clinical trials and the potential commercialization of our product candidates. However, we have not yet constructed or acquired manufacturing facilities or capabilities that would allow us to meet commercial-scale quantities.

The implementation of this plan is subject to many risks. For example, the expansion of a manufacturing facility is a complex endeavor requiring knowledgeable individuals. Expanding our internal manufacturing infrastructure will rely upon finding personnel with an appropriate background and training to staff and operate the facility. Should we be unable to find these individuals, we may need to rely on external contractors or train additional personnel to fill the needed roles. There are a small number of individuals with relevant experience and the competition for these individuals is high.

We may never be successful in expanding our own manufacturing capability to support large scale clinical trials and commercialization of product candidates, if approved. We may establish additional manufacturing sites as we expand our commercial footprint to multiple geographies, which may lead to regulatory delays or prove costly. Even if we are successful, our manufacturing operations could be affected by cost-overruns, unexpected delays, equipment failures, labor shortages, natural disasters, power failures and numerous other factors, or we may not be successful in establishing sufficient capacity to produce our product candidates in sufficient quantities to meet the requirements for the potential launch or to meet potential future demand, all of which could prevent us from realizing the intended benefits of our manufacturing strategy and have a material adverse effect on our business.

The manufacture of our product candidates is complex and we may encounter difficulties in production, particularly with respect to process development or scaling-out of our manufacturing capabilities. If we encounter such difficulties, our ability to provide supply of our product candidates for clinical trials or our products for patients, if approved, could be delayed or stopped.

We have developed a process for manufacturing and stock storing bacteriophage viruses and we believe that our current processes are readily scalable and suitable for commercialization. Each manufacturing process must be validated through the performance of process validation runs to guarantee that the facility, personnel, equipment, and process work as designed. We have not yet manufactured or processed our product candidates on a commercial scale and may not be able to do so for any of our product candidates.

We may encounter difficulties in production, particularly in scaling up or out, validating the production process, and assuring high reliability of the manufacturing process. These problems include delays or break-downs in logistics and shipping, difficulties with production costs and yields, quality control, and product testing, operator error, lack of availability of qualified personnel, as well as failure to comply with strictly enforced federal, state and foreign regulations.

Furthermore, if microbial, viral or other contaminations are discovered in our supply of product candidates or in the manufacturing facilities, such manufacturing facilities may need to be closed for an extended period of time to investigate and remedy the contamination. We cannot assure you that any of these or other issues relating to the manufacture of our product candidates will not occur in the future. Any delay or interruption in the supply of clinical trial supplies could delay the completion of clinical trials, increase the costs associated with maintaining clinical trial programs and, depending upon the period of delay, require us to begin new clinical trials at additional expense or terminate clinical trials completely.

Manufacturing facilities also require commissioning and validation activities to demonstrate that they operate as designed, and are subject to government inspections by the FDA and other comparable regulatory authorities. If we are unable to reliably produce products to specifications acceptable to the regulatory authorities, we may not obtain or maintain the approvals we need to manufacture our products. Further, manufacturing facilities may fail to pass government inspections prior to or after the commercial launch of our product candidates, which would cause significant delays and additional costs required to remediate any deficiencies identified by the regulatory authorities. Any of these challenges could delay completion of clinical trials, require bridging clinical trials or the repetition of one or more clinical trials, increase clinical trial costs, delay approval of our product candidate, impair commercialization efforts, increase our cost of goods, and have an adverse effect on our business, financial condition, results of operations and growth prospects.

Prior treatments can alter the cancer and negatively impact chances for achieving clinical activity with our ImmunoPhage product candidates.

Patients with head and neck and other cancers typically receive highly toxic lympho-depleting chemotherapy as their initial treatments that can impact the patient’s responses to new therapies. Patients could also have received prior therapies that target the same target antigen on the cancer cells as our intended ImmunoPhage and thereby lead to a selection of cancer cells with low or no expression of the target. As a result, our product candidates may not recognize the cancer cell and may fail to achieve clinical activity. If any of our product candidates do not achieve a sufficient level of clinical activity, we may discontinue the development of that product candidate, which could have an adverse effect on the value of our common stock.

Even if we complete the necessary preclinical studies and clinical trials, the marketing approval process is expensive, time-consuming and uncertain and may prevent us or any future collaboration partners from obtaining approvals for the commercialization of SNS-301 as well as for any other product candidate we develop.

Any product candidate we may develop and the activities associated with their development and commercialization, including their design, testing, manufacture, safety, efficacy, recordkeeping, labeling,

storage, approval, advertising, promotion, sale, and distribution, are subject to comprehensive regulation by the FDA and other regulatory authorities in the United States and by comparable authorities in other countries. Failure to obtain marketing approval for a product candidate will prevent us from commercializing the product candidate in a given jurisdiction. We have not received approval to market any product candidates from regulatory authorities in any jurisdiction and it is possible that none of the product candidates we may seek to develop in the future will ever obtain regulatory approval. We have no experience in filing and supporting the applications necessary to gain marketing approvals and expect to rely on third-party contract research organizations, or CROs, or regulatory consultants to assist us in this process. Securing regulatory approval requires the submission of extensive preclinical and clinical data and supporting information to the various regulatory authorities for each therapeutic indication to establish the biologic product candidate's safety, purity, efficacy and potency. Securing regulatory approval also requires the submission of information about the product manufacturing process to, and inspection of manufacturing facilities by, the relevant regulatory authority. Any product candidates we develop may not be effective, may be only moderately effective, or may prove to have undesirable or unintended side effects, toxicities or other characteristics that may preclude our obtaining marketing approval or prevent or limit commercial use.

The process of obtaining marketing approvals, both in the United States and abroad, is expensive, may take many years if additional clinical trials are required, if approval is obtained at all, and can vary substantially based upon a variety of factors, including the type, complexity, and novelty of the product candidates involved. Changes in marketing approval policies during the development period, changes in or the enactment of additional statutes or regulations, or changes in regulatory review for each submitted product application, may cause delays in the approval or rejection of an application. The FDA and comparable authorities in other countries have substantial discretion in the approval process and may refuse to accept any application or may decide that our data are insufficient for approval and require additional preclinical, clinical or other studies. In addition, varying interpretations of the data obtained from preclinical and clinical testing could delay, limit, or prevent marketing approval of a product candidate. Any marketing approval we ultimately obtain may be limited or subject to restrictions or post-approval commitments that render the approved product not commercially viable.

If we experience delays in obtaining approval or if we fail to obtain approval of any product candidates we may develop, the commercial prospects for those product candidates may be harmed, and our ability to generate revenues will be materially impaired.

Risks Related to our Dependence on Third Parties

We collaborate with third parties in connection with the development of our product candidates, and may depend upon future collaboration partners to commit to the research, development, manufacturing and marketing of our product candidates.

We collaborate with third parties for the development of our product candidates, including, for instance, our clinical trial collaboration with AstraZeneca for future Phase 2 clinical trials of SNS-301 in combination with durvalumab in the neoadjuvant setting and our collaboration with the University of Washington pursuant to which we are conducting preclinical studies for our SNS-401 program. We may enter into additional collaborations for our other current or future product candidates or technologies. We cannot control the timing or quantity of resources that our existing or future collaborators will dedicate to research, preclinical and clinical development, manufacturing or marketing of our products. Our collaborators may not perform their obligations according to our expectations or standards of quality. Our collaborators could terminate our existing agreements for a number of reasons.

In order to optimize the launch and market penetration of certain of our future product candidates, we may enter into distribution and marketing agreements with pharmaceutical industry leaders. For these product candidates, we would not market our products alone once they have obtained marketing authorization. The risks inherent in entry into these contracts are as follows:

- the negotiation and execution of these agreements is a long process that may not result in an agreement being signed or that can delay the development or commercialization of the product candidate concerned;
- these agreements are subject to cancellation or non-renewal by our collaborators, or may not be fully complied with by our collaborators;
- in the case of a license granted by us, we lose control of the development of the product candidate licensed; in such cases, we would only have limited control over the means and resources allocated by our partner for the commercialization of our product; and
- collaborators may not properly obtain, maintain, enforce, or defend our intellectual property or proprietary rights or may use our proprietary information in such a way as to invite litigation that could jeopardize or invalidate our proprietary information or expose us to potential litigation.

Should any of these risks materialize, or should we fail to find suitable collaborators, this could have a material adverse effect on our business, prospects, financial condition and results of operations.

We have entered, and may in the future enter into, partnership agreements with third parties for the development and commercialization of our product candidates. Our prospects with respect to those product candidates will depend in significant part on the success of those collaborations.

The advancement of our product candidates and development programs and the potential commercialization of our current and future product candidates will require substantial additional cash to fund expenses. For some of our programs, we may decide to collaborate with additional pharmaceutical and biotechnology companies with respect to development and potential commercialization. As such, we have entered into and may seek to enter into additional collaborations or partnerships with third parties for the development and potential commercialization of our product candidates.

We face significant competition in seeking appropriate collaborators. Should we seek to collaborate with a third party with respect to a prospective development program, we may not be able to locate a suitable partner or to enter into an agreement on commercially reasonable terms or at all. Even if we succeed in securing partners for the development and commercialization of our product candidates, we have limited control over the time and resources that our partners may dedicate to the development and commercialization of our product candidates. These partnerships pose a number of risks, including the following:

- partners may not have sufficient resources or decide not to devote the necessary resources due to internal constraints such as budget limitations, lack of human resources or a change in strategic focus;
- partners may believe our intellectual property is not valid or is unenforceable or the product candidate infringes on the intellectual property rights of others;
- partners may dispute their responsibility to conduct development and commercialization activities pursuant to the applicable collaboration, including the payment of related costs or the division of any revenues;
- partners may decide to pursue a competitive product developed outside of the collaboration arrangement;
- partners may not be able to obtain, or believe they cannot obtain, the necessary regulatory approvals; or
- partners may delay the development or commercialization of our product candidates in favor of developing or commercializing another party’s product candidate.

Thus, partnership agreements may not lead to development, regulatory approval or successful commercialization of product candidates in the most efficient manner or at all. Some partnership agreements are terminable without cause on short notice. Once a partnership agreement is signed, it may not lead to regulatory approval and commercialization of a product candidate. We also face competition in seeking out partners. If we are unable to secure new collaborations that achieve the collaborator's objectives and meet our expectations, we may be unable to advance our product candidates and may not generate meaningful revenues.

We rely, and expect to continue to rely, on third parties to conduct the preclinical and clinical trials for our product candidates, and those third parties may not perform satisfactorily, including failing to meet deadlines for the completion of such trials or failing to comply with applicable regulatory requirements.

We depend and will continue to depend upon independent investigators and collaborators, such as universities, medical institutions, and strategic partners to conduct our preclinical studies and clinical trials. Agreements with such third parties might terminate for a variety of reasons, including a failure to perform by the third parties. If we need to enter into alternative arrangements, our product development activities would be delayed.

Our reliance on these third parties for research and development activities will reduce our control over these activities but will not relieve us of our responsibilities. For example, we will remain responsible for ensuring that each of our clinical trials is conducted in accordance with the general investigational plan and protocols for the trial. Moreover, the FDA requires us to comply with regulatory standards, commonly referred to as good laboratory practices, or GLP, and good clinical practices, or GCP, for conducting, recording and reporting the results of preclinical and clinical trials to assure that data and reported results are credible and accurate and that the rights, integrity and confidentiality of trial participants are protected. We are also required to register certain ongoing clinical trials and post the results of certain completed clinical trials on a government-sponsored database within specified timeframes. Failure to do so by us or third parties can result in FDA refusal to approve applications based on the clinical data, enforcement actions, adverse publicity and civil and criminal sanctions.

Furthermore, these third parties may also have relationships with other entities, some of which may be our competitors. If these third parties do not successfully carry out their contractual duties, meet expected deadlines or conduct our clinical trials in accordance with regulatory requirements or our stated protocols, we will not be able to obtain, or may be delayed in obtaining, marketing approvals for our product candidates and will not be able to, or may be delayed in our efforts to, successfully commercialize our product candidates.

In addition, principal investigators for our clinical trials may serve as scientific advisors or consultants to us from time to time and may receive cash or equity compensation in connection with such services. If these relationships and any related compensation result in perceived or actual conflicts of interest, or the FDA concludes that the financial relationship may have affected the interpretation of the trial, the integrity of the data generated at the applicable clinical trial site may be questioned and the utility of the clinical trial itself may be jeopardized, which could result in the delay or rejection by the FDA. Any such delay or rejection could prevent us from commercializing our clinical-stage product candidates or any future product candidates.

To develop immunotherapeutic candidates, we rely on the availability of reagents, specialized equipment, and other specialty materials, which may not be available to us on acceptable terms or at all. For some of these reagents, equipment, and materials, we may rely on sole source vendors or a limited number of vendors, which could impair our ability to manufacture and supply our products.

Manufacturing our product candidates will require many reagents, which are substances used in our manufacturing processes to bring about chemical or biological reactions, and other specialty materials and equipment, some of which are manufactured or supplied by small companies with limited resources and experience to support commercial biologics production. We currently depend on a limited number of vendors for access to facilities and supply of certain materials and equipment used in the manufacture of our product

candidates. For example, we purchase equipment and reagents critical for the manufacture of our product candidates from third parties on a purchase order basis. Some of our suppliers may not have the capacity to support commercial products manufactured under cGMP by biopharmaceutical firms or may otherwise be ill-equipped to support our needs. We also do not have supply contracts with many of these suppliers, and may not be able to obtain supply contracts with them on acceptable terms or at all. Accordingly, we may not be able to obtain key materials and equipment to support clinical or commercial manufacturing.

For some of these reagents, equipment, and materials, we may in the future rely on sole source vendors or a limited number of vendors. An inability to source product from any of these suppliers, which could be due to regulatory actions or requirements affecting the supplier, adverse financial or other strategic developments experienced by a supplier, labor disputes or shortages, widespread business interruption, unexpected demands, or quality issues, could adversely affect our ability to satisfy demand for our product candidates, which could adversely and materially affect our product sales and operating results or our ability to conduct clinical trials, either of which could significantly harm our business.

As we continue to develop and scale our manufacturing process, we may need to obtain rights to and supplies of certain materials and equipment to be used as part of that process. We may not be able to obtain rights to such materials on commercially reasonable terms, or at all, and if we are unable to alter our process in a commercially viable manner to avoid the use of such materials or find a suitable substitute, it would have a material adverse effect on our business.

Our employees, principal investigators, CROs and consultants may engage in misconduct or other improper activities, including non-compliance with regulatory standards and requirements.

We are exposed to the risk that our employees, principal investigators, CROs and consultants may engage in fraudulent conduct or other illegal activity. Misconduct by these parties could include intentional, reckless and/or negligent conduct or disclosure of unauthorized activities to us that violate the regulations of the FDA and other regulatory authorities, including those laws requiring the reporting of true, complete and accurate information to such authorities; healthcare fraud and abuse laws and regulations in the United States and abroad; or laws that require the reporting of financial information or data accurately. In particular, sales, marketing and business arrangements in the healthcare industry are subject to extensive laws and regulations intended to prevent fraud, misconduct, kickbacks, self-dealing and other abusive practices. These laws and regulations may restrict or prohibit a wide range of pricing, discounting, marketing and promotion, sales commission, customer incentive programs and other business arrangements. Activities subject to these laws also involve the improper use of information obtained in the course of clinical trials or creating fraudulent data in our preclinical studies or clinical trials, which could result in regulatory sanctions and cause serious harm to our reputation. We intend to adopt, prior to the completion of this offering, a code of conduct applicable to all of our employees, but it is not always possible to identify and deter misconduct by employees and other third parties, and the precautions we take to detect and prevent this activity may not be effective in controlling unknown or unmanaged risks or losses or in protecting us from governmental investigations or other actions or lawsuits stemming from a failure to comply with these laws or regulations. Additionally, we are subject to the risk that a person could allege such fraud or other misconduct, even if none occurred. If any such actions are instituted against us, and we are not successful in defending ourselves or asserting our rights, those actions could have a significant impact on our business, including the imposition of civil, criminal and administrative penalties, damages, monetary fines, possible exclusion from participation in Medicare, Medicaid and other federal healthcare programs, contractual damages, reputational harm, diminished profits and future earnings, and curtailment of our operations, any of which could adversely affect our ability to operate our business and our results of operations.

Risks Related to Regulatory Approval of our Product Candidates and Other Legal Compliance Matters

If we are not able to obtain, or if there are delays in obtaining, required regulatory approvals for our product candidates, we will not be able to commercialize, or will be delayed in commercializing, our product candidates, and our ability to generate revenue will be materially impaired.

Our product candidates and the activities associated with their development and commercialization, including their design, testing, manufacture, safety, efficacy, recordkeeping, labeling, storage, approval, advertising, promotion, sale, distribution, import and export are subject to comprehensive regulation by the FDA and other regulatory agencies in the United States and by comparable authorities in other countries. Before we can commercialize any of our product candidates, we must obtain marketing approval. Currently, all of our product candidates are in development, and we have not received approval to market any of our product candidates from regulatory authorities in any jurisdiction. It is possible that our product candidates, including any product candidates we may seek to develop in the future, will never obtain regulatory approval. Whether the results from our current ongoing clinical trials and other trials will suffice to obtain approval will be a review issue and the FDA may not grant approval and may require that we conduct one or more controlled clinical trials to obtain approval. Additionally, even if FDA does grant approval for one or more of our product candidates, it may be for a more narrow indication than we seek. Regulatory authorities, including the FDA, also may impose significant limitations in the form of narrow indications, warnings or a REMS. These regulatory authorities may require labeling that includes precautions or contra-indications with respect to conditions of use, or they may grant approval subject to the performance of costly post-marketing clinical trials. In addition, regulatory authorities may not approve the labeling claims that are necessary or desirable for the successful commercialization of any product candidates we may develop.

We have only limited experience in filing and supporting the applications necessary to gain regulatory approvals and expect to rely on third-party CROs and/or regulatory consultants to assist us in this process. Securing regulatory approval requires the submission of extensive preclinical and clinical data and supporting information to the various regulatory authorities for each therapeutic indication to establish the product candidate's safety and efficacy. Securing regulatory approval also requires the submission of information about the product manufacturing process to, and inspection of manufacturing facilities by, the relevant regulatory authority. Our product candidates may not be effective, may be only moderately effective or may prove to have undesirable or unintended side effects, toxicities or other characteristics that may preclude our obtaining marketing approval or prevent or limit commercial use. In addition, regulatory authorities may find fault with our manufacturing process or facilities or that of third-party contract manufacturers. We may also face greater than expected difficulty in manufacturing our product candidates.

The process of obtaining regulatory approvals, both in the United States and abroad, is expensive and often takes many years. If the FDA or a comparable foreign regulatory authority requires that we perform additional preclinical studies or clinical trials, approval, if obtained at all, may be delayed. The length of such a delay varies substantially based upon a variety of factors, including the type, complexity and novelty of the product candidates involved. Changes in marketing approval policies during the development period, changes in or the enactment of additional statutes or regulations, or changes in regulatory review for each submitted BLA, premarket approval application, or equivalent application types, may cause delays in the approval or rejection of an application. The FDA and comparable authorities in other countries have substantial discretion in the approval process and may refuse to accept any application or may decide that our data are insufficient for approval and require additional preclinical, clinical or other studies. Our product candidates could be delayed in receiving, or fail to receive, regulatory approval for many reasons, including the following:

- the FDA or comparable foreign regulatory authorities may disagree with the design or implementation of our preclinical studies or clinical trials;
- we may not be able to enroll a sufficient number of patients in our clinical studies;

- we may be unable to demonstrate to the satisfaction of the FDA or comparable foreign regulatory authorities that a product candidate is safe and effective for its proposed indication or a related companion diagnostic is suitable to identify appropriate patient populations;
- the results of clinical trials may not meet the level of statistical significance required by the FDA or comparable foreign regulatory authorities for approval;
- we may be unable to demonstrate that a product candidate's clinical and other benefits outweigh its safety risks;
- the FDA or comparable foreign regulatory authorities may disagree with our interpretation of data from preclinical studies or clinical trials;
- the data collected from clinical trials of our product candidates may not be sufficient to support the submission of an NDA or other submission or to obtain regulatory approval in the United States or elsewhere;
- the FDA or comparable foreign regulatory authorities may find deficiencies with or fail to approve the manufacturing processes or facilities of third-party manufacturers with which we contract for clinical and commercial supplies; and
- the approval policies or regulations of the FDA or comparable foreign regulatory authorities may significantly change such that our clinical data are insufficient for approval.

Even if we were to obtain approval, regulatory authorities may approve any of our product candidates for fewer or more limited indications than we request, thereby narrowing the commercial potential of the product candidate. In addition, regulatory authorities may grant approval contingent on the performance of costly post-marketing clinical trials, or may approve a product candidate with a label that does not include the labeling claims necessary or desirable for the successful commercialization of that product candidate. Any of the foregoing scenarios could materially harm the commercial prospects for our product candidates.

If we experience delays in obtaining approval or if we fail to obtain approval of our product candidates, the commercial prospects for our product candidates may be harmed and our ability to generate revenues will be materially impaired.

Obtaining and maintaining regulatory approval of our product candidates in one jurisdiction does not mean that we will be successful in obtaining regulatory approval of our product candidates in other jurisdictions.

We may also submit marketing applications in other countries. Regulatory authorities in jurisdictions outside of the United States have requirements for approval of product candidates with which we must comply prior to marketing in those jurisdictions. Obtaining foreign regulatory approvals and compliance with foreign regulatory requirements could result in significant delays, difficulties and costs for us and could delay or prevent the introduction of our products in certain countries. If we fail to comply with the regulatory requirements in international markets and/or receive applicable marketing approvals, our target market will be reduced and our ability to realize the full market potential of our product candidates will be harmed.

Obtaining and maintaining regulatory approval of our product candidates in one jurisdiction does not guarantee that we will be able to obtain or maintain regulatory approval in any other jurisdiction, while a failure or delay in obtaining regulatory approval in one jurisdiction may have a negative effect on the regulatory approval process in others. For example, even if the FDA grants marketing approval of a product candidate, comparable regulatory authorities in foreign jurisdictions must also approve the manufacturing, marketing and promotion of the product candidate in those countries. Approval procedures vary among jurisdictions and can involve requirements and administrative review periods different from, and greater than, those in the United States, including additional nonclinical studies or clinical trials as clinical trials conducted in one jurisdiction may not be accepted by regulatory authorities in other jurisdictions. In short, the foreign regulatory approval

process involves all of the risks associated with FDA approval. In many jurisdictions outside the United States, a product candidate must be approved for reimbursement before it can be approved for sale in that jurisdiction. In some cases, the price that we may intend to charge for our products will also be subject to approval.

Even if we receive regulatory approval for any of our product candidates, we will be subject to ongoing regulatory obligations and continued regulatory review, which may result in significant additional expense. Additionally, our product candidates, if approved, could be subject to post-market study requirements, marketing and labeling restrictions, and even recall or market withdrawal if unanticipated safety issues are discovered following approval. In addition, we may be subject to penalties or other enforcement action if we fail to comply with regulatory requirements.

If the FDA or a comparable foreign regulatory authority approves any of our product candidates, the manufacturing processes, labeling, packaging, distribution, storage, advertising, promotion, import, export, recordkeeping, monitoring, and reporting for our product will be subject to extensive and ongoing regulatory requirements. These requirements include submissions of safety and other post-marketing information and reports, establishment registration and listing, as well as continued compliance with cGMPs and GCPs for any clinical trials that we conduct post-approval. Any regulatory approvals that we receive for our product candidates may also be subject to limitations on the approved indicated uses for which the product may be marketed or to the conditions of approval, or contain requirements for potentially costly post-marketing studies, including Phase 4 clinical trials, and surveillance to monitor the safety and efficacy of the product.

The FDA may require a REMS in order to approve our product candidates, which could entail requirements for a medication guide, physician communication plans or additional elements to ensure safe use, such as restricted distribution methods, patient registries and other risk minimization tools. Later discovery of previously unknown problems with a product, including adverse events of unanticipated severity or frequency, or with our third-party manufacturers or manufacturing processes, or failure to comply with regulatory requirements, may result in, among other things:

- restrictions on the marketing or manufacturing of the product, withdrawal of the product from the market, or voluntary or mandatory product recalls;
- revision to the labeling, including limitations on approved uses or the addition of additional warnings, contraindications or other safety information, including boxed warnings;
- imposition of a REMS, which may include distribution or use restrictions;
- requirements to conduct additional post-market clinical trials to assess the safety of the product;
- fines, warning letters or other regulatory enforcement action;
- refusal by the FDA to approve pending applications or supplements to approved applications filed by us;
- product seizure or detention, or refusal to permit the import or export of products; and
- injunctions or the imposition of civil or criminal penalties.

The FDA's and other regulatory authorities' policies may change and additional government regulations may be enacted that could prevent, limit or delay regulatory approval of our product candidates. If we are slow or unable to adapt to changes in existing requirements or the adoption of new requirements or policies, or if we are not able to maintain regulatory compliance, we may lose any marketing approval that we may have obtained, which would adversely affect our business, prospects and ability to achieve or sustain profitability.

If we are unable to successfully validate, develop and obtain regulatory approval for any required companion diagnostic tests for our product candidates or experience significant delays in doing so, we may fail to obtain approval or may not realize the full commercial potential of these product candidates.

In connection with the clinical development of our product candidates for certain indications, we may develop or engage third parties to develop or obtain access to *in vitro* companion diagnostic tests to identify

patient subsets within a disease category who may derive benefit from our product candidates, as we are targeting certain genetically defined populations for our treatments. Such companion diagnostics may be used during our clinical trials and may be required in connection with the FDA approval of our product candidates. To be successful, we or our collaborators will need to address a number of scientific, technical, regulatory and logistical challenges. Companion diagnostics are subject to regulation by the FDA, EMA and other regulatory authorities as medical devices and require separate regulatory approval prior to commercialization.

We may rely on third parties for the design, development and manufacture of companion diagnostic tests for our therapeutic product candidates that may require such tests. If we enter into such collaborative agreements, we will be dependent on the sustained cooperation and effort of our future collaborators in developing and obtaining approval for these companion diagnostics. We and our future collaborators may encounter difficulties in developing and obtaining approval for the companion diagnostics, including issues relating to selectivity/specificity, analytical validation, reproducibility, or clinical validation of companion diagnostics. We and our future collaborators also may encounter difficulties in developing, obtaining regulatory approval for, manufacturing and commercializing companion diagnostics similar to those we face with respect to our therapeutic product candidates themselves, including issues with achieving regulatory clearance or approval, production of sufficient quantities at commercial scale and with appropriate quality standards, and in gaining market acceptance. If we are unable to successfully develop companion diagnostics for these therapeutic product candidates, or experience delays in doing so, the development of these therapeutic product candidates may be adversely affected, these therapeutic product candidates may not obtain marketing approval or such approval may be delayed, and we may not realize the full commercial potential of any of these therapeutics that obtain marketing approval. As a result, our business, results of operations and financial condition could be materially harmed. In addition, a diagnostic company with whom we contract may decide to discontinue developing, selling or manufacturing the companion diagnostic test that we anticipate using in connection with development and commercialization of our product candidates or our relationship with such diagnostic company may otherwise terminate. We may not be able to enter into arrangements with another diagnostic company to obtain supplies of an alternative diagnostic test for use in connection with the development and commercialization of our product candidates or do so on commercially reasonable terms, which could adversely affect and/or delay the development or commercialization of our therapeutic product candidates.

Our relationships with customers, healthcare professionals, and third-party payors will be subject to applicable anti-kickback, fraud and abuse and other healthcare laws and regulations, which could expose us to significant penalties, including criminal sanctions, administrative civil penalties, exclusion from government healthcare programs, contractual damages, reputational harm and diminished profits and future earnings.

Our current and future business operations and activities may subject us to additional healthcare statutory and regulatory requirements and enforcement by the federal government and the states and foreign governments in which we conduct our business. Healthcare providers and third-party payors play a primary role in the recommendation and prescription of any product candidates for which we obtain marketing approval. Our current and future arrangements with healthcare professionals, third-party payors and customers may expose us to broadly applicable fraud and abuse and other healthcare laws and regulations that may constrain the business or financial arrangements and relationships through which we research as well as market, sell and distribute our product candidates for which we obtain marketing approval. These laws and regulations may restrict or prohibit a wide range of ownership, pricing, discounting, marketing and promotion, structuring and commission(s), certain customer incentive programs and other business arrangements generally. Restrictions under applicable federal and state healthcare laws and regulations, include the following:

- the federal Anti-Kickback Statute prohibits, among other things, persons and entities from knowingly and willfully soliciting, offering, receiving or providing remuneration, directly or indirectly, in cash or in kind, to induce or reward either the referral of an individual for, or the purchase, order or recommendation of, any good or service, for which payment may be made under federal and state healthcare programs such as

Medicare and Medicaid. The Anti-Kickback Statute has been interpreted to apply to arrangements between pharmaceutical manufacturers, on the one hand, and prescribers, purchasers and formulary managers, on the other. A person or entity does not need to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation;

- the federal civil and criminal false claims, including the federal False Claims Act, or FCA, which can be enforced through civil whistleblower or qui tam actions, and civil monetary penalties laws, which impose criminal and civil penalties against individuals or entities for knowingly presenting, or causing to be presented, to the federal government, claims for payment that are false or fraudulent or making a false statement to avoid, decrease or conceal an obligation to pay money to the federal government. In addition, the government may assert that a claim including items and services resulting from a violation of the federal Anti-Kickback Statute constitutes a false of fraudulent claim for purposes of the FCA;
- the federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, imposes criminal and civil liability for executing a scheme to defraud any healthcare benefit program, or knowingly and willfully falsifying, concealing or covering up a material fact or making any materially false statement in connection with the delivery of or payment for healthcare benefits, items or services; similar to the federal Anti-Kickback Statute, a person or entity does not need to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation;
- the federal physician payment transparency requirements, sometimes referred to as the “Sunshine Act” under the Affordable Care Act, require certain manufacturers of drugs, devices, biologics and medical supplies that are reimbursable under Medicare, Medicaid, or the Children’s Health Insurance Program to report to the Centers for Medicare & Medicaid Services, or CMS, information related to transfers of value made to physicians (currently defined to include doctors, dentists, optometrists, podiatrists and chiropractors) and teaching hospitals, as well as ownership and investment interests of such physicians and their immediate family members. Effective January 1, 2022, these reporting obligations will extend to include transfers of value made to and ownership interest held by certain non-physician providers such as physician assistants, nurse practitioners, clinical nurse specialists, anesthesiologist assistants, certified registered nurse anesthetists and certified nurse midwives during the previous year;
- HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009 and its implementing regulations, impose obligations on certain covered entity healthcare providers, health plans, and healthcare clearinghouses and their business associates that perform certain services involving the use or disclosure of individually identifiable health information as well as their covered subcontractors, including mandatory contractual terms, with respect to safeguarding the privacy, security and transmission of individually identifiable health information; and
- analogous state laws and regulations, such as state anti-kickback and false claims laws may apply to sales or marketing arrangements and claims involving healthcare items or services reimbursed by non-governmental third-party payors, including private insurers. Some state laws require pharmaceutical companies to comply with the pharmaceutical industry’s voluntary compliance guidelines and the relevant compliance guidance promulgated by the federal government in addition to requiring drug manufacturers to report information related to payments to physicians and other health care providers or marketing expenditures. Some state and local laws require the registration of pharmaceutical sales representatives. Further, many state laws governing the privacy and security of health information in certain circumstances, differ from each other in significant ways and often are not preempted by HIPAA, thus complicating compliance efforts.

Because of the breadth of these laws and the narrowness of the statutory exceptions and regulatory safe harbors available, it is possible that some of our business activities, including compensation of physicians with stock or stock options, could, despite efforts to comply, be subject to challenge under current or future statutes, regulations or case law interpreting applicable fraud and abuse or other healthcare laws and regulations. Ensuring that our business arrangements with third parties comply with applicable healthcare laws and regulations could

involve substantial costs. It is possible that governmental authorities will conclude that our business practices do not comply with current or future statutes, regulations or case law involving applicable fraud and abuse or other healthcare laws and regulations. If our operations, including anticipated activities to be conducted by our sales team, were to be found to be in violation of any of these laws or any other governmental regulations that may apply to us, we may be subject to significant civil, criminal and administrative penalties, damages, fines, disgorgement, imprisonment, exclusion from government funded healthcare programs, such as Medicare and Medicaid, contractual damages, integrity oversight and reporting obligations, reputational harm, diminished profits and future earnings, and the curtailment or restructuring of our operations, any of which could adversely affect our ability to operate our business and our results of operations. If any of the physicians or other providers or entities with whom we expect to do business is found not to be in compliance with applicable laws, they may be subject to significant criminal, civil or administrative sanctions, including exclusions from government funded healthcare programs. In addition, the approval and commercialization of any of our product candidates outside the United States will also likely subject us to foreign equivalents of the healthcare laws mentioned above, among other foreign laws.

Healthcare legislative reform measures may have a material adverse effect on our business and results of operations.

The U.S. and many foreign jurisdictions have enacted or proposed legislative and regulatory changes affecting the healthcare system that could prevent or delay marketing approval of our current or future product candidates or any future product candidates, restrict or regulate post-approval activities and affect our ability to profitably sell a product for which we obtain marketing approval. Changes in regulations, statutes or the interpretation of existing regulations could impact our business in the future by requiring, for example: (i) changes to our manufacturing arrangements, (ii) additions or modifications to product labeling, (iii) the recall or discontinuation of our products or (iv) additional record-keeping requirements. If any such changes were to be imposed, they could adversely affect the operation of our business. In the U.S., there have been and continue to be a number of legislative initiatives to contain healthcare costs. For example, in March 2010, the Patient Protection and Affordable Care Act, as amended by the Health Care Education and Reconciliation Act, or collectively the ACA, was passed, which substantially changed the way healthcare is financed by both governmental and private insurers, and significantly impacted the U.S. pharmaceutical industry. The ACA, among other things, subjected biological products to potential competition by lower-cost biosimilars, addressed a new methodology by which rebates owed by manufacturers under the Medicaid Drug Rebate Program are calculated for drugs that are inhaled, infused, instilled, implanted or injected, increases the minimum Medicaid rebates owed by manufacturers under the Medicaid Drug Rebate Program and extended the rebate program to individuals enrolled in Medicaid managed care organizations, established annual fees and taxes on manufacturers of certain branded prescription drugs, and created a new Medicare Part D coverage gap discount program, in which manufacturers must agree to offer 70% (increased pursuant to the Bipartisan Budget Act of 2018, effective as of 2019) point-of-sale discounts off negotiated prices of applicable brand drugs to eligible beneficiaries during their coverage gap period, as a condition for the manufacturer’s outpatient drugs to be covered under Medicare Part D.

Members of the U.S. Congress and the Trump administration have expressed intent to pass legislation or adopt executive orders to fundamentally change or repeal parts of the ACA. While Congress has not passed comprehensive repeal legislation to date, the Tax Act, repealed, effective January 1, 2019, the tax-based shared responsibility payment imposed by the ACA on certain individuals who fail to maintain qualifying health coverage for all or part of a year that is commonly referred to as the “individual mandate.” On December 14, 2018, a federal district court in Texas ruled the individual mandate is a critical and inseverable feature of the ACA, and therefore, because it was repealed as part of the Tax Act, the remaining provisions of the ACA are invalid as well. On December 18, 2019, the Fifth Circuit U.S. Court of Appeals held that the individual mandate is unconstitutional, and remanded the case to the lower court to determine whether the remaining provisions of the ACA are invalid as well. On March 2, 2020, the U.S. Supreme Court granted the petitions for writs of

certiorari to review this case. It is unclear how such litigation and other efforts to repeal and replace the ACA will impact the ACA and our business. It is uncertain when a decision will be reached.

Since January 2017, the current presidential administration has signed several Executive Orders and other directives designed to eliminate the implementation of certain provisions of the ACA or otherwise circumvent some of the requirements for health insurance mandated by the ACA. Concurrently, Congress has considered legislation that would repeal or repeal and replace all or part of the ACA. While Congress has not passed comprehensive repeal legislation, it has enacted laws that modify certain provisions of the ACA. For example, on January 22, 2018, a continuing resolution on appropriations for fiscal year 2018 was approved that delayed the implementation of certain ACA-mandated fees, including the so called "Cadillac" tax on certain high cost employer-sponsored insurance plans, the annual fee imposed on certain health insurance providers based on market share, and the medical device excise tax on non-exempt medical devices; however on December 20, 2019, the Further Consolidated Appropriations Act (H.R. 1865) was signed into law, which repeals the Cadillac tax, the health insurance provider tax, and the medical device excise tax. It is impossible to determine whether similar taxes could be instated in the future. The Bipartisan Budget Act of 2018, also amended the ACA, effective January 1, 2019, by increasing the point-of-sale discount that is owed by pharmaceutical manufacturers who participate in Medicare Part D and closing the coverage gap in most Medicare drug plans, commonly referred to as the "donut hole." CMS published a final rule permitting further collections and payments to and from certain ACA qualified health plans and health insurance issuers under the ACA risk adjustment program in response to the outcome of federal district court litigation regarding the method CMS uses to determine this risk adjustment.

In addition, other legislative changes have been proposed and adopted since the ACA was enacted. In August 2011, the Budget Control Act of 2011, among other things, created measures for spending reductions by Congress. A Joint Select Committee on Deficit Reduction, tasked with recommending a targeted deficit reduction of at least $1.2 trillion for the years 2013 through 2021, was unable to reach required goals, thereby triggering the legislation's automatic reduction to several government programs. This includes aggregate reductions of Medicare payments to providers up to 2% per fiscal year, and, due to subsequent legislative amendments, will remain in effect through 2030 unless additional Congressional action is taken. However, the Medicare sequester reductions under the Budget Control Act of 2011 have been suspended from May 1, 2020 through March 31, 2021 due to the COVID-19 pandemic. The American Taxpayer Relief Act of 2012 among other things, reduced Medicare payments to several providers, including hospitals, imaging centers and cancer treatment centers, and increased the statute of limitations period for the government to recover overpayments to providers from three to five years.

There has been increasing legislative and enforcement interest in the U.S. with respect to specialty drug pricing practices. Specifically, there have been several recent U.S. Congressional inquiries and proposed federal and state legislation designed to, among other things, bring more transparency to drug pricing, reduce the cost of prescription drugs under Medicare, review the relationship between pricing and manufacturer patient programs, and reform government program reimbursement methodologies for drugs. At the federal level, the Trump administration's budget for fiscal year 2021 includes a $135 billion allowance to support legislative proposals seeking to reduce drug prices, increase competition, lower out-of-pocket drug costs for patients, and increase patient access to lower-cost generic and biosimilar drugs. On March 10, 2020, the Trump administration sent "principles" for drug pricing to Congress, calling for legislation that would, among other things, cap Medicare Part D beneficiary out-of-pocket pharmacy expenses, provide an option to cap Medicare Part D beneficiary monthly out-of-pocket expenses, and place limits on pharmaceutical price increases. Additionally, the Trump administration previously released a "Blueprint" to lower drug prices and reduce out of pocket costs of drugs that contained proposals to increase manufacturer competition, increase the negotiating power of certain federal healthcare programs, incentivize manufacturers to lower the list price of their products and reduce the out of pocket costs of product candidates paid by consumers. The U.S. Department of Health and Human Services, or HHS, has already started the process of soliciting feedback on some of these measures and, at the same time, is immediately implementing others under its existing authority. For example, in May 2019, CMS issued a final

rule to allow Medicare Advantage Plans the option of using step therapy, a type of prior authorization, for Part B drugs beginning January 1, 2020. This final rule codified CMS's policy change that was effective January 1, 2019. Additionally, on July 24, 2020 and September 13, 2020, the Trump administration announced several executive orders related to prescription drug pricing that seek to implement several of the administration's proposals. As a result, the FDA also released a final rule on September 24, 2020 providing guidance for states to build and submit importation plans for drugs from Canada. Further, on November 20, 2020, HHS finalized a regulation removing safe harbor protection for price reductions from pharmaceutical manufacturers to plan sponsors under Part D, either directly or through pharmacy benefit managers, unless the price reduction is required by law. The rule also creates a new safe harbor for price reductions reflected at the point-of-sale, as well as a safe harbor for certain fixed fee arrangements between pharmacy benefit managers and manufacturers. Further, in November 2020, CMS issued an interim final rule implementing the Most Favored Nation, or MFN, Model under which Medicare Part B reimbursement rates will be calculated for certain drugs and biologicals based on the lowest price drug manufacturers receive in Organization for Economic Cooperation and Development countries with a similar gross domestic product per capita. The MFN Model regulations mandate participation by identified Part B providers and will apply in all U.S. states and territories for a seven-year period beginning January 1, 2021, and ending December 31, 2027. On December 28, 2020, the United States District Court in Northern California issued a nationwide preliminary injunction against implementation of the interim final rule. The likelihood of implementation of any of the other Trump administration reform initiatives is uncertain, particularly in light of the recent U.S. presidential election.

At the state level, individual states are increasingly aggressive in passing legislation and implementing regulations designed to control pharmaceutical and biological product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures, and, in some cases, designed to encourage importation from other countries and bulk purchasing. In addition, regional health care authorities and individual hospitals are increasingly using bidding procedures to determine what pharmaceutical products and which suppliers will be included in their prescription drug and other health care programs. These measures could reduce the ultimate demand for our products, once approved, or put pressure on our product pricing.

We expect that additional state and federal healthcare reform measures will be adopted in the future, any of which could limit the amounts that federal and state governments will pay for healthcare products and services, which could result in reduced demand for our current or future product candidates or additional pricing pressures. In particular any policy changes through CMS as well as local state Medicaid programs could have a significant impact on our business in light of the higher proportion of SCD patients that utilize Medicare and Medicaid programs to pay for treatments.

Our revenue prospects could be affected by changes in healthcare spending and policy in the U.S. and abroad. We operate in a highly regulated industry and new laws, regulations or judicial decisions, or new interpretations of existing laws, regulations or decisions, related to healthcare availability, the method of delivery or payment for healthcare products and services could negatively impact our business, operations and financial condition.

There have been, and likely will continue to be, legislative and regulatory proposals at the foreign, federal and state levels directed at broadening the availability of healthcare and containing or lowering the cost of healthcare. We cannot predict the initiatives that may be adopted in the future, including repeal, replacement or significant revisions to the ACA. The continuing efforts of the government, insurance companies, managed care organizations and other payors of healthcare services to contain or reduce costs of healthcare and/or impose price controls may adversely affect:

- the demand for our current or future product candidates, if we obtain regulatory approval;
- our ability to set a price that we believe is fair for our products;
- our ability to obtain coverage and reimbursement approval for a product;
- our ability to generate revenue and achieve or maintain profitability;

- the level of taxes that we are required to pay; and
- the availability of capital.

Any reduction in reimbursement from Medicare or other government programs may result in a similar reduction in payments from private payors, which may adversely affect our future profitability.

Further, it is possible that additional governmental action is taken in response to the COVID-19 pandemic. For example, on August 6, 2020, the Trump administration issued another executive order that instructs the federal government to develop a list of "essential" medicines and then buy them and other medical supplies from U.S. manufacturers instead of from companies around the world, including China. The order is meant to reduce regulatory barriers to domestic pharmaceutical manufacturing and catalyze manufacturing technologies needed to keep drug prices low and the production of drug products in the United States.

We are subject to the U.K. Bribery Act 2010, or the Bribery Act, the U.S. Foreign Corrupt Practices Act of 1977, as amended, or the FCPA, and other anti-corruption laws, as well as export control laws, import and customs laws, trade and economic sanctions laws and other laws governing our operations.

Our operations are subject to anti-corruption laws, including the Bribery Act, the FCPA, the U.S. domestic bribery statute contained in 18 U.S.C. §201, the U.S. Travel Act, and other anti-corruption laws that apply in countries where we do business. The Bribery Act, the FCPA and these other laws generally prohibit us and our employees and intermediaries from authorizing, promising, offering, or providing, directly or indirectly, improper or prohibited payments, or anything else of value, to government officials or other persons to obtain or retain business or gain some other business advantage. Under the Bribery Act, we may also be liable for failing to prevent a person associated with us from committing a bribery offense. We and our commercial partners operate in a number of jurisdictions that pose a high risk of potential Bribery Act, or FCPA, violations, and we participate in collaborations and relationships with third parties whose corrupt or illegal activities could potentially subject us to liability under the Bribery Act, FCPA or local anti-corruption laws, even if we do not explicitly authorize or have actual knowledge of such activities. In addition, we cannot predict the nature, scope or effect of future regulatory requirements to which our international operations might be subject or the manner in which existing laws might be administered or interpreted.

We are also subject to other laws and regulations governing our international operations, including regulations administered by the governments of the United Kingdom and the United States, and authorities in the European Union, including applicable export control regulations, economic sanctions and embargoes on certain countries and persons, anti-money laundering laws, import and customs requirements and currency exchange regulations, collectively referred to as the Trade Control laws.

There is no assurance that we will be completely effective in ensuring our compliance with all applicable anti-corruption laws, including the Bribery Act, the FCPA or other legal requirements, including Trade Control laws. If we are not in compliance with the Bribery Act, the FCPA and other anti-corruption laws or Trade Control laws, we may be subject to criminal and civil penalties, disgorgement and other sanctions and remedial measures, and legal expenses, which could have an adverse impact on our business, financial condition, results of operations and liquidity. Likewise, any investigation of any potential violations of the Bribery Act, the FCPA, other anti-corruption laws or Trade Control laws by United Kingdom, United States or other authorities could also have an adverse impact on our reputation, our business, results of operations and financial condition.

If we fail to comply with environmental, health and safety laws and regulations, we could become subject to fines or penalties or incur costs that could have a material adverse effect on the success of our business.

We are subject to numerous environmental, health and safety laws and regulations, including those governing laboratory procedures and the handling, use, storage, treatment and disposal of hazardous materials and wastes. Our operations involve the use of hazardous and flammable materials, including chemicals and biological materials. Our operations also produce hazardous waste products. We generally contract with third parties for the disposal of these materials and wastes. We cannot eliminate the risk of contamination or injury from these materials. In the event of contamination or injury resulting from our use of hazardous materials, we

could be held liable for any resulting damages, and any liability could exceed our resources. We also could incur significant costs associated with civil or criminal fines and penalties. Furthermore, environmental laws and regulations are complex, change frequently and have tended to become more stringent. We cannot predict the impact of such changes and cannot be certain of our future compliance. In addition, we may incur substantial costs in order to comply with current or future environmental, health and safety laws and regulations. These current or future laws and regulations may impair our research, development or production efforts. Failure to comply with these laws and regulations also may result in substantial fines, penalties or other sanctions.

Although we maintain workers' compensation insurance to cover us for costs and expenses we may incur due to injuries to our employees resulting from the use of hazardous materials or other work-related injuries, this insurance may not provide adequate coverage against potential liabilities. In addition, we may incur substantial costs in order to comply with current or future environmental, health and safety laws and regulations. These current or future laws and regulations may impair our research, development or production efforts. Failure to comply with these laws and regulations also may result in substantial fines, penalties or other sanctions or liabilities, which could materially adversely affect our business, financial condition, results of operations and prospects.

Risks Related to the Commercialization of our Product Candidates

If we are unable to establish sales, marketing and distribution capabilities for our product candidates, or enter into sales, marketing and distribution agreements with third parties, we may not be successful in commercializing our product candidates, if approved.

We currently plan to work to build our global commercialization capabilities internally over time such that we are able to commercialize any product candidate for which we may obtain regulatory approval. However, we currently have no sales, marketing or distribution capabilities and have no experience in marketing or distributing pharmaceutical products. To achieve commercial success for any product candidate for which we may obtain marketing approval, we will need to expand our sales and marketing organization and establish logistics and distribution processes to commercialize and deliver our product candidates to patients and healthcare providers. The development of sales, marketing and distribution capabilities will require substantial resources, will be time-consuming and could delay any product launch.

If we are unable or decide not to establish internal sales, marketing and distribution capabilities, we would have to pursue collaborative arrangements regarding the sales and marketing of our products. However, we may not be successful in entering into arrangements with third parties to sell, market and distribute our product candidates or may be unable to do so on terms that are favorable to us, or if we are able to do so, that they would be effective and successful in commercializing our products. Our product revenues and our profitability, if any, would likely to be lower than if we were to sell, market and distribute any product candidates that we develop ourselves. In addition, we would have limited control over such third parties, and any of them may fail to devote the necessary resources and attention to sell and market our product candidates effectively.

If we do not establish sales, marketing and distribution capabilities successfully, either on our own or in collaboration with third parties, we will not be successful in commercializing our product candidates in the United States or overseas.

We operate in a rapidly changing industry and face significant competition, which may result in others discovering, developing or commercializing products before or more successfully than we do.

The development and commercialization of new biopharmaceutical products is highly competitive and subject to rapid and significant technological advancements. We face competition from major multi-national pharmaceutical companies, biotechnology companies and specialty pharmaceutical companies with respect to our current and future product candidates that we may develop and commercialize in the future. There are a number

of large pharmaceutical and biotechnology companies that currently market and sell products or are pursuing the development of product candidates for the treatment of cancer. Smaller or early-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large, established companies. Potential competitors also include academic institutions, government agencies and other public and private research organizations.

In addition to the current standard of care treatments for patients with infectious diseases or cancers, numerous commercial and academic preclinical studies and clinical trials are being undertaken by a large number of parties to assess novel technologies and product candidates in the field of immunotherapy. Results from these studies and trials have fueled increasing levels of interest in the field of immunotherapy.

Large pharmaceutical companies that have commercialized or are developing immunotherapies to treat cancer include AstraZeneca, Bristol Myers Squibb, Gilead Sciences, Merck, Novartis, Pfizer, and Roche/Genentech.

On the technology level, other companies which can potentially develop competing product candidates which act to stimulate the body's immune response as a treatment for SCCHN and other solid tumors include companies developing cell-based therapeutics such as CAR-T/TCR/NK therapies as well as companies developing therapeutic vaccines including BioNTech, Moderna, Gritstone Oncology and Oncorus, among others. In addition, a number of companies are developing oncolytic virus approaches, including Boehringer Ingelheim, Johnson and Johnson, Regeneron, Vyriad, Replimune and Turnstone. Amgen has received FDA approval for its oncolytic virus-based product, T-VEC.

Ablynx, a subsidiary of Sanofi, and Oncorus are actively pursuing the development of nanobodies as therapeutics.

Our competitors with development-stage programs may obtain marketing approval from the FDA or other comparable regulatory authorities for their product candidates more rapidly than we do, and they could establish a strong market position before we are able to enter the market. In addition, our competitors may succeed in developing, acquiring or licensing technologies and products that are more effective, more effectively marketed and sold or less costly than any product candidates that we may develop, which could render our product candidates non-competitive and obsolete.

Many of our competitors, either alone or with their strategic collaborators, have substantially greater financial, technical and human resources than we do. Accordingly, our competitors may be more successful than we are in obtaining approval for treatments and achieving widespread market acceptance, which may render our treatments obsolete or non-competitive. Mergers and acquisitions in the biotechnology and pharmaceutical industries may result in even more resources being concentrated among a smaller number of our competitors. These competitors also compete with us in recruiting and retaining qualified scientific and management personnel and establishing clinical trial sites and patient registration for clinical studies, as well as in acquiring technologies complementary to, or necessary for, our programs. Smaller or early-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies.

Our commercial opportunity could be reduced or eliminated if our competitors develop and commercialize products that are safer, more effective, have fewer or less severe side effects, are more convenient or are less expensive or better reimbursed than any products that we may commercialize. Our competitors also may obtain FDA or other regulatory approval for their products more rapidly than we may obtain approval for ours, which could result in our competitors establishing a strong market position for either the product or a specific indication before we are able to enter the market.

Even if any of our product candidates receives marketing approval, it may fail to achieve the degree of market acceptance by physicians, patients, third-party payors and others in the medical community necessary for commercial success.

Even if we obtain approvals from the FDA or other comparable regulatory agencies and are able to initiate commercialization of our clinical-stage product candidates or any other product candidates we develop, the product candidate may not achieve market acceptance among physicians, patients, hospitals, including pharmacy directors, and third-party payors and, ultimately, may not be commercially successful. The degree of market acceptance of our product candidates, if approved for commercial sale, will depend on a number of factors, including:

- the clinical indications for which our product candidates are approved;
- physicians, hospitals, cancer treatment centers, and patients considering our product candidates as a safe and effective treatment;
- the potential and perceived advantages of our product candidates over alternative treatments;
- the prevalence and severity of any side effects;
- product labeling or product insert requirements of the FDA or other regulatory authorities;
- limitations or warnings contained in the labeling approved by the FDA;
- the timing of market introduction of our product candidates as well as competitive products;
- the cost of treatment in relation to alternative treatments;
- the amount of upfront costs or training required for physicians to administer our product candidates;
- the availability of coverage, adequate reimbursement from, and our ability to negotiate pricing with, third-party payors and government authorities;
- the willingness of patients to pay out-of-pocket in the absence of comprehensive coverage and reimbursement by third-party payors and government authorities;
- relative convenience and ease of administration, including as compared to alternative treatments and competitive therapies; and
- the effectiveness of our sales and marketing efforts and distribution support.

Our efforts to educate physicians, patients, third-party payors and others in the medical community on the benefits of our product candidates, if approved, may require significant resources and may never be successful. Such efforts may require more resources than are typically required due to the complexity and uniqueness of our product candidates. Because we expect sales of our product candidates, if approved, to generate substantially all of our product revenue for the foreseeable future, the failure of our product candidates to find market acceptance would harm our business and could require us to seek additional financing.

In addition, although we are not utilizing embryonic stem cells or replication competent vectors, adverse publicity due to the ethical and social controversies surrounding the therapeutic use of such technologies, and reported side effects from any clinical trials using these technologies or the failure of such trials to demonstrate that these therapies are safe and effective, may limit market acceptance our product candidates. If our product candidates are approved but fail to achieve market acceptance among physicians, patients, hospitals, cancer treatment centers or others in the medical community, we will not be able to generate significant revenue.

Even if our product candidates, if approved, achieve market acceptance, we may not be able to maintain that market acceptance over time if new products or technologies are introduced that are more favorably received than our products, are more cost effective or render our products obsolete.

Coverage and adequate reimbursement may not be available for our current or any future product candidates, which could make it difficult for us to sell profitably, if approved.

Market acceptance and sales of any product candidates, if approved, that we commercialize will depend in part on the extent to which reimbursement for these products and related treatments will be available from third-party payors, including government health administration authorities, managed care organizations and private health insurers. Third-party payors decide which therapies they will pay for and establish reimbursement levels. In the United States, the principal decisions about reimbursement for new medicines are typically made by CMS, an agency within HHS. CMS decides whether and to what extent a new medicine will be covered and reimbursed under Medicare and private payors tend to follow CMS to a substantial degree. However, decisions regarding the extent of coverage and amount of reimbursement to be provided for any product candidates that we develop will be made on a payor-by-payor basis. Further, no uniform policy for coverage and reimbursement exists in the United States, and coverage and reimbursement can differ significantly from payor to payor. As a result, one payor's determination to provide coverage for a drug does not assure that other payors will also provide coverage and adequate reimbursement for the drug. Additionally, a third-party payor's decision to provide coverage for a therapy does not imply that an adequate reimbursement rate to allow us to establish or maintain pricing sufficient to realize a sufficient return on our investment will be approved. Third-party payors are increasingly challenging the price, examining the medical necessity and reviewing the cost-effectiveness of medical products, therapies and services, in addition to questioning their safety and efficacy. We may incur significant costs to conduct expensive pharmaco-economic studies in order to demonstrate the medical necessity and cost-effectiveness of our product candidates, in addition to the costs required to obtain FDA approvals. Our product candidates may not be considered medically necessary or cost-effective.

Each payor determines whether or not it will provide coverage for a therapy, what amount it will pay the manufacturer for the therapy, and on what tier of its list of covered drugs, or formulary, it will be placed. The position on a payor's formulary, generally determines the co-payment that a patient will need to make to obtain the therapy and can strongly influence the adoption of such therapy by patients and physicians. Patients who are prescribed treatments for their conditions and providers prescribing such services generally rely on third-party payors to reimburse all or part of the associated healthcare costs. Patients are unlikely to use our products, and providers are unlikely to prescribe our products, unless coverage is provided and reimbursement is adequate to cover a significant portion of the cost of our products and their administration. Therefore, coverage and adequate reimbursement is critical to new medical product acceptance.

In addition, companion diagnostic tests require coverage and reimbursement separate and apart from the coverage and reimbursement for their companion pharmaceutical or biological products. Similar challenges to obtaining coverage and reimbursement, applicable to pharmaceutical or biological products, will apply to companion diagnostics. Additionally, if any companion diagnostic provider is unable to obtain reimbursement or is inadequately reimbursed, that may limit the availability of such companion diagnostic, which would negatively impact prescriptions for our product candidates, if approved.

A primary trend in the U.S. healthcare industry and elsewhere is cost containment. Third-party payors have attempted to control costs by limiting coverage and the amount of reimbursement for particular medications. We cannot be sure that coverage and reimbursement will be available for any drug that we commercialize and, if reimbursement is available, what the level of reimbursement will be. Even if favorable coverage and reimbursement status is attained for one or more product candidates for which we receive regulatory approval, less favorable coverage policies and reimbursement rates may be implemented in the future. Inadequate coverage and reimbursement may impact the demand for, or the price of, any drug for which we obtain marketing approval. If coverage and adequate reimbursement are not available, or are available only to limited levels, we may not be able to successfully commercialize our current and any future product candidates that we develop. In many countries, the prices of medical products are subject to varying price control mechanisms as part of national health systems. In general, the prices of medicines under such systems are substantially lower than in the United States. Other countries allow companies to fix their own prices for medicines, but monitor and control

company profits. Additional foreign price controls or other changes in pricing regulation could restrict the amount that we are able to charge for our product candidates. Accordingly, in markets outside the United States, the reimbursement for products may be reduced compared with the United States and may be insufficient to generate commercially reasonable revenues and profits.

We cannot be sure that coverage and reimbursement in the United States or elsewhere will be available for any product that we may develop, and any reimbursement that may become available may be decreased or eliminated in the future.

Product liability lawsuits against us could cause us to incur substantial liabilities and to limit commercialization of any products that we may develop.

We face an inherent risk of product liability exposure related to the testing of our product candidates in human clinical trials and will face an even greater risk if we commercially sell any products that we may develop. If we cannot successfully defend ourselves against claims that our product candidates or products caused injuries, we will incur substantial liabilities. Regardless of merit or eventual outcome, liability claims may result in:

- reduced resources of our management to pursue our business strategy;
- decreased demand for any product candidates or products that we may develop;
- injury to our reputation and significant negative media attention;
- withdrawal of clinical trial participants;
- initiation of investigations by regulators;
- product recalls, withdrawals or labeling, marketing or promotional restrictions;
- significant costs to defend the resulting litigation;
- substantial monetary awards paid to clinical trial participants or patients;
- loss of revenue; and
- the inability to commercialize any products that we may develop.

We currently do not have product liability in place as the cost of coverage exceeds the covered amount during clinical trials. Once we are ready for a product launch, we intend to bind a policy with product liability insurance coverage in the aggregate and a per incident limit at an amount adequate to cover estimated liabilities that we may incur. We may need to increase our insurance coverage as we expand our clinical trials or if we commence commercialization of our product candidates. Insurance coverage is increasingly expensive. We may not be able to maintain insurance coverage at a reasonable cost or in an amount adequate to satisfy any liability that may arise.

Inadequate funding for the FDA, the SEC and other government agencies could hinder their ability to hire and retain key leadership and other personnel, prevent new products and services from being developed or commercialized in a timely manner or otherwise prevent those agencies from performing normal business functions on which the operation of our business may rely, which could negatively impact our business.

The ability of the FDA to review and approve new products can be affected by a variety of factors, including government budget and funding levels, ability to hire and retain key personnel and accept the payment of user fees, and statutory, regulatory, and policy changes. Average review times at the agency have fluctuated in recent years as a result. In addition, government funding of the SEC and other government agencies on which our operations may rely, including those that fund research and development activities, is subject to the political process, which is inherently fluid and unpredictable.

Disruptions at the FDA and other agencies may also slow the time necessary for product candidates to be reviewed and/or approved by necessary government agencies, which would adversely affect our business. For example, over the last several years, the U.S. government has shut down several times, and certain regulatory agencies, such as the FDA and the SEC, have had to furlough critical employees and stop critical activities. Separately, in response to the COVID-19 pandemic, on March 10, 2020, the FDA announced its intention to temporarily postpone most inspections of foreign manufacturing facilities and products. On March 18, 2020, the FDA announced its intention to temporarily postpone routine surveillance inspections of domestic manufacturing facilities and provided guidance regarding the conduct of clinical trials, which has since been further updated. As of June 23, 2020, the FDA noted it was continuing to ensure timely reviews of applications for medical products during the COVID-19 pandemic in line with its user fee performance goals and conducting mission critical domestic and foreign inspections to ensure compliance of manufacturing facilities with FDA quality standards. On July 16, 2020, FDA noted that it is continuing to expedite oncology product development with its staff teleworking full-time. However, FDA may not be able to continue its current pace and review timelines could be extended. As of July 2020, utilizing a rating system to assist in determining when and where it is safest to conduct such inspections based on data about the virus' trajectory in a given state and locality and the rules and guidelines that are put in place by state and local governments, the FDA is either continuing to, on a case-by-case basis, conduct only mission critical inspections, or, where possible to do so safely, resuming prioritized domestic inspections, which generally include pre-approval inspections. Foreign pre-approval inspections that are not deemed mission-critical remain postponed, while those deemed mission-critical will be considered for inspection on a case-by-case basis. The FDA will use similar data to inform resumption of prioritized operations abroad as it becomes feasible and advisable to do so. The FDA may not be able to maintain this pace, and delays or setbacks are possible in the future. Should the FDA determine that an inspection is necessary for approval and an inspection cannot be completed during the review cycle due to restrictions on travel, the FDA has stated that it generally intends to issue a complete response letter. Further, if there is inadequate information to make a determination on the acceptability of a facility, the FDA may defer action on the application until an inspection can be completed. Additionally, regulatory authorities outside the United States may adopt similar restrictions or other policy measures in response to the COVID-19 pandemic. If a prolonged government shutdown occurs, or if global health concerns continue to prevent the FDA or other regulatory authorities from conducting their regular inspections, reviews, or other regulatory activities, it could significantly impact the ability of the FDA to timely review and process our regulatory submissions, which could have a material adverse effect on our business. Further, upon completion of this offering and in our operations as a public company, future government shutdowns could impact our ability to access the public markets and obtain necessary capital in order to properly capitalize and continue our operations.

Risks Related to Our Intellectual Property

If we are unable to obtain and maintain patent protection for our phage-based vaccine and ASPH-targeting technologies and product candidates, or if the scope of the patent protection obtained is not sufficiently broad, our competitors could develop and commercialize technology and biologics similar or identical to ours, and our ability to successfully commercialize our technology and product candidates may be impaired.

Our success depends, in large part, on our ability to obtain and maintain patent protection in the United States, Canada, China, the European Union and other countries with respect to our product candidates. We seek to protect our proprietary position by filing patent applications related to our technology and product candidates in the major pharmaceutical markets, including the United States, Canada, China, major countries in Europe and Japan. If we do not adequately protect our intellectual property, competitors may be able to use our technologies and erode or negate any competitive advantage that we may have, which could harm our business and ability to achieve profitability.

To protect our proprietary positions, we file patent applications in the United States and other countries related to our novel technologies and product candidates that are important to our business. The patent application and prosecution process is expensive and time-consuming. We may not be able to file and prosecute

all necessary or desirable patent applications at a reasonable cost or in a timely manner. We may also fail to identify patentable aspects of our research and development before it is too late to obtain patent protection. It is possible that defects of form in the preparation or filing of our patents or patent applications may exist, or may arise in the future, such as with respect to proper priority claims, inventorship, claim scope or patent term adjustments. If any current or future licensors or licensees are not fully cooperative or disagree with us as to the prosecution, maintenance or enforcement of any patent rights, such patent rights could be compromised and we might not be able to prevent third parties from making, using and selling competing products. If there are material defects in the form or preparation of our patents or patent applications, such patents or applications may be invalid and unenforceable. Moreover, our competitors may independently develop equivalent knowledge, methods and know-how. Any of these outcomes could impair our ability to prevent competition from third parties.

It is also possible that we will fail to identify patentable aspects of our research and development output before it is too late to obtain patent protection. The patent applications that we own may fail to result in issued patents with claims that cover our current and future product candidates in the United States or in other foreign countries. Our patent applications cannot be enforced against third parties practicing the technology claimed in such applications unless, and until, a patent issues from such applications, and then only to the extent the issued claims cover the technology.

If the patent applications we hold with respect to our development programs and product candidates fail to issue, if their breadth or strength of protection is threatened, or if they fail to provide meaningful exclusivity for our current and future product candidates, it could threaten our ability to commercialize our product candidates. Any such outcome could have a negative effect on our business.

The patent position of biotechnology and pharmaceutical companies generally is highly uncertain. Changes in either the patent laws or interpretation of the patent laws in the United States and other countries may diminish the value of our patents or narrow the scope of our patent protection. In addition, the protections offered by laws of different countries vary. No consistent policy regarding the breadth of claims allowed in biotechnology and pharmaceutical patents has emerged to date in the United States or in many foreign jurisdictions. In addition, the determination of patent rights with respect to pharmaceutical compounds and technologies commonly involves complex legal and factual questions, which has in recent years been the subject of much litigation. As a result, the issuance, scope, validity, enforceability and commercial value of our patent rights are highly uncertain. Furthermore, recent changes in patent laws in the United States, may affect the scope, strength and enforceability of our patent rights or the nature of proceedings that may be brought by or against us related to our patent rights. Additionally, the U.S. Supreme Court has ruled on several patent cases in recent years either narrowing the scope of patent protection available in certain circumstances or weakening the rights of patent owners in certain situations. In addition to increasing uncertainty with regard to our ability to obtain patents in the future, this combination of events has created uncertainty with respect to the value of patents, once obtained. Depending on decisions by the U.S. Congress, the U.S. federal courts, and the U.S. Patent and Trademark Office, or USPTO, the laws and regulations governing patents could change in unpredictable ways that could weaken our ability to obtain patents or to enforce any patents that we might obtain in the future.

We may not be aware of all third-party intellectual property rights potentially relating to our current and future our product candidates. Publications of discoveries in the scientific literature often lag behind the actual discoveries, and patent applications in the United States and other jurisdictions are typically not published until 18 months after filing, or in some cases not at all. Therefore, we cannot be certain that we were the first to make the inventions claimed in our patents or pending patent applications, or that we were the first to file for patent protection of such inventions. Similarly, should we own any patents or patent applications in the future, we may not be certain that we were the first to file for patent protection for the inventions claimed in such patents or patent applications. As a result, the issuance, scope, validity and commercial value of our patent rights cannot be predicted with any certainty. Moreover, we may be subject to a third-party pre-issuance submission of prior art to the USPTO or become involved in opposition, derivation, reexamination, *inter partes* review or interference

proceedings, in the United States or elsewhere, challenging our patent rights or the patent rights of others. An adverse determination in any such submission, proceeding or litigation could reduce the scope of, or invalidate, our patent rights, allow third parties to commercialize our technology or product candidates and compete directly with us, without payment to us, or result in our inability to manufacture or commercialize products without infringing third-party patent rights, which could significantly harm our business and results of operations.

Our pending and future patent applications may not result in patents being issued that protect our technology or product candidates, in whole or in part, or which effectively prevent others from commercializing competitive technologies and products. Even if our patent applications issue as patents, they may not issue in a form that will provide us with any meaningful protection against competing products or processes sufficient to achieve our business objectives, prevent competitors from competing with us or otherwise provide us with any competitive advantage. Our competitors may be able to circumvent our owned or licensed patents, should they issue, by developing similar or alternative technologies or products in a non-infringing manner. Our competitors may seek approval to market their own products similar to or otherwise competitive with our products. In these circumstances, we may need to defend and/or assert our patents, including by filing lawsuits alleging patent infringement. In any of these types of proceedings, a court or other agency with jurisdiction may find our patents invalid and/or unenforceable.

The issuance of a patent is not conclusive as to its inventorship, scope, validity or enforceability, and our owned and licensed patents may be challenged in the courts or patent offices in the United States and abroad. Such challenges may result in loss of exclusivity or freedom to operate or in patent claims being narrowed, invalidated or held unenforceable, in whole or in part, which could limit our ability to stop others from using or commercializing similar or identical technology and products, or limit the duration of the patent protection of our technology and products. In addition, given the amount of time required for the development, testing and regulatory review of new product candidates, patents protecting such candidates might expire before or shortly after such candidates are commercialized.

Third parties may initiate legal proceedings alleging that we are infringing their intellectual property rights, the outcome of which would be uncertain and could significantly harm our business.

Our commercial success depends, in part, on our ability to develop, manufacture, market and sell our product candidates and use our proprietary phage-based vaccine technology without infringing the intellectual property and other proprietary rights of third parties. Numerous third-party U.S. and non-U.S. issued patents exist in the area of biotechnology, including in the area of vaccine therapies and including patents held by our competitors. If any third-party patents cover our product candidates or technologies, we may not be free to manufacture or commercialize our product candidates as planned.

There is a substantial amount of intellectual property litigation in the biotechnology and pharmaceutical industries, and we may become party to, or threatened with, litigation or other adversarial proceedings regarding intellectual property rights with respect to our technology or product candidates, including interference proceedings before the USPTO. Intellectual property disputes arise in a number of areas including with respect to patents, use of other proprietary rights and the contractual terms of license arrangements. Third parties may assert claims against us based on existing or future intellectual property rights and claims may also come from competitors against whom our own patent portfolio may have no deterrent effect. The outcome of intellectual property litigation is subject to uncertainties that cannot be adequately quantified in advance. Other parties may allege that our product candidates or the use of our technologies infringes patent claims or other intellectual property rights held by them or that we are employing their proprietary technology without authorization. As we continue to develop and, if approved, commercialize our current and future product candidates, competitors may claim that our technology infringes their intellectual property rights as part of business strategies designed to impede our successful commercialization. There are and may in the future be additional third-party patents or patent applications with claims to, for example, materials, compositions, formulations, methods of manufacture or methods for treatment related to the use or manufacture of any one or more of our product candidates.

Moreover, we may fail to identify relevant third party patents or patent applications, or we may incorrectly conclude that the claims of an issued patent are invalid or are not infringed by our activities. Because patent applications can take many years to issue, third parties may have currently pending patent applications which may later result in issued patents that any of our product candidates may infringe, or which such third parties claim are infringed by our technologies.

If we are found to infringe a third party's intellectual property rights, we could be forced, including by court order, to cease developing, manufacturing or commercializing the infringing product candidate or product. Alternatively, we may be required or may choose to obtain a license from such third party in order to use the infringing technology and continue developing, manufacturing or marketing the infringing product candidate. However, we may not be able to obtain any required license on commercially reasonable terms or at all. Even if we were able to obtain a license, it could be non-exclusive, thereby giving our competitors access to the same technologies licensed to us. In addition, we could be found liable for monetary damages, including treble damages and attorneys' fees if we are found to have willfully infringed a patent. A finding of infringement could prevent us from commercializing our product candidates or force us to cease some of our business operations. Claims that we have misappropriated the confidential information or trade secrets of third parties could have a similar negative effect on our business. Even if successful, the defense of any claim of infringement or misappropriation is time-consuming, expensive and diverts the attention of our management from our ongoing business operations.

We may need to license intellectual property from third parties, and such licenses may not be available or may not be available on commercially reasonable terms.

A third party may hold intellectual property rights, including patent rights, that are important or necessary to the development or manufacture of our product candidates. It may be necessary for us to use the patented or proprietary technology of third parties to commercialize our product candidates, in which case we would be required to obtain a license from these third parties. Such a license may not be available on commercially reasonable terms, or at all, and we could be forced to accept unfavorable contractual terms. If we are unable to obtain such licenses on commercially reasonable terms, our business could be harmed.

The licensing and acquisition of third-party intellectual property rights is a competitive practice, and companies that may be more established, or have greater resources than we do, may also be pursuing strategies to license or acquire third-party intellectual property rights that we may consider necessary or attractive in order to commercialize our product candidates. More established companies may have a competitive advantage over us due to their larger size and cash resources or greater clinical development and commercialization capabilities. We may not be able to successfully complete such negotiations and ultimately acquire the rights to the intellectual property surrounding the additional product candidates that we may seek to acquire.

We may become involved in lawsuits to protect or enforce our intellectual property, which could be expensive, time-consuming and unsuccessful.

Competitors may infringe our patents, if issued, trademarks, copyrights or other intellectual property. To counter infringement or unauthorized use, we may be required to file infringement claims, which can be expensive and time-consuming and divert the time and attention of our management and scientific personnel. Any claims we assert against perceived infringers could provoke these parties to assert counterclaims against us alleging that we infringe their patents, trademarks, copyrights or other intellectual property. In addition, in a patent infringement proceeding, there is a risk that a court will decide that a patent of ours is invalid or unenforceable, in whole or in part, and that we do not have the right to stop the other party from using the invention at issue. There is also a risk that, even if the validity of such patents is upheld, the court will construe the patent's claims narrowly or decide that we do not have the right to stop the other party from using the invention at issue on the grounds that our patents do not cover the invention. An adverse outcome in a litigation or proceeding involving our patents could limit our ability to assert our patents against those parties or other

competitors, and may curtail or preclude our ability to exclude third parties from making and selling similar or competitive products. Similarly, if we assert trademark infringement claims, a court may determine that the marks we have asserted are invalid or unenforceable, or that the party against whom we have asserted trademark infringement has superior rights to the marks in question. In this case, we could ultimately be forced to cease use of such trademarks.

In any infringement litigation, any award of monetary damages we receive may not be commercially valuable. Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of our confidential information could be compromised by disclosure during litigation. In addition, there could be public announcements of the results of hearings, motions or other interim proceedings or developments and if securities analysts or investors perceive these results to be negative, it could have a substantial adverse effect on the price of our common stock. Moreover, there can be no assurance that we will have sufficient financial or other resources to file and pursue such infringement claims, which typically last for years before they are concluded. Some of our competitors may be able to sustain the costs of such litigation or proceedings more effectively than we can because of their greater financial resources and more mature and developed intellectual property portfolios. Even if we ultimately prevail in such claims, the monetary cost of such litigation and the diversion of the attention of our management and scientific personnel could outweigh any benefit we receive as a result of the proceedings. Accordingly, despite our efforts, we may not be able to prevent third parties from infringing, misappropriating or successfully challenging our intellectual property rights. Uncertainties resulting from the initiation and continuation of patent litigation or other proceedings could have a negative impact on our ability to compete in the marketplace.

We may be subject to claims by third parties asserting that we or our employees have misappropriated their intellectual property, or claiming ownership of what we regard as our own intellectual property.

Many of our employees were previously employed at universities or other biotechnology or pharmaceutical companies. Although we try to ensure that our employees do not use the proprietary information or know-how of third parties in their work for us, we may be subject to claims that these employees or we have inadvertently or otherwise used intellectual property, including trade secrets or other proprietary information, of any such employee's former employer. We may also in the future be subject to claims that we have caused an employee to breach the terms of his or her non-competition or non-solicitation agreement. Litigation may be necessary to defend against these potential claims.

In addition, while it is our policy to require our employees and contractors who may be involved in the development of intellectual property to execute agreements assigning such intellectual property to us, such employees and contractors may breach the agreement and claim the developed intellectual property as their own.

If we fail in prosecuting or defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights or personnel. A court could prohibit us from using technologies or features that are essential to our products if such technologies or features are found to incorporate or be derived from the trade secrets or other proprietary information of the former employers. Even if we are successful in prosecuting or defending against such claims, litigation could result in substantial costs and could be a distraction to management. In addition, any litigation or threat thereof may adversely affect our ability to hire employees or contract with independent service providers. Moreover, a loss of key personnel or their work product could hamper or prevent our ability to commercialize our products.

We may be subject to claims challenging the inventorship or ownership of our owned patent rights and other intellectual property.

We generally enter into confidentiality and intellectual property assignment agreements with our employees, consultants, outside scientific collaborators, sponsored researchers and other advisors. However, these agreements may not be honored and may not effectively assign intellectual property rights to us. For example,

disputes may arise from conflicting obligations of consultants or others who are involved in developing our technology and product candidates. Litigation may be necessary to defend against these and other claims challenging inventorship or ownership. If we fail in defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights, such as exclusive ownership of, or right to use, valuable intellectual property. Such an outcome could have a material adverse effect on our business. Even if we are successful in defending against such claims, litigation could result in substantial costs and be a distraction to management and other employees.

Any trademarks we may obtain may be infringed or successfully challenged, resulting in harm to our business.

We expect to rely on trademarks as one means to distinguish any of our product candidates that are approved for marketing from the products of our competitors. We have not yet selected trademarks for our product candidates and have not yet begun the process of applying to register trademarks for our product candidates. Once we select trademarks and apply to register them, our trademark applications may not be approved. Third parties may oppose our trademark applications, or otherwise challenge our use of the trademarks. In the event that our trademarks are successfully challenged, we could be forced to rebrand our products, which could result in loss of brand recognition and could require us to devote resources to advertising and marketing new brands. Our competitors may infringe our trademarks and we may not have adequate resources to enforce our trademarks.

In addition, any proprietary name we propose to use with our clinical-stage product candidates or any other product candidate in the United States must be approved by the FDA, regardless of whether we have registered it, or applied to register it, as a trademark. The FDA typically conducts a review of proposed product names, including an evaluation of the potential for confusion with other product names. If the FDA objects to any of our proposed proprietary product names, we may be required to expend significant additional resources in an effort to identify a suitable proprietary product name that would qualify under applicable trademark laws, not infringe the existing rights of third parties and be acceptable to the FDA.

If we are unable to protect the confidentiality of our trade secrets, our business and competitive position would be harmed.

In addition to seeking patent and trademark protection for our product candidates, we also rely on trade secrets, including unpatented know-how, technology and other proprietary information, to maintain our competitive position. We seek to protect our trade secrets, in part, by entering into non-disclosure and confidentiality agreements with parties who have access to them, such as our employees, consultants, advisors and other third parties. We also enter into confidentiality and invention or patent assignment agreements with our employees and consultants. Despite these efforts, any of these parties may breach the agreements and disclose our proprietary information, including our trade secrets. Monitoring unauthorized uses and disclosures of our intellectual property is difficult, and we do not know whether the steps we have taken to protect our intellectual property will be effective. In addition, we may not be able to obtain adequate remedies for any such breaches. Enforcing a claim that a party illegally disclosed or misappropriated a trade secret is difficult, expensive and time-consuming, and the outcome is unpredictable. Furthermore, some courts inside and outside the United States are less willing or unwilling to protect trade secrets.

Moreover, our competitors may independently develop knowledge, methods and know-how equivalent to our trade secrets. Competitors could purchase our products and replicate some or all of the competitive advantages we derive from our development efforts for technologies on which we do not have patent protection. If any of our trade secrets were to be lawfully obtained or independently developed by a competitor, we would have no right to prevent them, or those to whom they communicate it, from using that technology or information to compete with us. If any of our trade secrets were to be disclosed to or independently developed by a competitor, our competitive position would be harmed.

We may not be able to protect our intellectual property rights throughout the world.

Filing, prosecuting and defending patents on product candidates in all countries throughout the world would be prohibitively expensive, and our intellectual property rights in some countries outside the United States could be less extensive than those in the United States. In some cases, we may not be able to obtain patent protection for certain technology outside the United States. In addition, the laws of some foreign countries do not protect intellectual property rights to the same extent as federal and state laws in the United States, even in jurisdictions where we do pursue patent protection. Consequently, we may not be able to prevent third parties from practicing our inventions in all countries outside the United States, even in jurisdictions where we do pursue patent protection or from selling or importing products made using our inventions in and into the United States or other jurisdictions.

Competitors may use our technologies in jurisdictions where we have not pursued and obtained patent protection to develop their own products and, further, may export otherwise infringing products to territories where we have patent protection, but enforcement is not as strong as that in the United States. These products may compete with our product candidates and preclinical programs and our patents or other intellectual property rights may not be effective or sufficient to prevent them from competing.

Many companies have encountered significant problems in protecting and defending intellectual property rights in foreign jurisdictions. The legal systems of certain countries, particularly certain developing countries, do not favor the enforcement of patents, trade secrets and other intellectual property protection, particularly those relating to biotechnology products, which could make it difficult for us to stop the infringement of our patents, if pursued and obtained, or marketing of competing products in violation of our proprietary rights generally. Proceedings to enforce our patent rights in foreign jurisdictions could result in substantial costs and divert our efforts and attention from other aspects of our business, could put our patents at risk of being invalidated or interpreted narrowly and our patent applications at risk of not issuing and could provoke third parties to assert claims against us. We may not prevail in any lawsuits that we initiate and the damages or other remedies awarded, if any, may not be commercially meaningful. Accordingly, our efforts to enforce our intellectual property rights around the world may be inadequate to obtain a significant commercial advantage from the intellectual property that we develop or license.

Obtaining and maintaining our patent protection depends on compliance with various procedural, document submission, fee payment and other requirements imposed by governmental patent agencies, and our patent protection could be reduced or eliminated for non-compliance with these requirements.

Periodic maintenance and annuity fees on any issued patent are due to be paid to the USPTO and patent agencies outside the United States in several stages over the lifetime of the patent. The USPTO and various foreign governmental patent agencies require compliance with a number of procedural, documentary, fee payment and other similar provisions during the patent application process. While an inadvertent lapse can in many cases be cured by payment of a late fee or by other means in accordance with the applicable rules, there are situations in which noncompliance can result in abandonment or lapse of the patent or patent application, resulting in partial or complete loss of patent rights in the relevant jurisdiction. Non-compliance events that could result in abandonment or lapse of a patent or patent application include failure to respond to official actions within prescribed time limits, non-payment of fees and failure to properly legalize and submit formal documents. If we fail to maintain the patents and patent applications covering our products or product candidates, our competitors might be able to enter the market, which would harm our business. In addition, to the extent that we have responsibility for taking any action related to the prosecution or maintenance of patents or patent application in-licensed from a third party, any failure on our part to maintain the in-licensed rights could jeopardize our rights under the relevant license and may expose us to liability.

Risks Related to our Business Operations

We will need to grow the size of our organization, and we may experience difficulties in managing this growth.

As of September 30, 2020, we had 25 employees, 24 of whom are employed full-time. As our development and commercialization plans and strategies develop, and as we transition into operating as a public company, we expect to need additional managerial, operational, financial and other personnel, including personnel to support our product development and planned future commercialization efforts. Future growth will impose significant added responsibilities on members of management, including:

- identifying, recruiting, integrating, maintaining and motivating additional employees;
- managing our internal development efforts effectively, including the preclinical, clinical and FDA review processes for our product candidates; and
- improving our operational, financial and management controls, reporting systems and procedures.

There are a small number of individuals with experience in immunotherapy and the competition for these individuals is high. Our future financial performance and our ability to commercialize our product candidates will depend, in part, on our ability to effectively manage any future growth, and our management may also have to divert a disproportionate amount of its attention away from day-to-day activities in order to devote a substantial amount of time to managing these growth activities.

If we are not able to effectively expand our organization by hiring new employees, we may not be able to successfully implement the tasks necessary to further develop and commercialize our product candidates and, accordingly, may not achieve our research, development and commercialization goals.

In addition to expanding our organization, we anticipate increasing the size of our facilities and building out our development and manufacturing capabilities, which would require significant capital expenditures. If these capital expenditures are higher than expected, it may adversely affect our financial condition and capital resources. In addition, if the increase in the size of our facilities is delayed, it may limit our ability to rapidly expand the size of our organization in order to meet our corporate goals.

Our future success depends on our ability to retain key members of senior management and to attract, retain and motivate qualified personnel.

Our ability to compete in the highly competitive biopharmaceutical industry depends upon our ability to attract and retain highly qualified management, research and development, clinical, financial and business development personnel. We are highly dependent on our management, scientific and medical personnel, including John Celebi, our Chief Executive Officer, Dr. Marie-Louise Fjaellskog, our Chief Medical Officer, Dr. Robert Pierce, our Chief Scientific Officer, and Anupama Hoey, our Chief Business Officer. Our senior management may terminate their employment with us at any time and will continue to be able to do so after the closing of this offering. We do not maintain “key person” insurance for any of our employees.

Recruiting and retaining qualified scientific and clinical personnel and, if we progress the development of any of our product candidates, commercialization, manufacturing and sales and marketing personnel, will be critical to our success. The loss of the services of members of our senior management or other key employees could impede the achievement of our research, development and commercialization objectives and seriously harm our ability to successfully implement our business strategy. Furthermore, replacing members of our senior management and key employees may be difficult and may take an extended period of time because of the limited number of individuals in our industry with the breadth of skills and experience required to successfully develop, gain regulatory approval of and commercialize our product candidates. Our success also depends on our ability to continue to attract, retain and motivate highly skilled junior, mid-level and senior managers, as well as junior,

mid-level and senior scientific and medical personnel. Competition to hire from this limited candidate pool is intense, and we may be unable to hire, train, retain or motivate these key personnel on acceptable terms given the competition among numerous pharmaceutical and biotechnology companies for similar personnel. We also experience competition for the hiring of scientific and clinical personnel from universities and research institutions. In addition, we rely on consultants and advisors, including scientific and clinical advisors, to assist us in formulating our research and development and commercialization strategy. Our consultants and advisors may have commitments under consulting or advisory contracts with other entities that may limit their availability to us. If we are unable to continue to attract and retain high-quality personnel, our ability to pursue our growth strategy will be limited.

If we engage in future acquisitions or strategic collaborations, this may increase our capital requirements, dilute our stockholders, cause us to incur debt or assume contingent liabilities and subject us to other risks.

From time to time, we may evaluate various acquisitions and strategic collaborations, including licensing or acquiring complementary products, intellectual property rights, technologies or businesses, as we may deem appropriate to carry out our business plan. For instance, in May 2020, we acquired Alvaxa Biosciences LLC to enhance the depth of our nanobody assets and know-how. Any potential acquisition or strategic collaboration may entail numerous risks, including:

- increased operating expenses and cash requirements;
- the assumption of additional indebtedness or contingent liabilities;
- assimilation of operations, intellectual property and products of an acquired company, including difficulties associated with integrating new personnel;
- the diversion of our management's attention from our existing programs and initiatives in pursuing such a strategic partnership, merger or acquisition;
- retention of key employees, the loss of key personnel and uncertainties in our ability to maintain key business relationships;
- risks and uncertainties associated with the other party to such a transaction, including the prospects of that party and their existing products or product candidates and regulatory approvals; and
- our inability to generate revenue from acquired technology sufficient to meet our objectives in undertaking the acquisition or even to offset the associated acquisition and maintenance costs.

Additionally, if we undertake future acquisitions, we may issue dilutive securities, assume or incur debt obligations, incur large one-time expenses and acquire intangible assets that could result in significant future amortization expenses. Moreover, we may not be able to locate suitable acquisition opportunities and this inability could impair our ability to grow or obtain access to technology or products that may be important to the development of our business.

Risks Related to this Offering, our Securities and our Status as a Public Company

An active trading market for our common stock may not develop and you may not be able to resell your common stock at or above the initial offering price, if at all.

This offering constitutes the initial public offering of our common stock, and no public market has previously existed for our common stock. We have applied to list our common stock on The Nasdaq Global Market, or the Nasdaq. Any delay in receiving approval for the listing from Nasdaq and in the commencement of trading of our common stock on Nasdaq would impair the liquidity of the market for the common stock and make it more difficult for holders to sell the common stock. There can be no assurance that an active trading market for the common stock will develop or be sustained after this offering is completed. The lack of an active trading market may also reduce the fair market value of the common stock. The initial offering price was determined by

negotiations among the lead underwriters and us. Among the factors considered in determining the initial public offering price were our future prospects and the prospects of our industry in general, our revenue, net income and certain other financial and operating information in recent periods, and the market prices of securities and certain financial and operating information of companies engaged in activities similar to ours. However, there can be no assurance that, following the completion of this offering, the common stock will trade at a price equal to or greater than the initial public offering price.

The trading price of our common stock may be volatile, and you could lose all or part of your investment.

The trading price of our common stock following this offering is likely to be highly volatile and could be subject to wide fluctuations in response to various factors, some of which are beyond our control, including limited trading volume. The stock market in general and the market for biopharmaceutical companies in particular have experienced extreme volatility that has often been unrelated to the operating performance of particular companies. As a result of this volatility, investors may not be able to sell their common stock at or above the price paid for the common stock. In addition to the factors discussed in this "Risk Factors" section and elsewhere in this prospectus, these factors include:

- the commencement, enrollment or results of our planned and future clinical trials;
- positive or negative results from, or delays in, testing and clinical trials by us, collaborators or competitors;
- the loss of any of our key scientific or management personnel;
- regulatory or legal developments in the United States and other countries;
- the success of competitive products or technologies;
- adverse actions taken by regulatory agencies with respect to our clinical trials or manufacturers;
- changes or developments in laws or regulations applicable to our product candidates and preclinical program;
- changes in the structure and scope of health care payment systems;
- changes to our relationships with collaborators, manufacturers or suppliers;
- concerns regarding the safety of our product candidates or ImmunoPhage platform in general;
- announcements concerning our competitors or the pharmaceutical industry in general;
- actual or anticipated fluctuations in our operating results;
- changes in financial estimates or recommendations by securities analysts;
- potential acquisitions, financing, collaborations or other corporate transactions;
- the results of our efforts to discover, develop, acquire or in-license additional product candidates;
- the trading volume of our common stock on Nasdaq;
- sales of our common stock by us, members of our senior management and directors or our stockholders or the anticipation that such sales may occur in the future;
- general economic, political, and market conditions and overall fluctuations in the financial markets in the United States;
- stock market price and volume fluctuations of comparable companies and, in particular, those that operate in the biopharmaceutical industry;
- investors' general perception of us and our business; and
- other events and factors, many of which are beyond our control.

These and other market and industry factors may cause the market price and demand for our common stock to fluctuate substantially, regardless of our actual operating performance, which may limit or prevent investors from selling their common stock at or above the price paid for the common stock and may otherwise negatively affect the liquidity of our common stock. In addition, the stock market in general, and biopharmaceutical companies in particular, have experienced extreme price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of these companies.

Some companies that have experienced volatility in the trading price of their shares have been the subject of securities class action litigation. From time to time, we have been, and may continue to be, subject to legal proceedings and claims in the ordinary course of business. For instance, during 2017, we became actively involved, along with other defendants, in a breach of contract claim in the Ontario (Canada) Superior Court of Justice seeking declaratory and other relief, including monetary damages. While we believe there is no merit to the allegations of that claim, any lawsuit to which we are a party, with or without merit, may result in an unfavorable judgment. We also may decide to settle lawsuits on unfavorable terms.

Any such negative outcome could result in payments of substantial damages or fines, damage to our reputation or adverse changes to our business practices. Defending against litigation is costly and time-consuming, and could divert our management's attention and our resources. Furthermore, during the course of litigation, there could be negative public announcements of the results of hearings, motions or other interim proceedings or developments, which could have a negative effect on the market price of our common stock.

If you purchase common stock in this offering, you will suffer immediate dilution of your investment.

The initial public offering price of our common stock is substantially higher than the pro forma as adjusted net tangible book value per common stock. Therefore, if you purchase common stock in this offering, you will pay a price per share that substantially exceeds our pro forma as adjusted net tangible book value per share after this offering. Based on the initial public offering price of $17.00 per share, you will experience immediate dilution of $12.30 per share, representing the difference between our pro forma as adjusted net tangible book value per share after this offering and the initial public offering price per share. After this offering, we will also have outstanding options and warrants to purchase common stock with exercise prices lower than the initial public offering price. To the extent these outstanding options or warrants are exercised, there will be further dilution to investors in this offering. For further information regarding the dilution resulting from this offering, see the section titled "Dilution" in this prospectus.

A significant portion of our total outstanding shares are restricted from immediate resale, but may be sold into the market in the near future. This could cause the market price of our common stock to drop significantly, even if our business is doing well.

Sales of a substantial number of our common stock in the public market could occur at any time. If our stockholders sell, or the market perceives that our stockholders intend to sell, substantial amounts of our shares of common stock in the public market following this offering, the market price of our common stock could decline significantly.

Upon completion of this offering, we will have outstanding 28,443,200 shares of common stock, based on 22,558,200 shares of common stock outstanding as of January 14, 2021 (including shares of all of our convertible preferred stock on an as-converted basis). Of these shares, the 5,885,000 shares of common stock sold in this offering will be freely tradable, and the remaining 22,558,200 shares of common stock will be available for sale in the public market beginning 180 days after the date of this prospectus, or with respect to shares purchased in our Series BB financing, 120 days after the date of this prospectus, following the expiration of lock-up agreements entered into by our stockholders in connection with the offering and subject to the restrictions of Rule 144 of the Securities Act. The representatives of the underwriters may agree to release these stockholders from their lock-up agreements at any time and without notice, which would allow for earlier sales of shares in the public market. Sales of a substantial number of such shares upon expiration of the lock-up agreements, the perception that such sales may occur, or early release of restrictions in the lock-up agreements,

could cause the market price of our common stock to fall or make it more difficult for you to sell your common stock at a time and price that you deem appropriate.

In addition, promptly following the completion of this offering, we intend to file one or more registration statements registering the issuance of approximately 7.3 million shares of common stock subject to options or other equity awards issued or reserved for future issuance under our equity incentive plans. Shares registered under these registration statements will be available for sale in the public market subject to vesting arrangements and exercise of options, the lock-up agreements described above and, in the case of our affiliates, the restrictions of Rule 144 under the Securities Act.

Additionally, after this offering, the holders of an aggregate of approximately 19.0 million of our shares of common stock, or their transferees, will have rights, subject to some conditions, to require us to file one or more registration statements covering their shares or to include their shares in registration statements that we may file for ourselves or other stockholders. If we were to register the resale of these shares, they could be freely sold in the public market. If these additional shares are sold, or if it is perceived that they will be sold, in the public market, the trading price of our common stock could decline.

If we fail to implement and maintain an effective system of internal controls to remediate our material weaknesses over financial reporting, we may be unable to accurately report our results of operations, meet our reporting obligations or prevent fraud, and investor confidence in our company and the market price of our common stock may be materially and adversely affected.

Prior to the completion of this offering, we only had limited accounting personnel and other resources with which to address internal control over financial reporting. In connection with the audits of our consolidated financial statements as of and for the years ended December 31, 2018 and 2019, we and our independent registered public accounting firm identified three material weaknesses in our internal control over financial reporting. As defined in the standards established by the U.S. Public Company Accounting Oversight Board, or PCAOB, a "material weakness" is a deficiency, or combination of deficiencies in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of the annual or interim financial statements will not be prevented or detected on a timely basis.

The material weaknesses that have been identified relate to lack of segregation of duties, lack of a risk assessment process and lack of contemporaneous documentation, both contractual and accounting related. We are in the process of implementing a number of measures to address the material weaknesses and deficiencies that have been identified. See "Management's Discussion and Analysis of Financial Condition and Results of Operations—Internal Control Over Financial Reporting." However, we cannot assure you that these measures may fully address the material weaknesses and deficiencies in our internal control over financial reporting or that we may conclude that they have been fully remediated.

Upon completion of this offering, we will become subject to the Sarbanes-Oxley Act. Section 404 will require that we include a report from management on the effectiveness of our internal control over financial reporting in our annual report on Form 10-K beginning with our annual report in our second annual report on Form 10-K after becoming a public company. In addition, after we become a public company, our reporting obligations may place a significant strain on our management, operational and financial resources and systems for the foreseeable future. We may be unable to timely complete our evaluation testing and any required remediation.

During the course of documenting and testing our internal control procedures, in order to satisfy the requirements of Section 404, we may identify other weaknesses and deficiencies in our internal control over financial reporting. If we fail to maintain the adequacy of our internal control over financial reporting, as these standards are modified, supplemented or amended from time to time, we may not be able to conclude on an ongoing basis that we have effective internal control over financial reporting in accordance with Section 404.

Generally speaking, if we fail to achieve and maintain an effective internal control environment, it could result in material misstatements in our financial statements and could also impair our ability to comply with applicable financial reporting requirements and related regulatory filings on a timely basis. As a result, our businesses, financial condition, results of operations and prospects, as well as the trading price of our common stock, may be materially and adversely affected. Additionally, ineffective internal control over financial reporting could expose us to increased risk of fraud or misuse of corporate assets and subject us to potential delisting from the stock exchange on which we list, regulatory investigations and civil or criminal sanctions. We may also be required to restate our financial statements from prior periods.

We will have broad discretion in the use of proceeds from this offering and may invest or spend the proceeds in ways with which you do not agree and in ways that may not increase the value of your investment.

Our management will have broad discretion in the application of our cash and cash equivalents, including the net proceeds from this offering, and could spend the proceeds in ways that do not improve our results of operations or enhance the value of our common stock. The failure by our management to apply these funds effectively could result in financial losses that could have a negative impact on our business, cause the price of our common stock to decline and delay the development of our product candidates and preclinical program. Pending their use, we may invest our cash and cash equivalents, including the net proceeds from this offering, in a manner that does not produce income or that loses value. See the section titled “Use of Proceeds” for additional information.

Because we do not anticipate paying any cash dividends on our common stock in the foreseeable future, capital appreciation, if any, will be your sole source of gains and you may never receive a return on your investment.

We do not intend to pay any cash dividends on our common stock in the forseeable future and we currently intend to retain our future earnings, if any, to fund the development and growth of our business. Therefore, you should not rely on an investment in our common stock to provide dividend income. Our board of directors has complete discretion as to whether to distribute dividends. Even if our board of directors decides to declare and pay dividends, the timing, amount and form of future dividends, if any, will depend on, among other things, our future results of operations and cash flow, our capital requirements and surplus, the amount of distributions, if any, received by us from our subsidiaries, our financial condition, contractual restrictions and other factors deemed relevant by our board of directors. As a result, capital appreciation, if any, on our common stock will be your sole source of gains for the foreseeable future. Investors seeking cash dividends should not purchase our common stock in this offering.

Our ability to use our net operating losses to offset future taxable income may be subject to certain limitations.

Our net operating loss, or NOL, carryforwards could expire unused and be unavailable to offset future income tax liabilities because of their limited duration or because of restrictions under U.S. tax law. NOLs generated in taxable years beginning before January 1, 2018 are permitted to be carried forward for only 20 taxable years under applicable U.S. federal income tax law. Under the Tax Cuts and Jobs Act, or the Tax Act, as modified by the Coronavirus Aid, Relief, and Economic Security Act, or the CARES Act, NOLs arising in taxable years beginning after December 31, 2017, and before January 1, 2021 may be carried back to each of the five tax years preceding the tax year of such loss, and NOLs arising in tax years beginning after December 31, 2020 may not be carried back. Moreover, under the Tax Act as modified by the CARES Act, NOLs generated in taxable years beginning after December 31, 2017 may be carried forward indefinitely, but the deductibility of such NOLs generally will be limited in taxable years beginning after December 31, 2020 to 80% of current year taxable income. The extent to which state income tax law will conform to the Tax Act and CARES Act is uncertain. As of December 31, 2019, we had NOL carryforwards for federal and state income tax purposes of

approximately $65.7 million, a portion of which expire beginning in 2020 if not utilized. NOL carryforwards generated in 2019 and 2018 for federal tax reporting purposes of $10.7 million and $10.4 million, respectfully, have an indefinite life.

In general, under Section 382 of the Internal Revenue Code of 1986, as amended, or the Code, a corporation that undergoes an "ownership change" (as defined under Section 382 of the Code and applicable Treasury Regulations) is subject to limitations on its ability to utilize its pre-change NOLs to offset future taxable income. We have not determined whether our NOLs are limited under Section 382 of the Code. We may have experienced an ownership change in the past, and may experience ownership changes in the future as a result of this offering or subsequent shifts in our stock ownership, some of which are outside our control. Furthermore, our ability to utilize NOLs of companies that we have acquired or may acquire in the future may be subject to limitations. There is also a risk that due to regulatory changes, such as suspensions on the use of NOLs or other unforeseen reasons, our existing NOLs could expire or otherwise be unavailable to reduce future income tax liabilities, including for state tax purposes. For these reasons, we may not be able to utilize a material portion of the NOLs reflected on our balance sheet, even if we attain profitability, which could potentially result in increased future tax liability to us and could adversely affect our operating results and financial condition.

We will incur significantly increased costs as a result of operating as a company whose common stock is publicly traded, and our management will be required to devote substantial time to new compliance initiatives.

As a public company, we will incur significant legal, accounting and other expenses that we did not incur previously. These expenses will likely be even more significant after we no longer qualify as an emerging growth company. The Sarbanes-Oxley Act, the Dodd-Frank Wall Street Reform and Consumer Protection Act, the listing requirements of Nasdaq and other applicable securities rules and regulations impose various requirements on public companies in the United States, including the establishment and maintenance of effective disclosure and financial controls and corporate governance practices. Our senior management and other personnel will need to devote a substantial amount of time to these compliance initiatives. Moreover, these rules and regulations will increase our legal and financial compliance costs and will make some activities more time-consuming and costly. For example, we expect that these rules and regulations may make it more difficult and more expensive for us to obtain director and officer liability insurance, which in turn could make it more difficult for us to attract and retain qualified senior management personnel or members for our board of directors.

However, these rules and regulations are often subject to varying interpretations, in many cases due to their lack of specificity, and, as a result, their application in practice may evolve over time as new guidance is provided by regulatory and governing bodies. This could result in continuing uncertainty regarding compliance matters and higher costs necessitated by ongoing revisions to disclosure and governance practices.

Pursuant to Section 404, we will be required to furnish a report by our senior management on our internal control over financial reporting. However, while we remain an emerging growth company, we will not be required to include an attestation report on internal control over financial reporting issued by our independent registered public accounting firm. To prepare for eventual compliance with Section 404, we will be engaged in a process to document and evaluate our internal control over financial reporting, which is both costly and challenging. In this regard, we will need to continue to dedicate internal resources, potentially engage outside consultants and adopt a detailed work plan to assess and document the adequacy of internal control over financial reporting, continue steps to improve control processes as appropriate, validate through testing that controls are functioning as documented and implement a continuous reporting and improvement process for internal control over financial reporting. Despite our efforts, there is a risk that we will not be able to conclude, within the prescribed timeframe or at all, that our internal control over financial reporting is effective as required by Section 404.

We are an "emerging growth company" and as a result of the reduced disclosure and governance requirements applicable to emerging growth companies, our common stock may be less attractive to investors.

We are an "emerging growth company" as defined in the JOBS Act. For as long as we continue to be an emerging growth company, we may take advantage of exemptions from various reporting requirements that are applicable to other public companies that are not emerging growth companies, including not being required to comply with the auditor attestation requirements of Section 404, exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved. As an emerging growth company, we are able to report only two years of financial results and selected financial data compared to three and five years, respectively, for comparable data reported by other public companies. We may take advantage of these exemptions until we are no longer an emerging growth company. We could be an emerging growth company for up to five years, although circumstances could cause us to lose that status earlier, including if the aggregate market value of our shares of common stock, held by non-affiliates exceeds $700 million as of the end of our second fiscal quarter before that time, in which case we would no longer be an emerging growth company as of the following December 31st (the last day of our fiscal year). We cannot predict if investors will find our common stock less attractive because we may rely on these exemptions. If some investors find our common stockless attractive as a result, there may be a less active trading market for our common stock and the price of our common stock may be more volatile.

In addition, the JOBS Act provides that an emerging growth company can take advantage of an extended transition period for complying with new or revised accounting standards. This allows an emerging growth company to delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We have elected not to "opt out" of such extended transition period, which means that when a standard is issued or revised and it has different application dates for public or private companies, we will adopt the new or revised standard at the time private companies adopt the new or revised standard and will do so until such time that we either (i) irrevocably elect to "opt out" of such extended transition period or (ii) no longer qualify as an emerging growth company. Therefore, the reported results of operations contained in our consolidated financial statements may not be directly comparable to those of other public companies.

Our amended and restated certificate of incorporation provides that the Court of Chancery of the State of Delaware and, to the extent enforceable, the federal district courts of the United States of America, will be the exclusive forum for substantially all disputes between us and our stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers, or employees.

Our amended and restated certificate of incorporation provides that the Court of Chancery of the State of Delaware and, to the extent enforceable, the federal district courts of the United States of America, will be the exclusive forum for the following types of actions or proceedings under Delaware statutory or common law:

- any derivative claim or cause of action brought on our behalf;
- any claim or cause of action for breach of a fiduciary duty owed by any of our current or former directors, officers or other employees to us or our stockholders;
- any claim or cause of action against us or any of our current or former directors, officers or other employees, arising out of or pursuant to any provision of the DGCL, our certificate of incorporation or our bylaws;
- any claim or cause of action seeking to interpret, apply, enforce or determine the validity of our certificate of incorporation or our bylaws;
- any action or proceeding as to which the DGCL confers jurisdiction to the Court of Chancery of the State of Delaware; and
- any claim or cause of action against us or any of our current or former directors, officers or other employees that is governed by the internal-affairs doctrine, in all cases to the fullest extent permitted by law and subject to the court having personal jurisdiction over the indispensable parties named as defendants.

This provision would not apply to suits brought to enforce a duty or liability created by the Securities Act or the Securities Exchange Act of 1934, or the Exchange Act, or any claim for which the U.S. federal courts have exclusive jurisdiction. Our amended and restated certificate of incorporation will provide that the federal district courts of the United States of America will be the exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act.

These exclusive-forum provisions may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers, or other employees, which may discourage lawsuits against us and our directors, officers, and other employees. If any other court of competent jurisdiction were to find either exclusive-forum provision in our amended and restated certificate of incorporation to be inapplicable or unenforceable, we may incur additional costs associated with resolving the dispute in other jurisdictions, which could seriously harm our business. For example, the Court of Chancery of the State of Delaware determined that a provision stating that U.S. federal district courts are the exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act is not enforceable. However, this decision was recently reviewed and ultimately overturned by the Delaware Supreme Court in March 2020.

General Risk Factors

Our business, operations and clinical development plans and timelines could be adversely affected by the effects of health epidemics, including the recent COVID-19 pandemic, on the manufacturing, clinical trial and other business activities performed by us or by third parties with whom we conduct business, including our contract manufacturers, CROs, shippers and others.

Our business could be adversely affected by health epidemics wherever we have clinical trial sites or other business operations. In addition, health epidemics could cause significant disruption in the operations of third-party manufacturers, CROs and other third parties upon whom we rely. For example, in December 2019, a novel strain of coronavirus, SARS-CoV-2, causing a disease referred to as COVID-19, was reported to have surfaced in Wuhan, China. Since then, COVID-19 has spread to multiple countries worldwide, including the United States. In March 2020, the World Health Organization declared the COVID-19 outbreak a pandemic, and the U.S. government ordered the closure of all non-essential businesses, imposed social distancing measures, "shelter-in-place" orders and restrictions on travel between the United States, Europe and certain other countries. The global pandemic and government measures taken in response have also had a significant impact on businesses and commerce worldwide, as worker shortages have occurred; supply chains have been disrupted; facilities and production have been suspended across a variety of industries; and demand for certain goods and services, such as medical services and supplies, has spiked, while demand for other goods and services, such as travel, has fallen. On March 18, 2020, the FDA issued updated industry guidance for conducting clinical trials during the COVID-19 pandemic, which requires clinical trial sponsors to consider the need to delay or cease patient recruitment, change protocol regarding patient monitoring and assessment that minimizes in-person visits, alternative administration of certain investigational products due to compromised clinical sites and to put in place new processes or modify existing processes in consultation with the FDA that would ensure the safety of clinical trial participants. In connection with COVID-19, we implemented optional work-from-home policies for most employees. The effects of government orders and our work-from-home policies may negatively impact productivity, disrupt our business and delay our clinical programs and timelines, the magnitude of which will depend, in part, on the length and severity of the restrictions and other limitations on our ability to conduct our business in the ordinary course.

If our relationships with our suppliers or other vendors are terminated or scaled back as a result of the COVID-19 pandemic or other health epidemics, we may not be able to enter into arrangements with alternative suppliers or vendors or do so on commercially reasonable terms or in a timely manner. Switching or adding additional suppliers or vendors involves substantial cost and requires management time and focus. In addition, there is a natural transition period when a new supplier or vendor commences work. As a result, delays may occur, which could adversely impact our ability to meet our desired clinical development and any future

commercialization timelines. Although we carefully manage our relationships with our suppliers and vendors, there can be no assurance that we will not encounter challenges or delays in the future or that these delays or challenges will not harm our business.

In addition, our preclinical studies and clinical trials may be affected by the COVID-19 pandemic. Clinical site initiation, patient enrollment and activities that require visits to clinical sites, including data monitoring, may be delayed due to prioritization of hospital resources toward the COVID-19 pandemic or concerns among patients about participating in clinical trials during a pandemic. Some patients may have difficulty following certain aspects of clinical trial protocols if quarantines impede patient movement or interrupt healthcare services. These challenges may also increase the costs of completing our clinical trials. Similarly, if we are unable to successfully recruit and retain patients and principal investigators and site staff who, as healthcare providers, may have heightened exposure to COVID-19 or experience additional restrictions by their institutions, city or state, our clinical trial operations could be adversely impacted.

The spread of COVID-19, which has caused a broad impact globally, may materially affect us economically. While the potential economic impact brought by, and the duration of, COVID-19 may be difficult to assess or predict, a widespread pandemic has resulted in significant disruption of global financial markets, resulting in an economic downturn that could continue to significantly impact our business and operations and may reduce our ability to access capital, which could in the future negatively affect our liquidity. In addition, a recession or market correction resulting from the spread of COVID-19 could materially affect our business and the value of our common stock. In addition, a recurrence or “second wave” of COVID-19 cases could cause other widespread or more severe impacts depending on where infection rates are highest.

Further, we may experience additional disruptions that could severely impact our business and clinical trials, including:

- diversion of healthcare resources away from the conduct of clinical trials, including the diversion of hospitals serving as our clinical trial sites and hospital staff supporting the conduct of our clinical trials;
- interruption or delays in the operations of the FDA or other regulatory authorities, which may impact review and approval timelines;
- limitations on employee resources that would otherwise be focused on the conduct of our preclinical studies and clinical trials, including because of sickness of employees or their families or the desire of employees to avoid contact with large groups of people;
- risk that participants enrolled in our clinical trials will acquire COVID-19 while the clinical trial is ongoing, which could impact the results of the clinical trial, including by increasing the number of observed adverse events; and
- refusal of the FDA to accept data from clinical trials in these affected geographies.

These and similar, and perhaps more severe, disruptions in our operations could have a material adverse effect on our business, results of operations, cash flows, financial condition and/or prospects.

The global pandemic of COVID-19 continues to evolve rapidly. The ultimate impact of the COVID-19 pandemic or a similar health epidemic is highly uncertain and subject to change. We do not yet know the full extent of potential delays or impacts on our business, our clinical trials, healthcare systems or the global economy as a whole. However, these effects could have a material impact on our operations, and we continue to monitor the COVID-19 situation closely. To the extent the COVID-19 pandemic adversely affects our business, results of operations, cash flows, financial condition and/or prospects, it may also have the effect of heightening many of the other risks described in this “Risk Factors” section.

Our internal computer systems, or those of our collaborators or other contractors or consultants, may fail or suffer security breaches, which could result in a significant disruption of our product development programs and our ability to operate our business effectively.

Our internal computer systems and those of our current and any future collaborators and other contractors or consultants may be vulnerable to a variety of disruptive elements, including computer viruses, unauthorized access, natural disasters, terrorism, war and telecommunication and electrical failures. While we have not experienced any significant system failure, accident or security breach to date, if such an event were to occur and cause interruptions in our operations, it could result in a disruption of our development programs and our business operations, whether due to a loss of our trade secrets or other proprietary information, significant delays or setbacks in our research, or other similar disruptions. For example, the loss of clinical trial data from completed or future clinical trials could result in delays in our regulatory approval efforts and significantly increase our costs to recover or reproduce the data. To the extent that any disruption or security breach were to result in a loss of, or damage to, our data or applications, or inappropriate disclosure of confidential or proprietary information, we could incur liability, our competitive position could be harmed, our reputation could be damaged, and the further development and commercialization of our product candidates could be delayed.

We are or may become subject to a variety of privacy and data security laws, and our failure to comply with them could harm our business.

We maintain sensitive information, including confidential business and personal information in connection with our preclinical studies and our employees, and are subject to laws and regulations governing the privacy and security of such information. In the United States, there are numerous federal and state privacy and data security laws and regulations governing the collection, use, disclosure and protection of personal information, including federal and state health information privacy laws, federal and state security breach notification laws, and federal and state consumer protection laws. Each of these constantly evolving laws can be subject to varying interpretations. In May 2018, a new privacy regime, the General Data Protection Regulation, the GDPR, took effect in the European Economic Area, the EEA, into which we may expand our business. The GDPR governs the collection, use, disclosure, transfer or other processing of personal data of European persons. Among other things, the GDPR imposes requirements regarding the security of personal data and notification of data processing obligations to the competent national data processing authorities, changes the lawful bases on which personal data can be processed, expands the definition of personal data and requires changes to informed consent practices, as well as more detailed notices for clinical trial subjects and investigators. In addition, the GDPR increases the scrutiny of transfers of personal data from clinical trial sites located in the EEA to the United States and other jurisdictions that the European Commission does not recognize as having “adequate” data protection laws, and imposes substantial fines for breaches and violations (up to the greater of €20 million or 4% of our consolidated annual worldwide gross revenue). The GDPR also confers a private right of action on data subjects and consumer associations to lodge complaints with supervisory authorities, seek judicial remedies and obtain compensation for damages resulting from violations of the GDPR.

Compliance with these and any other applicable privacy and data security laws and regulations is a rigorous and time-intensive process, and we may be required to put in place additional mechanisms ensuring compliance with the new data protection rules. If we fail to comply with any such laws or regulations, we may face significant fines and penalties that could adversely affect our business, financial condition and results of operations. Furthermore, the laws are not consistent, and compliance in the event of a widespread data breach is costly.

In addition, states are constantly adopting new laws or amending existing laws, requiring attention to frequently changing regulatory requirements. For example, California enacted the California Consumer Privacy Act, or the CCPA, on June 28, 2018, which took effect on January 1, 2020 and has been dubbed the first “GDPR-like” law in the United States. The CCPA gives California residents expanded rights to access and delete their personal information, opt out of certain personal information sharing and receive detailed information about how

their personal information is used by requiring covered companies to provide new disclosures to California consumers (as that term is broadly defined and can include any of our current or future employees who may be California residents) and provide such residents new ways to opt-out of certain sales of personal information. The CCPA provides for civil penalties for violations, as well as a private right of action for data breaches that is expected to increase data breach litigation. As we expand our operations and trials (both preclinical or clinical), the CCPA may increase our compliance costs and potential liability. Some observers have noted that the CCPA could mark the beginning of a trend toward more stringent privacy legislation in the United States. Other states are beginning to pass similar laws.

Business disruptions could seriously harm our future revenue and financial condition and increase our costs and expenses.

Our operations, and those of our vendors and suppliers, could be subject to power shortages, telecommunications failures, water shortages, civil unrest, labor disputes, violence, earthquakes, floods, hurricanes, typhoons, fires, extreme weather conditions, infectious disease, medical epidemics and other natural or man-made disasters or business interruptions, for which we are predominantly self-insured. The occurrence of any of these business disruptions could seriously harm our operations and financial condition and increase our costs and expenses. We currently rely on third-party suppliers to produce and process our product candidates on a patient-by-patient basis. Our ability to obtain clinical supplies of our product candidates could be disrupted if the operations of these suppliers are affected by a man-made or natural disaster or other business interruption.

If equity research analysts do not publish research or reports, or publish unfavorable research or reports, about us, our business or our market, the price and trading volume of our common stock could decline.

The trading market for our common stock will be influenced by the research and reports that equity research analysts publish about us and our business. We do not currently have and may never obtain research coverage by equity research analysts. Equity research analysts may elect not to provide research coverage of our common stock after the completion of this offering, and such lack of research coverage may adversely affect the market price of our common stock. In the event we do have equity research analyst coverage, we will not have any control over the analysts or the content and opinions included in their reports. The price of our common stock could decline if one or more equity research analysts downgrade our common stock or issue other unfavorable commentary or research about us. If one or more equity research analysts ceases coverage of us or fails to publish reports on us regularly, demand for our common stock could decrease, which in turn could cause the trading price or trading volume of our common stock to decline.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains forward-looking statements about us and our industry that involve substantial risks and uncertainties. All statements other than statements of historical facts contained in this prospectus, including statements regarding our future results of operations or financial condition, business strategy and plans and objectives of management for future operations, are forward-looking statements. In some cases, you can identify forward-looking statements because they contain words such as “anticipate,” “believe,” “contemplate,” “continue,” “could,” “estimate,” “expect,” “intend,” “may,” “plan,” “potential,” “predict,” “project,” “should,” “target,” “will” or “would” or the negative of these words or other similar terms or expressions, although not all forward-looking statements contain these words. These forward-looking statements include statements concerning the following:

- the ability of our preclinical studies and clinical trials to demonstrate acceptable safety and efficacy of our product candidates;
- business disruptions affecting the initiation, patient enrollment, development and operation of our clinical trials, including a public health emergency, such as the global outbreak of the COVID-19 coronavirus;
- the timing, progress and results of preclinical studies and clinical trials for our current and future product candidates, including statements regarding the timing of initiation and completion of studies or trials and related preparatory work, the period during which the results of the trials will become available, and our research and development programs;
- the timing, scope and likelihood of regulatory filings and approvals, including final regulatory approval of our product candidates;
- our ability to develop and advance our current product candidates and programs into, and successfully complete, clinical trials;
- our manufacturing, commercialization, and marketing capabilities and strategy;
- our plans relating to commercializing our product candidates, if approved;
- the need to hire additional personnel and our ability to attract and retain such personnel;
- the size of the market opportunity for our product candidates, including our estimates of the number of patients who suffer from the diseases we are targeting;
- our expectations regarding the approval and use of our product candidates as first, second or subsequent lines of therapy or in combination with other drugs;
- our competitive position and the success of competing therapies that are or may become available;
- our estimates of the number of patients that we will enroll in our clinical trials;
- the characteristics and therapeutic effects of our product candidates;
- our ability to obtain and maintain regulatory approval of our product candidates;
- our plans relating to the further development of our product candidates, including additional indications we may pursue;
- our intellectual property position, including the scope of protection we are able to establish and maintain for intellectual property rights covering product candidates we may develop, including the validity of intellectual property rights held by third parties, and our ability not to infringe, misappropriate or otherwise violate any third-party intellectual property rights;
- our continued reliance on third parties to conduct additional clinical trials of our product candidates;
- our ability to obtain, and negotiate favorable terms of, any collaboration, licensing or other arrangements that may be necessary or desirable to develop, manufacture or commercialize our product candidates;

- the pricing and reimbursement of our product candidates we may develop, if approved;
- the rate and degree of market acceptance and clinical utility of our product candidates we may develop;
- our estimates regarding expenses, future revenue, capital requirements and needs for additional financing;
- our financial performance and our ability to effectively manage our anticipated growth;
- the period over which we estimate our existing cash and cash equivalents will be sufficient to fund our future operating expenses and capital expenditure requirements;
- the impact of laws and regulations;
- our expectations regarding the period during which we will qualify as an emerging growth company under the JOBS Act; and
- our anticipated use of our existing resources and the proceeds from this offering.

You should not rely on forward-looking statements as predictions of future events. We have based the forward-looking statements contained in this prospectus primarily on our current expectations and projections about future events and trends that we believe may affect our business, financial condition and operating results. The outcome of the events described in these forward-looking statements is subject to risks, uncertainties and other factors described in the section titled “Risk Factors” and elsewhere in this prospectus. Moreover, we operate in a very competitive and rapidly changing environment. New risks and uncertainties emerge from time to time, and it is not possible for us to predict all risks and uncertainties that could have an impact on the forward-looking statements contained in this prospectus. The results, events and circumstances reflected in the forward-looking statements may not be achieved or occur, and actual results, events or circumstances could differ materially from those described in the forward-looking statements. You should read this prospectus and the documents that we reference in this prospectus and have filed as exhibits to the registration statement, of which this prospectus is a part, that we have filed with the SEC with the understanding that our actual future results, levels of activity, performance and achievements may be materially different from what we expect.

In addition, statements that “we believe” and similar statements reflect our beliefs and opinions on the relevant subject. These statements are based on information available to us as of the date of this prospectus. While we believe that information provides a reasonable basis for these statements, that information may be limited or incomplete. Our statements should not be read to indicate that we have conducted an exhaustive inquiry into, or review of, all relevant information. These statements are inherently uncertain, and investors are cautioned not to unduly rely on these statements.

The forward-looking statements made in this prospectus relate only to events as of the date on which the statements are made. We undertake no obligation to update any forward-looking statements made in this prospectus to reflect events or circumstances after the date of this prospectus or to reflect new information or the occurrence of unanticipated events, except as required by law. We may not actually achieve the plans, intentions or expectations disclosed in our forward-looking statements, and you should not place undue reliance on our forward-looking statements. Our forward-looking statements do not reflect the potential impact of any future acquisitions, mergers, dispositions, joint ventures or investments. We qualify all of our forward looking statements by these cautionary statements.

MARKET AND INDUSTRY DATA

We obtained the industry, statistical and market data in this prospectus from our own internal estimates and research as well as from industry and general publications and research, surveys and studies conducted by third parties. All of the market data used in this prospectus involves a number of assumptions and limitations, and you are cautioned not to give undue weight to such data. While we believe that each of these studies and publications is reliable, the industry in which we operate is subject to a high degree of uncertainty and risk due to a variety of important factors, including those described in the section titled “Risk Factors.” These and other factors could cause results to differ materially from those expressed in the estimates made by third parties and by us.

USE OF PROCEEDS

We estimate that we will receive net proceeds from this initial public offering of approximately $89.6 million (or approximately $103.6 million if the underwriters exercise their option to purchase additional shares in full) based on an assumed initial public offering price of $17.00 per share of common stock, the midpoint of the price range set forth on the cover page of this prospectus, after deducting estimated underwriting discounts and commissions and estimated offering expenses.

A $1.00 increase (decrease) in the assumed initial public offering price of $17.00 per share of common stock would increase (decrease) the net proceeds to us from this offering by approximately $5.5 million, assuming the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same, and after deducting estimated underwriting discounts and commissions. Similarly, each increase (decrease) of 1.0 million shares in the number of shares of common stock offered by us would increase (decrease) the net proceeds to us from this offering by approximately $15.8 million, assuming the assumed initial public offering price of $17.00 per share of common stock remains the same, and after deducting estimated underwriting discounts and commissions.

The principal purposes of this offering are to increase our capitalization and financial flexibility, and create a public market for our common stock.

As of September 30, 2020, we had a cash balance of $3.7 million. Subsequent to September 30, 2020, we received $41.4 million of aggregate gross proceeds from the sale of shares of our Series AA convertible preferred stock and Series BB convertible preferred stock. We intend to use the net proceeds from this offering, together with our existing cash and cash equivalents, as follows:

- approximately $30 million to $40 million to fund the clinical development of SNS-301;
- approximately $15 million to $20 million to fund the preclinical and clinical development of SNS-401;
- approximately $10 million to $15 million to fund the preclinical and clinical development of SNS-VISTA; and
- the remaining amounts to fund the development of our ImmunoPhage platform and other pipeline programs, as well as for working capital and other general corporate purposes.

Based on our current operating plan, we believe that the net proceeds from this offering, together with our existing cash and cash equivalents, will enable us to fund our planned operating expenses and capital expenditures at least into the second half of 2023. We believe that the net proceeds from this offering, together with our existing cash and cash equivalents, will be insufficient to fund any of our product candidates through regulatory approval, and we anticipate needing to raise additional capital to complete the development of and commercialize our product candidates. It is difficult to predict the cost and timing required to complete development and obtain regulatory approval of, and commercialize, our product candidates due to, among other factors, the relatively short history of our experience with initiating, conducting and completing clinical trials, obtaining regulatory approval and commercializing our product candidates, the rate of subject enrollment in our clinical trials, filing requirements with various regulatory agencies, clinical trial results and the actual costs of manufacturing and supplying our product candidates.

Our expected use of the net proceeds from this offering represents our intentions based upon our current plans and business conditions. As of the date of this prospectus, we cannot predict with certainty all of the particular uses for the net proceeds to be received upon the completion of this offering or the amounts that we will actually spend on the uses set forth above. We believe that opportunities may exist from time to time to expand our current business through licenses with or acquisitions of, or investments in, complementary businesses, products or technologies, and we may use a portion of the net proceeds for these purposes.

Our management will have broad discretion over the use of the net proceeds from this offering. The amounts and timing of our expenditures will depend upon numerous factors, including the results of our research

and development efforts, the timing, cost and success of preclinical studies and any ongoing clinical trials or clinical trials we may commence in the future, the timing of regulatory submissions, our ability to obtain additional financing, the amount of cash obtained through our existing collaborations and future collaborations, if any, and any unforeseen cash needs.

Pending any use described above, we intend to invest the net proceeds of this offering in short- and intermediate-term interest-bearing obligations, investment-grade instruments, certificates of deposit or direct or guaranteed obligations of the U.S. government.

DIVIDEND POLICY

We have never declared or paid cash dividends on our capital stock. We currently intend to retain all available funds and future earnings, if any, to fund the development and expansion of our business, and we do not anticipate paying any cash dividends in the foreseeable future. Any future determination regarding the declaration and payment of dividends, if any, will be at the discretion of our board of directors and will depend on then-existing conditions, including our financial condition, operating results, contractual restrictions, capital requirements, business prospects and other factors our board of directors may deem relevant. Our future ability to pay cash dividends on our capital stock may also be limited by the terms of any future debt or preferred securities or future credit facility.

CAPITALIZATION

The following table sets forth our cash and cash equivalents, and our capitalization as of September 30, 2020 as follows:

- on an actual basis;
- on a pro forma basis to reflect (i) our issuance and sale of 85,499,239 shares of Series AA convertible preferred stock and 165,956,208 shares of Series BB convertible preferred stock subsequent to September 30, 2020, (ii) the redemption of a convertible note in November 2020 for 31,591,824 shares of our Series AA convertible preferred stock, (iii) the automatic conversion of all outstanding shares of our convertible preferred stock, including the shares described above in (i) and (ii), into 19,034,069 shares of our common stock immediately prior to the closing of this offering, (iv) our issuance of 1,737,012 shares of common stock subsequent to September 30, 2020 and (v) the filing of our amended and restated certificate of incorporation immediately prior to the closing of this offering; and
- on a pro forma as adjusted basis to give further effect to our issuance and sale of 5,885,000 shares of common stock in this offering at an assumed initial public offering price of $17.00 per share, the midpoint of the price range set forth on the cover page of this prospectus, after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

The pro forma and pro forma as adjusted information below is illustrative only, and our capitalization following the completion of this offering will be adjusted based on the actual initial public offering price and other terms of this offering determined at pricing. You should read this information in conjunction with our consolidated financial statements and the related notes included in this prospectus and the "Management's Discussion and Analysis of Financial Condition and Results of Operations" section and other financial information contained in this prospectus.

	As of September 30, 2020		
	Actual	Pro Forma	Pro Forma As Adjusted(1)
		(in thousands)	
Cash and cash equivalents	$ 3,733	$ 45,193	$ 134,835
Preferred stock, $0.0001 par value per share: 870,211,737 shares authorized, 630,592,111 issued and outstanding, actual; and 10,000,000 shares authorized and no shares issued or outstanding, pro forma and pro forma as adjusted	51,788	—	—
Stockholders' equity:			
Common stock, $0.0001 par value per share; 1,230,000,000 shares authorized, 1,787,124 shares issued and outstanding, actual; 250,000,000 shares authorized, pro forma and pro forma as adjusted; 22,558,200 shares issued and outstanding, pro forma; 28,443,200 shares issued and outstanding, pro forma as adjusted	—	2	3
Additional paid-in capital	55,600	151,441	241,082
Accumulated deficit	(107,281)	(107,281)	(107,281)
Total stockholders' (deficit) equity	(51,681)	44,162	133,804
Total capitalization	$ 107	$ 44,162	$ 133,804

(1) Each $1.00 increase (decrease) in the assumed initial public offering price of $17.00 per share, the midpoint of the price range set forth on the cover page of this prospectus, would increase (decrease) the pro forma as adjusted amount of each of cash and cash equivalents, additional paid in capital, total stockholders' (deficit) equity and total capitalization by approximately $5.5 million, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. Similarly, each

increase (decrease) of 1.0 million shares in the number of shares offered by us at the assumed initial public offering price per share would increase (decrease) the pro forma as adjusted amount of each of cash and cash equivalents, additional paid in capital, total stockholders' (deficit) equity and total capitalization by approximately $15.8 million.

The table above is based on 1,787,124 shares of our common stock outstanding as of September 30, 2020 and excludes:

- 1,660,864 shares of common stock issuable upon the exercise of stock options outstanding as of September 30, 2020, under our 2018 Plan, at a weighted-average exercise price of $6.72 per share;
- 469,682 shares of common stock issuable upon the exercise of warrants outstanding as of September 30, 2020, at a weighted-average exercise price of $9.82 per share;
- 5,000,000 shares of common stock reserved for future issuance under our 2021 Plan, which will become effective in connection with this offering, as well as any future shares, including annual increases, in the number of shares of common stock available for issuance under our 2021 Plan (of which we will grant options to purchase 1,028,117 shares of common stock upon the pricing of this offering at an exercise price equal to the initial public offering price); and
- 333,333 shares of common stock reserved for future issuance under our ESPP, which will become effective in connection with this offering, as well as any future shares, including annual increases, in the number of shares of common stock reserved for issuance under our ESPP.

DILUTION

If you invest in our common stock in this offering, your ownership interest will be immediately diluted to the extent of the difference between the initial public offering price per share and the pro forma as adjusted net tangible book value per share of our common stock after this offering.

As of September 30, 2020, we had a historical net tangible book value of $0.1 million, or $0.06 per share of common stock. Our historical net tangible book value per share represents total tangible assets less total liabilities, divided by the number of shares of common stock outstanding as of September 30, 2020.

Our pro forma net tangible book value as of September 30, 2020 was $44.1 million, or $1.96 per share of our common stock. Pro forma net tangible book value represents the amount of our total tangible assets less our total liabilities, after giving effect to (i) our issuance and sale of 85,499,239 shares of Series AA convertible preferred stock and 165,956,208 shares of Series BB convertible preferred stock subsequent to September 30, 2020, (ii) the redemption of a convertible note in November 2020 for 31,591,824 shares of our Series AA convertible preferred stock, (iii) our issuance of 1,737,012 shares of common stock subsequent to September 30, 2020 and (iv) the automatic conversion of all outstanding shares of our convertible preferred stock, including the shares described above in (i) and (ii), into 19,034,069 shares of our common stock immediately prior to the closing of this offering. Pro forma net tangible book value per share represents pro forma net tangible book value divided by the total number of shares outstanding as of September 30, 2020, after giving effect to the pro forma adjustments described above.

After giving further effect to the sale of 5,885,000 shares of common stock that we are offering at an assumed initial public offering price of $17.00 per share, the midpoint of the price range set forth on the cover page of this prospectus, and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us, our pro forma as adjusted net tangible book value as of September 30, 2020 would have been approximately $133.8 million, or approximately $4.70 per share. This amount represents an immediate increase in pro forma net tangible book value of $2.74 per share to our existing stockholders and an immediate dilution in pro forma net tangible book value of approximately $12.30 per share to new investors purchasing shares of common stock in this offering.

Dilution per share to new investors is determined by subtracting pro forma as adjusted net tangible book value per share after this offering from the initial public offering price per share paid by new investors. The following table illustrates this dilution (without giving effect to any exercise by the underwriters of their option to purchase additional shares):

Assumed initial public offering price per share		$17.00
Historical net tangible book value (deficit) per share as of September 30, 2020	$0.06	
Pro forma increase in historical net tangible book value per share attributable to the pro forma transactions described in the preceding paragraphs	1.90	
Pro forma net tangible book value per share as of September 30, 2020	1.96	
Increase in pro forma net tangible book value per share attributable to this offering	2.74	
Pro forma as adjusted net tangible book value per share after this offering		4.70
Dilution per share to new investors in this offering		$12.30

Each $1.00 increase (decrease) in the assumed initial public offering price of $17.00 per share, the midpoint of the price range set forth on the cover page of this prospectus, would increase (decrease) the pro forma as adjusted net tangible book value per share after this offering by approximately $0.20 per share, and dilution in pro forma net tangible book value per share to new investors by approximately $0.80, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting the estimated underwriting discounts and commissions and the estimated offering expenses payable by us. Each increase

(decrease) of 1.0 million shares in the number of shares offered by us would increase (decrease) our pro forma as adjusted net tangible book value per share after this offering by approximately $0.38 per share and decrease (increase) the dilution to investors participating in this offering by approximately $0.38 per share, assuming that the assumed initial public offering price remains the same, and after deducting the estimated underwriting discounts and commissions and the estimated offering expenses payable by us.

If the underwriters exercise their option to purchase 882,750 additional shares of our common stock in full in this offering, the pro forma as adjusted net tangible book value after the offering would be $5.04 per share, the increase in pro forma net tangible book value per share to existing stockholders would be $3.08 per share and the dilution per share to new investors would be $11.96 per share, in each case assuming an initial public offering price of $17.00 per share, the midpoint of the price range set forth on the cover page of this prospectus.

The following table summarizes on the pro forma as adjusted basis described above, as of September 30, 2020, the differences between the number of shares purchased from us, the total consideration paid to us in cash and the average price per share paid by existing stockholders for shares issued prior to this offering and the price to be paid by new investors in this offering. The calculation below is based on the assumed initial public offering price of $17.00 per share, the midpoint of the price range set forth on the cover page of the prospectus, before deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

	Shares Purchased		Total Consideration		Average Price Per Share
	Number	Percent	Amount	Percent	
Existing stockholders	22,558,200	79.3%	$123,369,083	55.2%	$ 5.47
New investors	5,885,000	20.7	100,045,000	44.8	17.00
Total	28,443,200	100%	$223,414,083	100%	$ 7.85

If the underwriters exercise their option to purchase additional shares of our common stock in full:

- the percentage of shares of common stock held by existing stockholders will decrease to approximately 76.9% of the total number of shares of our common stock outstanding after this offering; and
- the number of shares held by new investors will increase to 6,767,750, or approximately 23.1% of the total number of shares of our common stock outstanding after this offering.

The foregoing tables and calculations exclude:

- 1,660,864 shares of common stock issuable upon the exercise of stock options outstanding as of September 30, 2020, under our 2018 Plan, at a weighted-average exercise price of $6.72 per share;
- 469,682 shares of common stock issuable upon the exercise of warrants outstanding as of September 30, 2020, at a weighted-average exercise price of $9.82 per share;
- 5,000,000 shares of common stock reserved for future issuance under our 2021 Plan, which will become effective in connection with this offering, as well as any future shares, including annual increases, in the number of shares of common stock available for issuance under our 2021 Plan (of which we will grant options to purchase 1,028,117 shares of common stock upon the pricing of this offering at an exercise price equal to the initial public offering price); and
- 333,333 shares of common stock reserved for future issuance under our 2021 Employee Stock Purchase Plan, or ESPP, which will become effective in connection with this offering, as well as any future shares, including annual increases, in the number of shares of common stock reserved for issuance under our ESPP.

To the extent any outstanding options or warrants are exercised, there will be further dilution to new investors. In addition, we may choose to raise additional capital because of market conditions or strategic considerations, even if we believe that we have sufficient funds for our current or future operating plans. If we raise additional capital through the sale of equity or convertible debt securities, the issuance of these securities could result in further dilution to our stockholders.

SELECTED CONSOLIDATED FINANCIAL DATA

You should read the consolidated financial data set forth below in conjunction with our consolidated financial statements and the accompanying notes and the information in "Management's Discussion and Analysis of Financial Condition and Results of Operations" contained elsewhere in this prospectus. The following selected consolidated statement of operations data for the years ended December 31, 2019 and 2018 and the consolidated balance sheet data as of December 31, 2019 and 2018 have been derived from our audited consolidated financial statements included elsewhere in this prospectus. The selected consolidated statements of operations data for the nine months ended September 30, 2020 and 2019 and the balance sheet data as of September 30, 2020 have been derived from our unaudited interim financial statements included elsewhere in this prospectus and have been prepared on the same basis as the audited financial statements. In the opinion of management, the unaudited data reflects all adjustments, consisting only of normal recurring adjustments, necessary for a fair presentation of the financial information in those statements. Our historical results are not necessarily indicative of the results that should be expected in the future and the results for the nine months ended September 30, 2020 are not necessarily indicative of the results to be expected for the full year ending December 31, 2020 or any other future period.

	Nine Months Ended September 30,		Year Ended December 31,	
(in thousands, except share and per share data)	2020	2019	2019	2018
Consolidated Statements of Operations Data:				
Operating expenses:				
Research and development	$ 8,629	$ 5,925	$ 8,350	$ 8,227
General and administrative	5,007	3,103	4,085	4,513
Alvaxa IPR&D	738	—	—	—
Total operating expenses	14,374	9,028	12,435	12,740
Loss from operations	(14,374)	(9,028)	(12,435)	(12,740)
Other expense:				
Interest expense	(1,635)	(860)	(2,256)	(327)
Fair value adjustments on embedded debt derivatives	995	(71)	(1,973)	—
Gain (loss) on debt extinguishment	45	(75)	(75)	—
Other (expense) income, net	—	(1)	(1)	28
Net loss	(14,969)	(10,035)	(16,740)	(13,039)
Cumulative dividends on convertible preferred stock	(104)	(2,853)	(3,804)	(3,804)
Net loss attributable to common stockholders	$ (15,073)	$ (12,888)	$ (20,544)	$ (16,843)
Net loss per common share, basic and diluted	$ (9.82)	$ (35.10)	$ (55.92)	$ (45.87)
Weighted-average number of shares used in computing net loss per common share, basic and diluted	1,535,033	367,213	367,359	367,213
Unaudited pro forma net loss per share common share, basic and diluted(1)	$ (1.22)		$ (29.98)	
Unaudited pro forma weighted-average shares used in computing net loss per common share, basic and diluted(1)	12,316,554		685,164	

(1) The unaudited pro forma basic and diluted weighted-average common shares outstanding used in the calculation of unaudited pro forma basic and diluted net loss per share attributable to common stockholders for the year ended December 31, 2019 and the nine months ended September 30, 2020 have been prepared to reflect (i) our issuance and sale of 85,499,239 shares of Series AA convertible preferred stock and 165,956,208 shares of Series BB convertible preferred stock subsequent to September 30, 2020, (ii) the redemption of a convertible note in November 2020 for 31,591,824 shares of our Series AA convertible preferred stock, (iii) our issuance of 1,737,012 shares of common stock subsequent to September 30, 2020 and (iv) the automatic conversion of all outstanding shares of our convertible preferred stock, including the shares described above in (i) and (ii), into common stock immediately prior to the closing of this offering as if this offering had occurred on the later of the beginning of each period or the issuance date of the convertible preferred stock.

(in thousands)	As of September 30, 2020	As of December 31, 2019	2018
Consolidated Balance Sheet Data:			
Cash and cash equivalents	$ 3,733	$ 251	$ 653
Working capital (deficit)(1)	(286)	(21,212)	(1,383)
Total assets	5,515	1,217	1,850
Convertible preferred stock	51,788	47,545	47,545
Total stockholders' deficit	(51,681)	(68,662)	(53,480)

(1) We define working capital as current assets less current liabilities. See our financial statements included elsewhere in this prospectus for further details regarding our current assets and current liabilities.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

You should read the following discussion and analysis of our financial condition and results of operations together with our consolidated financial statements and the related notes and other financial information included elsewhere in this prospectus. Some of the information contained in this discussion and analysis or set forth elsewhere in this prospectus, including information with respect to our plans and strategy for our business, includes forward-looking statements that involve risks and uncertainties. You should review the "Risk Factors" section of this prospectus for a discussion of important factors that could cause actual results to differ materially from the results described in or implied by the forward-looking statements contained in the following discussion and analysis.

Overview

We are a clinical-stage immunotherapy company engaged in the discovery and development of next-generation therapies with an initial focus on treatments for cancer. Our ImmunoPhage platform is a powerful, self-adjuvanted and highly differentiated immunotherapy approach that is designed to utilize bacteriophage to induce a robust, focused and coordinated innate and adaptive immune response. We are engineering our ImmunoPhage product candidates to directly target APCs and modulate the TME through the targeted use of nanobodies to further enhance therapeutic activity. We believe our ImmunoPhage platform has the potential to deliver on the promise of personalized, off-the-shelf product candidates tailored to a patient's specific tumor. The versatility of our ImmunoPhage platform allows us to design product candidates in a modular fashion, based on a cocktail of common and patient-specific antigens built from our proprietary library of ImmunoPhages, which we refer to as Phortress. We are currently conducting an ongoing 30-patient Phase 1/2 clinical trial of our lead product candidate, SNS-301, in combination with the PD-1 inhibitor pembrolizumab, as a potential treatment for SCCHN. As of December 10, we have enrolled 11 patients in the trial, of which ten patients were evaluable for efficacy. We have observed disease control in seven of the patients evaluable for efficacy, including one patient with a PR, and two patients who have achieved longstanding SD for greater than 36 weeks following treatment. Treatment with SNS-301 has generally been well tolerated. We anticipate reporting topline data from this trial by the end of 2021. If the results of this trial are positive, subject to feedback from the FDA, we intend to initiate a randomized, registration-enabling trial for SNS-301. We are leveraging the insights from our experience with SNS-301 to expand our development pipeline to include SNS-401 for the treatment of MCC and a human mAb program targeting the novel immune checkpoint VISTA.

Since our inception, we have devoted the majority of our efforts and financial resources to research and development activities related to our ImmunoPhage platform and our lead product candidate SNS-301, including raising capital, protecting our intellectual property portfolio and conducting preclinical studies and clinical trials. We do not have any product candidates approved for sale, have not generated any revenue from product sales, and do not expect to generate any revenue from product sales for at least the next several years. We have largely funded our operations with proceeds from the sale of convertible preferred stock, common stock and convertible debt. As of January 15, 2021, we had raised an aggregate of $123.4 million of gross proceeds from private placements of our equity and convertible debt securities.

We have incurred significant operating losses over the last several years. Our net loss was $16.7 million and $13.0 million for the years ended December 31, 2019 and 2018, respectively, and $15.0 million for the nine months ended September 30, 2020. As of December 31, 2019, we had an accumulated deficit of $92.3 million, which increased to $107.3 million as of September 30, 2020. We expect to continue to incur significant expenses and operating losses for the foreseeable future. We anticipate that our expenses will increase significantly in connection with our ongoing activities, as we:

- complete our Phase 1/2 clinical trial of SNS-301 and continue clinical development of SNS-301;
- prepare to file INDs and then initiate clinical development of additional product candidates, including SNS-401 and SNS-VISTA;

- continue the research and development of our other product candidates;
- invest in our ImmunoPhage platform;
- seek to discover and develop additional product candidates or acquire or in-license drugs, product candidates or technologies;
- seek regulatory approvals for any product candidates that successfully complete clinical trials;
- ultimately establish a sales, marketing and distribution infrastructure and scale up manufacturing capabilities to commercialize any product candidates for which we may obtain regulatory approval;
- manufacture our product candidates or otherwise secure the clinical and commercial supply of our product candidates;
- hire additional research and development and selling, general and administrative personnel;
- maintain, expand and protect our intellectual property portfolio; and
- incur additional costs associated with operating as a public company following the completion of this offering.

Cash used to fund operating expenses is impacted by the timing of when we pay these expenses, as reflected in the change in our accounts payable and accrued expenses. We expect to continue to incur net losses and negative cash flows for the foreseeable future, and we expect our research and development expenses, general and administrative expenses, and capital expenditures will continue to increase. In particular, we expect our expenses to increase as we continue our development of, and seek regulatory approvals for, our product candidates, as well as hire additional personnel, pay fees to outside consultants, lawyers and accountants, and incur other increased costs associated with being a public company. In addition, if we seek and obtain regulatory approval to commercialize any product candidate, we will also incur increased expenses in connection with commercialization and marketing of any such product.

Recapitalization and Recent Security Issuances

In January 2020, we entered into an agreement with a third party, who is the holder of the 2019 Bridge Note with a principal balance of $1.0 million, and the holders of a majority of our Series A through F convertible preferred stock, or the Majority Legacy Preferred Stockholders, that provided a new source of capital and restructured our existing capital structure, or the Recapitalization. The third party invested $4 million in exchange for 48,700,311 shares of Series AA convertible preferred stock, or our Series AA Preferred Stock, and a warrant to purchase 634,118 shares of our common stock at an exercise price of $0.01 per share. The warrant was subsequently exercised in January 2020. Additionally, the agreement with the Majority Legacy Preferred Stockholders caused all other holders of our Series A through F convertible preferred stock, or the Minority Legacy Preferred Stockholders, and the Majority Legacy Preferred Stockholders to receive an aggregate of 627,871 shares of our common stock, or the Newly Issued Common Stock, in exchange for their holdings of our Series A through F convertible preferred stock, including cumulative and unpaid dividends, as part of the Recapitalization.

The Majority Legacy Preferred Stockholders agreed to invest additional capital in exchange for Series AA Preferred Stock. The Minority Legacy Preferred Stockholders were provided the opportunity to invest additional capital in exchange for Series AA Preferred Stock. All Majority and Minority Legacy Preferred Stockholders who invested additional capital during January 2020 were allowed to convert their Newly Issued Common Stock into Series AA Preferred Stock at a conversion rate based upon their incremental and historical investment. The Majority and Minority Legacy Preferred Stockholders invested $6.6 million in exchange for 79,954,952 shares of Series AA Preferred Stock. The Majority and Minority Legacy Preferred Stockholders also exchanged 148,732 shares of Newly Issued Common Stock for 210,310,025 shares of Series AA Preferred Stock under the Recapitalization agreement.

Our issuance of Series AA Preferred Stock triggered the redemption of certain convertible promissory notes, as well as accrued and unpaid interest and repayment premium, as applicable for certain notes, into shares of Series AA Preferred Stock. These debt instruments were redeemed for 188,173,050 shares of the Series AA Preferred Stock, which resulted in a gain on debt extinguishment of $45 thousand. Our remaining convertible promissory note was redeemed in November 2020.

On May 7, 2020, we issued warrants to a third party to purchase 389,325 shares of our common stock with an exercise price of $3.95 per common share. As of September 30, 2020, these warrants have not been exercised and have a five-year maturity date.

From October to November 2020, we issued and sold 85,499,239 shares of Series AA convertible preferred stock at $0.082135 per share in exchange for $7.0 million in gross proceeds.

From December 2020 through January 2021, we issued and sold 165,956,208 shares of our Series BB convertible preferred stock at a purchase price of $0.207383 per share for aggregate gross proceeds of $34.4 million.

Impact of COVID-19

In March 2020, COVID-19 was declared a global pandemic by the World Health Organization and to date, the COVID-19 pandemic continues to present a substantial public health and economic challenge around the world. The length of time and full extent to which the COVID-19 pandemic will directly or indirectly impact our business, results of operations and financial condition will depend on future developments that are highly uncertain, subject to change and are difficult to predict. While we continue to conduct our research and development activities, the COVID-19 pandemic may cause disruptions that impact the timing of our ongoing and planned clinical trials of SNS-301 and affect our ability to complete preclinical studies, future clinical trials or to procure items that are essential for our research and development activities.

In addition, a recurrence or “second wave” of COVID-19 cases could cause other widespread or more severe impacts depending on where infection rates are highest. We plan to continue to closely monitor the ongoing impact of the COVID-19 pandemic on our employees and our business operations, as we deal with the disruptions and uncertainties relating to the COVID-19 pandemic. In an effort to provide a safe work environment for our employees, we have, among other things, implemented various social distancing measures in our office and labs including replacing in-person meetings with virtual interactions, and are working remotely when possible. We expect to continue to take actions as may be required or recommended by government authorities or as we determine are in the best interests of our employees and other business partners in light of the pandemic. To date, there has not been a significant impact on the development of SNS-301 or the rest of our pipeline; however we cannot at this time predict the specific extent, duration, or full impact that the COVID-19 pandemic could potentially have on our ongoing business plan, financial condition and operations.

Components of Our Results of Operations

Operating Expenses

Research and Development Expense

Our research and development expense consists of expenses incurred in connection with the discovery and development of our product candidates. These expenses include:

- expenses incurred under agreements with CROs, as well as investigative sites and consultants that conduct our clinical trials and preclinical studies;
- the cost of manufacturing our product candidates including the potential cost of CMOs that manufacture product for use in our preclinical studies and clinical trials and perform analytical testing, scale-up and other services in connection with our development activities;
- the cost of outsourced professional scientific development services;
- employee-related expenses, including salaries, benefits and stock-based compensation for employees engaged in the research and development function;
- expenses relating to regulatory activities, including filing fees paid to regulatory agencies;

- fees for maintaining licenses and other amounts due under our third party licensing agreements;
- laboratory materials and supplies used to support our research activities; and
- allocated expenses for utilities and other facility-related costs.

We expense all research and development costs in the periods in which they are incurred. Costs for certain research and development activities are recognized based on an evaluation of the progress to completion of specific tasks using information and data provided to us by our vendors and third-party service providers.

We do not track our research and development expenses by program. Our direct external research and development expenses consist primarily of external costs, such as fees paid to CROs, CMOs, research/testing laboratories and outside consultants in connection with our preclinical development, process development, manufacturing and clinical development activities. We do not allocate these costs to specific product candidates because many of them are deployed across several of our development programs and, as such, are not separately classified. We use internal resources primarily to conduct research and manage our preclinical development, outsourced clinical trials, process development, manufacturing and clinical development activities. These employees work across multiple development programs and, therefore, we do not track their costs by program and, as such, are not separately classified. Research and development activities are central to our business model. Product candidates in later stages of clinical development generally have higher development costs than those in earlier stages of clinical development, primarily due to the increased size and duration of later-stage clinical trials. We expect our research and development expenses to increase significantly over the next several years as we increase personnel costs, including stock-based compensation, conduct our registration-enabling clinical trial of SNS-301 in patients with SCCHN, conduct other clinical trials and prepare regulatory filings for our product candidates.

The successful development of our product candidates is highly uncertain. At this time, we cannot reasonably estimate or know the nature, timing and costs of the efforts that will be necessary to complete the remainder of the development of, or when, if ever, material net cash inflows may commence from any of our other product candidates. This uncertainty is due to the numerous risks and uncertainties associated with the duration and cost of clinical trials, which vary significantly over the life of a project as a result of many factors, including:

- the scope, progress, outcome and costs of our preclinical studies and clinical trials of SNS-301, our other product candidates and any other product candidates we may acquire or develop;
- manufacturing of our product candidates or making arrangements with potential third-party manufacturers for both clinical and commercial supplies of these product candidates;
- successful patient enrollment in, and the initiation, duration and completion of clinical trials;
- the cost of gaining regulatory approvals for our product candidates, subject to the successful outcome of ongoing and future clinical trials; and
- the extent of any required post-marketing approval commitments to applicable regulatory authorities.

Our expenditures are subject to additional uncertainties, including the terms and timing of regulatory approvals, and the expense of filing, prosecuting, defending and enforcing any patent claims or other intellectual property rights. We may never succeed in achieving regulatory approval for any of our product candidates. We may obtain unexpected results from our clinical trials. We may elect to discontinue, delay or modify clinical trials of some product candidates or focus on others. A change in the outcome of any of these variables with respect to the development of a product candidate could mean a significant change in the costs and timing associated with the development of that product candidate. For example, if the FDA or other regulatory authorities were to require us to conduct clinical trials beyond those that we currently anticipate, or if we experience significant delays in enrollment in any of our clinical trials, we could be required to expend significant additional financial resources and time on the completion of clinical development. Product commercialization will take several years and significant additional development costs.

General and Administrative Expense

General and administrative expenses consist principally of salaries and related costs for personnel in executive, administrative, finance and legal functions, including stock-based compensation, travel expenses and recruiting expenses. Other general and administrative expenses include facility related costs, patent filing and prosecution costs and professional fees for legal, auditing and tax services, and insurance costs.

We anticipate that our general and administrative expenses will increase as a result of increased payroll, expanded infrastructure and higher consulting, legal and tax-related services associated with maintaining compliance with Nasdaq listing and SEC requirements, accounting and investor relations costs, and director and officer insurance premiums associated with being a public company.

Alvaxa IPR&D

On May 18, 2020, we acquired Alvaxa Biosciences, or Alvaxa, in a cash and stock purchase pursuant to a Stock Purchase Agreement. Under the terms of the Stock Purchase Agreement, we acquired Alvaxa's existing camelid nanobodies and other biomaterials, or the Biomaterials, expertise in nanobody discovery, as well as a license agreement with a research organization. The former majority shareholder of Alvaxa is our current Chief Scientific Officer. Under the Stock Purchase Agreement, we paid $197 thousand to settle liabilities assumed from Alvaxa and issued 304,376 shares of our common stock to the shareholders of Alvaxa. We have evaluated the acquisition under ASC 805, *Business Combinations* and determined this to be an asset acquisition.

The 304,376 shares of common stock was valued at $1.78 per share, or $541 thousand in total, based on a valuation determined with the assistance of a third party. We determined that substantially all the value acquired in the transaction related to the Biomaterials and represents in-process research and development, or IPR&D. The liabilities of $197 thousand assumed were related to previously incurred employee costs as well as contractually required vendor payments. The consideration transferred in this transaction was recorded as an expense in the IPR&D line item within our Statement of Operations during the nine months ended September 30, 2020.

Other Expense

Our other expense consists of changes in the fair value of our derivative liability related to an embedded derivative on certain 2019 promissory notes, gain/loss on debt extinguishments and interest expense on our outstanding convertible debt.

Income Taxes

Since our inception, we have not recorded any income tax benefits for the net losses we have incurred or for the research and development tax credits earned in each year, as we believe, based upon the weight of available evidence, that it is more likely than not that all of our net operating loss carryforwards and tax credit carryforwards will not be realized.

Results of Operations

Comparison of the Nine Months Ended September 30, 2020 and 2019

The following sets forth our results of operations for the nine months ended September 30, 2020 and 2019:

(in thousands)	Nine Months Ended September 30, 2020	2019	Change
Operating expenses:			
Research and development	$ 8,629	$ 5,925	$ 2,704
General and administrative	5,007	3,103	1,904
Alvaxa IPR&D	738	—	738
Total operating expenses	14,374	9,028	5,346
Loss from operations	(14,374)	(9,028)	(5,346)
Total other expense	(595)	(1,007)	412
Net loss	$ (14,969)	$ (10,035)	$(4,934)

Research and Development Expenses

Research and development expenses were $8.6 million for the nine months ended September 30, 2020, compared to $5.9 million for the nine months ended September 30, 2019. The increase of $2.7 million is driven mainly by the progress of our clinical trial for SNS-301, furthering the preclinical development of SNS-401 and SNS-VISTA and increased early research costs.

General and Administrative Expenses

General and administrative expenses were $5.0 million for the nine months ended September 30, 2020, compared to $3.1 million for the nine months ended September 30, 2019. The increase of $1.9 million was primarily attributable to increased human resources related spend associated with growing the new leadership team, and consulting fees for executive contractors and financing support.

Alvaxa IPR&D

In May 2020, we entered into a Stock Purchase Agreement to purchase 100% of the shares of Alvaxa. Under the Stock Purchase Agreement, we paid $197 thousand and issued 304,376 shares of our common stock to the shareholders of Alvaxa valued at $541 thousand.

Other Expense

Other expense was $0.6 million for the nine months ended September 30, 2020, compared to $1.0 million for the nine months ended September 30, 2019. The decrease of $0.4 million was driven by $1.1 million fair value adjustments of embedded debt derivative liability associated with certain 2019 promissory notes, and gain on gain extinguishment related to the conversion of outstanding promissory notes in January 2020, offset by an increase of $0.8 million in interest expense on convertible promissory notes.

Comparison of Years Ended December 31, 2019 and 2018

The following sets forth our results of operations for the years ended December 31, 2019 and 2018:

(in thousands)	Year Ended December 31, 2019	2018	Change
Operating expenses:			
Research and development	$ 8,350	$ 8,227	$ 123
General and administrative	4,085	4,513	(428)
Total operating expenses	12,435	12,740	(305)
Loss from operations	(12,435)	(12,740)	305
Total other expense	(4,305)	(299)	(4,006)
Net loss	$ (16,740)	$ (13,039)	$(3,701)

Research and Development Expenses

Research and development expenses were $8.4 million for the year ended December 31, 2019, compared to $8.2 million for the year ended December 31, 2018. Costs remained relatively flat between the two years, with investments being made in early research and development activities and the clinical and preclinical development of SNS-301, SNS-401 and SNS-VISTA.

General and Administrative Expenses

General and administrative expenses were $4.1 million for the year ended December 31, 2019, compared to $4.5 million for the year ended December 31, 2018. The decrease of $0.4 million was primarily attributable to decreased spend associated with external corporate legal costs, partially offset by an increase headcount-related costs in the same period.

Other Expense

Other expense was $4.3 million for the year ended December 31, 2019, compared to $0.3 million for the year ended December 31, 2018. The increase of $4.0 million was driven by a $2.0 fair value adjustments of embedded debt derivative liability associated with certain 2019 promissory notes, and an increase of $2.0 million in interest expense on outstanding convertible promissory notes.

Liquidity and Capital Resources

Sources of Liquidity

We have not generated any product revenue and have incurred net losses and negative cash flows from our operations. We have financed our operations through sales of our common stock, convertible preferred stock and convertible debt, receiving aggregate gross proceeds of $123.4 million as of January 15, 2021. Our net loss was $16.7 million and $13.0 million for the years ended December 31, 2019 and 2018, respectively and $15.0 million for the nine months ended September 30, 2020. As of December 31, 2019, we had an accumulated deficit of $92.3 million, increasing to $107.3 million as of September 30, 2020. Our primary use of cash is to fund operating expenses, which consist primarily of research and development expenditures, and to a lesser extent, general and administrative expenditures.

As of December 31, 2019, we had cash and cash equivalents of $0.3 million. From January 2020 to November 2020, we issued and sold 317.6 million shares of Series AA convertible preferred stock to a group of investors, in exchange for $26.1 million of new gross proceeds. As of September 30, 2020, we had cash and cash equivalents of $3.7 million. From December 2020 to January 2021, we issued and sold 165,956,208 shares of Series BB convertible preferred stock to a group of investors, in exchange for $34.4 million of new gross proceeds.

Cash Flows

The following table summarizes our sources and uses of cash for each of the periods below:

(in thousands)	Nine Months Ended September 30, 2020	Nine Months Ended September 30, 2019	Year Ended December 31, 2019	Year Ended December 31, 2018
Net cash used in operating activities	$ (15,025)	$ (6,920)	$ (8,571)	$ (10,313)
Net cash used in investing activities	(1,087)	(9)	(53)	(31)
Net cash provided by financing activities	19,594	6,576	8,222	750
Net increase (decrease) in cash and cash equivalents	$ 3,482	$ (353)	$ (402)	$ (9,594)

Operating Activities

During the nine months ended September 30, 2020, our operating activities used $15.0 million of cash, driven primarily by our net loss. During the nine months ended September 30, 2019, operating activities used $6.9 million of cash, primarily resulting from our net loss. The increase in net cash used in operating activities for the nine months ended September 30, 2020 as compared to the nine months ended September 30, 2019 is attributed to an increase in both our research and development and general and operating expenses as well a $2.5 million decrease in our outstanding payables.

During the year ended December 31, 2019, our operating activities used $8.6 million of cash, primarily resulting from the continued clinical and preclinical advancement of our product candidates. During the year ended December 31, 2018, operating activities used $10.3 million of cash, primarily resulting from our advancement of our lead product candidate, SNS-301, and development of our ImmunoPhage platform. The decrease in net cash used in operating activities for the year ended December 31, 2019 as compared to the year ended December 31, 2018 was primarily impacted by extending vendor payment terms on services provided in order to conserve cash usage.

Investing Activities

During the nine months ended September 30, 2020, net cash used in investing activities was $1.1 million from the purchase of Alvaxa and purchases of property and equipment. During the nine months ended September 30, 2019 and the years ended December 31, 2019 and 2018, net cash used in investing activities was related to purchases of property and equipment.

Financing Activities

During the nine months ended September 30, 2020, net cash provided by financing activities was $19.6 million, primarily from the issuance of our Series AA convertible preferred stock, as well as $0.6 million received in unsecured loan funding from the Payroll Protection Program. During the nine months ended September 30, 2019, net cash provided by financing activities was $6.6 million from the issuance of convertible promissory notes.

During the year ended December 31, 2019, net cash provided by financing activities was $8.2 million from the issuance of convertible promissory notes, as well as cash proceeds from the exercise of common stock warrants. During the year ended December 31, 2018, net cash provided by financing activities was $0.8 million from the issuance of a convertible promissory note.

Funding Requirements

We expect our expenses to increase in connection with our ongoing activities, particularly as we continue the research and development of, continue or initiate clinical trials of, and potentially seek marketing approval for, our product candidates. In addition, upon the closing of this offering, we expect to incur additional costs

associated with operating as a public company, including significant legal, accounting, investor relations and other expenses that we did not incur as a private company. The timing and amount of our operating expenditures will depend largely on:

- the initiation, progress, timing, costs and results of current and future preclinical studies and clinical trials for SNS-301, SNS-401 and SNS-VISTA and our other product candidates;
- the cost and timing of the manufacture of additional clinical trial material as well as any costs related to the scale-up of manufacturing activities;
- the costs to seek regulatory approvals for any product candidates that successfully complete clinical trials;
- the extent to which we or any third-party service providers on whom we rely experience delays or interruptions to preclinical studies and clinical trials, or to our supply chain due to the COVID-19 pandemic;
- the need to hire additional clinical, quality assurance, quality control and other scientific personnel;
- the number and characteristics of product candidates that we develop or may in-license;
- the outcome, timing and cost of meeting and maintaining compliance with regulatory requirements;
- the cost of filing, prosecuting, defending and enforcing our patent claims and other intellectual property rights;
- the terms of any collaboration agreements we may choose to enter into, including the achievement of milestones or occurrence of other developments that trigger payments under any license or collaboration agreements we might have at such time;
- the cost associated with the expansion of our operational, financial and management systems and increased personnel, including personnel to support our operations as a public company; and
- the cost of establishing sales, marketing and distribution capabilities for any product candidates for which we may receive regulatory approval in regions where we choose to commercialize our products, if approved, on our own.

Without giving effect to the anticipated net proceeds from this offering, based on our current operating plan, we believe we do not have sufficient cash and cash equivalents on hand to support current operations for at least one year from the date of issuance of the consolidated financial statements for the year ended December 31, 2019, which was November 12, 2020, appearing at the end of this prospectus. To finance our operations beyond that point we will need to raise additional capital, which cannot be assured. Our independent registered public accounting firm included an explanatory paragraph in its audit report on our consolidated financial statements as of and for the years ended December 31, 2019 and 2018 emphasizing our disclosure in note 1 of our consolidated financial statements regarding recurring losses from operations and negative cash flows and our need to raise additional funding to finance our operations raising substantial doubt about our ability to continue as a going concern.

We expect our existing cash and cash equivalents, together with the net proceeds from this offering, will enable us to fund our operating expenses and capital expenditure requirements at least into the second half of 2023. We have based this estimate on assumptions that may prove to be wrong, and we may use our available capital resources sooner than we currently expect. Our future capital requirements will depend on many factors, including:

- the scope, progress, results and costs of product discovery, preclinical studies and clinical trials;
- the scope, prioritization and number of our research and development programs;
- the costs, timing and outcome of regulatory review of our product candidates;
- our ability to establish and maintain collaborations on favorable terms, if at all;

- the extent to which we are obligated to reimburse, or entitled to reimbursement of, clinical trial costs under collaboration agreements, if any;
- the costs of preparing, filing and prosecuting patent applications, maintaining and enforcing our intellectual property rights and defending intellectual property-related claims;
- the extent to which we acquire or in-license other product candidates and technologies;
- the costs of securing manufacturing arrangements for commercial production;
- the costs of establishing or contracting for sales and marketing capabilities if we obtain regulatory approvals to market our product candidates; and
- the impact of the COVID-19 pandemic and the corresponding responses of businesses and governments.

Until such time, if ever, as we can generate substantial product revenue, we expect to finance our operations through a combination of equity offerings, debt financings, collaborations, strategic alliances and marketing, distribution or licensing arrangements. We do not currently have any committed external source of funds. To the extent that we raise additional capital through the sale of equity or convertible debt securities, your ownership interest may be materially diluted, and the terms of such securities could include liquidation or other preferences that adversely affect your rights as a common stockholder. Debt financing and preferred equity financing, if available, may involve agreements that include restrictive covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures or declaring dividends. In addition, debt financing would result in fixed payment obligations.

If we raise additional funds through collaborations, strategic alliances or marketing, distribution or licensing arrangements with third parties, we may have to relinquish valuable rights to our future revenue streams, research programs or product candidates or grant licenses on terms that may not be favorable to us. If we are unable to raise additional funds through equity or debt financings or other arrangements when needed, we may be required to delay, limit, reduce or terminate our research, product development or future commercialization efforts or grant rights to develop and market product candidates that we would otherwise prefer to develop and market ourselves.

Contractual Obligations

The following table summarizes our contractual obligations at December 31, 2019 (in thousands):

	Total	Less than 1 Year	1 to 3 Years	3 to 5 Years
Capital leases	$ 178	$ 41	$ 82	$ 55
Convertible notes	16,055	16,055	—	—
Operating leases	5,310	1,171	2,381	1,758
Total	$ 21,543	$ 17,267	$ 2,463	$ 1,813

The amounts in the table above are associated with contracts that are enforceable and legally binding and that specify all significant terms, including fixed or minimum services to be used, fixed, minimum or variable price provisions, and the approximate timing of the actions under the contracts. The table does not include obligations under agreements that we can cancel without a significant penalty.

In July 2020, we entered into an agreement with our sub-landlord to terminate our corporate headquarters lease agreement. Under the terms of the agreement, we will vacate the property on or before December 31, 2020 and the sub-landlord will retain our $0.4 million security deposit previously remitted in 2018. In October 2020, we entered into a new operating lease for our current corporate headquarters, with a term commencing on November 1, 2020 and continuing through February 2027. Our minimum commitment under the new lease is approximately $0.4 million dollars annually.

In January 2021, the Company entered into a new operating lease for general office purposes including laboratory use in Boston, Massachusetts, with a term commencing on April 1, 2021 and continuing through December 2026. The amount of square feet of office space is 10,082 square feet and the Company's minimum commitment under the new lease is approximately $0.9 million dollars annually.

All of our convertible notes and related accrued interest were redeemed series AA convertible preferred stock subsequent to December 31, 2019.

We enter into contracts in the normal course of business with third-party service providers for clinical trials, preclinical research studies and testing, manufacturing and other services and products for operating purposes. We have not included our payment obligations under these contracts in the table as these contracts generally provide for termination upon notice, and therefore, we believe that our non-cancelable obligations under these agreements are not material and we cannot reasonably estimate the timing of if and when they will occur. We could also enter into additional research, manufacturing, supplier and other agreements in the future, which may require up-front payments and even long-term commitments of cash.

Internal Control Over Financial Reporting

During the audit of our financial statements for the year ended December 31, 2019, three material weaknesses were identified in our internal control over financial reporting. Under standards established by the PCAOB, a "material weakness" is a deficiency, or combination of deficiencies in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of the annual or interim financial statements will not be prevented or detected on a timely basis. The material weaknesses that have been identified relate to lack of segregation of duties, lack of a risk assessment process and lack of contemporaneous documentation, both contractual and accounting related.

We are in the process of implementing a number of measures to address the material weaknesses and deficiencies that have been identified including: (i) hiring additional accounting and financial reporting personnel with generally accepted accounting principles in the United States, or US GAAP, and SEC reporting experience, (ii) developing, communicating and implementing an accounting policy manual for our accounting and financial reporting personnel for recurring transactions and period-end closing processes, and (iii) establishing effective monitoring and oversight controls for non-recurring and complex transactions to ensure the accuracy and completeness of our company's consolidated financial statements and related disclosures.

These additional resources and procedures are designed to enable us to broaden the scope and quality of our internal review of underlying information related to financial reporting and to formalize and enhance our internal control procedures. With the oversight of senior management and our audit committee, we have begun taking steps and plan to take additional measures to remediate the underlying causes of the material weaknesses.

We intend to complete the implementation of our remediation plan during fiscal year 2021. Although we believe that our remediation plan will improve our internal control over financial reporting, additional time may be required to fully implement it and to make conclusions regarding the effectiveness of our internal controls over financial reporting. Our management will closely monitor and modify, as appropriate, the remediation plan to eliminate the identified material weakness.

If our remediation of the material weaknesses is not effective, or if we experience additional material weaknesses or otherwise fail to maintain an effective system of internal controls in the future, we may not be able to accurately or timely report our financial condition or results of operations. Accordingly, there could continue to be a reasonable possibility that a material misstatement of our financial statements would not be prevented or detected on a timely basis. We cannot assure you that the measures we have taken to date, or any measures we may take in the future, will be sufficient to remediate the material weaknesses we have identified or avoid potential future material weaknesses.

We, and our independent registered public accounting firm, were not required to report on our evaluation of the Company's internal control over financial reporting as of December 31, 2019 and 2018 in accordance with the provisions of the Sarbanes-Oxley Act. Accordingly, we cannot assure you that we have identified all, or that we will not in the future have additional, material weaknesses. Material weaknesses may still exist when we report on the effectiveness of our internal control over financial reporting as required by reporting requirements under Section 404 of the Sarbanes-Oxley Act after the completion of this offering.

Off-Balance Sheet Arrangements

We did not have during the periods presented, and we do not currently have, any off-balance sheet arrangements, as defined in the rules and regulations of the U.S. Securities and Exchange Commission.

Critical Accounting Policies and Significant Judgements and Estimates

This Management's Discussion and Analysis of Financial Condition and Results of Operations is based on our financial statements, which are prepared in accordance with US GAAP. The preparation of our financial statements requires us to make estimates, assumptions and judgments that affect the reported amounts of assets, liabilities, costs and expenses. We base our estimates and assumptions on historical experience and other factors that we believe to be reasonable under the circumstances. We evaluate our estimates and assumptions on an ongoing basis. Our actual results may differ from these estimates.

We define our critical accounting policies as those accounting principles that require us to make subjective estimates and judgments about matters that are uncertain and are likely to have a material impact on our financial condition and results of operations, as well as the specific manner in which we apply those principles. While our significant accounting policies are more fully described in note 2 to our annual financial statements beginning on page F-1 of this prospectus, we believe the following are the critical accounting policies used in the preparation of our financial statements that require significant estimates and judgments.

Accrued Research and Development Expenses

We incur substantial expenses associated with clinical trials. Accounting for clinical trials relating to activities performed by CROs and other external vendors requires management to exercise significant estimates in regard to the timing and accounting for these expenses. We estimate costs of research and development activities conducted by service providers, which include, the conduct of sponsored research, preclinical studies and contract manufacturing activities. The diverse nature of services being provided under CRO and other arrangements, the different compensation arrangements that exist for each type of service and the lack of timely information related to certain clinical activities complicates the estimation of accruals for services rendered by CROs and other vendors in connection with clinical trials. We record the estimated costs of research and development activities based upon the estimated amount of services provided but not yet invoiced and include these costs in the accrued and other current liabilities or prepaid expenses on the balance sheets and within research and development expense on the consolidated statements of operations. We determine the estimated costs through discussions with the internal personnel and external service providers as to the progress, or stage of completion of the services and the agreed-upon fees to be paid for such services. This process involves a thorough review of open contracts and evaluation by internal personnel to identify services received that have been performed for us and estimating the associated cost incurred for these services for which we have not yet been invoiced or otherwise notified of the actual cost. In estimating the duration of a clinical study, we evaluate the start-up, treatment and wrap-up periods, compensation arrangements and services rendered attributable to each clinical trial and fluctuations are regularly tested against payment plans and trial completion assumptions.

Our expenses related to clinical trials are based on estimates of patient enrollment and related expenses at clinical investigator sites as well as estimates for the services received and efforts expended pursuant to contracts with multiple research institutions and CROs that may be used to conduct and manage clinical trials on our

behalf. We determine the estimated costs through discussions with internal personnel and external service providers as to the progress, or stage of completion of the services and the agreed-upon fees to be paid for such services. We generally accrue expenses related to clinical trials based on contracted amounts applied to the level of patient enrollment and activity. If timelines or contracts are modified based upon changes in the clinical trial protocol or scope of work to be performed, we modify our estimates of accrued expenses accordingly on a prospective basis.

Stock-Based Compensation

We measure all stock-based awards granted based on their estimated fair value on the date of the grant and recognize the corresponding compensation expense for those awarded to employees and directors over the requisite service period, which is generally the vesting period of the respective award, and for those awarded to nonemployees over the period during which services are rendered by nonemployees until completed. We have typically issued stock options and warrants with service-based vesting conditions and we record the expense for these awards using the straight-line method.

We estimate the fair value of each stock option grant using the Black-Scholes option-pricing model, which uses as inputs the fair value of our common stock and assumptions we make for the volatility of our common stock, the expected term of our stock options and warrants, the risk-free interest rate for a period that approximates the expected term of our stock options and warrants and our expected dividend yield.

The following table reflects the weighted average assumptions used to estimate the fair value of stock options and warrants granted during the nine months ended September 30, 2020 and 2019 and year ended December 31, 2019 and 2018:

	Nine Months Ended September 30,		Year Ended December 31,	
	2020	2019	2019	2018
Volatility	90.0%	90.0%	90.0%	72.5%–75.0%
Expected life (years)	0.5–4.0	0.5–10.0	0.5–10.0	6.0–10.0
Risk-free interest rate	0.11%–0.18%	1.4%–2.5%	1.4%–2.5%	2.2%–2.8%
Dividend rate	— %	— %	— %	— %

Due to the lack of a public market for the trading of our common stock and a lack of company-specific historical and implied volatility data, we base the estimate of expected stock price volatility on the historical volatility of a representative group of publicly traded companies for which historical information is available. The historical volatility is generally calculated based on a period of time commensurate with the expected term assumption. We use the simplified method to calculate the expected term for options granted to employees and directors. We utilize this method as we do not have sufficient historical exercise data to provide a reasonable basis upon which to estimate the expected term. For options granted to non-employees, we utilize the contractual term. The risk-free interest rate is based on a U.S. treasury instrument whose term is consistent with the expected term of the stock options. The expected dividend yield is assumed to be zero, as we have never paid dividends and do not have current plans to pay any dividends on our common stock.

Fair Value of Common Stock

As there has been no public market for our common stock to date, the estimated fair value of our common stock has been determined by our board of directors as of the date of each option grant, with input from management, considering our most recently available third-party valuations of common stock, and our board of directors' assessment of additional objective and subjective factors that it believed were relevant and which may have changed from the date of the most recent valuation through the date of the grant.

These third-party valuations were performed in accordance with the guidance outlined in the American Institute of Certified Public Accountants' Accounting and Valuation Guide, *Valuation of Privately-Held-Company Equity Securities Issued as Compensation*. Our common stock valuations were prepared using either an option pricing method, or OPM, or a hybrid method, both of which used market approaches to estimate our enterprise value.

After our equity value was determined, our common stock values were estimated using both an option pricing method, or OPM, and a hybrid approach. The OPM treats common stock and convertible preferred stock as call options on the total equity value of a company, with exercise prices based on the value thresholds at which the allocation among the various holders of a company's securities changes. Under this method, the common stock only has value if the funds available for distribution to stockholders exceeds the value of the convertible preferred stock liquidation preferences at the time of the liquidity event, such as a strategic sale or a merger. A discount for lack of marketability of the common stock is then applied to arrive at an indication of value for the common stock.

The hybrid method utilized both a probability-weighted expected return method, or PWERM, where the equity value in one or more scenarios is assigned, and the OPM. The PWERM is a scenario-based methodology that estimates the fair value of our common stock based upon an analysis of our future values, assuming various outcomes. The common stock value is based on the probability-weighted present value of expected future investment returns considering each of the possible outcomes available as well as the rights of each class of stock. The future value of the common stock under each outcome is discounted back to the valuation date at an appropriate risk-adjusted discount rate, and then probability weighted to arrive at an indication of value for the common stock

Given the absence of a public trading market of our capital stock, our board of directors exercised reasonable judgment and considered a number of objective and subjective factors to determine its estimate of the fair value of our common stock, including changes in the following factors between the date of the July 31, 2020 valuation and the grant date:

- the prices, rights, preferences and privileges of our convertible preferred stock relative to our common stock;
- our business, financial condition and results of operations, including related industry trends affecting our operations;
- the likelihood of achieving a liquidity event, such as an initial public offering or sale of our company, given prevailing market conditions;
- the lack of marketability of our common stock;
- the market performance of comparable publicly traded companies; and
- U.S. and global economic and capital market conditions and outlook.

The assumptions underlying our board of directors' valuations represented our board's best estimates, which involved inherent uncertainties and the application of our board's judgment. As a result, if factors or expected outcomes had changed or our board of directors had used significantly different assumptions or estimates, our equity-based compensation expense could have been materially different. Following the completion of this offering, our board of directors will determine the fair value of our common stock based on the quoted market prices of our common stock on the Nasdaq Global Market.

The following table summarizes by grant date the number of shares of common stock subject to options granted since January 1, 2020, as well as the associated per share exercise price and the estimated fair value per share of the common stock underlying the options as of the grant date:

Grant Date	Number of Shares of Common Stock Subject to Options Granted	Exercise Price per Share	Estimated Fair Value Per Share of Common Stock on Grant Date
August 5, 2020	1,583,260	$ 3.22	$ 3.22
December 29, 2020	316,247	$ 6.00	$ 6.00
January 14, 2021	72,916	$ 9.22	$ 7.49

Based on an assumed initial public offering price of $17.00 per share of common stock, the midpoint of the price range set forth on the cover page of this prospectus, the intrinsic value of vested and unvested options outstanding as of September 30, 2020 was $2.0 million.

Recent Accounting Pronouncements

See note 2 in our annual financial statements and note 2 in our interim financial statements beginning on page F-1 of this prospectus for a description of recent accounting pronouncements applicable to our financial statements. Other than as disclosed in our financial statements, we do not expect that any recently issued accounting standards will have a material impact on our financial statements or will otherwise apply to our operations.

Qualitative and Quantitative Disclosures about Market Risk

We are a smaller reporting company as defined by Item 10 of Regulation S-K and are not required to provide the information otherwise required under this item.

Emerging Growth Company and Smaller Reporting Company Status

We qualify as an EGC, as defined in the JOBS Act. As an EGC, we may take advantage of specified reduced disclosure and other requirements that are otherwise applicable generally to public companies, including reduced disclosure about our executive compensation arrangements, exemption from the requirements to hold non-binding advisory votes on executive compensation and golden parachute payments and exemption from the auditor attestation requirement in the assessment of our internal control over financial reporting.

We may take advantage of these exemptions until the last day of the fiscal year following the fifth anniversary of this offering or such earlier time that we are no longer an emerging growth company. We would cease to be an EGC earlier if we have more than $1.07 billion in annual revenue, we have more than $700.0 million in market value of our stock held by non-affiliates (and we have been a public company for at least 12 months and have filed one annual report on Form 10-K) or we issue more than $1.0 billion of non-convertible debt securities over a three-year period. For so long as we remain an EGC, we are permitted, and intend, to rely on exemptions from certain disclosure requirements that are applicable to other public companies that are not EGCs. We may choose to take advantage of some, but not all, of the available exemptions.

In addition, the JOBS Act provides that an EGC can take advantage of an extended transition period for complying with new or revised accounting standards. This allows an EGC to delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We have elected not to “opt out” of such extended transition period, which means that when a standard is issued or revised and it has different application dates for public or private companies, we will adopt the new or revised standard at the time

private companies adopt the new or revised standard and will do so until such time that we either (i) irrevocably elect to "opt out" of such extended transition period or (ii) no longer qualify as an EGC. Therefore, the reported results of operations contained in our consolidated financial statements may not be directly comparable to those of other public companies.

We are also a "smaller reporting company," meaning that the market value of our stock held by non-affiliates plus the proposed aggregate amount of gross proceeds to us as a result of this offering is less than $700 million and our annual revenue was less than $100 million during the most recently completed fiscal year. We may continue to be a smaller reporting company after this offering if either (i) the market value of our stock held by non-affiliates is less than $250 million or (ii) our annual revenue is less than $100 million during the most recently completed fiscal year and the market value of our stock held by non-affiliates is less than $700 million.

If we are a smaller reporting company at the time we cease to be an EGC, we may continue to rely on exemptions from certain disclosure requirements that are available to smaller reporting companies. Specifically, as a smaller reporting company we may choose to present only the two most recent fiscal years of audited financial statements in our Annual Report on Form 10-K and, similar to EGCs, smaller reporting companies have reduced disclosure obligations regarding executive compensation.

BUSINESS

Overview

We are a clinical-stage immunotherapy company engaged in the discovery and development of next-generation therapies with an initial focus on treatments for cancer. Our proprietary ImmunoPhage platform is a powerful, self-adjuvanted and highly differentiated immunotherapy approach that is designed to utilize bacteriophage to induce a robust, focused and coordinated innate and adaptive immune response. We are engineering our ImmunoPhage product candidates to directly target antigen presenting cells, or APCs, and modulate the tumor microenvironment, or TME, through the targeted use of nanobodies which further enhances therapeutic activity. We believe our ImmunoPhage platform has the potential to deliver personalized, off-the-shelf product candidates tailored to a patient's specific tumor. The versatility of our ImmunoPhage platform allows us to design product candidates in a modular fashion, based on a cocktail of common and patient-specific antigens built from our proprietary library of ImmunoPhages, which we refer to as Phortress. We are currently conducting an ongoing 30-patient Phase 1/2 clinical trial of our lead product candidate, SNS-301, in combination with the PD-1 inhibitor pembrolizumab, as a potential treatment for squamous cell carcinoma of the head and neck, or SCCHN. As of December 10, 2020, we have enrolled 11 patients in the trial, of which ten patients were evaluable for efficacy. We have observed disease control in seven of the patients evaluable for efficacy, including one patient with a partial response, or PR, and two patients who have achieved longstanding stable disease, or SD, for greater than 36 weeks following treatment. Treatment with SNS-301 has generally been well tolerated. We anticipate reporting topline data from this trial by the end of 2021. If the results of this trial are positive, subject to feedback from the U.S. Food and Drug Administration, or FDA, we intend to initiate a randomized, registration-enabling trial for SNS-301. We are leveraging the insights from our experience with SNS-301 to expand our development pipeline to include SNS-401 for the treatment of Merkel cell carcinoma, or MCC, as well as a human monoclonal antibody, or mAb, program targeting the novel immune checkpoint VISTA, or V-set immunoglobulin domain suppressor of T cell activation.

Monoclonal antibodies targeting the programmed cell death protein 1, or PD-1, and its related ligand, or PD-L1, have emerged as one of the most promising classes of therapeutics for the treatment of cancer. However, in a majority of patients they generally fail to produce meaningful results. Drugs utilizing PD-1 blockade have been approved by the FDA to treat at least 20 different types of cancer and, in 2019, generated sales of approximately $19.4 billion worldwide. By 2024, the total global market for drugs utilizing PD-1 blockade is estimated to exceed $36 billion. Two of the most common reasons for non-response to PD-1 blockade treatment include a lack of tumor infiltrating lymphocytes, or TILs, or the presence of alternate immunosuppressive mechanisms such as VISTA. To address these mechanisms of non-response to PD-1 blockade, there has been considerable focus on the development of therapies that induce the body's immune system to mount a response towards tumor antigen targets. Our ImmunoPhage platform is designed to address the challenges of converting PD-1 blockade non-responsive tumors into responsive ones by triggering the generation of tumor antigen-specific T cells and circumventing immunosuppressive pathways.

Pioneering work with bacteriophage led to our discovery of their utility as a powerful, self-adjuvanted immunotherapy platform. The foundation of ImmunoPhage is the bacteriophage lambda, or lambda phage, which we selected for its native immunostimulatory capabilities, large and tractable genome, and tolerability profile. The highly immunogenic nature of bacteriophage promotes a balanced, coordinated and robust response by both the innate and the cellular and humoral components of the adaptive immune system. We believe that the unique features of bacteriophage, including the ability to generate both T cell responses and B cell mediated antibody responses, give it the potential to be used in the development of differentiated treatments for cancer. The modularity of the ImmunoPhage platform allows for personalized, dynamic substitution of particular phage components to optimize patient therapy. Our creation of a phage cocktail expressing multivalent antigens along with the integration of nanobody technology is designed to enhance the utility, precision and therapeutic activity of our product candidates. This allows for an adaptive clinical trial design, which we have discussed with the FDA. To date, we have constructed over 25 unique ImmunoPhage configurations in-house in accordance with current good manufacturing practices, or cGMP, and we are continuing to expand our Phortress library of ImmunoPhages.

SNS-301 is an ImmunoPhage product candidate that we are developing as a treatment for locally advanced unresectable or metastatic SCCHN. Head and neck cancer is the sixth most common malignancy worldwide, accounting for approximately 6% of all cancer cases, and is responsible for an estimated 1% to 2% of all cancer deaths. An estimated 650,000 cases of head and neck cancer are diagnosed annually worldwide, including approximately 50,000 cases in the United States. Human papilloma virus, or HPV, infection accounts for an estimated 70% of SCCHN cases in the United States. The current standard of care in our target patient population is PD-1 inhibition as a single agent or in combination with chemotherapy. Despite improvements in diagnoses and disease management, long-term survival rates for patients with SCCHN have not increased significantly over the past 30 years and are among the lowest for major cancers.

We selected SCCHN as our first indication based on a high unmet patient need, robust scientific rationale, a clearly defined regulatory path and accessibility of these tumors for biopsy. SNS-301 has been engineered to produce a targeted immune response against the tumor associated antigen, or TAA, aspartate b-hydroxylase, or ASPH. ASPH is found to be overexpressed in 70% to 90% of human malignancies, including SCCHN. Expression of ASPH is related to cancer cell growth, invasiveness, and disease progression through the Notch signaling pathway. As SCCHN tumors are often lacking intratumoral CD8 T cells, we believe that the addition of SNS-301 has the potential to generate and expand ASPH specific anti-tumor T cells and thereby enhance PD-1 blockade activity.

We are currently evaluating SNS-301 in combination with the PD-1 inhibitor pembrolizumab in a 30-patient Phase 1/2 clinical trial. As of December 10, 2020, we have enrolled 11 patients in the trial, of which ten patients were evaluable for efficacy. The trial includes patients with locally advanced unresectable or metastatic SCCHN who have been treated with PD-1 blockade for at least 12 weeks with the best overall response being SD or unconfirmed progressive disease, or PD. Patients who achieved a PR, complete response, or CR, or confirmed progression on PD-1 blockade, are not eligible. Based on an initial assessment of the ten evaluable patients, SNS-301 in combination with pembrolizumab has been well tolerated and has shown promising anti-tumor activity, including a PR in one patient with a PD-L1 negative tumor who achieved SD as best overall response on PD-1 inhibition alone as well as SD in six patients. Of the six SD patients, one patient previously had PD on PD-L1 inhibition and two patients have achieved longstanding SD for greater than 36 weeks following treatment. We anticipate reporting topline data from this trial by the end of 2021. If the results of this trial are positive, subject to feedback from the FDA, we intend to initiate a randomized, registration-enabling trial for SNS-301.

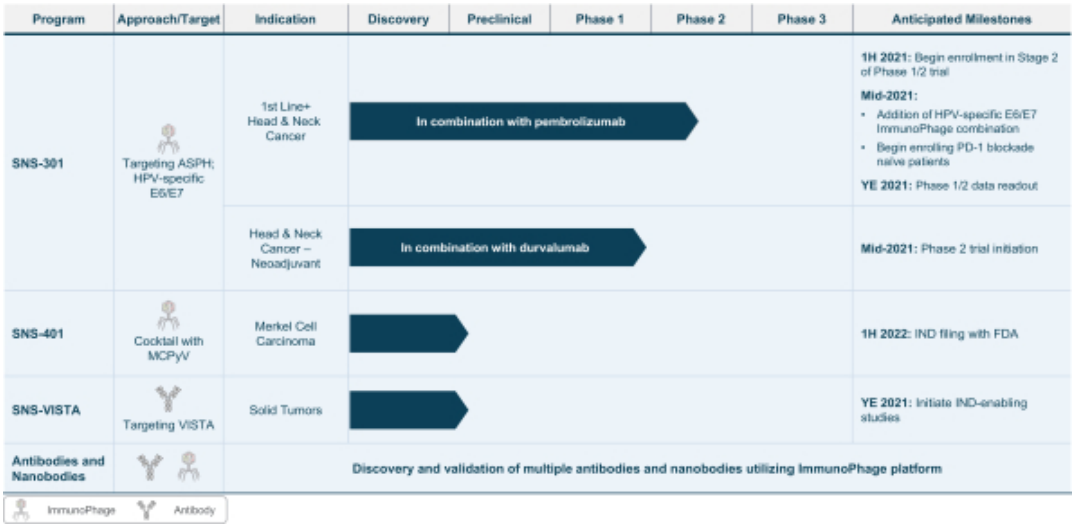
Based on the results we have observed to date, we also intend to evaluate the addition of SNS-301 to pembrolizumab in PD-1 blockade naïve SCCHN patients as part of our ongoing Phase 1/2 trial, with enrollment in this additional treatment arm expected to begin in mid-2021. We intend to use an ImmunoPhage cocktail targeting the E6/E7 antigens of HPV, in combination with SNS-301, in HPV positive patients in our ongoing trial of SNS-301, which we expect to incorporate in mid-2021. In addition, we are currently planning two Phase 2 trials to evaluate the safety and efficacy of SNS-301 in combination with durvalumab for patients with locally advanced resectable SCCHN in the neoadjuvant setting and ASPH positive patients with locally advanced unresectable or metastatic solid tumors. We intend to initiate the first trial in patients with locally advanced resectable SCCHN in the neoadjuvant setting in mid-2021.

In addition to SNS-301, we are currently developing our next ImmunoPhage candidate, SNS-401, for the treatment of MCC. SNS-401 is in preclinical studies and we plan on submitting an IND for SNS-401 in the first half of 2022. We are also developing a mAb therapy targeting VISTA. Through the use of proprietary functional and in vivo assays, we intend to select a product candidate and initiate IND-enabling studies for our lead mAb by the end of 2021.

We are led by an experienced team with deep experience in immuno-oncology, biologics, drug discovery platform technologies, clinical development, general management and business development. Collectively, our management team has a track record of managing product development programs that have received regulatory approval and been successfully commercialized, including Keytruda and Kisqali, as well as building companies that have initiated innovative investigational new drug programs.

Our Pipeline

We are utilizing our pioneering ImmunoPhage platform, which harnesses the intrinsic immunostimulatory characteristics and capabilities of bacteriophage, to develop a pipeline of product candidates with an initial focus on treatments for cancer. We have worldwide commercial rights for each of our product candidates. Our current portfolio of therapeutic initiatives is presented in the diagram below:



Our Strategy

Our goal is to transform the treatment of cancer and other diseases by leveraging our ImmunoPhage platform to discover, develop and commercialize transformative immunotherapies capable of eliciting a robust, focused and coordinated innate and adaptive immune response. Key components of our strategy include the following:

- ***Rapidly advance our lead ImmunoPhage product candidate, SNS-301, through clinical development in patients with SCCHN and other solid tumors.*** We are currently evaluating the safety and efficacy of our lead ImmunoPhage product candidate, SNS-301, in combination with pembrolizumab in an ongoing Phase 1/2 trial in patients with locally advanced unresectable or metastatic SCCHN. Based on an initial assessment of the first 11 patients in the trial, of which ten patients were evaluable for efficacy, SNS-301 in combination with pembrolizumab was well tolerated with promising anti-tumor activity, including a PR observed in a patient with a PD-L1 negative tumor. We expect to report topline data from this trial by the end of 2021. If the results of this trial are positive, subject to feedback from the FDA, we intend to initiate a randomized registration-enabling trial. Based on the results we have observed to date, we also intend to evaluate the addition of SNS-301 to pembrolizumab in PD-1 blockade naïve SCCHN patients as part of our ongoing Phase 1/2 trial, with enrollment in this additional treatment arm expected to begin in mid-2021. In addition, we are currently planning two additional Phase 2 trials to evaluate the safety and efficacy of SNS-301 in combination with durvalumab for patients with locally advanced resectable SCCHN in the neoadjuvant setting and ASPH positive patients with locally advanced unresectable or metastatic solid tumors. We intend to initiate the first trial in patients with locally advanced resectable SCCHN in the neoadjuvant setting in mid-2021.
- ***Leverage our proprietary ImmunoPhage platform and Phortress library to design differentiated product candidates with enhanced activity through a cocktail therapy approach.*** Our platform allows us to engineer ImmunoPhage product candidates, in a modular fashion. We envision engineering our immunotherapies that are precisely tailored to a patient's specific tumor and yet are composed of

pre-manufactured and off-the-shelf components. We have designed more than 25 distinct ImmunoPhage product candidates into our Phortress library and intend to develop additional candidates against known antigens and neo-antigens. We believe that the creation of a phage cocktail expressing multivalent antigens along with the integration of nanobody technology will further enhance the utility, precision and therapeutic activity of our product candidates and has the potential to replace current standards of care, including systemic administration of checkpoint inhibitors. We intend to use an HPV-specific E6/E7 ImmunoPhage cocktail in our ongoing Phase 1/2 trial of SNS-301 and are advancing several early-stage programs, including SNS-401, which is an ImmunoPhage cocktail for MCC.

- ***Strengthen our position in the immunotherapy field through the continuous innovation and expansion of our ImmunoPhage platform.*** We have identified novel immunostimulatory mechanisms and are engineering ImmunoPhage to further optimize APC targeting and co-stimulatory signaling. In addition, we are developing nanobodies targeted to immune checkpoints that can be packaged into the phage as immunomodulatory payloads to enhance immunogenicity. We plan to continue driving innovation that enables the delivery of a robust and complete immune response. In addition, we continually survey the scientific and industry landscape for opportunities to in-license or acquire new technologies as well as access the human capital necessary to enable our development of a world class scientific organization.
- ***Expansion of our ImmunoPhage manufacturing capabilities.*** We own and operate a cGMP compliant facility and believe the scalability, speed and cost effectiveness of ImmunoPhage manufacturing, as well as our control over our manufacturing processes, provide us with significant competitive advantages. We believe these advantages, along with the long-term stability of ImmunoPhage, have the potential to make personalized ImmunoPhage cocktails a commercially viable solution to the current challenges facing fully personalized patient-specific immunotherapy. As we advance into later-stage clinical trials and additional indications, we intend to expand our current manufacturing capabilities to support larger scale clinical trials and the potential commercialization of our product candidates.
- ***Seek strategic partnerships for selected product candidates.*** Our ImmunoPhage platform is designed to generate a broad pipeline of product candidates with potential for clinical application in multiple indications. We intend to accelerate opportunities for preclinical and clinical development of these candidates in a capital-efficient manner, including selectively pursuing strategic partnerships with leading biopharmaceutical companies with clinical development expertise to maximize the value of our pipeline. As we seek to commercialize any approved products, we plan to retain worldwide rights for key programs, while considering partnership opportunities for others.

Background

The Role of the Immune System in Fighting Cancer

The immune system is a host defense system comprising multiple structures and processes within an organism that protects against infection and disease. The human immune system is comprised of two integrated systems, the innate immune system and the adaptive immune system. The innate immune system involves an immediate, non-specific response to foreign pathogens, based primarily on the built-in ability to recognize pathogen-associated molecular patterns. It generally lacks immune memory, which is a defining feature of the adaptive immune response. Phagocytic leukocytes like macrophages and dendritic cells, or DCs, are part of this front-line immune response and, in this capacity, eliminate pathogens directly. DCs also act as APCs and facilitate activation of the adaptive immune response.

The adaptive immune system includes special types of leukocytes known as B and T lymphocytes (also known as B cells and T cells, respectively). B cells are involved in the humoral immune response, differentiating into antibody-secreting plasma cells upon activation and recognition of their target antigen. T cells participate primarily in the cell-mediated immune response.

T lymphocytes can be further segregated into distinct cell types with the primary types being CD8 T cells, also referred to as cytotoxic T lymphocytes, or CTLs, and CD4 “helper” T cells. CTLs eliminate cells that are infected with viruses, other pathogens or cancer-associated mutations. In contrast, CD4 T cells, which have limited cytotoxic activity, participate in the immune response by directing the activity of other cells, in particular B cells and CTLs.

APCs are a functional class of immune cells capable of taking up antigen by a variety of mechanisms, then processing and presenting the antigen to lymphocytes. DCs are often referred to as “professional APC” as they are particularly well-suited to driving immune responses, although it is fundamentally the integration of both positive and negative signals in the immune synapse between APC and lymphocytes that primarily determines the character of the subsequent adaptive immune response. Optimal immunogenicity requires that DCs present antigen to and drive CD4 T cells, which provide support for downstream activation and differentiation of both B cells and CD8 T cells.

A critical feature of adaptive immunity is its ability to distinguish between healthy, functioning host cells, or self, and either infectious agents or cells that have mutated, or non-self. Many mechanisms are responsible for enabling the ongoing inhibition of immune attacks against “self.” Taken together, these mechanisms constitute immune tolerance.

Immune checkpoints, such as PD-1/PD-L1, represent a myriad of inhibitory pathways involved in the immune system that act to regulate the duration and intensity of an antigen-induced immune response. Checkpoints are critical to regulating immune tolerance. Certain tumors have the ability to co-opt these pathways to up-regulate the activity of these immune checkpoints which enables the cancerous cells to evade detection and elimination. Two of the more well characterized immune checkpoints are cytotoxic T lymphocyte associated antigen 4, or CTLA4, PD-1 and PD-L1. Other potentially relevant checkpoints and counter-regulatory pathways that inhibit T cell activity include TIGIT, IL-10, TGFb and VISTA. In multiple models, inhibition of VISTA appears to synergize with PD-1 blockade to enhance anti-tumor immune responses.

Limitations of Currently Available Immunotherapy and the Need for New Options for Cancer Patients

Immunotherapy is a treatment that harnesses the components and mechanics of the immune system to address diseases and disorders. Several types of immunotherapy are used to treat cancers. These include mAbs adoptive transfer of T cells, including naturally occurring and engineered T cells, other immune system modulators and therapeutic vaccines.

All immunotherapy modalities, including efforts to develop robust anti-cancer vaccines, have inherent efficacy limitations. While general immune activity directed at target antigens has been observed with vaccines, reduction in tumor loads has not been frequently observed. Contributing to this lack of efficacy is the low immunogenicity of TAAs, down regulation of antigen presentation and processing mechanisms involving T cell recognition of tumor, as well as the loss of adequate expression of positive costimulatory signals. These negative factors result in the limited generation of tumor antigen-specific T cells as well as the impaired fitness of anti-tumor T cells.

Immune checkpoint inhibitors have emerged as one of the most promising classes of therapeutics for the treatment of cancer. Checkpoint inhibitors work by disabling the inhibitory function of immune checkpoint proteins. Disabling immune checkpoints allows the immune system to bypass the shield of immune tolerance they provide, allowing the tumor-specific CTL to engage the tumor. Drugs utilizing PD-1 blockage have been approved by the FDA to treat at least 20 different types of cancer and, in 2019, generated sales of approximately $19.4 billion worldwide. By 2024, the total global market for drugs utilizing PD-1 blockade is estimated to exceed $36 billion.

While checkpoint inhibitors have proven a significant advance in cancer therapy, they generally fail to produce meaningful results in a majority of patients. Because PD-1 blockade, including PD-1 or PD-L1

inhibitory mAbs, require anti-tumor T cells to be effective, patients whose tumors lack TILs typically fail to respond. Given this mechanism of non-response to PD-1 blockade, considerable effort is being made to develop T cell therapies which can induce the body's immune system to mount a response towards tumor antigen targets. The overarching objective of our ImmunoPhage-based approach is to convert PD-1 non-responsive tumors into responsive ones.

Our Approach to Immunotherapy

Our ImmunoPhage Platform

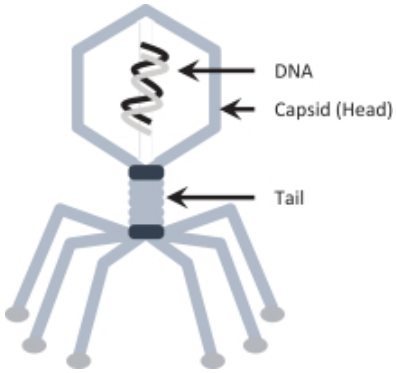
We believe that the unique features of bacteriophage give it the potential to be used in the development of differentiated treatments for cancer. The pioneering work with bacteriophage documented in scientific literature describes its potential utility as a powerful, self-adjuvanted immunotherapy platform. However, we have not directly evaluated our ImmunoPhase platform in clinical trials beyond those described below. We selected bacteriophage because of its native immunostimulatory capabilities, large and tractable genome, and tolerability profile. The highly immunogenic nature of bacteriophage promotes a balanced, coordinated and robust response by both the innate and the cellular and humoral components of the adaptive immune system. Bacteriophage has the ability to generate both T cell responses and B cell mediated antibody responses.

The bacteriophage lambda, or lambda phage, is the foundation of our ImmunoPhage platform. Lambda phage is composed of an icosahedral head, or capsid, consisting of major capsid proteins gpD and gpE that surround a single copy of a 48.5 kb double-stranded DNA genome and a flexible tail structure. The gpD protein forms specialized structures on the capsid that results in over 400 copies of the protein being displayed on the capsid surface, which can be modified with antigens to increase the antigen presentation capacity of the phage. The lambda phage DNA genome contains abundant CpG sequence motifs, which are known to function as potent APC activators, through TLR9-mediated signaling.

As bacteriophages are ubiquitous, patients either have pre-existing anti-phage antibody titers or quickly develop anti-phage antibodies upon repeat dosing. However, rather than contributing to neutralization, as is experienced with many viral and protein-based therapies, the presence of phage antibodies may augment ImmunoPhage activity through a process known as antibody-dependent enhancement, or ADE.

In addition to its natural characteristics, lambda phage can be manufactured without significant difficulty and is amenable to further optimization through our proprietary engineering capabilities, such as the addition of antigens and integration of our proprietary nanobodies, which can be used to direct the phage to specific cells and as payloads that can be incorporated into our product candidates.

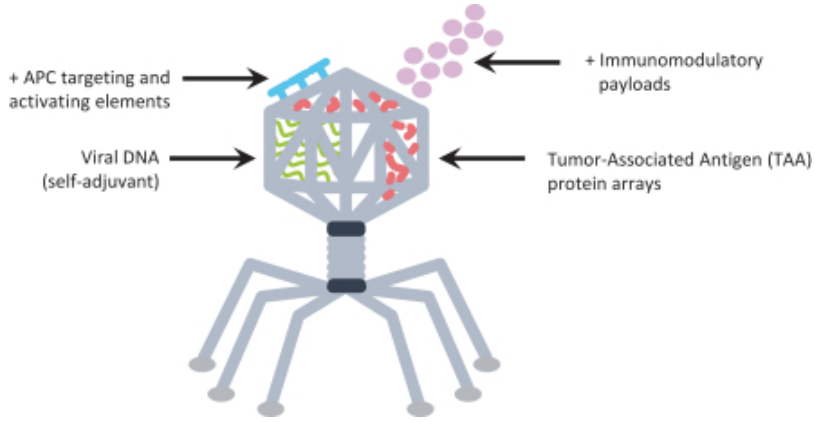
Structure of Lambda Phage



Our ImmunoPhage platform capitalizes on the following key immunostimulatory features:

- **Self-adjuvanted:** ImmunoPhage elicits an enhanced immune response and displays a high-density of the protein sequence of the targeted antigen and contains multiple CpG motifs in its DNA genome, eliminating the need to include an exogenous adjuvant common to competing viral and mRNA nanoparticle immunotherapies.
- **Intrinsic APC targeting:** ImmunoPhage demonstrates a natural tropism for APCs. We have identified and are advancing additional mechanisms, such as engineering moieties on ImmunoPhage targeted to proteins found on APCs, to further optimize APC targeting and costimulatory signaling.
- **Modular antigen design:** We intend to use off-the-shelf common antigens together with viral and patient-specific antigens as an array of customized, multi-antigen phage configurations, which we refer to as phage cocktails. We believe that the ability to dose cocktails of ImmunoPhage displaying different antigens have the potential to create a personalized, patient-specific immunotherapy.
- **Targeted use of nanobodies:** We are developing nanobodies targeted to immune checkpoints and other immune stimulatory molecules that can be packaged into the phage as immunomodulatory payloads to enhance immunogenicity.

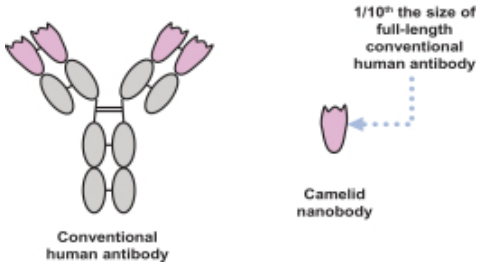
Structure of Our ImmunoPhage



Our proprietary nanobodies, derived from alpacas, are antibody-like structures that consist of a single monomeric variable domain located on the heavy chain. Nanobodies are small (approximately 1/10 the size of mAb), robust protein-binding molecules that we believe represent the optimal class of molecules for use as immunomodulatory proteins, where payload space in a delivery vector or vehicle is limited. Like conventional antibodies, nanobodies can bind selectively to a specific antigen, but they possess additional advantages to conventional antibodies, including:

- **Small size:** Provides better access to binding grooves and contours on proteins on target cells.
- **Stability:** Stable at a wide range of temperatures and able to refold properly at varying temperatures.
- **High Solubility:** Hydrophilic, single-chain structure allows nanobodies to avoid aggregation issues common to mAbs.
- **Ease of manufacturing:** Easier and less expensive to produce due to benefits from improved screening and isolation techniques and bacterial cell production.

Size of Conventional Human Antibody versus Camelid Nanobody

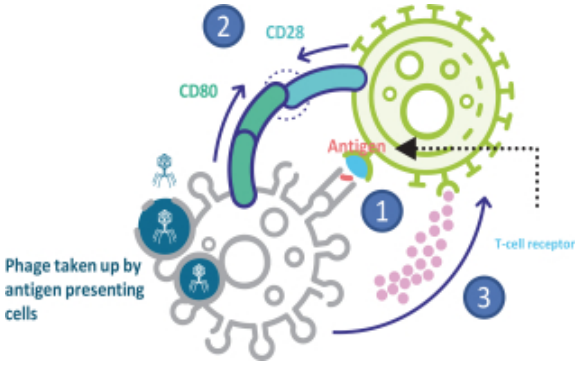


We maintain the ability to produce our customized nanobodies in-house that are compatible with our ImmunoPhage engineering processes. Our product candidates are able to be manufactured through the well-established principles of bacterial fermentation, which provides cost and scalability advantages. We can achieve GMP manufacture of an ImmunoPhage dose configuration in-house in as little as four weeks. We believe that these advantages, along with the long-term stability of ImmunoPhage, make personalized ImmunoPhage cocktails a commercially viable solution to the current challenges facing fully personalized patient-specific immunotherapy.

ImmunoPhage Mechanism of Action

Our mechanism of action focuses on what we believe to be the critical step leading to the generation of effective anti-tumor T cells, the immune priming step where APCs acquire and process tumors antigens, and interact with CD4 and CD8 T cells in the immune synapse. ImmunoPhage mimics a pathogenic virus and naturally targets APCs that capitalize on phage-intrinsic danger signals which activate these critical cells. The aggregation of antigen and danger signals enable self-adjuvant capabilities in a single entity which help to enhance the immunogenicity and augment downstream immune responses, including antigen-specific B and T cell responses. In order to drive optimal generation of antigen-specific T cells, the APC must deliver three discrete critical signals to the T cell, as shown below.

ImmunoPhage Activates Three Discrete Critical Signals Required to Drive Activation of T Cells



1. **Signal one** involves antigenic peptides, derived from APC protein processing pathways, presented in the context of the appropriate major histocompatibility complex, or MHC, molecules, Class II for CD4 T cells and Class I for CD8 T cells. An alternate MHC Class I presentation pathway results in the activation of CD8 T cells through a process called cross presentation.

2. **Signal two** involves the APC expressing positive costimulatory molecules CD80 (or CD86) interacting with CD28 on the T cells. In the presence of significant negative costimulatory signals through molecules like PD-L1 or VISTA, or the lack of sufficient positive co-stimulation, the interaction between APC and T cell can lead to dysfunction of the T cell rather than T cell activation.

3. **Signal three** collectively refers to the cytokine microenvironment of the immune synapse wherein the priming interaction between APC and T cell is occurring. This cytokine milieu determines the differentiation and fitness of the downstream T cell response. For instance, a rich IL-12 environment leads to a Th1 biased immune response and enhanced generation of CTLs.

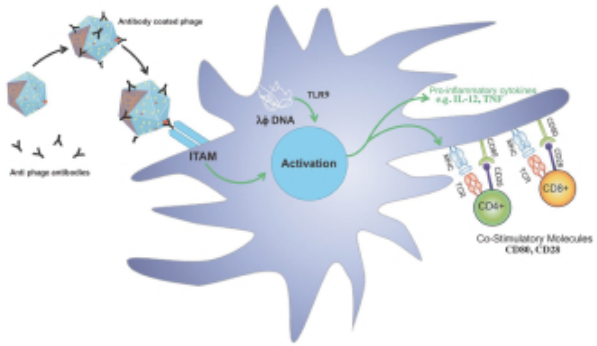
We believe that ImmunoPhage can efficiently deliver antigen to and activate DCs, driving these three critical signals in the priming phase of the immune response. We have observed that increasing doses of ImmunoPhage on human skin-derived DC cultures increase the critical components of signals two and three in a dose-dependent fashion. Importantly, in the context of anti-tumor immune responses, which require the generation of tumor antigen-specific CD8 T cells, phages can drive cross-presentation of displayed antigens, even breaking tolerance to “self” TAAs.

Since the development of pembrolizumab and other inhibitors of the PD-1 signaling pathway, it has become clear that a prerequisite for response to PD-1 blockade is the presence of a sufficient number of tumor-specific T cells, particularly, CD8 T cells in the TME. Patients with poorly immunogenic tumors lacking CD8 T cells represent a major unmet medical need. We believe that there is a significant opportunity for our ImmunoPhage platform to drive the generation of tumor antigen-specific T-cells and potentially convert PD-1 blockade non-responders into responders.

To optimize immunotherapy in cancer, a two-fold approach may be required: the first is the systemic generation of antigen-specific T cells through vaccination or adoptive transfer and the second refers to inhibition of immunosuppressive mechanisms limiting the entry of T cells into the TME. In situ vaccination has been shown to “soften” the TME and increase T cell infiltration. We believe that ImmunoPhage delivered to the tumor, either by direct intralesional injection or by the development of tumor-targeted phages, can deliver both a potent generation of tumor-specific T cells and enhancement of T cell infiltration into tumors.

In addition to our ImmunoPhage-based approach, we are developing a human mAb targeting the immunosuppressive VISTA checkpoint protein as well as nanobody programs targeting other key molecules preventing T cell entry into the TME and cytotoxic activity, including TGFb, IL-10 and PD-1. The goal of these programs is to limit the immunosuppressive mechanisms that prevent T cell entry into the TME.

ImmunoPhage leverages anti-drug antibodies that limit the use of other viral and protein-based therapies to enhance immunogenicity. ADE occurs when anti-phage antibodies which coat the capsid surface result in enhanced uptake by, and activation of, DCs through the binding and activation of Fc receptors, or FcRs. The high-density of phage-bound antibody is thought to lead to massive cross-linking of certain FcRs, leading to a strong immunogenic response to FcR-mediated endocytosis of the phage antigen/antibody complex. This mode of DC activation can lead to enhanced T cell responses, including CD8 priming by enabling cross-presentation.



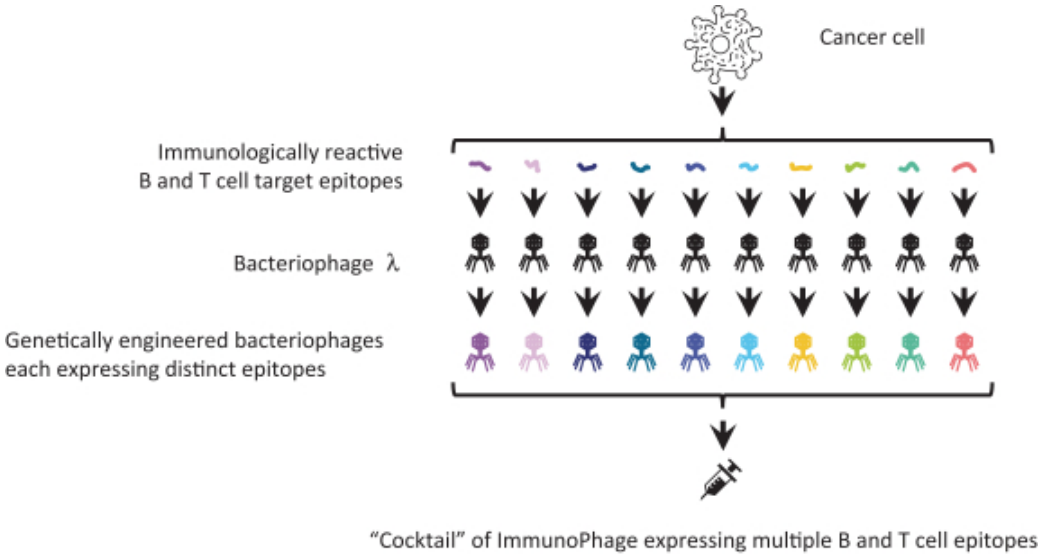
Our Adaptive Approach to ImmunoPhage Cocktail Therapy

Our ImmunoPhage platform enables a cocktail therapy approach that has the potential to provide patients with the benefits of both an off-the-shelf treatment and a personalized approach to their individual cancer. Each ImmunoPhage product candidate we produce has a unique therapeutic armament, such as various multivalent antigens, including those targeting CD4, CD8 and B cell epitopes designed to deliver broad epitope coverage, and nanobody payloads added to boost antigenicity or provide direct cancer cell killing capabilities. Based on the profile of a patient's tumor, multiple distinct ImmunoPhage product candidates, each having a distinct profile, can be combined for treatment. We believe that broad epitope coverage along with nanobody payloads, combined with the intrinsic immunostimulatory activity of our ImmunoPhage product candidates, can provide patients a therapy with meaningful clinical benefits.

The modular nature of the Phortress library allows for personalized dynamic substitution of particular ImmunoPhage components to optimize patient therapy. Moreover, the ease of manufacturing allows us to perform immune monitoring in patients to assess the immunogenicity of each phage component of a cocktail and adjust the cocktail during the course of treatment. To date, we have constructed over 25 unique ImmunoPhage configurations and anticipate expanding our Phortress library as we advance our clinical stage programs.

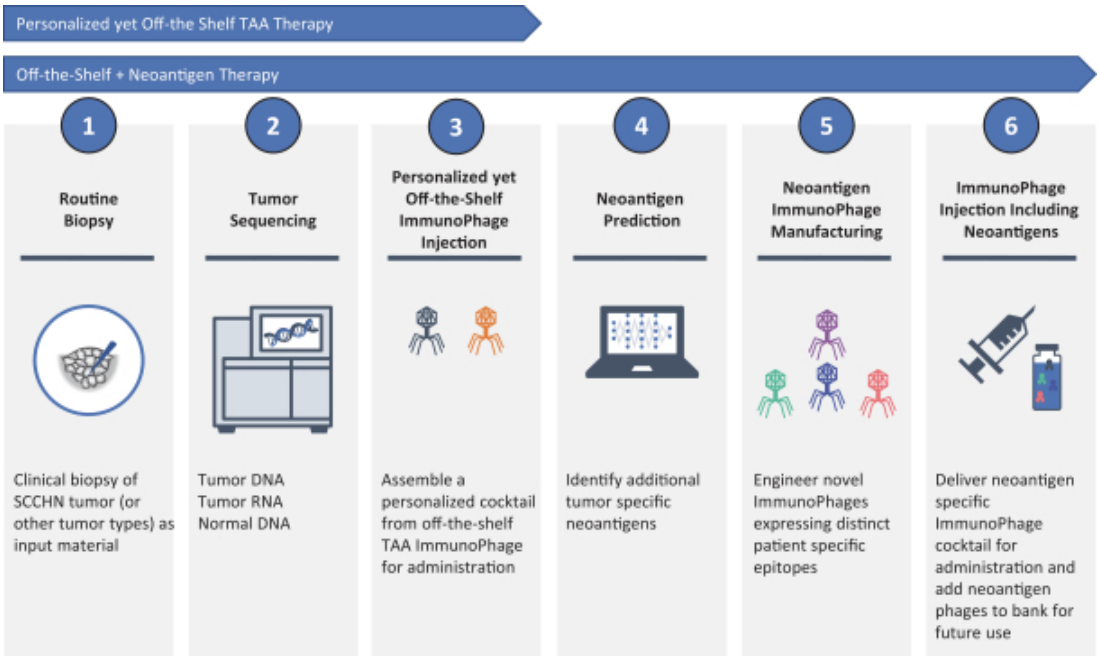
We also intend to utilize the potential of an adaptive cocktail therapy approach in our ongoing and future clinical trials, including in our SNS-301, SNS-401 and our SARS-CoV2 programs. For the SARS-CoV2 program, we have discussed the proposed clinical trial design, including the adaptive cocktail therapy approach, with the FDA. We believe this strategy will allow us to use insights derived from initial study cohorts, such as antibody titers raised against a target antigen, to dictate phage substitutions to the phage cocktail which are subsequently tested in additional cohorts. The best performing cocktail can then be advanced into dose expansion and later-stage clinical trials.

ImmunoPhage Adaptive Cocktail Therapy Approach



We believe that the speed of manufacturing and antigenic capacity of ImmunoPhage cocktails will allow us to address the limitations of neoantigen-only vaccine approaches. With the Phortress library, we have the ability to quickly initiate an off-the-shelf immunotherapy with a patient-specific ImmunoPhage cocktail from our shared antigen library within 1 to 2 weeks of diagnosis as display in steps 1 through 3 in the figure below, and then to augment the cocktail with a newly designed neoantigen phage within 4 to 6 weeks, as displayed in steps 4 through 6 below. We believe that this approach has the potential to address the urgency of treatment and provide the patient with an enhanced anti-tumor immune response.

Our Personalized Immunotherapy Process



SNS-301: Our Lead ImmunoPhage Candidate Targeting ASPH for Treatment of SCCHN

Our lead product candidate, SNS-301, is an ImmunoPhage construct engineered to generate a strong, specific immune response against the TAA ASPH. We believe the immune stimulatory effects generated by our ImmunoPhage platform, combined with the inhibition of the PD-1 immune system checkpoint, act in a complementary manner to produce an enhanced immune response in SCCHN patients. SNS-301 is being studied in an ongoing Phase 1/2 trial in combination with pembrolizumab. As of December 10, 2020, we have enrolled 11 patients in the trial, of which ten patients were evaluable for efficacy. In these pateints, we have observed that SNS-301 in combination with pembrolizumab has been well tolerated and has shown promising anti-tumor activity, including a PR in one patient with a PD-L1 negative tumor and disease control in seven of ten evaluable patients.

Head and Neck Cancer

Head and neck cancer is the sixth most common malignancy worldwide, accounting for approximately 6% of all cancer cases, and is responsible for an estimated 1% to 2% of all cancer deaths. Head and neck cancers encompass an array of cancers originating in the squamous cells that line the moist, mucosal surfaces inside the head and neck. More than 90% of head and neck cancers are classified as squamous cell carcinomas that raise from the mucosal surfaces of the oral cavity, oropharynx and larynx.

An estimated 650,000 cases of head and neck cancer are diagnosed annually worldwide, including approximately 50,000 cases in the United States, with more than 350,000 deaths annually worldwide. HPV infection accounts for an estimated 70% of SCCHN cases in the United States. The primary causes of SCCHN are smoking, heavy alcohol use and certain types of HPV.

Early-stage head and neck cancer is typically either treated with surgery or radiation alone; however, approximately 66% of patients present with advanced disease and fewer than 30% of these are cured. The

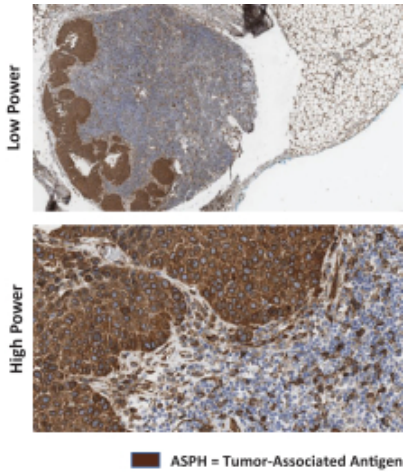
management of advanced disease consists of multiple-modality therapy with surgery, radiation, chemotherapy and immunotherapy. Despite improvements in diagnoses and local management, long-term survival rates for patients with SCCHN have not increased significantly over the past 30 years and are among the lowest when compared against other major cancers.

Targeting ASPH

ASPH is a TAA, strongly expressed in 70% to 90% of human malignancies, including carcinomas, such as SCCHN, and sarcomas and hematologic malignancies. Expression of ASPH is related to cancer cell growth, invasiveness, and disease progression through the Notch signaling pathway. SNS-301 is designed to overcome self-tolerance and induce robust and durable humoral and cellular immune responses that target tumors expressing ASPH.

In the course of conducting our ongoing Phase 1/2 trial for SNS-301, we collected ASPH-positive tumor samples from 30 patients who had been screened for inclusion in our trial, although some patients who had samples collected did not satisfy other criteria for ultimate inclusion in our trial. The samples were stained to show intratumoral ASPH expression. Depicted below is a staining of a representative patient's tumor biopsy using an immunohistochemistry assay. The first figure shows the magnification at low power, while the second figure shows the same sample at a higher power of magnification. In each figure, the ASPH is shown in the darker color.

Representative Patient ASPH-Positive Tumor Sample



SNS-301—A Potential Solution for SCCHN

We believe that SNS-301, in combination with pembrolizumab, has the potential to produce enhanced activity in patients with SCCHN compared to currently available therapies. We are developing SNS-301 for the treatment of SCCHN due to the cancer's lack of intratumoral T cells and the consequent modest objective response rate to PD-1 blockade. We selected SCCHN as our first indication based on a high unmet need, a clearly defined regulatory path and easily accessible tumor for obtaining biopsies for early translational data to evaluate immune activation.

Although drugs utilizing PD-1 blockade have been approved for several years in the treatment of advanced SCCHN after platinum containing chemotherapy, the objective response rate, or ORR, has been reported to be as

modest as 13% to 18% in relapsed or refractory SCCHN patients with progression free survival, or PFS, of two months and overall survival, or OS, of eight months. Objective responses predominantly occur in patients with PD-L1 positive tumors, with demonstrated ORR of 21% for PD-L1 positive patients, while patients with PD-L1 negative tumors are reported to have a response rate of only 6%. Pembrolizumab has been approved for use as a first-line therapy in combination with chemotherapy for all patients and as a single agent for patients with PD-L1 positive of T cells infiltrating the tumor. As SCCHN tumors are often lacking intratumoral CD8 T cells, we believe that the addition of SNS-301 has the potential to generate and expand ASPH specific anti-tumor T cells and thereby enhance PD-1 blockade activity.

SNS-301: Ongoing Phase 1/2 Trial Status and Design

We are currently conducting an open-label, multi-center Phase 1/2 clinical trial of SNS-301 in combination with pembrolizumab. The primary objectives of this trial are to assess the safety and tolerability of SNS-301 in combination with pembrolizumab and the anti-tumor activity of the combination treatment as measured by ORR, PFS per iRECIST and OS. The secondary objective is to assess the preliminary immune response, which is measured by evaluating antigen-specific antibody and T cells and other lymphocytes. Examination of paired pre- and post-treatment biopsy samples are being utilized to evaluate whether the addition of SNS-301 to PD-1 blockade results in increased inflammation, determined by the presence of TILs, PD-L1, inflammatory gene signatures.

As of December 10, 2020, we have enrolled 11 patients in the trial. Our Phase 1/2 trial includes patients with locally advanced unresectable or metastatic SCCHN who have been treated with PD-1 blockade for at least 12 weeks with the best overall response being SD or unconfirmed PD based on RECIST1.1 and iRECIST, industry accepted standard guidelines for tumor evaluation. RECIST 1.1 defines a CR, PR, SD and PD as follows:

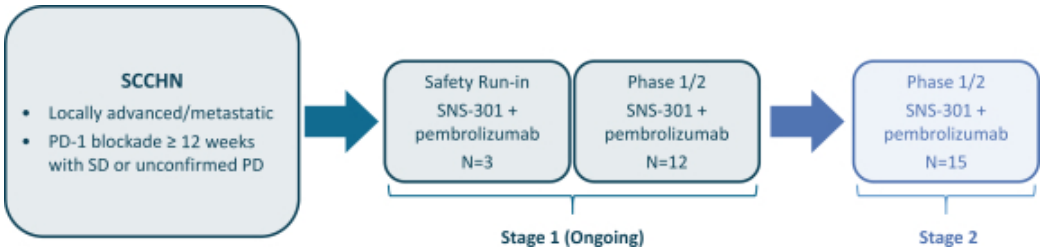
Category	Description
Complete Response (CR)	Disappearance of all Tumor Lesions
Partial Response (PR)	Reduction of ³30% of the Sum of Target Diameters
Stable Disease (SD)	Reduction of <30% or increase of <20% of the Sum of Target Diameters
Progressive Disease (PD)	Increase of ³20% of the Sum of Target Diameters

Patients who achieved a PR, CR or confirmed progression on PD-1 blockade are not eligible for participation in this clinical trial. The rationale for this restrictive inclusion criteria is based on reported data demonstrating that the median time to a PR or CR with PD-1 blockade is two months. Therefore, by excluding patients that achieved PRs or CRs while on PD-1 blockade alone for at least 12 weeks, we believe that any PRs or CRs observed in our Phase 1/2 trial are likely attributable to the addition of SNS-301. Similarly, we believe that a patient with PD on single-agent PD-1 blockade achieving stabilization after the addition of SNS-301 is an indication of clinical benefit from the treatment combination.

Phase 1/2 trial design

The treatment regimen consists of repeat doses of SNS-301 administered intradermally on Day 0, Week 3, Week 6, Week 9, then every 6 weeks for 6 additional doses, and thereafter every 12 weeks until confirmed disease progression, unacceptable toxicity, patient intolerability as determined by the investigator or up to 24 months in patients without disease progression. Pembrolizumab is administered intravenously as per standard of care at either 200 mg every 3 weeks or 400 mg every 6 weeks.

Design of the Phase 1/2 Clinical Trial of SNS-301 in SCCHN



The Phase 1/2 trial consists of a safety run-in followed by a Simon two-stage design in the absence of any dose-limiting toxicities, or DLTs, during the safety run-in, with a total initial enrollment of 15 patients, which we refer to as Stage 1. The trial design allows additional expansion up to a total of 30 patients if one CR or PR is observed in Stage 1. We did not observe any DLTs during the safety run-in and are continuing to enroll patients through Stage 1. Since one patient in our clinical trial has already achieved a confirmed PR, as described below, the pre-defined efficacy criteria of Stage 1 has been met, allowing us to continue into Stage 2 and dose up to a total of 30 patients in the trial.

Ongoing Phase 1/2 Trial Results

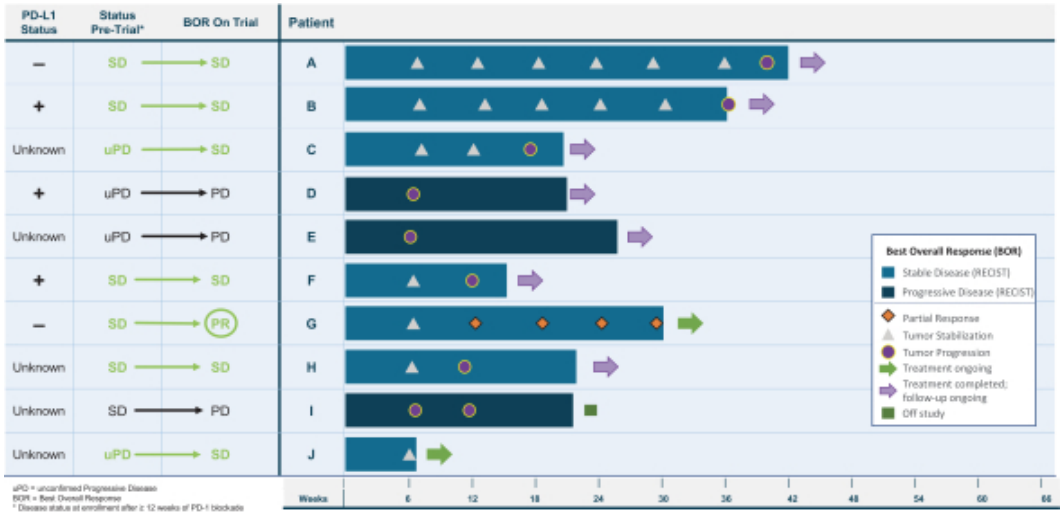
Preliminary evidence of clinical benefit of SNS-301 in combination with pembrolizumab

As of the December 10, 2020 data cutoff for the first 11 patients in Stage 1 of our ongoing Phase 1/2 trial, we observed the following results in the first ten patients evaluable for efficacy:

- PR in one patient with a PD-L1 negative tumor who previously achieved SD on PD-1 inhibition alone;
- SD in six patients, including:
  - one patient that has achieved SD for more than 4 months following PD at enrollment after 10 months of PD-L1 blockade treatment; and
  - two patients with longstanding SD for 9 and 9.5 months, respectively, of which one SD occurred in a patient with a PD-L1 negative tumor; and
- PD in three patients, including two patients who had PD at enrollment while on PD-1 blockade.

One patient withdrew consent prior to the first efficacy evaluation and was therefore not evaluable for efficacy. As shown in the figure below, disease control, as evidenced by PR or SD, was achieved in seven of the ten patients regardless of HPV status. Tumor regression was observed regardless of PD-L1 or HPV status.

Duration of Response in Ongoing Phase 1/2 Trial of SNS-301 in Combination with Pembrolizumab



Patient G referred to in the chart above achieved a PR at 12 weeks. This patient was diagnosed in May 2018 with HPV negative and PD-L1 negative SCCHN. At diagnosis, the cancer was classified as Stage II and graded T2N0M0, an enlarged tumor (<4 cm) that had not spread to lymph nodes or other organs. This patient received radiation therapy followed by two cycles of platinum-based chemotherapy, achieving a PR. At the time of enrollment into this trial, the patient had received pembrolizumab for more than 12 weeks with SD. After six weeks on SNS-301 in combination with pembrolizumab, the combined lesion measurement had decreased by 29%. After 12 weeks, the combined lesion measurement had decreased by 43% from baseline, achieving a PR that was confirmed at the 18-week scans. Furthermore, the 30 week scan showed an additional decrease to 52%, maintaining a PR.

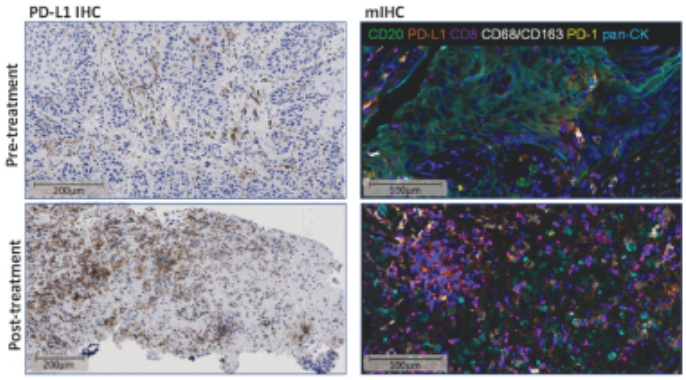
Patient C is another patient of notable clinical interest who had been treated with the PD-L1 inhibitor atezolizumab for 10 months when scans showed PD per RECIST 1.1. After receiving combination therapy with SNS-301 and pembrolizumab, two consecutive scans six weeks apart showed SD. Given that SCCHN is an aggressive disease, we believe stabilization of an ongoing progression suggests that SNS-301 likely added to the improvement of the patient's disease status. Safety concerns related to COVID-19 prevented the acquisition of paired biopsies to evaluate the TME in this patient.

In addition, of the two Patients (A and B) with longstanding SD of 9 and 9.5 months, respectively, Patient A's tumor was assessed as PD-L1 negative in the clinical setting.

Translational Data Demonstrated T Cell Integration into the Tumor Supporting Antitumor Activity of SNS-301

A comparison of pre-treatment and on-treatment biopsies showed a definitive increase in PD-L1 expression, which likely represents an influx of T cells into the TME and aligns with the achieved clinical benefit. As illustrated below, a predominance of tumor cells was observed pre-treatment, with a pronounced influx of immune cells noted upon treatment. Multiplex IHC demonstrates that the PD-L1 staining in the post-treatment biopsy is found in close proximity to PD-1 positive CD4 and CD8 TILs.

SNS-301 Catalyzes Conversion of PD-L1^{NEG} Immune Desert Tumor into Inflamed Phenotype in Patient with PR



Given that the patient initially had a PD-L1 negative tumor with no objective response to PD-1 blockade alone and that after combination treatment the patient achieved a PR with transformation of the tumor into a PD-L1 positive inflamed phenotype, we believe the additional treatment benefit is likely attributable to the addition of SNS-301. Serology data indicated the presence of anti-phage antibodies prior to treatment, suggesting increased immunogenic activity related to ADE.

SNS-301 in Combination with Pembrolizumab has been well tolerated

As of December 10, 2020, based on the 11 patients enrolled in our ongoing Phase 1/2 trial, the combination of SNS-301 and pembrolizumab has been generally well tolerated. No DLTs have been observed in the safety run-in and observed adverse events, or AEs, have primarily been either Grade 1 or 2 or unrelated to treatment. Three Grade 3 related AEs, dehydration, electrocardiogram QT prolongation and rash, have been reported. Four serious adverse events, or SAEs, have been reported. The Grade 3 dehydration was also an SAE as a result of hospitalization; however, it was attributed to an underlying cancer and concomitant medication by the sponsor, and therefore not a reportable event. One patient experienced an SAE for Grade 2 hemoptysis and two weeks later a second SAE of Grade 2 dehydration. Neither of these events were considered related to study drug, but were instead attributed to disease progression. There was one SAE of Grade 2 systemic inflammatory response syndrome that occurred during the follow-up visit but was assessed as not being a treatment-related adverse event.

SNS-301: Future Clinical Plans

We expect to report topline data from the Phase 1/2 trial by the end of 2021. If the results from our Phase 1/2 trial are positive, subject to feedback from the FDA, we intend to initiate a randomized, registration-enabling trial of SNS-301 against standard of care, single-agent pembrolizumab.

Based on the results we have observed to date, we also intend to evaluate the addition of SNS-301 to pembrolizumab in PD-1 blockade naïve SCCHN patients as part of our ongoing Phase 1/2 trial, with enrollment in this additional treatment arm expected to begin in mid-2021.

We also intend to use an ImmunoPhage cocktail targeting the E6/E7 antigens of HPV, in combination with SNS-301, in HPV positive patients in our ongoing trial of SNS-301, which we expect to incorporate in mid-2021. As a significant percentage of SCCHN patients are HPV positive, we believe the opportunity to incorporate our HPV-specific E6/E7 ImmunoPhage into a combination with SNS-301 has the potential to increase the evidence of clinical benefit seen to date.

We entered into a clinical trial collaboration with AstraZeneca in May 2019 to evaluate the safety, tolerability and preliminary efficacy of AstraZeneca's PD-1 inhibitor, durvalumab, in combination with SNS-301. We are currently planning two Phase 2 trials to evaluate SNS-301 in combination with durvalumab. Under the agreement, AstraZeneca will be supplying us with durvalumab for the trial with no upfront, milestone or royalty payments required by us. We intend to initiate the first trial in patients with locally advanced resectable SCCHN in the neoadjuvant setting in mid-2021. We are also planning a second trial in ASPH positive patients with locally advanced unresectable or metastatic solid tumors.

Prior Clinical Results

In 2018, we completed a Phase 1 trial evaluating the safety, immunogenicity and efficacy of SNS-301 in patients with biochemical relapse of localized prostate cancer after surgery or radiotherapy. SNS-301 was dosed intradermally in three cohorts of patients, using a fixed dose escalation scheme every 21 days to establish the maximum tolerated dose, or MTD. Patients who tested positive for ASPH in either tumor tissue or serum were eligible to continue in the study. The treatment regimen consisted of three repeat doses of SNS-301 at each dose level (2.0×10^{10}, 1.0×10^{11} and 3.0×10^{11} particles) administered intradermally every 21 days for nine cycles plus six months of follow up. Three patients were enrolled in the low and mid dose cohorts and six patients were enrolled in the high dose cohort.

SNS-301 was well tolerated in the trial, with few and mostly mild AEs, no observed DLTs and no patients experiencing study drug related SAEs or Grade 4 or Grade 5 AEs. Importantly, there were no indications of an off-target autoimmune response. Furthermore, the MTD of SNS-301 was not reached. Three major protocol deviations occurred during the study: two patients went from middle to high dose prematurely of which one stayed at the higher dose level and one patient varied between middle and high dose levels in subsequent cycles, and one patient (assigned to the lowest dose level) was started on the excluded anti-androgen drug bicalutamide after one year on study treatment. Of the 12 treated subjects, nine discontinued the study before completing all protocol required assessments: six because of sponsor decision, one due to investigator decision, and one with prostate-specific antigen doubling time <90 days and one from an AE (severe arthralgia not related to study drug).

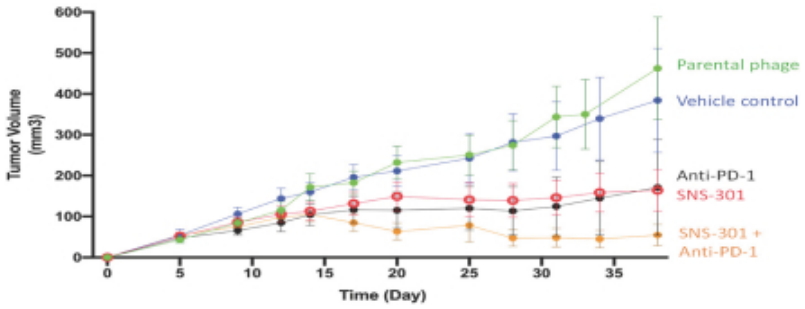
All patients had antigen-specific immune responses, with SNS-301 inducing a multi-variate immune response including T cells and B cells in the majority of patients. In addition, seven of the 12 participants in this Phase 1 safety trial, or 58%, demonstrated a reduction in the doubling time of biomarker prostate specific antigen, or PSA, levels through cycle 2. The second dosage level of 1.0×10^{11} was chosen as the recommended Phase 2 dose based on safety, immunogenicity data and the observation of an improvement in PSA doubling time for the mid-dose patients (two of three patients) compared to the high dose (three of six patients).

Preclinical Study Results

SNS-301 was evaluated in rodents for immunogenicity and efficacy. Immunogenicity was observed in mice and rats, with both humoral and cellular immune response specific to ASPH to the amount of and number of doses. Efficacy data was obtained in three rodent tumor models, BNLT3, 4T1 and MLLB-2, showing inhibition of tumor and or metastasis growth. A repeat dose toxicology study in rats has been conducted with no adverse safety findings for SNS-301.

As illustrated in the graph below, in a murine model of hepatocellular carcinoma, co-administration of SNS-301 and a PD-1 inhibitor resulted in a significant decrease in tumor growth, as did administration of SNS-301 or an anti-PD-1 antibody individually. We believe the results of this study provide encouraging evidence that checkpoint inhibition removes immunological encumbrances while at the same time SNS-301 works to drive antigen-specific immune activation.

SNS-301 and PD-1 Blockade Slowed Tumor Growth in a Liver Cancer (Hepa 1-6) Treatment Model



SNS-401: Our ImmunoPhage Candidate Targeting Merkel Cell Carcinoma

We are currently developing our next ImmunoPhage candidate, SNS-401, for the treatment of MCC. MCC is a rare but highly aggressive neuroendocrine carcinoma of the skin in which MCPyV infection and chronic exposure to ultraviolet radiation are key risk factors. Approximately 2,500 cases are diagnosed each year with the disease-specific mortality approaching 50%. Integration of MCPyV is evidenced by the presence of virus-specific epitopes in 80% of cases diagnosed in the U.S. In these cases, expression of a virus-related T cell oncogenic antigen appears intimately linked to tumor growth.

Checkpoint inhibitors have proven to be a major advancement in the treatment of advanced MCC and have revolutionized the treatment of locally advanced, inoperable and metastatic MCC. Systemic PD-1/PD-L1 inhibition therapy is associated with a high ORR, prolonged durable responses, and good tolerability in advanced-stage MCC. However, even with the advances made by checkpoint inhibitors, refractory PD-1/PD-L1 inhibitor disease remains a significant unmet medical need with an aggressive clinical course.

In March 2020, we established an exclusive exploratory collaboration with The University of Washington, one of the world's leading research centers for the study of MCC. This collaboration provides for the joint construction, to the preclinical development stage, of the first custom MCC vaccine consisting of MCPyV epitopes together with other patient specific antigens. There are no upfront, milestone or royalty payments payable to either party as part of this collaboration. The University of Washington will design MCPyV T cell constructs and determine the immunogenicity and mechanism of candidate ImmunoPhages developed by us. We will develop ImmunoPhages specifically targeting MCPyV T cell constructs and other TAAs using our cocktail approach. We believe that the MCPyV epitope space can be completely addressed with an ImmunoPhage cocktail of two bacteriophage carriers. We have an option to license on an exclusive, worldwide basis the intellectual property developed as part of this collaboration. Currently, SNS-401 is in preclinical studies and we plan on submitting an IND for SNS-401 in the first half of 2022.

SNS-VISTA: Monoclonal Antibody targeting VISTA

We are developing a mAb therapy targeting VISTA. VISTA is an immunoregulatory receptor and is highly expressed on various immune system cells including neutrophils, monocytes, macrophages, basophils and DCs. While highly expressed on CD4 T helper cells and certain T regulatory cells, it exhibits much lower expression on CD8 CTLs.

VISTA is an important checkpoint regulator. Effective PD-1 blockade is often confounded by alternative immune checkpoints, such as VISTA, and we have chosen to develop a mAb targeting VISTA in the expectation that our development of this checkpoint inhibitor will closely complement our ImmunoPhage development activities. Unlike other checkpoint regulators, which are induced after activation, VISTA expression is maintained at a steady state. This broad pattern of expression suggests that VISTA has an important role in

regulating immune system activity and preserving homeostasis. VISTA's presence in tumors is often indicative of a poor prognosis. Analysis of the TME often reveals an absence of TILs as well as a reduction in cytokines and other co-stimulatory molecules. VISTA blockade appears to dramatically modulate the TME towards a state that favors an immune system response, resulting in improved T-cell effector function and anti-tumor activity. Accordingly, VISTA has been identified as a promising therapeutic target.

In January 2020, we entered into a collaborative agreement with AdiMab to expedite antibody development through the production of human IgGs that we may evaluate as potential therapeutic product candidates. Under this agreement, we provide key proprietary reagents and information to AdiMab to enable the initiation of antibody discovery and development. In March 2020, AdiMab initiated our VISTA antibody campaign. In June 2020, we received a first shipment of 84 IgGs for further screening. Among these, several have passed through our proprietary screening criteria and we believe multiple antibodies possess the desired biophysical properties and mechanism of action for a potential clinical candidate. Through the use of proprietary functional and in vivo assays, we intend to select a product candidate and initiate IND-enabling studies for our lead mAb by the end of 2021.

SNS-CoV2: ImmunoPhage Targeting SARS-CoV-2

Coronavirus infectious disease 2019, or COVID-19, caused by the emerging coronavirus SARS-CoV-2, has rapidly swept throughout the world. As of November 9, 2020, there have been an estimated 50 million laboratory-confirmed COVID-19 patients and over 1.2 million deaths worldwide. The WHO has declared COVID-19 a public health emergency of international concern.

We have rapidly deployed our ImmunoPhage platform to address the ongoing COVID-19 crisis. Our ImmunoPhage platform has been designed to include multiple epitopes from multiple domains simultaneously. Using the known immunogenicity of the closely related SARS virus and the highly conserved structural genes (N, M, E and S), we have developed an ImmunoPhage cocktail broadly covering large epitopic domains of SARS-Cov-2. We have discussed our ImmunoPhage cocktail approach and clinical trial design with the FDA.

SARS-CoV-2 is an enveloped, single-stranded, positive-sense RNA virus belonging to the family *Coronavidae* and the genus b-coronavirus. The genome of SARS-CoV-2 encodes one large Spike, or S, protein that plays a pivotal role during the viral attachment and entry into host cells. The S protein has been frequently considered as the major antigen target for vaccines against human coronavirus such as SARS-CoV, MERS-CoV, and also SARS-CoV-2 in recent studies because it contains the major epitopes targeted by neutralizing antibodies. In addition, the M and E domains of the viral genome code for structural viral protein, the M domain coding for a membrane protein and the E domain coding for a viral envelope protein and represent attractive targets for neutralizing viral entry or targeting the virus for cellular destruction. Both M and E are believed to be highly immunogenic and, as illustrated below, collectively contain multiple B cell and T cell epitopes.

	Spike (S)	Nucleocapsid (N)	Membrane (M)	Envelope (E)
Similarity to SARS-CoV-2	~80%	94%	98%	100%
B cell epitopes	279	113	20	2
T cell epitopes	48	33	4	0

Because ImmunoPhage is capable of rapid and cost-effective manufacturing, we manufactured over 25 different unique ImmunoPhage, each targeting different epitopes of the S, M or E domains of SARS-COV-2. This was achieved in less than three months under cGMP conditions. While advancing this program would

advance our platform's use to address other indications, we do not envision funding its development ourselves. As such, we would continue its development only if public funding is available or through some other collaborative initiative.

Manufacturing

We have manufactured SNS-301 bulk drug substance for clinical trials, as well as our current Phortess library, at our own manufacturing facility. We are in the process of establishing a new manufacturing facility, where we anticipate having a 10L bioreactor capability, which will allow us to produce a quantity of drug substance equivalent to 5,000 to 10,000 doses under cGMP conditions. We believe that having control over the manufacturing process allows us to reduce cycle times, increase the robustness and consistency of the process and potentially reduce cost of goods for commercial production, which are critical to the construction of our Phortress library consisting of multiple novel ImmunoPhage. We expect that having a dedicated manufacturing facility will allow us to optimize commercial-scale processes and to develop a suitable workforce capable of supporting market launch. As we advance into later-stage clinical trials and additional indications, we intend to expand our current manufacturing capabilities to support larger scale clinical trials and the potential commercialization of our product candidates.

We may also rely on contract manufacturing organizations, or CMOs, to produce our product candidates for clinical use. We require that our CMOs produce bulk drug substances and finished drug products in accordance with cGMP, and all other applicable laws and regulations. Although we have established our own manufacturing facility, we may rely on CMOs for parts of the process, like filling and labelling of our products for commercial sale. Any agreements with potential and existing manufacturers will include confidentiality and intellectual property provisions to protect our proprietary rights related to our product candidates.

Intellectual Property

Intellectual property is of vital importance in our field and in biotechnology generally. We seek to protect and enhance proprietary technology, inventions, and improvements that are commercially important to the development of our business by seeking, maintaining, and defending patent rights, whether developed internally or licensed from third parties. We will also seek to rely on regulatory protection afforded through inclusion in expedited development and review, data exclusivity, market exclusivity and patent term extensions where available.

We have sought patent protection in the United States and internationally for our clinical product SNS-301. The claims of U.S. Patent Nos. 9,744,223 and 10,702,591 encompass the clinical product. We continue to pursue claims directed to the clinical product in related applications. Such applications may not result in issued patents and, even if patents do issue, such patents may not be in a form that will provide us with meaningful protection for our product. We also rely on trade secrets that may be important to the development of our business. Trade secrets are difficult to protect and provide us with only limited protection.

We expect to file additional patent applications in support of current and new clinical candidates as well as new platform and core technologies. Our commercial success will depend in part on obtaining and maintaining patent protection and trade secret protection of our current and future product candidates and the methods used to develop and manufacture them, as well as successfully defending these patents against third-party challenges and operating without infringing on the proprietary rights of others. Our ability to stop third parties from making, using, selling, offering to sell or importing our products depends on the extent to which we have rights under valid and enforceable patents or trade secrets that cover these activities. We cannot be sure that patents will be granted with respect to any of our pending patent applications or with respect to any patent applications filed by us in the future, nor can we be sure that any patents that may be granted to us in the future will be commercially useful in protecting our product candidates, discovery programs and processes. For this and more comprehensive risks related to our intellectual property, please see "Risk Factors—Risks Related to Our Intellectual Property."

The term of individual patents depends upon the legal term of the patents in the countries in which they are obtained. In most countries in which we file, including the United States, the patent term is 20 years from the

earliest date of filing a non-provisional patent application. In the United States, a patent's term may be lengthened by patent term adjustment, which compensates a patentee for administrative delays by the U.S. Patent and Trademark Office, or USPTO, in examining and granting a patent, or may be shortened if a patent is terminally disclaimed over an earlier filed patent. In the United States, the patent term of a patent that covers an FDA-approved drug may also be eligible for patent term extension, which permits patent term restoration as compensation for the patent term lost during the FDA regulatory review process. The Hatch-Waxman Act permits a patent term extension of up to five years beyond the expiration of the patent. The length of the patent term extension is related to the length of time the drug is under regulatory review. Patent term extension cannot extend the remaining term of a patent beyond a total of 14 years from the date of product approval, only one patent applicable to an approved drug may be extended and only those claims covering the approved drug, a method for using it, or a method for manufacturing it may be extended. Similar provisions are available in Europe and other foreign jurisdictions to extend the term of a patent that covers an approved drug. In the future, if and when our products receive FDA approval, we expect to apply for patent term extensions on patents covering those products. We plan to seek patent term extensions to any issued patents we may obtain in any jurisdiction where such patent term extensions are available, however there is no guarantee that the applicable authorities, including the FDA in the United States, will agree with our assessment of whether such extensions should be granted, and if granted, the length of such extensions. For more information regarding the risks related to our intellectual property, see "Risk Factors—Risks Related to Our Intellectual Property."

In some instances, we submit patent applications directly with the USPTO as provisional patent applications. Corresponding non-provisional patent applications must be filed not later than 12 months after the provisional application filing date. While we intend to timely file non-provisional patent applications relating to our provisional patent applications, we cannot predict whether any such patent applications will result in the issuance of patents that provide us with any competitive advantage.

We file U.S. non-provisional applications and Patent Cooperation Treaty, or PCT, applications that claim the benefit of the priority date of earlier filed provisional applications, when applicable. The PCT system allows a single application to be filed within 12 months of the original priority date of the patent application, and to designate all of the PCT member states in which national patent applications can later be pursued based on the international patent application filed under the PCT. The PCT searching authority performs a patentability search and issues a non-binding patentability opinion which can be used to evaluate the chances of success for the national applications in foreign countries prior to having to incur the filing fees. Although a PCT application does not issue as a patent, it allows the applicant to seek protection in any of the member states through national-phase applications. At the end of the period of two and a half years from the first priority date of the patent application, separate patent applications can be pursued in any of the PCT member states either by direct national filing or, in some cases by filing through a regional patent organization, such as the European Patent Office. The PCT system delays expenses, allows a limited evaluation of the chances of success for national/regional patent applications and enables substantial savings where applications are abandoned within the first two and a half years of filing.

For all patent applications, we determine claiming strategy on a case-by-case basis. Advice of counsel and our business model and needs are always considered. We seek to file patents containing claims for protection of all useful applications of our proprietary technologies and any products, as well as all new applications and/or uses we discover for existing technologies and products, assuming these are strategically valuable. We continuously reassess the number and type of patent applications, as well as the pending and issued patent claims to pursue maximum coverage and value for our processes, and compositions, given existing patent office rules and regulations. Further, claims may be modified during patent prosecution to meet our intellectual property and business needs.

We recognize that the ability to obtain patent protection and the degree of such protection depends on a number of factors, including the extent of the prior art, the novelty and non-obviousness of the invention, and the ability to satisfy the enablement requirement of the patent laws. In addition, the coverage claimed in a patent application can be significantly reduced before the patent is issued, and its scope can be reinterpreted or further altered even after patent issuance. Consequently, we may not obtain or maintain adequate patent protection for

any of our future product candidates or for our technology platform. We cannot predict whether the patent applications we are currently pursuing will issue as patents in any particular jurisdiction or whether the claims of any issued patents will provide sufficient proprietary protection from competitors. Any patents that we hold may be challenged, circumvented or invalidated by third parties.

In addition to patent protection, we also rely on trademark registration, trade secrets, know how, other proprietary information and continuing technological innovation to develop and maintain our competitive position. We seek to protect and maintain the confidentiality of proprietary information to protect aspects of our business that are not amenable to, or that we do not consider appropriate for, patent protection. Although we take steps to protect our proprietary information and trade secrets, including through contractual means with our employees and consultants, third parties may independently develop substantially equivalent proprietary information and techniques or otherwise gain access to our trade secrets or disclose our technology. Thus, we may not be able to meaningfully protect our trade secrets. It is our policy to require our employees, consultants, outside scientific collaborators, sponsored researchers and other advisors to execute confidentiality agreements upon the commencement of employment or consulting relationships with us. These agreements provide that all confidential information concerning our business or financial affairs developed or made known to the individual during the course of the individual's relationship with us is to be kept confidential and not disclosed to third parties except in specific circumstances. Our agreements with employees also provide that all inventions conceived by the employee in the course of employment with us or from the employee's use of our confidential information are our exclusive property. However, such confidentiality agreements and invention assignment agreements can be breached and we may not have adequate remedies for any such breach. In addition, our trade secrets may otherwise become known or be independently discovered by competitors. To the extent that our consultants, contractors or collaborators use intellectual property owned by others in their work for us, disputes may arise as to the rights in related or resulting trade secrets, know-how and inventions. For more information regarding the risks related to our intellectual property, see "Risk Factors—Risks Related to Intellectual Property."

The patent positions of biotechnology companies like ours are generally uncertain and involve complex legal, scientific and factual questions. Our commercial success will also depend in part on not infringing upon the proprietary rights of third parties. Third-party patents could require us to alter our development or commercial strategies, or our products or processes, obtain licenses or cease certain activities. Our breach of any license agreements or our failure to obtain a license to proprietary rights required to develop or commercialize our future products may have a material adverse impact on us. If third parties prepare and file patent applications in the United States that also claim technology to which we have rights, we may have to participate in interference or derivation proceedings in the USPTO to determine priority of invention. For more information, see "Risk Factors—Risks Related to Intellectual Property."

When available to expand market exclusivity, our strategy is to obtain, or license additional intellectual property related to current or contemplated development platforms, core elements of technology and/or clinical candidates.

As of December 9, 2020, our solely owned patent estate included four issued U.S. patents, two issued foreign patents, over five pending U.S. patent applications, two pending international (PCT) patent applications, and over nine foreign patent applications (pending in Canada, China, Europe, Hong Kong and Japan).

With regard to SNS-301, we own one pending U.S. patent application and two issued U.S. patents with composition of matter claims covering SNS-301. The issued U.S. patents and U.S. patent application, if issued, are expected to expire in 2033, subject to payment of required maintenance fees, annuities and other charges. We also own one issued European EP patent (in force in France, Germany and the United Kingdom) and five pending foreign patent applications (pending in Canada, Europe, Hong Kong and Japan), where the EP European patent and the pending foreign patent applications, if issued, are expected to expire in 2034.

We own one pending U.S. patent application and one pending, published PCT application with claims directed to methods for using and making the SNS-301 product candidate. The U.S. patent application and patent applications claiming the benefit of the PCT application, if issued, are expected to expire in 2039, subject to payment of required maintenance fees, annuities and other charges.

We own one pending U.S. patent application and one pending, published PCT application relating to methods for using the SNS-301 product candidate in combination with immune checkpoint protein inhibitors. The U.S. patent application and patent applications claiming the benefit of the PCT application, if issued, are expected to expire in 2040, subject to payment of required maintenance fees, annuities and other charges.

We own one provisional U.S. patent application relating to phage-based vaccines targeting SARS-CoV-2 proteins. Subject to payment of required maintenance fees, annuities and other charges, and assuming either U.S. non-provisional or foreign patent applications are filed at the appropriate time, if issued, are projected to expire in 2041.

License Agreement with Fred Hutch

In connection with our acquisition of Alvaxa Biosciences, Inc., or Alvaxa, in May 2020, we acquired a non-exclusive license agreement, or the Fred Hutch Agreement, with Fred Hutchinson Cancer Research Center, or Fred Hutch, which was originally entered into in January 2020 and amended in March 2020. Pursuant to the Fred Hutch Agreement, we obtained a non-exclusive, non-sublicensable, worldwide license to possess, maintain, and use certain biological materials, including llama-derived antibodies, for any and all uses. Under the Fred Hutch Agreement, we are obligated to use commercially reasonable efforts to develop and commercialize at least one product containing or derived from an antibody in any form, or a developed product.

As partial consideration for the licensed rights granted under the Fred Hutch Agreement, Alvaxa issued Fred Hutch 1,429,412 shares of its common stock, which were subsequently exchanged for 45,656 shares of our common stock in connection with our acquisition of Alvaxa. Under the Fred Hutch Agreement, we are obligated to pay an annual license maintenance fee ranging from the mid-single digit thousands to approximately $0.1 million, depending on net sales of developed products in a given calendar year. We are also obligated to pay up to $300,000 in development milestone payments for each therapeutic developed product and up to $165,000 for each diagnostic developed product, in each case including each unique target covered by such developed product. We have no obligation to pay royalties under the Fred Hutch Agreement.

The Fred Hutch Agreement expires 20 years after the effective date. We may terminate the agreement for convenience, and Fred Hutch may terminate the agreement for our insolvency. Either party may terminate the agreement for breach of material obligations by such other party.

Trademarks, Trade Secrets and Know-How

Our trademark portfolio currently consists of two registered trademarks and one trademark application. In addition to patent and trademark protection, we rely upon unpatented trade secrets and know-how and continuing technological innovation to develop and maintain our competitive position. We seek to protect our proprietary information, in part, using confidentiality agreements with our commercial partners, collaborators, employees, and consultants, and employees. These and other agreements, such as invention assignment agreements, grant us ownership of technologies that are developed through a relationship with a third party.

Competition

The biotechnology and pharmaceutical industries have made substantial investments in recent years into the rapid development of novel immunotherapies for the treatment of a range of pathologies, including cancers and infectious diseases, making this a highly competitive market.

We face substantial competition from multiple sources, including large and specialty pharmaceutical, biopharmaceutical and biotechnology companies, academic research institutions and governmental agencies and public and private research institutions. Our competitors compete with us on the level of the technologies employed, or on the level of development of product candidates. In addition, many small biotechnology companies have formed collaborations with large, established companies to (i) obtain support for their research, development and commercialization of products or (ii) combine several treatment approaches to develop longer lasting or more efficacious treatments that may potentially directly compete with our current or future product candidates. We anticipate that we will continue to face increasing competition as new therapies and combinations thereof, technologies, and data emerge within the field of immunotherapy and, furthermore, within the treatment of cancers and infectious diseases.

In addition to the current standard of care treatments for patients with cancers and infectious diseases, numerous commercial and academic preclinical studies and clinical trials are being undertaken by a large number of parties to assess novel technologies and product candidates in the field of immunotherapy. Results from these studies and trials have fueled increasing levels of interest in the field of immunotherapy.

Large pharmaceutical companies that have commercialized or are developing immunotherapies to treat cancer include AstraZeneca, Bristol Myers Squibb, Gilead Sciences, Merck, Novartis, Pfizer, and Roche/Genentech.

On the technology level, other companies which can potentially develop competing product candidates which act to stimulate the body’s immune response as a treatment for SCCHN and other solid tumors include companies developing cell-based therapeutics such as CAR-T/TCR/NK therapies as well as companies developing therapeutic vaccines including BioNTech, Moderna, Gritstone Oncology and Oncorus, among others. In addition, a number of companies are developing oncolytic virus approaches, including Boehringer Ingelheim, Johnson and Johnson, Regeneron, Vyriad, Replimune and Turnstone. Amgen has received FDA approval for its oncolytic virus-based product, T-VEC. Ablynx, a subsidiary of Sanofi, and Oncorus are actively pursuing the development of nanobodies as therapeutics.

Many of our competitors, either alone or in combination with their respective strategic partners, have significantly greater financial resources and expertise in research and development, manufacturing, the regulatory approval process, and marketing than we do. Mergers and acquisition activity in the pharmaceutical, biopharmaceutical and biotechnology sector is likely to result in greater resource concentration among a smaller number of our competitors.

Smaller or early-stage companies may also prove to be significant competitors, particularly through sizeable collaborative arrangements with established companies. These competitors also compete with us in recruiting and retain qualified scientific and management personnel and establishing clinical trial sites and patient registration for clinical trials, as well as in acquiring technologies complementary to, or necessary for, our programs.

Our commercial opportunity could be reduced or eliminated if one or more of our competitors develop and commercialize products that are safer, more effective, better tolerated, or of greater convenience or economic benefit than our proposed product offering. Our competitors also may be in a position to obtain FDA or other regulatory approval for their products more rapidly, resulting in a stronger or dominant market position before we are able to enter the market. The key competitive factors affecting the success of all of our programs are likely to be product safety, efficacy, convenience and treatment cost.

Government Regulation

Government authorities in the United States at the federal, state and local level and in other countries regulate, among other things, the research, development, testing, manufacture, quality control, approval, labeling, packaging, storage, record-keeping, promotion, advertising, distribution, post-approval monitoring and reporting,

marketing and export and import of biological products. Generally, before a new drug or biologic can be marketed, considerable data demonstrating its quality, safety and efficacy must be obtained, organized into a format specific for each regulatory authority, submitted for review and approved by the regulatory authority.

U.S. Biological Product Development

In the United States, the FDA regulates biologics under the Federal Food, Drug and Cosmetic Act, or FDCA, the Public Health Service Act, or the PHSA, and their implementing regulations. Biologics also are subject to other federal, state and local statutes and regulations. The process of obtaining regulatory approvals and the subsequent compliance with appropriate federal, state and local statutes and regulations requires the expenditure of substantial time and financial resources. Failure to comply with the applicable U.S. requirements at any time during the product development process, approval process or post-market may subject an applicant to administrative or judicial sanctions. These sanctions could include, among other actions, the FDA's refusal to approve pending applications, suspension or revocation of a license, a clinical hold, untitled or warning letters, product recalls or market withdrawals, product seizures, total or partial suspension of production or distribution, injunctions, fines, refusals of government contracts, restitution, disgorgement and civil or criminal penalties.

Our product candidates and any future biological product candidates we develop must be approved by the FDA through a biologics license application, or BLA, before they may be legally marketed in the United States. The BLA is a request for approval to market the biologic for one or more specified indications and must contain proof of safety, purity and potency. The FDA review and approval process generally involves the following:

- completion of extensive preclinical studies conducted in accordance with applicable regulations, including studies conducted in accordance with good laboratory practices, or GLP, requirements;
- submission to the FDA of an IND, which must become effective before human clinical trials may begin;
- approval by an Institutional Review Board, or IRB, or independent ethics committee at each clinical trial site before each trial may be initiated;
- performance of adequate and well-controlled human clinical trials in accordance with applicable IND regulations, good clinical practice, or GCP, requirements and other clinical trial-related regulations to establish the safety and efficacy of the investigational product for each proposed indication;
- submission to the FDA of a BLA;
- a determination by the FDA within 60 days of its receipt of a BLA to accept the filing for review;
- satisfactory completion of an FDA pre-approval inspection of the manufacturing facility or facilities where the biologic will be produced to assess compliance with cGMP requirements to assure that the facilities, methods and controls are adequate to preserve the biologic's identity, strength, quality and purity;
- potential FDA audit of the preclinical study and clinical trial sites that generated the data in support of the BLA;
- payment of user fees for FDA review of the BLA (unless a fee waiver applies); and
- FDA review and approval of the BLA, including consideration of the views of any FDA advisory committee, prior to any commercial marketing or sale of the biologic in the United States.

Preclinical Studies and IND

Before testing any biological product candidate in humans, the product candidate enters the preclinical testing stage. Preclinical studies include laboratory evaluation of product biological characteristics, chemistry and formulation, as well as in vitro and animal studies to assess the potential for adverse events and in some cases to establish a rationale for therapeutic use. The conduct of preclinical studies is subject to federal regulations and requirements, including GLP regulations for safety/toxicology studies.

An IND sponsor must submit the results of the preclinical studies, together with manufacturing information, analytical data, any available clinical data or literature and plans for clinical trials, among other things, to the FDA as part of an IND. An IND is a request for authorization from the FDA to administer an investigational product to humans, and must become effective before human clinical trials may begin. Some long-term preclinical testing may continue after the IND is submitted. An IND automatically becomes effective 30 days after receipt by the FDA, unless before that time, the FDA raises concerns or questions related to one or more proposed clinical trials and places the trial on clinical hold. In such a case, the IND sponsor and the FDA must resolve any outstanding concerns before the clinical trial can begin. As a result, submission of an IND may not result in the FDA allowing clinical trials to commence.

Clinical Trials

The clinical stage of development involves the administration of the investigational product to healthy volunteers or patients under the supervision of qualified investigators, generally physicians not employed by or under the trial sponsor's control, in accordance with GCP requirements, which include the requirement that all research subjects provide their informed consent for their participation in any clinical trial. Clinical trials are conducted under protocols detailing, among other things, the objectives of the clinical trial, dosing procedures, subject selection and exclusion criteria and the parameters to be used to monitor subject safety and assess efficacy, including stopping rules that assure a clinical trial will be stopped if certain adverse events should occur. Each protocol, and any subsequent amendments to the protocol, must be submitted to the FDA as part of the IND. Further, each clinical trial must be reviewed and approved by an IRB for each institution at which the clinical trial will be conducted to ensure that the risks to individuals participating in the clinical trials are minimized and are reasonable in relation to anticipated benefits. The IRB also approves the informed consent form that must be provided to each clinical trial subject or his or her legal representative, and must monitor the clinical trial until completed. There also are requirements governing the reporting of ongoing clinical trials and completed clinical trial results to public registries.

A sponsor who wishes to conduct a clinical trial outside of the United States may, but need not, obtain FDA authorization to conduct the clinical trial under an IND. If a foreign clinical trial is not conducted under an IND, the sponsor may submit data from the clinical trial to the FDA in support of a BLA. The FDA will accept a well-designed and well-conducted foreign clinical trial not conducted under an IND if the study was conducted in accordance with GCP requirements, and the FDA is able to validate the data through an onsite inspection if deemed necessary.

Clinical trials generally are conducted in three sequential phases, known as Phase 1, Phase 2 and Phase 3, and may overlap or be combined, such that the objectives of multiple phases are addressed within the design of a single trial.

- Phase 1 clinical trials generally involve a small number of healthy volunteers or disease-affected patients who are initially exposed to a single dose and then multiple doses of the product candidate. The primary purpose of these clinical trials is to assess the metabolism, pharmacologic action, side effect tolerability and safety of the product candidate. When conducted in disease-affected patients and including an endpoint of early activity or efficacy, such a trial may be a Phase 1/2 trial, comprising a Phase 1 portion and a Phase 2 portion.
- Phase 2 clinical trials involve studies in disease-affected patients to determine the dose required to produce the desired benefits. At the same time, safety and further pharmacokinetic and pharmacodynamic information is collected, possible adverse effects and safety risks are identified and a preliminary evaluation of efficacy is conducted. Multiple Phase 2 clinical trials may be conducted to obtain information prior to beginning larger and more expensive Phase 3 clinical trials. Phase 2/3 trials may also be designed to sequentially address both dose finding and effectiveness in a single trial.
- Phase 3 clinical trials generally involve a large number of patients at multiple sites and are designed to provide the data necessary to demonstrate the effectiveness of the product for its intended use, its safety in use and to establish the overall benefit/risk relationship of the product candidate and provide an adequate basis for product labeling.

In August 2018, the FDA released a draft guidance entitled “Expansion Cohorts: Use in First-In-Human Clinical Trials to Expedite Development of Oncology Drugs and Biologics,” which outlines how developers can utilize an adaptive trial design commonly referred to as a seamless trial design in early stages of oncology biological product development (i.e., the Phase 1 first-in-human clinical trial) to compress the traditional three phases of trials into one continuous trial called an expansion cohort trial. Information to support the design of individual expansion cohorts are included in IND applications and assessed by FDA. Expansion cohort trials can potentially bring efficiency to biological product development and reduce developmental costs and time.

Post-approval trials, sometimes referred to as Phase 4 clinical trials, may be conducted after initial marketing approval. These trials are used to gain additional experience from the treatment of patients in the intended therapeutic indication. In certain instances, the FDA may mandate the performance of Phase 4 clinical trials as a condition of approval of a BLA. Failure to exhibit due diligence with regard to conducting required Phase 4 clinical trials could result in withdrawal of licensure for biological products.

During all phases of clinical development, regulatory agencies require extensive monitoring and auditing of all clinical activities, clinical data, and clinical trial investigators. Progress reports detailing the results of the clinical trials, among other information, must be submitted at least annually to the FDA and written IND safety reports must be submitted to the FDA and the investigators for serious and unexpected suspected adverse events, findings from other studies or animal or in vitro testing that suggest a significant risk for human subjects, and any clinically important increase in the rate of a serious suspected adverse reaction over that listed in the protocol or investigator brochure.

Phase 1, Phase 2 and Phase 3 clinical trials may not be completed successfully within any specified period, if at all. The FDA or the sponsor may suspend or terminate a clinical trial at any time on various grounds, including a finding that the research subjects or patients are being exposed to an unacceptable health risk. Similarly, an IRB can suspend or terminate approval of a clinical trial at its institution if the clinical trial is not being conducted in accordance with the IRB’s requirements or if the biological product candidate has been associated with unexpected serious harm to patients. Additionally, some clinical trials are overseen by an independent group of qualified experts organized by the clinical trial sponsor, known as a data safety monitoring board or committee. This group provides authorization for whether a trial may move forward at designated check points based on access to certain data from the trial. There are also requirements governing the reporting of ongoing clinical studies and clinical study results to public registries. Concurrent with clinical trials, companies usually complete additional animal studies and also must develop additional information about the chemistry and physical characteristics of the biological product candidate as well as finalize a process for manufacturing the product candidate in commercial quantities in accordance with cGMP requirements. The manufacturing process must be capable of consistently producing quality batches of the product and, among other things, companies must develop methods for testing the identity, strength, quality, purity and potency of the final product. Additionally, appropriate packaging must be selected and tested and stability studies must be conducted to demonstrate that the product candidate does not undergo unacceptable deterioration over their shelf life.

FDA Review Process

Following completion of the clinical trials, data are analyzed to assess whether the investigational product is safe and effective for the proposed indicated use or uses. The results of preclinical studies and clinical trials are then submitted to the FDA as part of a BLA, along with proposed labeling, chemistry and manufacturing information to ensure product quality and other relevant data. The BLA may include both negative and ambiguous results of preclinical studies and clinical trials, as well as positive findings. Data may come from company-sponsored clinical trials intended to test the safety and efficacy of a product candidate’s use or from a number of alternative sources, including studies initiated by investigators. To support marketing approval, the data submitted must be sufficient in quality and quantity to establish the safety, purity and potency of the investigational product to the satisfaction of FDA. FDA approval of a BLA must be obtained before a biologic may be marketed in the United States.

Under the Prescription Drug User Fee Act, or PDUFA, as amended, each BLA must be accompanied by a user fee. The FDA adjusts the PDUFA user fees on an annual basis. The sponsor of an approved BLA is also subject to an annual prescription drug program fee. Fee waivers or reductions are available in certain circumstances, including a waiver of the application fee for the first application filed by a small business. Additionally, no user fees are assessed on BLAs for products designated as orphan drugs, unless the product also includes a non-orphan indication.

The FDA reviews all submitted BLAs before it accepts them for filing, and may request additional information rather than accepting the BLA for filing. The FDA decides whether to accept a BLA for filing within 60 days of receipt, and such decision could include a refusal to file by the FDA. Once the submission is accepted for filing, the FDA begins an in-depth review of the BLA. Under the goals and policies agreed to by the FDA under PDUFA, the FDA has ten months from the filing date in which to complete its initial review of an original BLA and respond to the applicant, and six months from the filing date of an original BLA designated for priority review. The FDA does not always meet its PDUFA goal dates for standard and priority BLAs, and the review process is often extended by FDA requests for additional information or clarification.

Before approving a BLA, the FDA will conduct a pre-approval inspection of the manufacturing facilities for the new product to determine whether they comply with cGMP requirements. The FDA will not approve the product unless it determines that the manufacturing processes and facilities are in compliance with cGMP requirements and adequate to assure consistent production of the product within required specifications. The FDA also may audit data from clinical trials to ensure compliance with GCP requirements. Additionally, the FDA may refer applications for novel products or products which present difficult questions of safety or efficacy to an advisory committee, typically a panel that includes clinicians and other experts, for review, evaluation and a recommendation as to whether the application should be approved and under what conditions, if any. The FDA is not bound by recommendations of an advisory committee, but it considers such recommendations when making decisions on approval. The FDA likely will reanalyze the clinical trial data, which could result in extensive discussions between the FDA and the applicant during the review process. After the FDA evaluates a BLA, it will issue an approval letter or a complete response letter. An approval letter authorizes commercial marketing of the biologic with specific prescribing information for specific indications. A complete response letter indicates that the review cycle of the application is complete and the application will not be approved in its present form. A complete response letter usually describes all of the specific deficiencies in the BLA identified by the FDA. The complete response letter may require additional clinical data, pivotal Phase 3 clinical trial(s) as well as other significant and time-consuming requirements related to clinical trials, preclinical studies or manufacturing. If a complete response letter is issued, the applicant may either resubmit the BLA, addressing all of the deficiencies identified in the letter, or withdraw the application. Even if such data and information are submitted, the FDA may decide that the BLA does not satisfy the criteria for approval.

Orphan Drug Designation

Under the Orphan Drug Act, the FDA may grant orphan designation to a biological product intended to treat a rare disease or condition, which is generally a disease or condition that affects fewer than 200,000 individuals in the United States, or more than 200,000 individuals in the United States and for which there is no reasonable expectation that the cost of developing and making the product available in the United States for this type of disease or condition will be recovered from sales of the product. Orphan drug designation for a biologic must be requested before submitting a BLA. After the FDA grants orphan drug designation, the identity of the therapeutic agent and its potential orphan use are disclosed publicly by the FDA. Orphan drug designation does not convey any advantage in or shorten the duration of the regulatory review and approval process.

Orphan drug designation entitles a party to financial incentives such as opportunities for grant funding towards clinical trial costs, tax advantages and user fee waivers. If a product that has orphan drug designation subsequently receives the first FDA approval for the disease or condition for which it has such designation, the product is entitled to orphan drug exclusivity, which means that the FDA may not approve any other applications to market the same biological product for the same indication for seven years from the date of such approval,

except in limited circumstances, such as a showing of clinical superiority to the product with orphan exclusivity by means of greater effectiveness, greater safety or providing a major contribution to patient care or in instances of drug supply issues. Competitors, however, may receive approval of either a different product for the same indication or the same product for a different indication but that could be used off-label in the orphan indication. Orphan drug exclusivity also could block the approval of one of our products for seven years if a competitor obtains approval before we do for the same product, as defined by the FDA, for the same indication we are seeking approval, or if our product is determined to be contained within the scope of the competitor's product for the same indication or disease. If a biological product designated as an orphan drug receives marketing approval for an indication broader than that which is designated, it may not be entitled to orphan drug exclusivity. Orphan drug status in the European Union has similar, but not identical, requirements and benefits.

Expedited Development and Review Programs

The FDA has a fast track program that is intended to expedite or facilitate the process for reviewing new biologics that meet certain criteria. Specifically, new biological product candidates are eligible for fast track designation if they are intended to treat a serious or life-threatening condition and preclinical or clinical data demonstrate the potential to address unmet medical needs for the condition. Fast track designation applies to both the product and the specific indication for which it is being studied. The sponsor of a biological product candidate can request the FDA to designate the product for fast track status any time before receiving BLA approval, but ideally no later than the pre-BLA meeting.

Any product submitted to the FDA for marketing, including under a fast track program, may be eligible for other types of FDA programs intended to expedite development and review, such as priority review and accelerated approval. Any product candidate is eligible for priority review if it treats a serious or life-threatening condition and, if approved, would provide a significant improvement in safety and effectiveness compared to available therapies. The FDA will attempt to direct additional resources to the evaluation of an application for a new biologic designated for priority review in an effort to facilitate the review.

A product candidate may also be eligible for accelerated approval, if it treats a serious or life-threatening condition and generally provides a meaningful advantage over available therapies. In addition, it must demonstrate an effect on a surrogate endpoint that is reasonably likely to predict clinical benefit or on a clinical endpoint that can be measured earlier than irreversible morbidity or mortality, or IMM, that is reasonably likely to predict an effect on IMM or other clinical benefit. As a condition of approval, the FDA may require that a sponsor of a biological product candidate receiving accelerated approval perform adequate and well-controlled post-marketing clinical trials. If the FDA concludes that a biological product candidate shown to be effective can be safely used only if distribution or use is restricted, it will require such post-marketing restrictions, as it deems necessary to assure safe use of the product. If the FDA determines that the conditions of approval are not being met, the FDA can withdraw its accelerated approval for such biologic.

Additionally, a biological product candidate may be eligible for designation as a breakthrough therapy if the product candidate is intended, alone or in combination with one or more other drugs or biologics, to treat a serious or life-threatening condition and preliminary clinical evidence indicates that the product candidate may demonstrate substantial improvement over currently approved therapies on one or more clinically significant endpoints. The benefits of breakthrough therapy designation include the same benefits as fast track designation, plus intensive guidance from the FDA to ensure an efficient drug development program.

Fast track designation, priority review, accelerated approval and breakthrough therapy designation do not change the standards for approval, but may expedite the development or approval process.

Pediatric Information

Under the Pediatric Research Equity Act, or PREA, a BLA or supplement to a BLA must contain data to assess the safety and efficacy of the biological product candidate for the claimed indications in all relevant

pediatric subpopulations and to support dosing and administration for each pediatric subpopulation for which the product is safe and effective. The FDA may grant deferrals for submission of pediatric data or full or partial waivers. Unless otherwise required by regulation, PREA does not apply to any biological product candidate for an indication for which orphan designation has been granted.

The Food and Drug Administration Safety and Innovation Act, or FDASIA, amended the FDCA to require that a sponsor who is planning to submit a marketing application for a drug that includes a new active ingredient, new indication, new dosage form, new dosing regimen or new route of administration submit an initial Pediatric Study Plan, or PSP, within 60 days of an end-of-Phase 2 meeting or, if there is no such meeting, as early as practicable before the initiation of the registration-enabling trial. The initial PSP must include an outline of the pediatric study or studies that the sponsor plans to conduct, including study objectives and design, age groups, relevant endpoints and statistical approach, or a justification for not including such detailed information, and any request for a deferral of pediatric assessments or a full or partial waiver of the requirement to provide data from pediatric studies along with supporting information. The FDA and the sponsor must reach an agreement on the PSP. A sponsor can submit amendments to an agreed-upon initial PSP at any time if changes to the pediatric plan need to be considered based on data collected from preclinical studies, early phase clinical trials as well as other clinical development programs.

Post-Marketing Requirements

Following approval of a new product, the manufacturer and the approved product are subject to continuing regulation by the FDA, including, among other things, monitoring and record-keeping activities, reporting of adverse experiences, complying with promotion and advertising requirements, which include restrictions on promoting products for unapproved uses or patient populations (known as “off-label use”) and limitations on industry-sponsored scientific and educational activities. Although physicians may prescribe legally available products for off-label uses, manufacturers may not market or promote such uses. Prescription drug and biologic promotional materials must be submitted to the FDA in conjunction with their first use. Further, if there are any modifications to the biologic, including changes in indications, labeling or manufacturing processes or facilities, the applicant may be required to submit and obtain FDA approval of a new BLA or BLA supplement, which may require the development of additional data or preclinical studies and clinical trials. The FDA may also place other conditions on approvals including the requirement for a Risk Evaluation and Mitigation Strategy, or REMS, to assure the safe use of the product. If the FDA concludes a REMS is needed, the sponsor of the BLA must submit a proposed REMS. The FDA will not approve the BLA without an approved REMS, if required. A REMS could include medication guides, physician communication plans or elements to assure safe use, such as restricted distribution methods, patient registries and other risk minimization tools. Any of these limitations on approval or marketing could restrict the commercial promotion, distribution, prescription or dispensing of products. Product approvals may be withdrawn for non-compliance with regulatory standards or if problems occur following initial marketing.

FDA regulations require that products be manufactured in specific facilities and in accordance with cGMP regulations. We rely, and expect to continue to rely, on third parties for the production of clinical and commercial quantities of our products in accordance with cGMP regulations. These manufacturers must comply with cGMP regulations that require, among other things, quality control and quality assurance, the maintenance of records and documentation and the obligation to investigate and correct any deviations from cGMP. Manufacturers and other entities involved in the manufacture and distribution of approved biologics are required to register their establishments with the FDA and certain state agencies, and are subject to periodic unannounced inspections by the FDA and certain state agencies for compliance with cGMP requirements and other laws. Accordingly, manufacturers must continue to expend time, money and effort in the area of production and quality control to maintain cGMP compliance. The discovery of violations, including failure to conform to cGMP regulations, could result in enforcement actions, and the discovery of post-approval problems with a product may result in restrictions on a product, manufacturer or holder of an approved BLA, including recall.

U.S. Healthcare Reform and Other U.S. Healthcare Laws

Manufacturing, sales, promotion and other activities following product approval are also subject to regulation by numerous regulatory authorities in the United States in addition to the FDA, including the Centers for Medicare & Medicaid Services, or CMS, other divisions of the Department of Health and Human Services, the Department of Justice, the Drug Enforcement Administration, the Consumer Product Safety Commission, the Federal Trade Commission, the Occupational Safety & Health Administration, the Environmental Protection Agency and state and local governments.

Healthcare providers, physicians and third-party payors in the United States and elsewhere play a primary role in the recommendation and prescription of pharmaceutical products. Arrangements with third-party payors and customers can expose pharmaceutical manufactures to broadly applicable fraud and abuse and other healthcare laws and regulations, including, without limitation, the federal Anti-Kickback Statute and the federal False Claims Act, or FCA, which may constrain the business or financial arrangements and relationships through which companies sell, market and distribute pharmaceutical products. In addition, transparency laws and patient privacy regulations by federal and state governments and by governments in foreign jurisdictions can apply to the manufacturing, sales, promotion and other activities of pharmaceutical manufactures. The applicable federal, state and foreign healthcare laws and regulations that can affect a pharmaceutical company's operations include:

- The federal Anti-Kickback Statute, which prohibits, among other things, knowingly and willfully soliciting, receiving, offering or paying any remuneration (including any kickback, bribe, or rebate), directly or indirectly, overtly or covertly, in cash or in kind, to induce, or in return for, either the referral of an individual, or the purchase, lease, order or recommendation of any good, facility, item or service for which payment may be made, in whole or in part, under the Medicare and Medicaid programs, or other federal healthcare programs. A person or entity can be found guilty of violating the statute without actual knowledge of the statute or specific intent to violate it. In addition, the government may assert that a claim including items or services resulting from a violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the FCA. The Anti-Kickback Statute has been interpreted to apply to arrangements between pharmaceutical manufacturers on the one hand and prescribers, purchasers, and formulary managers on the other. There are a number of statutory exceptions and regulatory safe harbors protecting some common activities from prosecution;
- The federal civil and criminal false claims laws and civil monetary penalty laws, including the FCA, which prohibit any person or entity from, among other things, knowingly presenting, or causing to be presented, a false, fictitious or fraudulent claim for payment to, or approval by, the federal government or knowingly making, using or causing to be made or used a false record or statement, including providing inaccurate billing or coding information to customers or promoting a product off-label, material to a false or fraudulent claim to the federal government. As a result of a modification made by the Fraud Enforcement and Recovery Act of 2009, a claim includes "any request or demand" for money or property presented to the federal government. In addition, manufacturers can be held liable under the FCA even when they do not submit claims directly to government payors if they are deemed to "cause" the submission of false or fraudulent claims. The FCA also permits a private individual acting as a "whistleblower" to bring actions on behalf of the federal government alleging violations of the FCA and to share in any monetary recovery;
- The anti-inducement law, which prohibits, among other things, the offering or giving of remuneration, which includes, without limitation, any transfer of items or services for free or for less than fair market value (with limited exceptions), to a Medicare or Medicaid beneficiary that the person knows or should know is likely to influence the beneficiary's selection of a particular provider, practitioner or supplier of items or services reimbursable, whole or in part, by a federal or state governmental program;

  The federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, which created federal criminal statutes that prohibit knowingly and willfully executing, or attempting to execute, a scheme to defraud any healthcare benefit program or obtain, by means of false or fraudulent pretenses,

representations, or promises, any of the money or property owned by, or under the custody or control of, any healthcare benefit program, regardless of the payor (e.g., public or private) and knowingly and willfully falsifying, concealing or covering up by any trick or device a material fact or making any materially false statements in connection with the delivery of, or payment for, healthcare benefits, items or services relating to healthcare matters. Similar to the federal Anti-Kickback Statute, a person or entity can be found guilty of violating HIPAA without actual knowledge of the statute or specific intent to violate it;

- HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009, or HITECH, and their respective implementing regulations, which impose, among other things, specified requirements relating to the privacy, security and transmission of individually identifiable health information held by covered entities, including certain healthcare providers, health plans, and healthcare clearinghouses, as well as their respective business associates that create, receive, maintain or transmit individually identifiable health information for or on behalf of a covered entity, and their subcontractors that use, disclose or otherwise process individually identifiable health information. HITECH also created new tiers of civil monetary penalties, amended HIPAA to make civil and criminal penalties directly applicable to business associates, and gave state attorneys general new authority to file civil actions for damages or injunctions in federal courts to enforce the federal HIPAA laws and seek attorneys' fees and costs associated with pursuing federal civil actions;
- The federal legislation commonly referred to as the Physician Payments Sunshine Act, created under the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act of 2010, or collectively the ACA, and its implementing regulations, which requires manufacturers of drugs, devices, biologics and medical supplies for which payment is available under Medicare, Medicaid or the Children's Health Insurance Program (with certain exceptions) to report annually to CMS, information related to payments or other transfers of value made to physicians (defined to include doctors, dentists, optometrists, podiatrists and chiropractors) and teaching hospitals, as well as ownership and investment interests held by physicians and their immediate family members. Effective January 1, 2022, these reporting obligations will extend to include transfers of value made to certain non-physician providers such as physician assistants and nurse practitioners;
- Federal government price reporting laws, which require us to calculate and report complex pricing metrics in an accurate and timely manner to government programs;
- Federal consumer protection and unfair competition laws, which broadly regulate marketplace activities and activities that potentially harm consumers; and
- Analogous state laws and regulations, including: state anti-kickback and false claims laws, which may apply to our business practices, including, but not limited to, research, distribution, sales and marketing arrangements and claims involving healthcare items or services reimbursed by any third-party payor, including private insurers; state laws that require pharmaceutical companies to comply with the pharmaceutical industry's voluntary compliance guidelines and the relevant compliance guidance promulgated by the U.S. federal government, or otherwise restrict payments that may be made to healthcare providers and other potential referral sources; state laws that require drug manufacturers to file reports with states regarding pricing and marketing information, such as the tracking and reporting of gifts, compensations and other remuneration and items of value provided to healthcare professionals and entities; state and local laws requiring the registration of pharmaceutical sales representatives; and state and foreign laws governing the privacy and security of health information in certain circumstances, many of which differ from each other in significant ways and may not have the same effect, thus complicating compliance efforts.

Pricing and rebate programs must comply with the Medicaid rebate requirements of the U.S. Omnibus Budget Reconciliation Act of 1990 and more recent requirements in the ACA. If products are made available to authorized users of the Federal Supply Schedule of the General Services Administration, additional laws and requirements apply. Products must meet applicable child-resistant packaging requirements under the U.S. Poison Prevention Packaging Act.

The distribution of pharmaceutical products is subject to additional requirements and regulations, including extensive record-keeping, licensing, storage and security requirements intended to prevent the unauthorized sale of pharmaceutical products.

The scope and enforcement of each of these laws is uncertain and subject to rapid change in the current environment of healthcare reform, especially in light of the lack of applicable precedent and regulations with respect to certain laws. Federal and state enforcement bodies have recently increased their scrutiny of interactions between healthcare companies and healthcare providers, which has led to a number of investigations, prosecutions, convictions and settlements in the healthcare industry. Prohibitions or restrictions on sales or withdrawal of future marketed products could materially affect our business in an adverse way. Changes in regulations, statutes or the interpretation of existing regulations could impact our business in the future by requiring, for example: (i) changes to our manufacturing arrangements; (ii) additions or modifications to product labeling; (iii) the recall or discontinuation of our products; or (iv) additional record-keeping requirements. If any such changes were to be imposed, they could adversely affect the operation of our business.

Ensuring our business arrangements comply with applicable healthcare laws, as well as responding to possible investigations by government authorities, can be time- and resource-consuming and can divert a company's attention from the business.

It is possible that governmental and enforcement authorities will conclude that a pharmaceutical manufacturer's business practices do not comply with current or future statutes, regulations or case law interpreting applicable fraud and abuse or other healthcare laws and regulations. The failure to comply with any of these laws or regulatory requirements subjects companies to possible legal or regulatory action. Depending on the circumstances, failure to meet applicable regulatory requirements can result in civil, criminal and administrative penalties, damages, fines, disgorgement, individual imprisonment, possible exclusion from participation in federal and state funded healthcare programs, contractual damages and the curtailment or restricting of our operations, as well as additional reporting obligations and oversight if we become subject to a corporate integrity agreement or other agreement to resolve allegations of non-compliance with these laws. Additionally, private individuals have the ability to bring actions on behalf of the U.S. government under the federal FCA as well as under the false claims laws of several states against a pharmaceutical manufacturer. The approval and commercialization of a pharmaceutical manufacturer's product candidates outside the United States will also likely subject it to foreign equivalents of the healthcare laws mentioned above, among other foreign laws. Lastly, if any of the physicians or other healthcare providers or entities with whom we expect to do business are found to be not in compliance with applicable laws, they may be subject to criminal, civil or administrative sanctions, including exclusions from government funded healthcare programs, which may also adversely affect our business. Any action for violation of these laws, even if successfully defended, could cause a pharmaceutical company to incur significant legal expenses and divert management's attention from the operation of the business.

In the United States, there have been and continue to be a number of legislative initiatives to contain healthcare costs. For example, in March 2010, the ACA was passed, which substantially changes the way healthcare is financed by both governmental and private insurers, and significantly impacts the U.S. pharmaceutical industry. The ACA, among other things, subjects biological products to potential competition by lower-cost biosimilars, addresses a new methodology by which rebates owed by manufacturers under the Medicaid Drug Rebate Program are calculated for drugs that are inhaled, infused, instilled, implanted or injected, increases the minimum Medicaid rebates owed by manufacturers under the Medicaid Drug Rebate Program and extends the rebate program to individuals enrolled in Medicaid managed care organizations, establishes annual fees and taxes on manufacturers of certain branded prescription drugs, and creates a new Medicare Part D coverage gap discount program, in which manufacturers must now, as amended by the Bipartisan Budget Act of 2018, effective January 1, 2019, agree to offer 70% point-of-sale discounts off negotiated prices of applicable brand drugs to eligible beneficiaries during their coverage gap period, as a condition to coverage under Medicare Part D for the manufacturer's outpatient drugs.

Some of the provisions of the ACA have yet to be fully implemented, while certain provisions have been subject to judicial and congressional challenges, as well as efforts by the Trump administration to repeal or replace certain aspects of the ACA. While Congress has not passed comprehensive repeal legislation, there have been a number of significant changes to the ACA and its implementation. The Tax Cuts and Jobs Act of 2017, or Tax Act, includes a provision repealing, effective January 1, 2019, the tax-based shared responsibility payment imposed by the ACA on certain individuals who fail to maintain qualifying health coverage for all or part of a year that is commonly referred to as the "individual mandate." On December 14, 2018, a federal district court in Texas ruled the individual mandate is a critical and inseverable feature of the ACA, and therefore, because it was repealed as part of the Tax Act, the remaining provisions of the ACA are invalid as well. Additionally, on December 18, 2019, the U.S. Court of Appeals for the Fifth Circuit upheld the District Court ruling that the individual mandate was unconstitutional and remanded the case back to the District Court to determine whether the remaining provisions of the ACA are invalid as well. On March 2, 2020, the United States Supreme Court granted the petitions for writs of certiorari to review this case. It is uncertain when a decision will be reached. Additionally, on January 22, 2018, President Trump signed a continuing resolution on appropriations for fiscal year 2018 that delayed the implementation of certain ACA-mandated fees, including the so-called "Cadillac" tax on certain high cost employer-sponsored insurance plans, the annual fee imposed on certain high cost employer-sponsored insurance plans, the annual fee imposed on certain health insurance providers based on market share, and the medical device excise tax on non-exempt medical devices. Further, the Bipartisan Budget Act of 2018 among other things, amended the ACA, effective January 1, 2019, to reduce the coverage gap in most Medicare drug plans, commonly referred to as the "donut hole."

Other legislative changes have been proposed and adopted in the United States since the ACA was enacted. On August 2, 2011, the Budget Control Act of 2011, among other things, created measures for spending reductions by Congress. A Joint Select Committee on Deficit Reduction, tasked with recommending a targeted deficit reduction of at least $1.2 trillion for the years 2013 through 2021, was unable to reach required goals, thereby triggering the legislation's automatic reduction to several government programs. This includes aggregate reductions of Medicare payments to providers of 2% per fiscal year. These reductions went into effect on April 1, 2013 and, due to subsequent legislative amendments to the statute, will remain in effect through 2030 unless additional congressional action is taken. The Coronavirus Aid, Relief and Economic Security Act, or CARES Act, which was signed into law in March 2020, along with other COVID-19 relief legislation suspended the 2% Medicare sequester from May 1, 2020 through March 31, 2021. On January 2, 2013, the American Taxpayer Relief Act of 2012 was signed into law, which, among other things, further reduced Medicare payments to several types of providers.

Moreover, payment methodologies may be subject to changes in healthcare legislation and regulatory initiatives which could limit the amounts that federal and state governments will pay for healthcare products and services and result in reduced demand for certain pharmaceutical products or additional pricing pressures.

Additionally, there has been increasing legislative and enforcement interest in the United States with respect to specialty drug pricing practices. Specifically, there have been several recent U.S. congressional inquiries and proposed and enacted federal and state legislation designed to, among other things, bring more transparency to drug pricing, reduce the cost of prescription drugs under Medicare, review the relationship between pricing and manufacturer patient programs, and reform government program reimbursement methodologies for drugs.

At the federal level, the Trump administration's budget for fiscal year 2021 includes a $135 billion allowance to support legislative proposals seeking to reduce drug prices, increase competition, lower out-of-pocket drug costs for patients, and increase patient access to lower-cost generic and biosimilar drugs. On March 10, 2020, the Trump administration sent "principles" for drug pricing to Congress, calling for legislation that would, among other things, cap Medicare Part D beneficiary out-of-pocket pharmacy expenses, provide an option to cap Medicare Part D beneficiary monthly out-of-pocket expenses, and place limits on pharmaceutical price increases.

Additionally, the Trump administration previously released a "Blueprint" to lower drug prices and reduce out of pocket costs of drugs that contained proposals to increase manufacturer competition, increase the negotiating power of certain federal healthcare programs, incentivize manufacturers to lower the list price of their products and reduce the out of pocket costs of product candidates paid by consumers. The U.S. Department of Health and Human Services, or HHS, has solicited feedback on some of these measures and has implemented others under its existing authority. For example, in May 2019, CMS issued a final rule to allow Medicare Advantage Plans the option of using step therapy, a type of prior authorization, for Part B drugs beginning January 1, 2020. This final rule codified CMS's policy change that was effective January 1, 2019.

Further, on May 30, 2018, the Right to Try Act, was signed into law. The law, among other things, provides a federal framework for certain patients to access certain investigational new product candidates that have completed a Phase 1 clinical trial and that are undergoing investigation for FDA approval. Under certain circumstances, eligible patients can seek treatment without enrolling in clinical trials and without obtaining FDA permission under the FDA expanded access program. There is no obligation for a pharmaceutical manufacturer to make its product candidates available to eligible patients as a result of the Right to Try Act.

Lastly, on July 24, 2020 and September 13, 2020, the Trump administration announced several executive orders related to prescription drug pricing that seek to implement several of the administration's proposals. As a result, the FDA also released a final rule on September 24, 2020 providing guidance for states to build and submit importation plans for drugs from Canada. Further, on November 20, 2020, HHS finalized a regulation removing safe harbor protection for price reductions from pharmaceutical manufacturers to plan sponsors under Part D, either directly or through pharmacy benefit managers, unless the price reduction is required by law. The rule also creates a new safe harbor for price reductions reflected at the point-of-sale, as well as a safe harbor for certain fixed fee arrangements between pharmacy benefit managers and manufacturers. Further, in November 2020, CMS issued an interim final rule implementing the Most Favored Nation, or MFN, Model under which Medicare Part B reimbursement rates will be calculated for certain drugs and biologicals based on the lowest price drug manufacturers receive in Organization for Economic Cooperation and Development countries with a similar gross domestic product per capita. The MFN Model regulations mandate participation by identified Part B providers and will apply in all U.S. states and territories for a seven-year period beginning January 1, 2021, and ending December 31, 2027. On December 28, 2020, the United States District Court in Northern California issued a nationwide preliminary injunction against implementation of the interim final rule. The likelihood of implementation of any of the other Trump administration reform initiatives is uncertain, particularly in light of the recent U.S. presidential election.

At the state level, individual states are increasingly aggressive in passing legislation and implementing regulations designed to control pharmaceutical and biological product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures, and, in some cases, designed to encourage importation from other countries and bulk purchasing. In addition, regional health care authorities and individual hospitals are increasingly using bidding procedures to determine what pharmaceutical products and which suppliers will be included in their prescription drug and other health care programs. These measures could reduce the ultimate demand for our products, once approved, or put pressure on our product pricing.

We expect that additional foreign, federal and state healthcare reform measures will be adopted in the future, any of which could limit the amounts that federal and state governments will pay for healthcare products and services, and result in reduced demand for our current product candidates and any future product candidates or additional pricing pressures. It is possible that additional governmental action is taken in response to the COVID-19 pandemic. For example, on August 6, 2020, President Trump issued an Executive Order that instructs the federal government to develop a list of "essential" medicines and then buy them and other medical supplies from U.S. manufacturers instead of from companies around the world, including China. The order is meant to reduce regulatory barriers to domestic pharmaceutical manufacturing and catalyze manufacturing technologies needed to keep drug prices low and the production of drug products in the United States.

Legislative and regulatory proposals, and enactment of laws, at the foreign, federal and state levels, directed at containing or lowering the cost of healthcare, will continue into the future. Further, we cannot predict the likelihood, nature, or extent of healthcare reform initiatives that may arise from future legislation or administrative action, particularly as a result of the recent presidential election.

U.S. Patent-Term Restoration and Marketing Exclusivity

Depending upon the timing, duration and specifics of FDA approval of our product candidates and any future product candidates we develop, some of our U.S. patents may be eligible for limited patent term extension under the Drug Price Competition and Patent Term Restoration Act of 1984, commonly referred to as the Hatch-Waxman Amendments. The Hatch-Waxman Amendments permit restoration of the patent term of up to five years as compensation for patent term lost during product development and FDA regulatory review process. Patent-term restoration, however, cannot extend the remaining term of a patent beyond a total of 14 years from the product's approval date. The patent-term restoration period is generally one-half the time between the effective date of an IND and the submission date of a BLA plus the time between the submission date of a BLA and the approval of that application, except that the review period is reduced by any time during which the applicant failed to exercise due diligence. Only one patent applicable to an approved biologic is eligible for the extension and the application for the extension must be submitted prior to the expiration of the patent. The USPTO in consultation with the FDA, reviews and approves the application for any patent term extension or restoration. In the future, we may apply for restoration of patent term for our currently owned or licensed patents to add patent life beyond its current expiration date, depending on the expected length of the clinical trials and other factors involved in the filing of the relevant BLA.

An abbreviated approval pathway for biological products shown to be similar to, or interchangeable with, an FDA-licensed reference biological product was created by the Biologics Price Competition and Innovation Act of 2009 as part of the ACA. This amendment to the PHSA, in part, attempts to minimize duplicative testing. Biosimilarity, which requires that the biological product be highly similar to the reference product notwithstanding minor differences in clinically inactive components and that there be no clinically meaningful differences between the product and the reference product in terms of safety, purity and potency, can be shown through analytical studies, animal studies and a clinical trial or trials. Interchangeability requires that a biological product be biosimilar to the reference product and that the product can be expected to produce the same clinical results as the reference product in any given patient and, for products administered multiple times to an individual, that the product and the reference product may be alternated or switched after one has been previously administered without increasing safety risks or risks of diminished efficacy relative to exclusive use of the reference biological product without such alternation or switch. A reference biological product is granted 12 years of data exclusivity from the time of first licensure of the product, and the FDA will not accept an application for a biosimilar or interchangeable product based on the reference biological product until four years after the date of first licensure of the reference product. "First licensure" typically means the initial date the particular product at issue was licensed in the United States. Date of first licensure does not include the date of licensure of (and a new period of exclusivity is not available for) a biological product if the licensure is for a supplement for the biological product or for a subsequent application by the same sponsor or manufacturer of the biological product (or licensor, predecessor in interest, or other related entity) for a change (not including a modification to the structure of the biological product) that results in a new indication, route of administration, dosing schedule, dosage form, delivery system, delivery device or strength, or for a modification to the structure of the biological product that does not result in a change in safety, purity, or potency. Therefore, one must determine whether a new product includes a modification to the structure of a previously licensed product that results in a change in safety, purity, or potency to assess whether the licensure of the new product is a first licensure that triggers its own period of exclusivity. Whether a subsequent application, if approved, warrants exclusivity as the "first licensure" of a biological product is determined on a case-by-case basis with data submitted by the sponsor.

Pediatric exclusivity is another type of regulatory market exclusivity in the United States. Pediatric exclusivity, if granted, adds six months to existing regulatory exclusivity periods. This six-month exclusivity,

which runs from the end of other exclusivity protection or patent term, may be granted based on the voluntary completion of a pediatric trial in accordance with an FDA-issued "Written Request" for such a trial.

U.S. regulation of companion diagnostics

Our product candidates may require use of an *in vitro* diagnostic to identify appropriate patient populations. These diagnostics, often referred to as companion diagnostics, are regulated as medical devices. In the United States, the FDCA and its implementing regulations, and other federal and state statutes and regulations govern, among other things, medical device design and development, preclinical and clinical testing, premarket clearance or approval, registration and listing, manufacturing, labeling, storage, advertising and promotion, sales and distribution, export and import and post-market surveillance. Unless an exemption applies, companion diagnostic tests require marketing clearance or approval from the FDA prior to commercial distribution. The two primary types of FDA marketing authorization applicable to a medical device are premarket notification, also called 510(k) clearance, and premarket approval, or PMA approval.

If use of companion diagnostic is essential to safe and effective use of a drug or biologic product, then the FDA generally will require approval or clearance of the diagnostic contemporaneously with the approval of the therapeutic product. On August 6, 2014, the FDA issued a final guidance document addressing the development and approval process for "*In Vitro* Companion Diagnostic Devices." According to the guidance, for novel candidates such as our product candidates, a companion diagnostic device and its corresponding drug or biologic candidate should be approved or cleared contemporaneously by FDA for the use indicated in the therapeutic product labeling. The guidance also explains that a companion diagnostic device used to make treatment decisions in clinical trials of a biologic product candidate generally will be considered an investigational device, unless it is employed for an intended use for which the device is already approved or cleared. If used to make critical treatment decisions, such as patient selection, the diagnostic device generally will be considered a significant risk device under the FDA's Investigational Device Exemption, or IDE, regulations. Thus, the sponsor of the diagnostic device will be required to comply with the IDE regulations. According to the guidance, if a diagnostic device and a drug are to be studied together to support their respective approvals, both products can be studied in the same investigational study, if the study meets both the requirements of the IDE regulations and the IND regulations. The guidance provides that depending on the details of the study plan and subjects, a sponsor may seek to submit an IND alone, or both an IND and an IDE. In July 2016, the FDA issued a draft guidance document intended to further assist sponsors of therapeutic products and sponsors of *in vitro* companion diagnostic devices on issues related to co-development of these products.

The FDA generally requires companion diagnostics intended to select the patients who will respond to cancer treatment to obtain approval of a PMA for that diagnostic contemporaneously with approval of the therapeutic. The review of these *in vitro* companion diagnostics in conjunction with the review of therapeutic candidates involves coordination of review by the FDA's Center for Biologics Evaluation and Research and by the FDA's Center for Devices and Radiological Health. The PMA process, including the gathering of clinical and preclinical data and the submission to and review by the FDA, can take several years or longer. It involves a rigorous premarket review during which the applicant must prepare and provide the FDA with reasonable assurance of the device's safety and effectiveness and information about the device and its components regarding, among other things, device design, manufacturing and labeling. PMA applications are also subject to an application fee.

PMAs for certain devices must generally include the results from extensive preclinical and adequate and well-controlled clinical trials to establish the safety and effectiveness of the device for each indication for which FDA approval is sought. In particular, for a diagnostic, the applicant must demonstrate that the diagnostic produces reproducible results when the same sample is tested multiple times by multiple users at multiple laboratories. In addition, as part of the PMA review, the FDA will typically inspect the manufacturer's facilities for compliance with the Quality System Regulation, or QSR, which imposes elaborate testing, control, documentation and other quality assurance requirements.

If the FDA evaluations of both the PMA application and the manufacturing facilities are favorable, the FDA will either issue an approval letter or a not-approvable letter, which usually contains a number of conditions that must be met in order to secure the final approval of the PMA, such as changes in labeling, or specific additional information, such as submission of final labeling, in order to secure final approval of the PMA. If the FDA concludes that the applicable criteria have been met, the FDA will issue a PMA for the approved indications, which can be more limited than those originally sought by the applicant. The PMA can include post-approval conditions that the FDA believes necessary to ensure the safety and effectiveness of the device, including, among other things, restrictions on labeling, promotion, sale and distribution.

If the FDA's evaluation of the PMA or manufacturing facilities is not favorable, the FDA will issue an order denying approval of the PMA or issue a not approvable order. A not approvable letter will outline the deficiencies in the application and, where practical, will identify what is necessary to make the PMA approvable. The FDA may also determine that additional clinical trials are necessary, in which case the PMA approval may be delayed for several months or years while the trials are conducted and then the data submitted in an amendment to the PMA. Once granted, PMA approval may be withdrawn by the FDA if compliance with post approval requirements, conditions of approval or other regulatory standards is not maintained or problems are identified following initial marketing. PMA approval is not guaranteed, and the FDA may ultimately respond to a PMA submission with a not approvable determination based on deficiencies in the application and require additional clinical trial or other data that may be expensive and time-consuming to generate and that can substantially delay approval.

After a device is placed on the market, it remains subject to significant regulatory requirements. Medical devices may be marketed only for the uses and indications for which they are cleared or approved. Device manufacturers must also establish registration and device listings with the FDA. A medical device manufacturer's manufacturing processes and those of its suppliers are required to comply with the applicable portions of the QSR, which cover the methods and documentation of the design, testing, production, processes, controls, quality assurance, labeling, packaging and shipping of medical devices. Domestic facility records and manufacturing processes are subject to periodic unscheduled inspections by the FDA. The FDA also may inspect foreign facilities that export products to the United States.

European Union Drug Development

In the European Union, or EU, our future products also may be subject to extensive regulatory requirements. As in the United States, medicinal products can be marketed only if a marketing authorization from the competent regulatory agencies has been obtained.

Similar to the United States, the various phases of preclinical and clinical research in the European Union are subject to significant regulatory controls. Although the EU Clinical Trials Directive 2001/20/EC has sought to harmonize the EU clinical trials regulatory framework, setting out common rules for the control and authorization of clinical trials in the EU, the EU member states have transposed and applied the provisions of the Directive differently. This has led to significant variations in the member state regimes. Under the current regime, before a clinical trial can be initiated it must be approved in each of the EU countries where the trial is to be conducted by two distinct bodies: the National Competent Authority, or NCA, and one or more Ethics Committees, or ECs. Under the current regime all suspected unexpected serious adverse reactions to the investigated drug that occur during the clinical trial have to be reported to the NCA and ECs of the member state where they occurred.

The EU clinical trials legislation currently is undergoing a transition process mainly aimed at harmonizing and streamlining clinical-trial authorization, simplifying adverse-event reporting procedures, improving the supervision of clinical trials and increasing their transparency. Recently enacted Clinical Trials Regulation EU No 536/2014 ensures that the rules for conducting clinical trials in the EU will be identical.

European Union Drug Review and Approval

In the European Economic Area, or EEA, which is comprised of the 28 member states of the EU and Iceland, Liechtenstein, Norway, medicinal products can only be commercialized after obtaining a Marketing Authorization, or MA. There are two types of marketing authorizations.

- The Community MA is issued by the European Commission through the Centralized Procedure, based on the opinion of the Committee for Medicinal Products for Human Use, or CHMP, of the EMA and is valid throughout the entire territory of the EEA. The Centralized Procedure is mandatory for certain types of products, such as biotechnology medicinal products, orphan medicinal products, advanced-therapy medicines such as gene-therapy, somatic cell-therapy or tissue-engineered medicines and medicinal products containing a new active substance indicated for the treatment of HIV, AIDS, cancer, neurodegenerative disorders, diabetes, auto-immune and other immune dysfunctions and viral diseases. The Centralized Procedure is optional for products containing a new active substance not yet authorized in the EEA, or for products that constitute a significant therapeutic, scientific or technical innovation or which are in the interest of public health in the EU.
- National MAs, which are issued by the competent authorities of the Member States of the EEA and only cover their respective territory, are available for products not falling within the mandatory scope of the Centralized Procedure. Where a product has already been authorized for marketing in a member state of the EEA, this National MA can be recognized in other member states through the Mutual Recognition Procedure. If the product has not received a National MA in any member state at the time of application, it can be approved simultaneously in various member state through the Decentralized Procedure. Under the Decentralized Procedure an identical dossier is submitted to the competent authorities of each of the member state in which the MA is sought, one of which is selected by the applicant as the Reference Member State, or RMS. The competent authority of the RMS prepares a draft assessment report, a draft summary of the product characteristics, or SPC, and a draft of the labeling and package leaflet, which are sent to the other member state, referred to as the Member States Concerned, for their approval. If the Member States Concerned raise no objections, based on a potential serious risk to public health, to the assessment, SPC, labeling, or packaging proposed by the RMS, the product is subsequently granted a national MA in all the member states (i.e., in the RMS and the Member States Concerned). Under the above described procedures, before granting the MA, the EMA or the competent authorities of the member states of the EEA make an assessment of the risk-benefit balance of the product on the basis of scientific criteria concerning its quality, safety and efficacy.

European Union Orphan Designation and Exclusivity

In the European Union, the EMA's Committee for Orphan Medicinal Products grants orphan drug designation to promote the development of products that are intended for the diagnosis, prevention or treatment of life-threatening or chronically debilitating conditions affecting not more than five in 10,000 persons in the European Union community (or where it is unlikely that the development of the medicine would generate sufficient return to justify the investment) and for which no satisfactory method of diagnosis, prevention or treatment has been authorized (or, if a method exists, the product would be a significant benefit to those affected).

In the European Union, orphan drug designation entitles a party to financial incentives such as reduction of fees or fee waivers and ten years of market exclusivity is granted following medicinal product approval. This period may be reduced to six years if the orphan drug designation criteria are no longer met, including where it is shown that the product is sufficiently profitable not to justify maintenance of market exclusivity. Orphan drug designation must be requested before submitting an application for MA. Orphan drug designation does not convey any advantage in, or shorten the duration of, the regulatory review and approval process.

European Union Drug Marketing

Much like the Anti-Kickback Statute prohibition in the United States, the provision of benefits or advantages to physicians to induce or encourage the prescription, recommendation, endorsement, purchase, supply, order or use of medicinal products is also prohibited in the EU. The provision of benefits or advantages to physicians is governed by the national anti-bribery laws of European Union member states, such as the U.K. Bribery Act 2010. Infringement of these laws could result in substantial fines and imprisonment.

Payments made to physicians in certain EU member states must be publicly disclosed. Moreover, agreements with physicians often must be the subject of prior notification and approval by the physician's employer, his or her competent professional organization as well as the regulatory authorities of the individual EU member states. These requirements are provided in the national laws, industry codes or professional codes of conduct, applicable in the EU member states. Failure to comply with these requirements could result in reputational risk, public reprimands, administrative penalties, fines or imprisonment.

European Data Collection

The collection and use of personal health data in the EU is governed by the provisions of the Data Protection Directive, and as of May 2018 the General Data Protection Regulation, or GDPR. This directive imposes several requirements relating to the consent of the individuals to whom the personal data relates, the information provided to the individuals, notification of data processing obligations to the competent national data protection authorities and the security and confidentiality of the personal data. The Data Protection Directive and GDPR also impose strict rules on the transfer of personal data out of the EU to the United States. Failure to comply with the requirements of the Data Protection Directive, the GDPR, and the related national data protection laws of the EU member states may result in fines and other administrative penalties. The GDPR introduces new data protection requirements in the EU and substantial fines for breaches of the data protection rules. The GDPR regulations may impose additional responsibility and liability in relation to personal data that we process and we may be required to put in place additional mechanisms ensuring compliance with the new data protection rules. This may be onerous and adversely affect our business, financial condition, results of operations and prospects.

Rest of the World Regulation

For other countries outside of the EU and the United States, such as countries in Eastern Europe, Latin America or Asia, the requirements governing the conduct of clinical trials, product licensing, pricing and reimbursement vary from country to country. Additionally, the clinical trials must be conducted in accordance with GCP requirements and the applicable regulatory requirements and the ethical principles that have their origin in the Declaration of Helsinki.

If we fail to comply with applicable foreign regulatory requirements, we may be subject to, among other things, fines, suspension or withdrawal of regulatory approvals, product recalls, seizure of products, operating restrictions and criminal prosecution.

Reimbursement

Sales of our products, when and if approved, will depend, in part, on the extent to which our products will be covered by third-party payors, such as government health programs, commercial insurance and managed healthcare organizations. In the United States, no uniform policy of coverage and reimbursement for drug or biological products exists. Accordingly, decisions regarding the extent of coverage and amount of reimbursement to be provided for any of our products will be made on a payor-by-payor basis. As a result, coverage determination is often a time-consuming and costly process that will require us to provide scientific and clinical support for the use of our products to each payor separately, with no assurance that coverage and adequate reimbursement will be obtained.

The U.S. government, state legislatures and foreign governments have shown significant interest in implementing cost containment programs to limit the growth of government-paid health care costs, including price-controls, restrictions on reimbursement and requirements for substitution of biosimilars for branded prescription drugs. For example, the ACA contains provisions that may reduce the profitability of drug products through increased rebates for drugs reimbursed by Medicaid programs, extension of Medicaid rebates to Medicaid managed care plans, mandatory discounts for certain Medicare Part D beneficiaries and annual fees based on pharmaceutical companies' share of sales to federal healthcare programs. Adoption of general controls and measures, coupled with the tightening of restrictive policies in jurisdictions with existing controls and measures, could limit payments for pharmaceutical drugs.

The Medicaid Drug Rebate Program requires pharmaceutical manufacturers to enter into and have in effect a national rebate agreement with the Secretary of the Department of Health and Human Services as a condition for states to receive federal matching funds for the manufacturer's outpatient drugs furnished to Medicaid patients. The ACA made several changes to the Medicaid Drug Rebate Program, including increasing pharmaceutical manufacturers' rebate liability by raising the minimum basic Medicaid rebate on most branded prescription drugs from 15.1% of average manufacturer price, or AMP, to 23.1% of AMP and adding a new rebate calculation for "line extensions" (i.e., new formulations, such as extended release formulations) of solid oral dosage forms of branded products, as well as potentially impacting their rebate liability by modifying the statutory definition of AMP. The ACA also expanded the universe of Medicaid utilization subject to drug rebates by requiring pharmaceutical manufacturers to pay rebates on Medicaid managed care utilization and by enlarging the population potentially eligible for Medicaid drug benefits.

The Medicare Prescription Drug, Improvement, and Modernization Act of 2003, or the MMA, established the Medicare Part D program to provide a voluntary prescription drug benefit to Medicare beneficiaries. Under Part D, Medicare beneficiaries may enroll in prescription drug plans offered by private entities that provide coverage of outpatient prescription drugs. Unlike Medicare Part A and B, Part D coverage is not standardized. While all Medicare drug plans must give at least a standard level of coverage set by Medicare, Part D prescription drug plan sponsors are not required to pay for all covered Part D drugs, and each drug plan can develop its own drug formulary that identifies which drugs it will cover and at what tier or level. However, Part D prescription drug formularies must include drugs within each therapeutic category and class of covered Part D drugs, though not necessarily all the drugs in each category or class. Any formulary used by a Part D prescription drug plan must be developed and reviewed by a pharmacy and therapeutic committee. Government payment for some of the costs of prescription drugs may increase demand for products for which we receive marketing approval. However, any negotiated prices for our products covered by a Part D prescription drug plan likely will be lower than the prices we might otherwise obtain. Moreover, while the MMA applies only to drug benefits for Medicare beneficiaries, private payors often follow Medicare coverage policy and payment limitations in setting their own payment rates. Any reduction in payment that results from the MMA may result in a similar reduction in payments from non-governmental payors.

For a drug product to receive federal reimbursement under the Medicaid or Medicare Part B programs or to be sold directly to U.S. government agencies, the manufacturer must extend discounts to entities eligible to participate in the 340B drug pricing program. The required 340B discount on a given product is calculated based on the AMP and Medicaid rebate amounts reported by the manufacturer. As of 2010, the ACA expanded the types of entities eligible to receive discounted 340B pricing, although, under the current state of the law, with the exception of children's hospitals, these newly eligible entities will not be eligible to receive discounted 340B pricing on orphan drugs. In addition, as 340B drug pricing is determined based on AMP and Medicaid rebate data, the revisions to the Medicaid rebate formula and AMP definition described above could cause the required 340B discount to increase.

As noted above, the marketability of any products for which we receive regulatory approval for commercial sale may suffer if the government and third-party payors fail to provide coverage and reimbursement. Obtaining coverage and reimbursement for newly approved drugs and biologics is a time-consuming and costly process,

and coverage may be more limited than the purposes for which a drug is approved by the FDA or comparable foreign regulatory authorities. Assuming coverage is obtained for a given product by a third-party payor, the resulting reimbursement payment rates may not be adequate or may require co-payments that patients find unacceptably high. Additionally, coverage policies and third-party reimbursement rates may change at any time. Patients who are prescribed medications for the treatment of their conditions, and their prescribing physicians, generally rely on third-party payors to reimburse all or part of the costs associated with their prescription drugs. Patients are unlikely to use products unless coverage is provided and reimbursement is adequate to cover all or a significant portion of the cost of prescribed products.

In addition, in most foreign countries, the proposed pricing for a drug must be approved before it may be lawfully marketed. The requirements governing drug pricing and reimbursement vary widely from country to country. For example, the EU provides options for its member states to restrict the range of medicinal products for which their national health insurance systems provide reimbursement and to control the prices of medicinal products for human use. A member state may approve a specific price for the medicinal product or it may instead adopt a system of direct or indirect controls on the profitability of the company placing the medicinal product on the market. There can be no assurance that any country that has price controls or reimbursement limitations for pharmaceutical products will allow favorable reimbursement and pricing arrangements for any of our products. Historically, products launched in the European Union do not follow price structures of the United States and generally prices tend to be significantly lower.

Employees and Human Capital Resources

As of September 30, 2020, we had 24 full-time employees and 1 part-time employee. We consider our relationship with our employees to be good.

Our human capital resources objectives include, as applicable, identifying, recruiting, retaining, incentivizing and integrating our existing and new employees, advisors and consultants. The principal purposes of our equity incentive plans are to attract, retain and reward personnel through the granting of stock-based compensation awards in order to increase stockholder value and the success of our company by motivating such individuals to perform to the best of their abilities and achieve our objectives.

Facilities

Our principal executive offices are located in Rockville, Maryland, pursuant to a lease that expires in February 2027. We also lease office and laboratory space in Boston, Massachusetts, pursuant to a lease that expires in December 2026. We believe that our current facilities are adequate to meet our ongoing needs, and that, if we require additional space, we will be able to obtain additional facilities on commercially reasonable terms.

Legal Proceedings

We are not currently a party to any material legal proceedings. From time to time, we may become involved in other litigation or legal proceedings relating to claims arising from the ordinary course of business.

MANAGEMENT

Executive Officers and Directors

The following table sets forth information for our executive officers and directors as of December 31, 2020:

Name	Age	Position
Executive Officers		
John Celebi	49	President, Chief Executive Officer and Director
Anupama Hoey	50	Chief Business Officer
Marie-Louise Fjaellskog, M.D., Ph.D.	56	Chief Medical Officer
Robert Pierce, M.D.	56	Chief Scientific Officer
Erin Colgan	40	Senior Vice President of Finance
Non-Employee Directors		
Bob Holmen(1)(2)	57	Director
James Peyer, Ph.D.(1)(3)	34	Director
Samuel Broder, M.D.(3)	75	Director
Thomas Ricks(1)(2)	67	Director
Deneen Vojta, M.D.(3)	56	Director

(1) Member of the Audit Committee
(2) Member of the Compensation Committee
(3) Member of the Nominating and Governance Committee

Executive Officers

John Celebi has served as our President and Chief Executive Officer and a member of our board of directors since February 2018. Prior to joining us, from June 2016 until February 2018, Mr. Celebi served as Chief Operating Officer of X4 Pharmaceuticals, Inc., a clinical-stage biopharmaceutical company. Prior to X4 Pharmaceuticals, from 2011 until June 2016, he served as Chief Business Officer at Igenica Biotherapeutics, Inc., an immunotherapy company. Prior to joining Igencia Biotherapeutics, Mr. Celebi served in various roles at ArQule, Inc., a biotechnology and pharmaceutical company from 2003 until 2011, including as Vice President of Business Development and New Product Planning and Alliance Management. Mr. Celebi received a B.S. in Biophysics from the University of California, San Diego and an M.B.A. from Carnegie Mellon University. We believe that Mr. Celebi's perspective and deep experience in the biotechnology industry, as well as his experience leading our company as the President and Chief Executive Officer, qualifies him to serve on our board of directors.

Anupama Hoey has served as our Chief Business Officer since October 2020. Prior to joining us, Ms. Hoey served as Chief Business Officer of Second Genome Inc., a biotechnology company, from July 2018 until June 2020. Prior to that, Ms. Hoey served as Chief Business Officer of Invenra Inc., a biotechnology company, from March 2017 until July 2018. Prior to Invenra, Ms. Hoey served as Vice President of Business Development of Arcus Biosciences, Inc. from November 2015 until December 2016. Ms. Hoey received a B.S. in Molecular Genetics from the Ohio State University, an M.S. from Case Western Reserve University and an M.B.A. from the University of San Francisco.

Marie-Louise Fjaellskog, M.D., Ph.D. has served as our Chief Medical Officer since June 2020. Prior to joining us, Dr. Fjaellskog served as Vice President, Clinical Development at Merus N.V., an immuno-oncology company from May 2019 until June 2020. Prior to joining Merus, Dr. Fjaellskog served as Vice President, Clinical Development at Infinity Pharmaceuticals, a biopharmaceutical company, from February 2018 until April 2019. From 2012 to February 2018, Dr. Fjaellskog held positions of increasing responsibility at Novartis, most recently as Global Clinical Program Leader. Dr. Fjaellskog has also served as an Associate Professor of Oncology at Uppsala University in Sweden since 2008, where she also received an M.D. and a Ph.D.

Robert Pierce, M.D. has served as our Chief Scientific Officer since March 2020. Prior to joining us, Dr. Pierce served as Scientific Director of the Immunopathology Lab in the Clinical Research Division of the

Fred Hutchinson Cancer Research Center from November 2016 until March 2020. Prior to that, Dr. Pierce served as Chief Scientific Officer of OncoSec Medical Incorporated, a biotechnology company, from 2014 until June 2016. Dr. Pierce received a B.A. in Philosophy from Yale College and an M.D. from Brown University.

Erin Colgan has served as our Senior Vice President of Finance since January 2021 and previously served as our Vice President of Finance from July 2020 to January 2021. Prior to joining us, Ms. Colgan served as the Vice President of FP+A and Commercial Planning at Intarcia Therapeutics from August 2019 to June 2020. Prior to Intarcia, from August 2010 to August 2019, Ms. Colgan held various roles of increasing responsibility at Vertex Pharmaceuticals, most recently as Senior Director, FP+A and Global Revenue. Ms. Colgan began her career in public accounting at PricewaterhouseCoopers where she worked in both audit and business development. Ms. Colgan holds a B.A. in Accounting from the University of Massachusetts, Amherst.

Non-Employee Directors

Bob Holmen has served as a member of our board of directors since January 2017. Mr. Holmen provides legal services focused on venture capital and private equity markets to investors through his boutique law firm Investor Counsel, where he has served as a Principal since 2016. Mr. Holmen has also served as a Managing Director since 2001 and Chief Financial Officer since 2012 at Miramar Venture Partners, a venture capital firm, and as a Principal of Holmen Ventures, a strategic financial consulting firm, since 2013. Prior to Miramar, Mr. Holmen served as an Executive Officer for CoCensys, Inc., a biopharmaceutical company, and First Consulting Group, Inc., a healthcare consulting firm. Mr. Holmen received a B.S. in Electrical Engineering from Stanford University and a J.D. from University of California, Berkeley School of Law. We believe that Mr. Holmen's education and professional background in advising companies in the biotechnology industry qualifies him to serve on our board of directors.

James Peyer, Ph.D. has served as a member of our board of directors since January 2020. In September 2019, Dr. Peyer founded Cambrian Biopharma, where he serves as the Chief Executive Officer. In 2018, Dr. Peyer founded Cleara Biotech, a biopharmaceutical company, where he served as Executive Director from February 2018 to June 2019. Dr. Peyer also founded and served as Managing Partner at Apollo Health Ventures GmbH from June 2016 until March 2019. Prior to his service at Apollo Ventures, Dr. Peyer served as a consultant at McKinsey & Company from August 2015 until June 2016. Dr. Peyer received a B.A. in Biology from the University of Chicago and a Ph.D. in Stem Cell Biology at The University of Texas Southwestern Medical Center at Dallas. We believe that Dr. Peyer's experience in the biopharmaceutical industry, his years of business and leadership experience and expertise qualifies him to serve on our board of directors.

Samuel Broder, M.D. has served as a member of our board of directors since April 2019. Prior to his retirement, Dr. Broder was Senior Vice President from 2012 to June 2016 and Head of the Health Sector from 2015 to June 2016 for Intrexon Corporation, a synthetic biology company. Prior to Intrexon, he served as the Executive Vice President for Medical Affairs and Chief Medical Officer at Celera Corporation from 1998 to 2010. Prior to Celera, Dr. Broder served as Senior Vice President, Research and Development and Chief Scientific Officer at IVAX Corporation from 1995 to 1998. Dr. Broder served as the director of the National Cancer Institute from 1989 to 1995 appointed by President Ronald Reagan, where he oversaw the development of numerous anti-cancer therapeutic agents. Dr. Broder received a B.S. from University of Michigan and an M.D. from the University of Michigan Medical School, with post-graduate training at Stanford University in Palo Alto. We believe that Dr. Broder's significant scientific experience with therapeutic agents qualifies him to serve on our board of directors.

Thomas Ricks has served as a member of our board of directors since 2015. Mr. Ricks served as former Chief Investment Officer of H&S Ventures, LLC, a Forbes 150 family office, from 2001 until his retirement in 2018. Prior to his service, Mr. Ricks served as Chief Executive Officer of The University of Texas Investment Management Company from 1996 to 2001. Mr. Ricks has been a director of Ovintiv, Inc. since 2019 and currently serves as Chair of the Human Resources and Compensation Committee, and on the Corporate

Responsibility and Governance Committee. He was a director of Newfield Exploration Company from 1992 to 2019 and most recently served as Chair of its Audit Committee. Mr. Ricks also served on the boards of several privately-held companies; BDM International (acquired by TRW), LifeCell Corporation, and Argus Pharmaceuticals. Mr. Ricks is a former director of the Ocean Institute, and a former member of the Investment Committees for St. David's Foundation and the University of California – Irvine Foundation. Mr. Ricks received a B.A. in Economics from Trinity College and an M.B.A. from the University of Chicago. We believe Mr. Ricks' extensive experience as a director of public company and private companies in the healthcare industry qualifies him to serve on our board of directors.

Deneen Vojta, M.D. has served as a member of our board of directors since January 2021. Dr. Vojta has served in various roles at UnitedHealth Group since 2006, including most recently as the Executive Vice President for Global Research & Development since 2016. Prior to UnitedHealth, she founded Mynetico, a company focused on the childhood obesity epidemic, and served as its Chief Executive Officer from 2003 to 2006. Prior to that, she served as the Chief Medical Officer of Health Partners from 1997 to 2000 and Frankford Health System from 2000 to 2003. Dr. Vojta received a B.S. from the University of Pittsburgh and an M.D. from Temple University School of Medicine. We believe that Dr. Vojta's significant scientific experience and experience as an executive of life sciences companies qualifies her to serve on our board of directors.

Family Relationships

There are no family relationships among any of our directors or executive officers.

Composition of Our Board of Directors

Our business and affairs are managed under the direction of our board of directors. We have six directors serving as members of our board of directors. Our current directors will continue to serve as directors until their resignation, removal or successor is duly elected.

Our amended and restated certificate of incorporation and amended and restated bylaws to become effective immediately prior to the closing of this offering will permit our board of directors to establish the authorized number of directors from time to time by resolution. Each director serves until the expiration of the term for which such director was elected or appointed, or until such director's earlier death, resignation or removal. In accordance with our amended and restated certificate of incorporation that will be in effect on the completion of this offering, our board of directors will be divided into three classes with staggered three-year terms. At each annual general meeting of stockholders, the successors to directors whose terms then expire will be elected to serve from the time of election and qualification until the third annual meeting following election. Our directors will be divided among the three classes as follows:

- the Class I directors will be John Celebi and Samuel Broder, M.D., and their terms will expire at our first annual meeting of stockholders following this offering;
- the Class II directors will be Bob Holmen and Deneen Vojta, M.D., and their terms will expire at our second annual meeting of stockholders following this offering; and
- the Class III directors will be James Peyer, Ph.D. and Thomas Ricks, and their terms will expire at our third annual meeting of stockholders following this offering.

We expect that any additional directorships resulting from an increase in the number of directors will be distributed among the three classes so that, as nearly as possible, each class will consist of one third of the directors. The division of our board of directors into three classes with staggered three-year terms may delay or prevent a change of our management or a change in control.

Our board of directors meets on a regular basis and additionally as required. The members of our current board of directors were elected in compliance with the provisions of our amended and restated certificate of

incorporation and an amended and restated voting agreement among certain of our stockholders. The amended and restated voting agreement will terminate immediately prior to the closing of this offering, and following the closing of this offering none of our stockholders will have any special rights regarding the election or designation of members of our board of directors.

Director Independence

Our board of directors has undertaken a review of the independence of each director. Based on information provided by each director concerning her or his background, employment and affiliations, our board of directors has determined that all of our directors except for Mr. Celebi do not have relationships that would interfere with the exercise of independent judgment in carrying out the responsibilities of a director and that each of these directors is "independent" as that term is defined under the listing standards of the Nasdaq Stock Market. In making these determinations, our board of directors considered the current and prior relationships that each non-employee director has with our company and all other facts and circumstances our board of directors deemed relevant in determining their independence, including the beneficial ownership of our shares by each non-employee director and the transactions described in the section titled "Certain Relationships and Related Party Transactions."

Committees of Our Board of Directors

Our board of directors has established an audit committee, a compensation committee, and a nominating and corporate governance committee. The composition and responsibilities of each committee of our board of directors are described below. Members serve on these committees until their resignation or until otherwise determined by our board of directors. Our board of directors may establish other committees as it deems necessary or appropriate from time to time.

Audit Committee

Our audit committee consists of Mr. Ricks, Mr. Holmen and Dr. Peyer. Our board of directors has determined that each of Mr. Ricks and Mr. Holmen satisfy the independence requirements under the listing standards of the Nasdaq Stock Market and Rule 10A-3(b)(1) of the Securities and Exchange Act of 1934, or the Exchange Act. Under Rule 10A-3 under the Exchange Act, we are permitted to phase in our compliance with the independent audit committee requirements set forth in Nasdaq Rule 5605(c) and Rule 10A-3 under the Exchange Act as follows: (1) one independent member at the time of listing, (2) a majority of independent members within 90 days of listing and (3) all independent members within one year of listing. Within one year of our listing on the Nasdaq Global Market, we expect that each director serving on the audit committee will satisfy the independence requirements under the applicable Nasdaq listing requirements and under Rule 10A-3 of the Exchange Act. The chair of our audit committee is Mr. Ricks, who our board of directors has determined is an "audit committee financial expert" within the meaning of SEC regulations. Each member of our audit committee can read and understand fundamental financial statements in accordance with applicable requirements. In arriving at these determinations, our board of directors has examined each audit committee member's scope of experience and the nature of their employment in the corporate finance sector.

The primary purpose of the audit committee is to discharge the responsibilities of our board of directors with respect to our corporate accounting and financial reporting processes, systems of internal control and financial statement audits, and to oversee our independent registered public accounting firm. Specific responsibilities of our audit committee include:

- helping our board of directors oversee our corporate accounting and financial reporting processes;
- managing the selection, engagement, qualifications, independence and performance of a qualified firm to serve as the independent registered public accounting firm to audit our financial statements;
- discussing the scope and results of the audit with the independent registered public accounting firm, and reviewing, with management and the independent accountants, our interim and year-end operating results;

- developing procedures for employees to submit concerns anonymously about questionable accounting or audit matters;
- reviewing related person transactions;
- obtaining and reviewing a report by the independent registered public accounting firm at least annually that describes our internal quality control procedures, any material issues with such procedures and any steps taken to deal with such issues when required by applicable law; and
- approving or, as permitted, pre-approving, audit and permissible non-audit services to be performed by the independent registered public accounting firm.

Our audit committee will operate under a written charter, to be effective prior to the completion of this offering, that satisfies the applicable listing standards of the Nasdaq Stock Market.

Compensation Committee

Our compensation committee consists of Mr. Holmen and Mr. Ricks. The chair of our compensation committee is Mr. Holmen. Our board of directors has determined that each of Mr. Holmen and Mr. Ricks is independent under the listing standards of the Nasdaq Stock Market, a "non-employee director" as defined in Rule 16b-3 promulgated under the Exchange Act.

The primary purpose of our compensation committee is to discharge the responsibilities of our board of directors in overseeing our compensation policies, plans and programs and to review and determine the compensation to be paid to our executive officers, directors and other senior management, as appropriate. Specific responsibilities of our compensation committee include:

- reviewing and approving the compensation of our chief executive officer, other executive officers and senior management;
- reviewing and recommending to our board of directors the compensation paid to our directors;
- administering our equity incentive plans and other benefit programs;
- reviewing, adopting, amending and terminating incentive compensation and equity plans, severance agreements, profit sharing plans, bonus plans, change-of-control protections and any other compensatory arrangements for our executive officers and other senior management; and
- reviewing and establishing general policies relating to compensation and benefits of our employees, including our overall compensation philosophy.

Our compensation committee will operate under a written charter, to be effective prior to the completion of this offering, that satisfies the applicable listing standards of the Nasdaq Stock Market.

Nominating and Corporate Governance Committee

Our nominating and corporate governance committee consists of Dr. Broder, Dr. Peyer and Dr. Vojta. The chair of our nominating and corporate governance committee is Dr. Broder. Our board of directors has determined that each member of the nominating and corporate governance committee is independent under the listing standards of the Nasdaq Stock Market.

Specific responsibilities of our nominating and corporate governance committee will include:

- identifying and evaluating candidates, including the nomination of incumbent directors for reelection and nominees recommended by stockholders, to serve on our board of directors;
- considering and making recommendations to our board of directors regarding the composition and chairmanship of the committees of our board of directors;

- instituting plans or programs for the continuing education of our board of directors and orientation of new directors;
- developing and making recommendations to our board of directors regarding corporate governance guidelines and matters; and
- overseeing periodic evaluations of the board of directors' performance, including committees of the board of directors.

Our nominating and corporate governance committee will operate under a written charter, to be effective prior to the completion of this offering, that satisfies the applicable listing standards of the Nasdaq Stock Market.

Code of Business Conduct and Ethics

We have adopted a written code of business conduct and ethics that applies to our directors, officers and employees, including our principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions. Upon the completion of this offering, our code of business conduct and ethics will be available under the Corporate Governance section of our website at www.senseibio.com. In addition, we intend to post on our website all disclosures that are required by law or the listing standards of the Nasdaq Stock Market concerning any amendments to, or waivers from, any provision of the code. The reference to our website address does not constitute incorporation by reference of the information contained at or available through our website, and you should not consider it to be a part of this prospectus.

Compensation Committee Interlocks and Insider Participation

None of the members of the compensation committee is currently or has been at any time one of our officers or employees. None of our executive officers currently serves, or has served during the last year, as a member of the board of directors or compensation committee of any entity that has one or more executive officers serving as a member of our board of directors or compensation committee.

Non-Employee Director Compensation

With the exception of the payments provided pursuant to the consulting arrangement described below, we have not historically paid cash retainers or other cash compensation with respect to service on our board of directors, except for reimbursement of direct expenses incurred in connection with attending meetings of the board or committees.

The following table sets forth information regarding the compensation earned or paid to our non-employee directors during the year ended December 31, 2020. John Celebi, our President and Chief Executive Officer, is also a member of our board of directors, but did not receive any additional compensation for service as a director. The compensation of Mr. Celebi as a named executive officer is set forth below under "Executive Compensation—Summary Compensation Table."

Name	Option Awards ($)(1)(2)	All Other Compensation ($)	Total ($)
Bob Holmen	188,337	—	188,337
James Peyer, Ph.D.	62,779	—	62,779
Samuel Broder, M.D.	62,779	84,000(3)	146,779
Thomas Ricks	62,779	—	62,779

(1) Amounts reported represent the aggregate grant date fair value of option awards granted to our directors during 2020 under our 2018 Stock Incentive Plan, as amended, or 2018 Plan, computed in accordance with Financial Accounting Standard Board Accounting Standards Codification, Topic 718, or ASC Topic 718.

The assumptions used in calculating the grant date fair value of the awards reported in this column are set forth in the notes to our audited consolidated financial statements included elsewhere in this prospectus. This amount does not reflect the actual economic value that may be realized by the non-employee director.

(2) As of December 31, 2020, Mr. Holmen, Dr. Peyer, Dr. Broder and Mr. Ricks held options to purchase 43,145, 19,520, 20,145 and 20,770 shares of our common stock, respectively.

(3) Consists of payments pursuant to the consulting arrangement described below.

Non-Employee Director Compensation Policy

Our board of directors adopted a non-employee director compensation policy in January 2021 that will become effective upon the pricing of this offering and will be applicable to all of our non-employee directors. This compensation policy provides that each such non-employee director will receive the compensation described below for service on our board of directors:

Cash compensation. Under this policy, we will pay each of our non-employee directors cash retainers for service on our board of directors and committees of our board of directors as follows:

	Annual Cash Retainer ($)
Annual retainer	35,000
Additional retainer for independent chair	30,000
Additional retainer for audit committee chair	15,000
Additional retainer for audit committee non-chair member	7,500
Additional retainer for compensation committee chair	10,000
Additional retainer for compensation committee non-chair member	5,000
Additional retainer for nominating and corporate governance committee chair	8,000
Additional retainer for nominating and corporate governance committee non-chair member	4,000

Equity compensation. In addition to cash compensation, each non-employee director will be eligible to receive options under our 2021 Plan. Any options granted under this policy will have a term of ten years from the date of grant, subject to earlier termination in connection with a termination of service. Vesting schedules for equity awards will be subject to the non-employee director's continuous service on each applicable vesting date, provided that each option will vest in full upon a change in control of the company, as defined in the 2021 Plan.

Initial award. Each new non-employee director elected or appointed to our board of directors after the effective date of the policy will be granted an initial, one-time option to purchase 16,666 shares of our common stock, which will vest in equal monthly installments such that the option is fully vested on the third anniversary of the grant date. On the date of the pricing of this offering, each non-employee director will receive an option to purchase 16,666 shares of our common stock effective with an exercise price equal to the initial public offering price, which will vest in equal monthly installments such that the option is fully vested on the third anniversary of the grant date.

Annual awards. On the date of each annual meeting of stockholders of our company after the effective date of the policy, each non-employee director that continues to serve on our board of directors will be granted an option to purchase 8,333 shares of our common stock, which will vest in equal monthly installments such that the option is fully vested on the first anniversary of the grant date, provided that such option will in any case become fully vested on the date of our next annual stockholder meeting.

Consulting Arrangements

In May 2018, we entered into an Independent Contractor and Strategic Advisory Services Agreement with Samuel Broder, M.D., pursuant to which Mr. Broder received $7,000 per month. We entered into an amended agreement as of April 5, 2020, pursuant to which Mr. Broder receives $7,000 per month.

EXECUTIVE COMPENSATION

Our named executive officers, consisting of our principal executive officer and the next two most highly compensated executive officers, as of December 31, 2020, were:

- John Celebi, our President and Chief Executive Officer;
- Robert Pierce, our Chief Scientific Officer; and
- Anupama Hoey, our Chief Business Officer.

Summary Compensation Table

The following table sets forth information concerning the compensation of our named executive officers during the fiscal year ended December 31, 2020:

Name and Principal Position	Year	Salary ($)	Bonus ($)	Option Awards ($)(1)	Non-Equity Incentive Plan Compensation ($)	All Other Compensation ($)	Total ($)
John Celebi	2020	394,625	—	1,775,500	118,965	19,040(5)	2,308,130
President and Chief Executive Officer							
Robert Pierce(2)	2020	266,806	—	670,000	102,000	32,780(6)	1,071,586
Chief Scientific Officer							
Anupama Hoey(3)	2020	74,529	25,000(4)	1,250,000	22,118	—	1,371,647
Chief Business Officer							

(1) The amounts disclosed represent the aggregate grant date fair value of the awards granted to our named executive officers during 2020 under our 2018 Plan, computed in accordance with ASC Topic 718. The assumptions used in calculating the grant date fair value of the awards are set forth in Note 10 to our audited consolidated financial statements included elsewhere in this prospectus. This amount does not reflect the actual economic value that may be realized by the named executive officer.
(2) Dr. Pierce joined as our Chief Scientific Officer in March 2020.
(3) Ms. Hoey joined as our Chief Business Officer in October 2020.
(4) Pursuant to her employment agreement, Ms. Hoey received a $25,000 signing and retention bonus upon joining our company, as further described below in "—Employment Agreements with our Named Executive Officers."
(5) Includes 401(k) plan matching contributions, a housing allowance and a vehicle allowance.
(6) Includes 401(k) plan matching contributions, a housing allowance, and a payment in connection with our acquisition of Alvaxa as further described in "Certain Relationships and Related Party Transactions—Business Combination."

Narrative to the Summary Compensation Table

Annual Base Salary

Our named executive officers receive a base salary to compensate them for services rendered to us. The base salary payable to each named executive officer is intended to provide a fixed component of compensation reflecting the executive's skill set, experience, role and responsibilities. Mr. Celebi's annual base salary was $385,000 from January 1, 2020 to March 31, 2020 and was $396,550 from April 1, 2020 to December 31, 2020. The base salaries for Dr. Pierce and Ms. Hoey during 2020 were $340,000 and $345,000, respectively.

Bonus

Our named executive officers are eligible to receive annual bonuses of up to a percentage of the applicable executive's gross base salary based on performance metrics, as determined by our board of directors. For 2020, the target bonus for each of Mr. Celebi, Dr. Pierce and Ms. Hoey was 30% of their respective base salaries. For 2020, our board of directors determined that the corporate performance goals had been achieved at a 100% level in the aggregate.

Employment Agreements with our Named Executive Officers

Below are descriptions of our employment agreements with our named executive officers. The agreements generally provide for at-will employment and set forth the named executive officer's initial base salary, eligibility for employee benefits and severance benefits upon a qualifying termination of employment. Furthermore, each of our named executive officers has executed a form of our standard proprietary information and inventions assignment agreement. The key terms of the employment agreements with our named executive officers, including potential payments upon termination or change of control, are described below. We have also entered into new employment agreements with our named executive officers, which will be effective upon the closing of this offering, as described further below under "—Post IPO Employment Agreements."

John Celebi

On January 1, 2021, we entered into an amended and restated executive employment agreement with John Celebi, or the Celebi Employment Agreement, which provides for his continued at will employment as our President and Chief Executive Officer, with no specific term. The Celebi Employment Agreement provides for an annual base salary of $395,000, which amount is subject to review and adjustment from time to time, an annual discretionary bonus of up to 30% of this base salary, the amount of which will be decided in the sole discretion of our board of directors based upon our and Mr. Celebi's achievement of objectives and milestones determined on an annual basis by our board of directors, and reimbursement for reasonable travel expenses for so long as Mr. Celebi's primary residence is in Connecticut, not to exceed $4,000 per month.

In the event of his termination without cause (as such term is defined in the Celebi Employment Agreement) or resignation for good reason (as such term is defined in the Celebi Employment Agreement), Mr. Celebi shall be entitled to (i) salary continuation for the nine month period following such termination, or the Severance Period, provided that such salary continuation will be reduced by 50% of any amounts Mr. Celebi receives as salary from any other entity within the life sciences industry during the Severance Period, (ii) any annual bonus declared but not yet paid, (iii) accelerated vesting of the portion of her time-based equity awards that would have otherwise vested during the nine-month period following the termination and (iv) continuation of medical insurance through the Severance Period at no cost to Mr. Celebi, unless he begins subsequent employment prior to the end of such nine-month period. The foregoing severance benefits are conditioned upon Mr. Celebi's execution of a separation agreement, including a release of claims and compliance with certain restrictive covenants.

Robert Pierce

On February 9, 2020, we entered into an executive employment agreement with Robert Pierce, or the Pierce Employment Agreement, which provides for his at will employment as our Chief Scientific Officer, with no specific term. The Pierce Employment Agreement provides for an annual base salary of $340,000, which amount is subject to review and adjustment from time to time, an annual discretionary bonus of up to 30% of this base salary, the amount of which will be decided in the sole discretion of our board of directors based upon our and Dr. Pierce's achievement of objectives and milestones determined on an annual basis by our board of directors, and a one-time bonus in the event that Dr. Pierce is required to repay to Fred Hutchinson Cancer Research Center, or FHCRC, a portion of the home loan forgiveness provided by FHCRC. The Pierce Employment Agreement also provides for relocation expense reimbursement of up to $25,000, a housing stipend and repayment of certain other business-related expenses.

In the event of his termination without cause (as such term is defined in the Pierce Employment Agreement), Dr. Pierce shall be entitled to (i) salary continuation for the Severance Period, (ii) any annual bonus declared but not yet paid, (iii) accelerated vesting of the portion of his time-based equity awards that would have otherwise vested during the six-month period following the termination, (iv) any accrued but unpaid expenses and (v) continuation of medical insurance through the Severance Period at no cost to Dr. Pierce, unless he begins subsequent employment prior to the end of the Severance Period. The foregoing severance benefits are conditioned upon Dr. Pierce's execution of a separation agreement, including a release of claims and compliance with certain restrictive covenants.

Anupama Hoey

On October 13, 2020, we entered into an employment agreement with Anupama Hoey, or the Hoey Employment Agreement, which provides for her at-will employment as our Chief Business Officer, with no specific term. The Hoey Employment Agreement provides for an annual base salary of $345,000, which amount is subject to review and adjustment from time to time, and an annual discretionary bonus of up to 30% of this base salary, the amount of which will be decided in the sole discretion of our board of directors based upon our and Ms. Hoey's achievement of objectives and milestones determined on an annual basis by our board of directors. The Hoey Employment Agreement also provides for a signing and retention payment of $25,000, which we paid to Ms. Hoey in October 2020, and which is subject to repayment if Ms. Hoey's employment terminates prior to October 14, 2021 other than in the event of her termination without cause or if Ms. Hoey terminates her employment for good reason (as such terms are defined in the Hoey Employment Agreement).

In the event of her termination without cause or if Ms. Hoey terminates her employment for good reason, Ms. Hoey shall be entitled to (i) an amount equal to Ms. Hoey's then current salary for six months, (ii) accelerated vesting of the portion of her time-based equity awards that would have otherwise vested during the six-month period following the termination, (iii) any accrued and unpaid business expenses, and (iv) continuation of medical insurance for six months at no cost to Ms. Hoey, unless she begins subsequent employment prior to the end of such Severance Period. The foregoing severance benefits are conditioned upon Ms. Hoey's execution of a separation agreement, including a release of claims and compliance with certain restrictive covenants.

Post-IPO Employment Agreements

In January 2021, we entered into new employment agreements with our named executive officers, which will be effective upon the closing of this offering. The agreements generally provide for at-will employment and set forth the named executive officer's base salary, target bonus and eligibility for employee benefits and severance benefits upon a qualifying termination of employment. Under the new agreements, Mr. Celebi's, Dr. Pierce's and Ms. Hoey's annual base salaries will be $500,000, $420,000 and $365,000, respectively, subject to review and revision by our board of directors. In addition, the target bonus for each of Mr. Celebi, Dr. Pierce and Ms. Hoey will be up to 55%, 40% and 40%, respectively, of their respective base salaries, subject to review and revision by our board of directors.

The new employment agreements provide that, subject to certain conditions and limitations, upon the termination of the employment of an eligible executive officer without Cause or resignation for Good Reason (each, as defined in the employment agreements) not in connection with a Change in Control (as defined in the 2018 Plan):

- Dr. Pierce and Ms. Hoey will be eligible to receive a cash severance benefit equal to nine months' base salary; Mr. Celebi will be eligible to receive a cash severance benefit equal to 12 months' base salary; and
- such executive officer shall be eligible to receive COBRA premiums for the applicable length of the severance period as described above.

In addition, the new employment agreements provide that, subject to certain conditions and limitations, upon the termination of the employment of an eligible executive officers without Cause or resignation for Good Reason (each, as defined in the employment agreements) within 12 months following a Change in Control:

- Dr. Pierce and Ms. Hoey will be eligible to receive a cash severance benefit equal to 12 months' base salary and 100% of the officer's target bonus; Mr. Celebi will be eligible to receive a cash severance benefit equal to 18 months' base salary and 150% of his target bonus;
- all unvested equity awards held by such executive officer will become immediately vested and fully exercisable; and
- such executive officer shall be eligible to receive COBRA premiums for the applicable length of the severance period as described above.

The severance benefits described above are conditioned upon the executive officer's execution and non-revocation of a separation agreement, including a release of claims, and compliance with certain restrictive other obligations.

Equity-Based Incentive Awards

We believe that equity awards provide our executives with a strong link to our long-term performance, create an ownership culture and help to align the interests of our executives and our stockholders. To date, we have only used stock option grants for this purpose because we believe they are an effective means by which to align the long-term interests of our executive officers with those of our stockholders. The use of stock options also can provide tax and other advantages to our executive officers relative to other forms of equity compensation. We believe that our equity awards are an important retention tool for our executive officers, as well as for our other employees.

We award stock options broadly to our employees, including to our non-executive employees. Grants to our executives and other employees are made at the discretion of our board of directors and are not made at any specific time period during a year.

Prior to this offering, all of the stock options we have granted were made pursuant to our 2018 Plan. Following this offering, we will grant equity incentive awards under the terms of our 2021 Equity Incentive Plan, or 2021 Plan. The terms of our equity plans are described under the section titled "—Equity Incentive Plans" below.

Our board of directors has approved the grant of options to purchase 416,666, 110,416 and 83,333 shares of common stock to Mr. Celebi, Dr. Pierce and Ms. Hoey, respectively, under our 2021 Plan, effective upon the pricing of this offering. These options will have an exercise price equal to the initial offering price. The unvested shares underlying this option vest as to 25% of the shares on the one-year anniversary of the grant date, with the remainder vesting in 36 equal monthly installments thereafter, subject to the officer's continued service through each applicable vesting date.

Outstanding Equity Awards as of December 31, 2020

The following table presents estimated information regarding outstanding equity awards held by our named executive officers as of December 31, 2020. All awards were granted pursuant to the 2018 Plan. See the section titled "—Equity Incentive Plans—2018 Stock Incentive Plan" below for additional information.

	Option Awards			
Name	Number of Securities Underlying Unexercised Options Exercisable	Number of Securities Underlying Unexercised Options Unexercisable	Option Exercise Price	Option Expiration Date
John Celebi	—	559,375(1)	$ 3.22	08/04/2030
President and Chief Executive Officer	18,333	8,333(2)	$122.88	04/01/2028
Robert Pierce	—	208,333(3)	$ 3.22	08/04/2030
Chief Scientific Officer	499	21(4)	$122.88	01/21/2029
Anupama Hoey	—	208,333(5)	$ 6.00	12/28/2030
Chief Business Officer				

(1) The unvested shares underlying this option vest as to 25% of the shares on February 15, 2021, with the remainder vesting in 36 equal monthly installments thereafter, subject to the officer's continued service through each applicable vesting date.
(2) The unvested shares underlying this option vest in 15 equal monthly installments until March 1, 2022, subject to the officer's continued service through each applicable vesting date.
(3) The unvested shares underlying this option vest as to 25% of the shares on March 18, 2021, with the remainder vesting in 36 equal monthly installments thereafter, subject to the officer's continued service through each applicable vesting date.
(4) The unvested shares underlying this option vest on January 22, 2021, subject to the officer's continued service through each applicable vesting date.
(5) The unvested shares underlying this option vest as to 25% of the shares on October 14, 2021, with the remainder vesting in 36 equal monthly installments thereafter, subject to the officer's continued service through each applicable vesting date.

Employee Benefit Plans

We believe that our ability to grant equity-based awards is a valuable and necessary compensation tool that aligns the long-term financial interests of our employees, consultants and directors with the financial interests of our stockholders. In addition, we believe that our ability to grant options and other equity-based awards helps us to attract, retain and motivate employees, consultants and directors, and encourages them to devote their best efforts to our business and financial success. The principal features of our equity incentive plans and our 401(k) plan are summarized below. These summaries are qualified in their entirety by reference to the actual text of the plans, which, other than the 401(k) plan, are filed as exhibits to the registration statement of which this prospectus is a part.

2021 Equity Incentive Plan

Our board of directors adopted our 2021 Plan on January 27, 2021 and our stockholders approved our 2021 Plan on January 28, 2021. Our 2021 Plan provides for the grant of incentive stock options, or ISOs, to employees, including employees of any of our parent or subsidiary corporations, and for the grant of nonstatutory stock options, or NSOs, stock appreciation rights, restricted stock awards, restricted stock unit awards, performance awards and other forms of stock awards to employees, directors, and consultants, including employees and consultants of our affiliates. Our 2021 Plan is a successor to the 2018 Plan, and will become effective on the execution of the underwriting agreement related to this offering.

Authorized Shares. Initially the maximum number of shares of our common stock that may be issued under our 2021 Plan after it becomes effective will be the sum of (i) 2,469,935 new shares; plus (ii) the number of shares that remain available for issuance under our 2018 Plan at the time our 2021 Plan becomes effective; and (iii) any shares subject to outstanding stock options or other stock awards that were granted under our 2018 Plan that are forfeited, terminate, expire or are otherwise not issued. In addition, the number of shares of our common stock reserved for issuance under our 2021 Plan will automatically increase on January 1 of each calendar year, starting on January 1, 2022 through January 1, 2031, in an amount equal to 4.0% of the total number of shares of our capital stock outstanding on the last day of the calendar month before the date of each automatic increase, or a lesser number of shares determined by our board of directors. The maximum number of shares of our common stock that may be issued on the exercise of ISOs under our 2021 Plan is 10,000,000 shares.

Shares subject to stock awards granted under our 2021 Plan that expire or terminate without being exercised in full, or that are paid out in cash rather than in shares, do not reduce the number of shares available for issuance under our 2021 Plan. Additionally, shares become available for future grant under our 2021 Plan if they were issued pursuant to stock awards granted under our 2021 Plan and we repurchase such shares or they are forfeited. This includes shares used to pay the exercise price of a stock award or to satisfy the tax withholding obligations related to a stock award.

Plan Administration. Our board of directors, or a duly authorized committee of our board of directors, will administer our 2021 Plan. The plan administrator may also delegate to one or more of our officers the authority to (i) designate employees (other than officers) to receive specified stock awards and (ii) determine the number of shares subject to such stock awards. Under our 2021 Plan, the plan administrator has the authority to determine and amend the terms of awards and underlying agreements, including:

- the recipients;
- the exercise, purchase or strike price of stock awards, if any;
- the number of shares subject to stock awards;
- the vesting schedule applicable to stock awards, together with any vesting acceleration; and
- the form of consideration, if any, payable on exercise or settlement of stock awards.

Under the 2021 Plan, the plan administrator also generally has the authority to effect, with the consent of any adversely affected participant:

- the reduction of the exercise, purchase, or strike price of any outstanding stock award;
- the cancellation of any outstanding stock award and the grant in substitution therefore of other stock awards, cash, or other consideration; or
- any other action that is treated as a repricing under generally accepted accounting principles.

Stock Options. ISOs and NSOs are granted under stock option agreements adopted by the plan administrator. The plan administrator determines the exercise price for stock options, within the terms and conditions of the 2021 Plan; provided, that the exercise price of a stock option generally cannot be less than 100% of the fair market value of our common stock on the date of grant. Options granted under the 2021 Plan vest at the rate specified in the stock option agreement as determined by the plan administrator.

Tax Limitations on ISOs. The aggregate fair market value, determined at the time of grant, of our common stock with respect to ISOs that are exercisable for the first time by an optionholder during any calendar year under all of our equity incentive plans may not exceed $100,000. Options or portions thereof that exceed such limit will generally be treated as NSOs. No ISO may be granted to any person who, at the time of the grant, owns or is deemed to own stock possessing more than 10% of our total combined voting power or that of any of our affiliates unless (i) the option exercise price is at least 110% of the fair market value of the stock subject to the option on the date of grant; and (ii) the option is not exercisable after the expiration of five years from the date of grant.

Restricted Stock Unit Awards. Restricted stock units are granted under restricted stock unit award agreements adopted by the plan administrator. Restricted stock units may be granted in consideration for any form of legal consideration that may be acceptable to our board of directors and permissible under applicable law. A restricted stock unit may be settled by cash, delivery of stock, a combination of cash and stock as deemed appropriate by the plan administrator, or in any other form of consideration set forth in the restricted stock unit agreement. Additionally, dividend equivalents may be credited in respect of shares covered by a restricted stock unit. Except as otherwise provided in the applicable award agreement, restricted stock units that have not vested will be forfeited once the participant's continuous service ends for any reason.

Restricted Stock Awards. Restricted stock awards are granted under restricted stock award agreements adopted by the plan administrator. A restricted stock award may be awarded in consideration for cash, check, bank draft or money order, past services to us, or any other form of legal consideration that may be acceptable to our board of directors and permissible under applicable law. The plan administrator determines the terms and conditions of restricted stock awards, including vesting and forfeiture terms. If a participant's service relationship with us ends for any reason, we may receive any or all of the shares of common stock held by the participant that have not vested as of the date the participant terminates service with us through a forfeiture condition or a repurchase right.

Stock Appreciation Rights. Stock appreciation rights are granted under stock appreciation grant agreements adopted by the plan administrator. The plan administrator determines the purchase price or strike price for a stock appreciation right, which generally cannot be less than 100% of the fair market value of our common stock on the date of grant. A stock appreciation right granted under the 2021 Plan vests at the rate specified in the stock appreciation right agreement as determined by the plan administrator.

Performance Awards. The 2021 Plan permits the grant of performance-based stock and cash awards. The plan administrator may structure awards so that the shares of our stock, cash, or other property will be issued or paid only following the achievement of certain pre-established performance goals during a designated performance period. The performance criteria that will be used to establish such performance goals may be based on any measure of performance selected by the plan administrator. The performance goals may be based on a company-wide basis, with respect to one or more business units, divisions, affiliates, or business segments, and in either absolute terms or relative to the performance of one or more comparable companies or the performance of one or more relevant indices. Unless specified otherwise (i) in the award agreement at the time the award is granted or (ii) in such other document setting forth the performance goals at the time the goals are established, we will appropriately make adjustments in the method of calculating the attainment of performance goals as follows: (1) to exclude restructuring and/or other nonrecurring charges; (2) to exclude exchange rate effects; (3) to exclude the effects of changes to generally accepted accounting principles; (4) to exclude the effects of any statutory adjustments to corporate tax rates; (5) to exclude the effects of items that are "unusual" in nature or occur "infrequently" as determined under generally accepted accounting principles; (6) to exclude the dilutive effects of acquisitions or joint ventures; (7) to assume that any business divested by us achieved performance objectives at targeted levels during the balance of a performance period following such divestiture; (8) to exclude the effect of any change in the outstanding shares of our common stock by reason of any stock dividend or split, stock repurchase, reorganization, recapitalization, merger, consolidation, spin-off, combination or exchange of shares or other similar corporate change, or any distributions to common stockholders other than regular cash dividends; (9) to exclude the effects of stock based compensation and the award of bonuses under our bonus plans; (10) to exclude costs incurred in connection with potential acquisitions or divestitures that are required to be expensed under generally accepted accounting principles; (11) to exclude the goodwill and intangible asset impairment charges that are required to be recorded under generally accepted accounting principles; and (12) to exclude the effects of the timing of acceptance for review and/or approval of submissions to the FDA or any other regulatory body. In addition, we retain the discretion to reduce or eliminate the compensation or economic benefit due upon attainment of the goals. The performance goals may differ from participant to participant and from award to award.

Other Stock Awards. The plan administrator may grant other awards based in whole or in part by reference to our common stock. The plan administrator will set the number of shares under the stock award and all other terms and conditions of such awards.

Non-Employee Director Compensation Limit. The aggregate value of all compensation granted or paid to any non-employee director with respect to any calendar year, including stock awards granted and cash fees paid by us to such non-employee director, will not exceed $750,000 in total value, or in the event such non-employee director is first appointed or elected to the board during such annual period, $1,000,000 in total value (in each case, calculating the value of any such stock awards based on the grant date fair value of such stock awards for financial reporting purposes); provided, that the foregoing limitations will not apply during the year in which the 2021 Plan is first adopted.

Changes to Capital Structure. In the event there is a specified type of change in our capital structure, such as a stock split, reverse stock split, or recapitalization, appropriate adjustments will be made to (1) the class and maximum number of shares reserved for issuance under the 2021 Plan, (2) the class and maximum number of shares by which the share reserve may increase automatically each year, (3) the class and maximum number of shares that may be issued on the exercise of incentive stock options, and (4) the class and number of shares and exercise price, strike price, or purchase price, if applicable, of all outstanding stock awards.

Corporate Transactions. The following applies to stock awards under the 2021 Plan in the event of a corporate transaction, unless otherwise provided in a participant's stock award agreement or other written agreement with us or one of our affiliates or unless otherwise expressly provided by the plan administrator at the time of grant. In the event of a corporate transaction, any stock awards outstanding under the 2021 Plan may be assumed, continued or substituted for by any surviving or acquiring corporation (or its parent company), and any reacquisition or repurchase rights held by us with respect to the stock award may be assigned to the successor (or its parent company). If the surviving or acquiring corporation (or its parent company) does not assume, continue or substitute for such stock awards, then with respect to any such stock awards that are held by participants whose continuous service has not terminated prior to the effective time of the transaction, or current participants, the vesting (and exercisability, if applicable) of such stock awards will be accelerated in full to a date prior to the effective time of the transaction (contingent upon the effectiveness of the transaction), and such stock awards will terminate if not exercised (if applicable) at or prior to the effective time of the transaction, and any reacquisition or repurchase rights held by us with respect to such stock awards will lapse (contingent upon the effectiveness of the transaction). With respect to performance awards with multiple vesting levels depending on performance level, unless otherwise provided by an award agreement or by the administrator, the award will accelerate at 100% of target. If the surviving or acquiring corporation (or its parent company) does not assume, continue or substitute for such stock awards, then with respect to any such stock awards that are held by persons other than current participants, such awards will terminate if not exercised (if applicable) prior to the effective time of the transaction, except that any reacquisition or repurchase rights held by us with respect to such stock awards will not terminate and may continue to be exercised notwithstanding the transaction. The plan administrator is not obligated to treat all stock awards or portions of stock awards in the same manner and is not obligated to take the same actions with respect to all participants. In the event a stock award will terminate if not exercised prior to the effective time of a transaction, the plan administrator may provide, in its sole discretion, that the holder of such stock award may not exercise such stock award but instead will receive a payment equal in value to the excess (if any) of (i) the value of the property the participant would have received upon the exercise of the stock award over (ii) any exercise price payable by such holder in connection with such exercise.

Under our 2021 Plan, a corporate transaction is defined to include: (i) a sale of all or substantially all of our assets, (ii) the sale or disposition of more than 50% of our outstanding securities, (iii) the consummation of a merger or consolidation where we do not survive the transaction, and (iv) the consummation of a merger or consolidation where we do survive the transaction but the shares of our common stock outstanding before such transaction are converted or exchanged into other property by virtue of the transaction, unless otherwise provided in an award agreement or other written agreement between us and the award holder.

Change in Control. In the event of a change in control, as defined under our 2021 Plan, awards granted under our 2021 Plan will not receive automatic acceleration of vesting and exercisability, although this treatment may be provided for in an award agreement.

Under the 2021 Plan, a change in control is defined to include (i) the acquisition by any person or company of more than 50% of the combined voting power of our then outstanding stock; (ii) a merger, consolidation or similar transaction in which our stockholders immediately before the transaction do not own, directly or indirectly, more than 50% of the combined voting power of the surviving entity (or the parent of the surviving entity); (iii) the approval by our stockholders or our board of directors of a plan of complete dissolution or liquidation of the company, or the occurrence of a complete dissolution or liquidation of the company, except for a liquidation into a parent corporation; (iv) a sale, lease, exclusive license or other disposition of all or substantially all of our assets other than to an entity more than 50% of the combined voting power of which is owned by our stockholders; and (v) an unapproved change in the majority of our board of directors.

Transferability. A participant may not transfer stock awards under our 2021 Plan other than by will, the laws of descent and distribution, or as otherwise provided under our 2021 Plan.

Plan Amendment or Termination. Our board of directors has the authority to amend, suspend, or terminate our 2021 Plan; provided, that such action does not materially impair the existing rights of any participant without such participant's written consent. Certain material amendments also require the approval of our stockholders. No ISOs may be granted after the tenth anniversary of the date our board of directors adopted our 2021 Plan. No stock awards may be granted under our 2021 Plan while it is suspended or after it is terminated.

2021 Employee Stock Purchase Plan

Our board of directors adopted, and our stockholders approved, our 2021 Employee Stock Purchase Plan, or the ESPP, in January 2021. The ESPP will become effective on the execution of the underwriting agreement related to this offering. The purpose of the ESPP is to secure the services of new employees, to retain the services of existing employees, and to provide incentives for such individuals to exert maximum efforts toward our success and that of our affiliates. The ESPP is intended to qualify as an "employee stock purchase plan" within the meaning of Section 423 of the Code for U.S. employees.

Share Reserve. Following this offering, the ESPP authorizes the issuance of 333,333 shares of our common stock under purchase rights granted to our employees or to employees of any of our designated affiliates. The number of shares of our common stock reserved for issuance will automatically increase on January 1 of each calendar year, beginning on January 1, 2022 through January 1, 2031, by 1.0% of the total shares of our common stock outstanding on December 31st of the preceding calendar year, or the Evergreen Measurement Date; provided, that (i) the number of shares added to the share reserve will be reduced automatically to the extent necessary to avoid causing the share reserve to exceed a number of shares equal to 1.0% of the shares of our common stock outstanding on the applicable Evergreen Measurement Date and (ii) our board of directors may act prior to the first day of any calendar year to provide that there will be no January 1st increase in the share reserve for such calendar year or that the increase in the share reserve for such calendar year will be a lesser number of shares of our common stock than would otherwise occur.

Administration. Our board of directors has delegated its authority to administer the ESPP to our compensation committee. The ESPP is implemented through a series of offerings under which eligible employees are granted purchase rights to purchase shares of our common stock on specified dates during such offerings. Under the ESPP, we may specify offerings with durations of not more than 27 months, and may specify shorter purchase periods within each offering. Each offering will have one or more purchase dates on which shares of our common stock will be purchased for employees participating in the offering.

Payroll Deductions. Generally, all regular employees, including executive officers, employed by us or by any of our designated affiliates, may participate in the ESPP and may contribute, normally through payroll

deductions, up to % of their earnings (as defined in the ESPP) for the purchase of our common stock under the ESPP. Unless otherwise determined by our board of directors, common stock will be purchased for the accounts of employees participating in the ESPP at a price per share that is at least the lesser of (i) 85% of the fair market value of a share of our common stock on the first date of an offering; or (ii) 85% of the fair market value of a share of our common stock on the date of purchase. For the initial offering, which we expect will commence on the execution and delivery of the underwriting agreement relating to this offering, the fair market value on the first day of the offering period will be the price at which shares of common stock are first sold to the public.

Limitations. Employees may have to satisfy one or more of the following service requirements before participating in the ESPP, as determined by our board of directors, including: (i) being customarily employed for more than 20 hours per week; (ii) being customarily employed for more than five months per calendar year; or (iii) continuous employment with us or one of our affiliates for a period of time (not to exceed two years). No employee may purchase shares under the ESPP at a rate in excess of $25,000 worth of our common stock based on the fair market value per share of our common stock at the beginning of an offering for each year such a purchase right is outstanding. Finally, no employee will be eligible for the grant of any purchase rights under the ESPP if immediately after such rights are granted, such employee has voting power over 5% or more of our outstanding capital stock measured by vote or value under Section 424(d) of the Code.

Changes to Capital Structure. In the event that there occurs a change in our capital structure through such actions as a stock split, merger, consolidation, reorganization, recapitalization, reincorporation, stock dividend, dividend in property other than cash, large nonrecurring cash dividend, liquidating dividend, combination of shares, exchange of shares, change in corporate structure, or similar transaction, the board of directors will make appropriate adjustments to: (i) the number of shares reserved under the ESPP; (ii) the maximum number of shares by which the share reserve may increase automatically each year; (iii) the number of shares and purchase price of all outstanding purchase rights; and (iv) the number of shares that are subject to purchase limits under ongoing offerings.

Corporate Transactions. In the event of certain significant corporate transactions, including: (i) a sale of all or substantially all of our assets; (ii) the sale or disposition of 90% of our outstanding securities; (iii) the consummation of a merger or consolidation where we do not survive the transaction; and (iv) the consummation of a merger or consolidation where we do survive the transaction but the shares of our common stock outstanding immediately before such transaction are converted or exchanged into other property by virtue of the transaction, any then-outstanding rights to purchase our stock under the ESPP may be assumed, continued or substituted for by any surviving or acquiring entity (or its parent company). If the surviving or acquiring entity (or its parent company) elects not to assume, continue, or substitute for such purchase rights, then the participants' accumulated payroll contributions will be used to purchase shares of our common stock within ten business days before such corporate transaction, and such purchase rights will terminate immediately.

Amendment or Termination. Our board of directors has the authority to amend or terminate our ESPP, provided that except in certain circumstances such amendment or termination may not materially impair any outstanding purchase rights without the holder's consent. We will obtain stockholder approval of any amendment to our ESPP as required by applicable law or listing requirements.

2018 Stock Incentive Plan

Our board of directors and our stockholders approved the 2018 Plan, which became effective in March 26, 2018. The 2018 Plan provides for the grant of ISOs to our employees and our parent and subsidiary corporations' employees, and for the grant of NSOs, restricted stock awards and other forms of stock compensation to our employees, including officers, consultants and directors.

Authorized Shares. As of September 30, 2020, a total of 1,864,746 shares of our common stock were reserved for issuance under the 2018 Plan. As of September 30, 2020, 1,660,864 shares of our common stock

were subject to outstanding option awards and 203,719 shares of our common stock remained available for future issuance. Following the effectiveness of the 2021 Plan, no additional awards will be granted under the 2018 Plan. Any outstanding awards granted under our 2018 Plan will remain subject to the terms of our 2018 Plan and applicable award agreements.

Administration. Our board of directors or a duly authorized committee of our board of directors administers the 2018 Plan and the stock awards granted under it. Under the 2018 Plan, the administrator has the authority to: (i) construe and interpret the 2018 Plan and any agreement thereunder; (ii) to determine the fair market value of our common stock; (iii) to select award recipients; (iv) to determine whether an option will be an ISO or an NSO; (v) to determine the number of shares subject to awards; (vi) to establish the terms and conditions of the awards; (vii) to amend, cancel, accept the surrender of, or modify any award; (viii) to accelerate the vesting of or terminate the restrictions of an award; (ix) to amend the terms of an award agreement, as required by the Internal Revenue Code of 1986, as amended, or the Code, or with the consent as the participant, as applicable; and (x) to establish policies and procedures for the exercise of awards.

Stock Options. ISOs and NSOs are granted pursuant to award agreements adopted by the plan administrator. The plan administrator determines the exercise price for a stock option, within the terms and conditions of the 2018 Plan; provided, that the exercise price of an ISO generally cannot be less than 100% (or 110% in the case of ISOs granted to certain stockholders) of the fair market value of our common stock on the date of grant. Options granted under the 2018 Plan vest at the rate specified by the plan administrator. Payment for the purchase of common stock issued upon the exercise of an option may be made (i) in cash; (ii) by good check payable to the Company or electronic funds transfer of immediately available funds to the Company; or (iii) in accordance with the terms of the applicable award agreement. The plan administrator determines the term of stock options granted under the 2018 Plan, up to a maximum of 10 years in the case of ISOs (or five years in the case of ISOs granted to certain stockholders).

Changes in Capital Structure. In the event there is a specified type of change in our capital structure, such as a stock dividend, division, combination, reclassification or similar change in the capital structure of the Company, appropriate adjustments will be made to (i) the number of shares authorized or reserved for issuance under the 2018 Plan; and (ii) the exercise prices of and number of shares subject to outstanding awards under the 2018 Plan.

Transferability. A participant may not transfer stock awards under our 2018 Plan other than by will, the laws of descent and distribution, or as otherwise provided under our 2018 Plan or an award granted thereunder.

Plan Amendment or Termination. Our board of directors may terminate, amend or modify the 2018 Plan; provided, that no amendment of the 2018 Plan may adversely affect any outstanding stock award.

Nonqualified Deferred Compensation

Our named executive officers did not participate in, or earn any benefits under, a nonqualified deferred compensation plan sponsored by us during fiscal 2020.

Termination or Change in Control Benefits

Our named executive officers may become entitled to certain benefits in connection with a qualifying termination. Each of our named executive officers' employment agreements entitles them to certain benefits, upon a qualifying termination. For additional discussion, please see "Employment Agreements with our Named Executive Officers."

Health and Welfare; Perquisites

All of our current named executive officers are eligible to participate in our employee benefit plans, including our medical, dental, vision, disability and life insurance plans, in each case on the same basis as all of

our other employees. We generally do not provide perquisites or personal benefits to our named executive officers, except in limited circumstances (including Mr. Celebi's housing and vehicle allowances and Dr. Pierce's housing allowance).

401(k) Plan

We maintain a safe harbor 401(k) plan that provides eligible U.S. employees with an opportunity to save for retirement on a tax advantaged basis. Eligible employees are able to defer eligible compensation up to certain limits of the Code, which are updated annually. We have the ability to make matching and discretionary contributions to the 401(k) plan. Currently, make matching contributions or discretionary contributions to the 401(k) plan up to a maximum of 4% of such employee's annual compensation. The 401(k) plan is intended to be qualified under Section 401(a) of the Code, with the related trust intended to be tax exempt under Section 501(a) of the Code. As a tax-qualified retirement plan, contributions to the 401(k) plan are deductible by us when made, and contributions and earnings on those amounts are not generally taxable to the employees until withdrawn or distributed from the 401(k) plan.

Limitations of Liability and Indemnification Matters

On the completion of this offering, our amended and restated certificate of incorporation will contain provisions that limit the liability of our current and former directors for monetary damages to the fullest extent permitted by Delaware law. Delaware law provides that directors of a corporation will not be personally liable for monetary damages for any breach of fiduciary duties as directors, except liability for:

- any breach of the director's duty of loyalty to the corporation or its stockholders;
- any act or omission not in good faith or that involves intentional misconduct or a knowing violation of law;
- unlawful payments of dividends or unlawful stock repurchases or redemptions; or
- any transaction from which the director derived an improper personal benefit.

Such limitation of liability does not apply to liabilities arising under federal securities laws and does not affect the availability of equitable remedies such as injunctive relief or rescission.

Our amended and restated certificate of incorporation that will be in effect on the completion of this offering will authorize us to indemnify our directors, officers, employees and other agents to the fullest extent permitted by Delaware law. Our amended and restated bylaws that will be in effect on the completion of this offering will provide that we are required to indemnify our directors and officers to the fullest extent permitted by Delaware law and may indemnify our other employees and agents. Our amended and restated bylaws that will be in effect on the completion of this offering will also provide that, on satisfaction of certain conditions, we will advance expenses incurred by a director or officer in advance of the final disposition of any action or proceeding, and permit us to secure insurance on behalf of any officer, director, employee or other agent for any liability arising out of his or her actions in that capacity regardless of whether we would otherwise be permitted to indemnify him or her under the provisions of Delaware law. We have entered and expect to continue to enter into agreements to indemnify our directors, executive officers and other employees as determined by the board of directors. With certain exceptions, these agreements provide for indemnification for related expenses including attorneys' fees, judgments, fines and settlement amounts incurred by any of these individuals in any action or proceeding. We believe that these amended and restated certificate of incorporation and amended and restated bylaw provisions and indemnification agreements are necessary to attract and retain qualified persons as directors and officers. We also maintain customary directors' and officers' liability insurance.

The limitation of liability and indemnification provisions in our amended and restated certificate of incorporation and amended and restated bylaws may discourage stockholders from bringing a lawsuit against our

directors for breach of their fiduciary duty. They may also reduce the likelihood of derivative litigation against our directors and officers, even though an action, if successful, might benefit us and other stockholders. Further, a stockholder's investment may be adversely affected to the extent that we pay the costs of settlement and damage awards against directors and officers as required by these indemnification provisions.

Insofar as indemnification for liabilities arising under the Securities Act of 1933, as amended, or the Securities Act, may be permitted for directors, executive officers or persons controlling us, we have been informed that, in the opinion of the SEC, such indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable.

CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

Other than compensation arrangements for our directors and executive officers, which are described elsewhere in this prospectus, below we describe transactions since January 1, 2018 to which we were a party or will be a party, in which:

- the amounts involved exceeded or will exceed $120,000; and
- any of our directors, executive officers or holders of more than 5% of our voting securities, or any member of the immediate family of, or person sharing the household with, the foregoing persons, had or will have a direct or indirect material interest.

Series BB Convertible Preferred Stock Financing

From December 2020 through January 2021, we issued an aggregate of 165,956,208 shares of our Series BB convertible preferred stock at a purchase price of $0.207383 per share for an aggregate gross proceeds of $34.4 million in cash. The following table summarizes purchases of convertible preferred stock by holders of more than five percent of our voting securities and their affiliated entities, our directors and our executive officers.

Name	Series BB Preferred Stock(1)
Cambrian BioPharma, Inc.	4,821,996
Entities affiliated with Future Ventures	8,679,592
Entities affiliated with Presight Capital	28,931,976
Ricks Family Trust	3,037,849

(1) Upon the closing of this offering, each share of our Series BB preferred stock will convert into one share of common stock.

Series AA Convertible Preferred Stock and Warrant Financing

From January 2020 through the date of this prospectus, we issued an aggregate of 747,683,172 shares of our Series AA convertible preferred stock to a total of 128 accredited investors at a price per share of $0.082135 per share. We received aggregate gross proceeds of $26.1 million for the sale of 317,608,273 shares of Series AA convertible preferred stock. The redemption of convertible notes resulted in the issuance of 219,764,874 shares of Series AA convertible preferred stock. In exchange for our convertible preferred stock series A through F, including cumulative and unpaid dividends, we issued 210,310,025 shares of Series AA convertible preferred stock as part of the Recapitalization. In connection with the issuance or our Series AA convertible preferred stock, (1) the principal and accrued interest under the Secured Note, the Existing Stockholder Notes and the Existing Bridge Note described below under the heading "—Convertible Note and Warrant Financings" converted into an aggregate of 219,764,874 shares of our Series AA convertible preferred stock, (2) we issued warrants to purchase an aggregate of 1,530,737 shares of our common stock, (3) accrued and unpaid dividends payable to holders of our convertible preferred stock, and (4) immediately prior to the issuance of our Series AA convertible preferred stock, all shares of convertible preferred stock then outstanding were converted into 210,310,025 shares of our common stock. In connection with the issuance of our Series AA convertible preferred stock, certain purchasers of Series AA convertible preferred stock were entitled to convert certain shares of common stock held by such purchaser into shares of Series AA convertible preferred stock. The following table summarizes purchases of convertible preferred stock by holders of more than five percent of our voting securities and their affiliated entities, our directors and our executive officers, as well as the number of shares of common stock such persons received upon conversion of shares of our then-outstanding convertible preferred stock.

Name	Series AA Convertible Preferred Stock(1)	Shares of Common Stock
Cambrian BioPharma, Inc.	110,729,827(2)	—
Entities affiliated with Future Ventures	66,962,926	—
H&S Investments I, L.P.	209,368,245	34,998
Entities affiliated with Presight Capital	48,974,005	—

(1) Immediately prior to the closing of this offering, each share of our Series AA convertible preferred stock will convert into one share of common stock. For a description of the material rights and privileges of the convertible preferred stock, see Note 8 to our audited consolidated financial statements included elsewhere in this prospectus.
(2) Includes shares acquired upon exercise of warrants in January 2021 issued in connection with the financing.

Convertible Note and Warrant Financings

Transferred Note

In March 2020, Cambrian BioPharma, Inc., or Cambrian, purchased an outstanding convertible promissory note issued by us to a prior investor and, as a result, we issued a replacement convertible promissory note, or the Transferred Note, to Cambrian in the principal amount of $1.0 million.

In November 2020, Cambrian converted the Transferred Note into 31,591,824 shares of our Series AA convertible preferred stock.

Existing Bridge Note

In November 2019, we issued an unsecured convertible promissory note, or the Existing Bridge Note, to Cambrian, in a principal amount of $1.0 million. The Existing Bridge Note converted into shares of our Series AA convertible preferred stock in the Series AA convertible preferred stock and warrant financing described above.

Secured Note

In September 2019, we issued a secured convertible promissory note, or the Secured Note, to H&S Investments I, L.P., or H&S, in a principal amount of up to a maximum of $3.0 million to be paid in installments. Pursuant to the terms of the Secured Note, H&S paid two installments, equal to an aggregate principal amount of $1.5 million. Prior to the payment of all required installments, the Secured Note converted into shares of our Series AA convertible preferred stock in the Series AA convertible preferred stock and warrant financing described above.

In connection with the issuance of the Secured Note, we entered into a Security Agreement with H&S, providing for a security interest in all of our (1) goods and equipment, (2) inventory, (3) contract rights and general intangibles, (4) accounts, accounts receivable, royalties, license rights and all other forms of obligation arising out of the sale or leads or good, the licensing of technology or the rendering of services, (4) commercial tort claims, (5) documents, cash, deposit accounts, securities, investment property, letters of credit, certificates of deposit, instruments, chattel paper and supporting obligation, (6) all patents and patent application, and (7) any claims, rights and interests in any of the aforementioned property.

Existing Stockholder Notes and Warrants

From December 2018 to November 2019, we issued unsecured convertible promissory notes, or collectively, the Existing Stockholder Notes, to certain of our existing stockholders in an aggregate principal amount of $11.4 million. In connection with the issuance of the Existing Stockholder Notes, we issued warrants to purchase an aggregate of 26,823 shares of our common stock to the holders of the Existing Stockholder Notes. The following table summarizes purchases of our Existing Stockholder Notes and the issuance of the related warrants to purchase common stock by our directors, executive officers and holders of more than 5% of any class of our capital stock:

Name	Principal Amount of Existing Stockholder Notes	Warrants to Purchase Common Stock
H&S Investments I, L.P.	$ 3,000,000	15,624
Ricks Family Trust	$ 375,000	1,457

The Existing Stockholder Notes converted into shares of our Series AA convertible preferred stock in the Series AA convertible preferred stock and warrant financing described above.

Investors' Rights Agreement

We are party to an investors' rights agreement, or IRA with certain holders of our convertible preferred stock, including our 5% stockholders and their affiliates. The IRA provides these stockholders with certain registration rights, including the right to demand that we file a registration statement or request that their shares be covered by a registration statement that we are otherwise filing, and also the right to obligate us to an agreement to provide for additional rights to demand that we file a registration statement or request that their shares be covered by a registration statement that we have filed and maintain as effective. The IRA also provides these stockholders with information rights, which will terminate immediately before consummation of this offering. In connection with this offering, the holders of approximately 19.0 million shares of our common stock issuable on conversion of outstanding shares of our convertible preferred stock, will be entitled to rights with respect to the registration of their shares of common stock under the Securities Act under this agreement.

For a description of these registration rights, see the section titled "Description of Capital Stock—Registration Rights."

Business Combination

In May 2020, we entered into a Stock Purchase Agreement to purchase 100% of the shares of Alvaxa. Dr. Pierce, the Company's Chief Scientific Officer, and his spouse together held a majority of the shares of Alvaxa. Under the Stock Purchase Agreement, we paid an aggregate of $0.2 million and issued 304,376 shares of our common stock to the shareholders of Alvaxa. Dr. Pierce and his spouse collectively received $70,336 and 169,286 shares of our common stock in connection with the acquisition.

Indemnification Agreements

Our amended and restated certificate of incorporation that will be in effect on the completion of this offering will contain provisions limiting the liability of directors, and our amended and restated bylaws that will be in effect on the completion of this offering will provide that we will indemnify each of our directors and officers to the fullest extent permitted under Delaware law. Our amended and restated certificate of incorporation and amended and restated bylaws that will be in effect on the completion of this offering will also provide our board of directors with discretion to indemnify our employees and other agents when determined appropriate by the board. In addition, we have entered into an indemnification agreement with each of our directors and executive officers, which requires us to indemnify them. For more information regarding these agreements, see the section titled "Executive Compensation —Limitations of Liability and Indemnification Matters."

Policies and Procedures for Related Person Transactions

Our board of directors will adopt written related person transaction policy, to be effective upon the completion of this offering, setting forth the policies and procedures for the review and approval or ratification of related-person transactions. This policy will cover, with certain exceptions set forth in Item 404 of Regulation S-K under the Securities Act, any transaction, arrangement or relationship, or any series of similar transactions, arrangements or relationships in which we were or are to be a participant, where the amount involved exceeds $120,000 and a related person had or will have a direct or indirect material interest, including, without limitation, purchases of goods or services by or from the related person or entities in which the related person has a material interest, indebtedness, guarantees of indebtedness and employment by us of a related person. In reviewing and approving any such transactions, our audit committee is tasked to consider all relevant facts and circumstances, including whether the transaction is on terms comparable to those that could be obtained in an arm's length transaction and the extent of the related person's interest in the transaction. All of the transactions described in this section occurred prior to the adoption of this policy.

PRINCIPAL STOCKHOLDERS

The following table sets forth information with respect to the beneficial ownership of our common stock as of January 14, 2020 by:

- each of our named executive officers;
- each of our directors;
- all of our executive officers and directors as a group; and
- each person or group of affiliated persons known by us to beneficially own more than 5% of our common stock.

We have determined beneficial ownership in accordance with the rules and regulations of the SEC, and the information is not necessarily indicative of beneficial ownership for any other purpose. Applicable percentage ownership is based on 22,558,200 shares of common stock outstanding as of January 14, 2020, after giving effect to the automatic conversion of shares of our convertible preferred stock outstanding as of January 14, 2021 into an aggregate of 19,034,069 shares of our common stock immediately prior to the closing of this offering. In computing the number of shares beneficially owned by an individual or entity and the percentage ownership of that person, shares of common stock subject to options and warrants held by such person that are currently exercisable or will become exercisable within 60 days of January 14, 2020 are considered outstanding, although these shares are not considered outstanding for purposes of computing the percentage ownership of any other person. The following table does not give effect to any shares that may be acquired by our stockholders, directors or executive officers pursuant to the directed share program.

Unless otherwise indicated, the address of each beneficial owner listed below is c/o Sensei Biotherapeutics, Inc., 1405 Research Blvd, Suite 125, Rockville, MD 20850. We believe, based on information provided to us, that each of the stockholders listed below has sole voting and investment power with respect to the shares beneficially owned by the stockholder unless noted otherwise, subject to community property laws where applicable.

Name of Beneficial Owner	Number Shares Beneficially Owned Prior to Offering	Percentage of Shares Beneficially Owned	
		Before Offering	After Offering
Greater than 5% Stockholders			
Cambrian BioPharma Inc.(1)	4,699,102	20.8%	16.5%
Future Ventures, L.P.(2)	1,601,247	7.1	5.6
H&S Investments I, L.P.(3)	4,441,625	19.7	15.6
Presight Sensei Co-Invest Fund, L.P.(4)	1,422,124	6.3	5.0
Directors and Named Executive Officers			
John Celebi(5)	171,497	*	*
Robert Pierce, M.D.(6)	73,983	*	*
Anupama Hoey	—	—	—
Bob Holmen(7)	16,666	*	*
James Peyer, Ph.D.(1)	4,699,102	20.8	16.5
Samuel Broder, M.D.(8)	9,259	*	*
Thomas Ricks(9)	313,423	1.4	1.1
Deneen Vojta, M.D.	—	—	
All directors and executive officers as a group (10 persons)	5,283,930	23.2	18.4

* Represents beneficial ownership of less than 1%.

(1) Consists of 2,282,825 shares of common stock, 110,729,827 shares of Series AA convertible preferred stock, 4,821,996 shares of Series BB convertible preferred stock and 8,947 shares issuable pursuant to stock

options exercisable within 60 days following January 14, 2021 held by Cambrian Biopharma Inc, or Cambrian. Cambrian is a Delaware corporation and Mr. Peyer serves as Cambrian's Chief Executive Officer. In such capacity Mr. Peyer may direct the voting and disposition of the shares held by Cambrian, subject in certain instances to the approval of Cambrian's Board of Directors. Cambrian's business address is 19 Morris Avenue, Brooklyn Navy Yard, Building 128, Brooklyn, New York 11025.

(2) Consists of 24,350 shares of common stock, 62,945,151 shares of Series AA convertible preferred stock and 8,161,917 shares of Series BB convertible preferred stock held by Future Ventures, L.P., and 1,014 shares of common stock, 4,017,775 shares of Series AA convertible preferred stock and 517,675 shares of Series BB convertible preferred stock held by Future Ventures Side Fund, L.P. The shares directly held by Future Ventures L.P. and Future Ventures Side Fund, L.P. are indirectly held by Future Ventures GP, LLC, the general partner of Future Ventures, L.P. and Future Ventures Side Fund, L.P. The managing members of Future Ventures GP, LLC are Maryanna Saenko and Steve Jurvetson. Future Ventures GP, LLC, Maryanna Saenko and Steve Jurvetson may be deemed to have voting and dispositive power with respect to the shares held by Future Ventures, L.P. and Future Ventures Side Fund, L.P. The principal business address of Future Ventures, L.P. and Future Ventures Side Fund, L.P. is 465 1st Street, Los Altos, California 94022.

(3) Consists of 64,163 shares of common stock, 209,368,245 shares of Series AA convertible preferred stock and warrants exercisable for 15,624 shares of common stock held by H&S Investments I, L.P. H&S Ventures, LLC, its general partner, and Michael Schulman, manager of H&S Ventures, may be deemed to have voting and dispositive power with respect to the shares held. The principal business address of H&S Investments I, L.P. is 2101 E Coast Highway 3rd Floor Corona Del Mar, CA 92625.

(4) Consists of 45,875,448 shares of our Series AA convertible preferred stock held by Presight Sensei Co-Invest Fund, L.P., or Presight Co-Invest, 3,098,557 shares of our Series AA convertible preferred stock held by Apeiron Investment Group, Ltd., or Apeiron, and 19,287,984 shares of our Series BB convertible preferred stock held by Apeiron. The general partner of Presight Co-Invest is Presight Sensei Co-Invest Management, L.L.C., or Presight Co-Invest Management, which is wholly owned by Apeiron. As a result, each of Apeiron and Presight Co-Invest Management may be deemed to share beneficial ownership of the securities held by Presight Co-Invest. Christian Angermayer is the majority shareholder of Apeiron and may be deemed to share beneficial ownership of the securities beneficially owned by Apeiron. The business address for (i) Presight Co-Invest and Presight Co-Invest Management is 340 South Lemon Avenue #3391 Walnut, CA 91789 and (ii) Apeiron and Christian Angermayer is Block A, Apt.12, Il-Piazzetta, Tower Road, SLM1605, Sliema, Malta.

(5) Consists of shares issuable pursuant to stock options exercisable within 60 days following January 14, 2021.

(6) Consists of 73,463 shares of common stock and 520 shares issuable pursuant to stock options exercisable within 60 days following January 14, 2021.

(7) Consists of 16,666 shares of common stock and 11,010 shares issuable pursuant to stock options exercisable within 60 days following January 14, 2021

(8) Consists of shares issuable pursuant to stock options exercisable within 60 days following January 14, 2021.

(9) Consists of 11,447,156 shares of our Series AA convertible preferred stock, 3,037,849 shares of our Series BB convertible preferred stock and a warrant to purchase 1,457 shares of our common stock held by Ricks Family Trust, and 10,197 shares issuable pursuant to stock options exercisable within 60 days following January 14, 2021 held by Thomas Ricks. Thomas Ricks is a trustee of the Ricks Family Trust and accordingly may be deemed to have voting and dispositive power with respect to the shares held by Ricks Family Trust.

DESCRIPTION OF CAPITAL STOCK

General

Following the completion of this offering, our authorized capital stock will consist of 250,000,000 shares of common stock, $0.0001 par value per share, and 10,000,000 shares of preferred stock, $0.0001 par value per share, all of which shares of preferred stock will be undesignated. Our board of directors may establish the rights and preferences of the preferred stock from time to time. As of September 30, 2020, we had outstanding 1,787,124 shares of common stock, held by 227 stockholders of record. As of September 30, 2020, after giving effect to the automatic conversion of all of the outstanding shares of our convertible preferred stock (including the 283,047,271 shares of our convertible preferred stock issued subsequent to September 30, 2020) into 19,034,069 shares of common stock, there would have been 20,821,193 shares of common stock issued and outstanding, held by 365 stockholders of record.

The following is a summary of the rights of our common stock and preferred stock and some of the provisions of our amended and restated certificate of incorporation and amended and restated bylaws, which will each become effective upon the closing of this offering, the investors' rights agreement and relevant provisions of Delaware General Corporation Law. Because it is only a summary, it does not contain all the information that may be important to you. For a complete description you should refer to our amended and restated certificate of incorporation, amended and restated bylaws and investors' rights agreement, copies of which have been filed as exhibits to the registration statement of which this prospectus is a part, as well as the relevant provisions of Delaware General Corporation Law.

Common Stock

Holders of our common stock are entitled to one vote per share of common stock. Our common stock does not have cumulative voting rights. Accordingly, the holders of a majority of the outstanding shares of common stock entitled to vote in any election of directors can elect all of the directors standing for election, if they so choose, other than any directors that holders of any preferred stock we may issue may be entitled to elect. Subject to preferences that may be applicable to any then outstanding preferred stock, holders of our common stock are entitled to receive ratably those dividends, if any, as may be declared by the board of directors out of legally available funds. In the event of our liquidation, dissolution or winding up, the holders of our common stock will be entitled to share ratably in the assets legally available for distribution to stockholders after the payment of or provision for all of our debts and other liabilities, subject to the prior rights of any preferred stock then outstanding. Holders of our common stock have no preemptive rights or other subscription rights and there are no redemption or sinking funds provisions applicable to our common stock. All outstanding shares of our common stock are, and the common stock to be outstanding upon the completion of this offering will be, duly authorized, validly issued, fully paid and nonassessable. The rights, preferences and privileges of holders of our common stock are subject to and may be adversely affected by the rights of the holders of shares of any series of preferred stock that we may designate and issue in the future.

Preferred Stock

As of January 14, 2021, there were 747,683,172 shares of our Series AA convertible preferred stock outstanding and 165,956,208 shares of our Series BB convertible preferred stock outstanding. Immediately prior to the closing of this offering, all of our previously outstanding shares of convertible convertible preferred stock will have been converted into common stock, there will be no authorized shares of our previously convertible preferred stock and we will have no shares of convertible preferred stock outstanding. Under the terms of our amended and restated certificate of incorporation, which will become effective immediately prior to the closing of this offering, our board of directors has the authority, without further action by our stockholders, to issue up to 10,000,000 shares of preferred stock in one or more series, to establish from time to time the number of shares to be included in each such series, to fix the dividend, voting and other rights, preferences and privileges of the shares of each wholly unissued series and any qualifications, limitations or restrictions thereon, and to increase or decrease the number of shares of any such series, but not below the number of shares of such series then outstanding.

Our board of directors may authorize the issuance of preferred stock with voting or conversion rights that could adversely affect the voting power or other rights of the holders of the common stock. The issuance of preferred stock, while providing flexibility in connection with possible acquisitions and other corporate purposes, could, among other things, have the effect of delaying, deferring or preventing a change in our control and may adversely affect the market price of the common stock and the voting and other rights of the holders of common stock. We have no current plans to issue any shares of preferred stock.

Options

As of September 30, 2020, options to purchase 1,660,864 of our common stock were outstanding under our 2018 Stock Incentive Plan, as amended, of which 117,667 were vested and exercisable as of that date.

Warrants

As of September 30, 2020, 469,682 shares of our common stock were issuable upon the exercise of outstanding warrants, with a weighted average exercise price of $9.60 per share.

Registration Rights

We are party to an investors' rights agreement that provides that certain holders of our convertible preferred stock, including certain holders of at least 5% of our capital stock, have certain registration rights, we refer to the shares with these registration rights as registrable securities as set forth below. The registration of shares of our common stock by the exercise of registration rights described below would enable the holders to sell these shares without restriction under the Securities Act when the applicable registration statement is declared effective. We will pay the registration expenses, other than underwriting discounts and commissions, of the shares registered by the demand and piggyback registrations described below.

Generally, in an underwritten offering, the managing underwriter, if any, has the right, subject to specified conditions, to limit the number of shares such holders may include. The demand and piggyback registration rights described below will expire three years after the closing of this offering, of which this prospectus is a part, or with respect to any particular stockholder, such time after the closing of this offering that such stockholder can sell all of its shares entitled to registration rights under Rule 144 of the Securities Act during any 90-day period.

Demand Registration Rights

Beginning 180 days after the effective date of the registration statement of which this prospectus is a part, subject to specified limitations set forth in the investors' rights agreement, at any time, the holders of at least two-thirds of the registrable securities then outstanding may demand that we register all or a portion of their shares. Such request for registration must cover shares with an anticipated aggregate offering price, net of underwriting discounts and commissions, of at least $50 million.

In addition, subject to specified limitations set forth in the investors' rights agreement, at any after we become eligible to file a registration statement on Form S-3, certain holders of at least 30% of the registrable securities then outstanding may request that we register their registrable securities on Form S-3 for purposes of a public offering for which the anticipated offering price to the public would exceed, net of selling expenses, of at least $5 million. We will not be required to effect more than two registrations on Form S-3 within any 12-month period.

Piggyback Registration Rights

In connection with this offering, the holders of an aggregate of approximately 19.0 million shares of our common stock were entitled to, and the necessary percentage of holders waived, their rights to notice of this

offering and to include their shares of registrable securities in this offering. After this offering, in the event that we propose to register any of our securities under the Securities Act, either for our own account or for the account of other security holders, the holders of these shares will be entitled to certain piggyback registration rights allowing the holder to include their shares in such registration, subject to certain marketing and other limitations. As a result, whenever we propose to file a registration statement under the Securities Act, other than with respect to a demand registration or a registration statement on Forms S-4 or S-8, the holders of these shares are entitled to notice of the registration and have the right to include their shares in the registration, subject to limitations that the underwriters may impose on the number of shares included in the offering.

Expenses of Registration

We are required to pay all expenses, including fees and expenses of one counsel to represent the selling stockholders (up to $50,000 total), relating to any demand or piggyback registration, other than underwriting discounts and commissions, stock transfer taxes and any additional fees of counsel for the selling stockholders, subject to specified conditions and limitations. We are not required to pay registration expenses if a demand registration request is withdrawn at the request of a majority of holders of registrable securities to be registered, unless holders of a majority of the registrable securities agree to forfeit their right to one demand registration.

The investors' rights agreement contains customary cross-indemnification provisions, pursuant to which we are obligated to indemnify the selling stockholders in the event of material misstatements or omissions in the applicable registration statement attributable to us, and the selling stockholders are obligated to indemnify us for material misstatements or omissions in the registration statement attributable to them, subject to certain limitations.

Termination of Registration Rights

The registration rights granted under the investors' rights agreement will terminate upon the earlier of a liquidation event or such time that Rule 144 or another similar exemption from registration statement is available for the sale of all of such holder's shares without limitation during a three-month period.

Anti-Takeover Effects of Delaware Law and Our Certificate of Incorporation and Bylaws

Some provisions of Delaware law, our amended and restated certificate of incorporation and our amended and restated bylaws contain provisions that could make the following transactions more difficult: an acquisition of us by means of a tender offer; an acquisition of us by means of a proxy contest or otherwise; or the removal of our incumbent officers and directors. It is possible that these provisions could make it more difficult to accomplish or could deter transactions that stockholders may otherwise consider to be in their best interest or in our best interests, including transactions which provide for payment of a premium over the market price for our shares.

These provisions, summarized below, are intended to discourage coercive takeover practices and inadequate takeover bids. These provisions are also designed to encourage persons seeking to acquire control of us to first negotiate with our board of directors. We believe that the benefits of the increased protection of our potential ability to negotiate with the proponent of an unfriendly or unsolicited proposal to acquire or restructure us outweigh the disadvantages of discouraging these proposals because negotiation of these proposals could result in an improvement of their terms.

Stockholder Meetings

Our amended and restated bylaws provide that a special meeting of stockholders may be called only by our chairman of the board, chief executive officer or president, or by a resolution adopted by a majority of our board of directors.

Requirements for Advance Notification of Stockholder Nominations and Proposals

Our amended and restated bylaws establish advance notice procedures with respect to stockholder proposals to be brought before a stockholder meeting and the nomination of candidates for election as directors, other than nominations made by or at the direction of the board of directors or a committee of the board of directors.

Elimination of Stockholder Action by Written Consent

Our amended and restated certificate of incorporation and amended and restated bylaws eliminate the right of stockholders to act by written consent without a meeting.

Staggered Board

Our board of directors is divided into three classes. The directors in each class serve for a three-year term, one class being elected each year by our stockholders. For more information on the classified board, see "Management—Board Composition and Election of Directors." This system of electing and removing directors may tend to discourage a third-party from making a tender offer or otherwise attempting to obtain control of us, because it generally makes it more difficult for stockholders to replace a majority of the directors.

Removal of Directors

Our amended and restated certificate of incorporation provides that no member of our board of directors may be removed from office by our stockholders except for cause and, in addition to any other vote required by law, upon the approval of not less than two thirds of the total voting power of all of our outstanding voting stock then entitled to vote in the election of directors.

Stockholders Not Entitled to Cumulative Voting

Our amended and restated certificate of incorporation does not permit stockholders to cumulate their votes in the election of directors. Accordingly, the holders of a majority of the outstanding shares of our common stock entitled to vote in any election of directors can elect all of the directors standing for election, if they choose, other than any directors that holders of our convertible preferred stock may be entitled to elect.

Delaware Anti-Takeover Statute

We are subject to Section 203 of the Delaware General Corporation Law, which prohibits persons deemed to be "interested stockholders" from engaging in a "business combination" with a publicly held Delaware corporation for three years following the date these persons become interested stockholders unless the business combination is, or the transaction in which the person became an interested stockholder was, approved in a prescribed manner or another prescribed exception applies. Generally, an "interested stockholder" is a person who, together with affiliates and associates, owns, or within three years prior to the determination of interested stockholder status did own, 15% or more of a corporation's voting stock. Generally, a "business combination" includes a merger, asset or stock sale, or other transaction resulting in a financial benefit to the interested stockholder. The existence of this provision may have an anti-takeover effect with respect to transactions not approved in advance by the board of directors.

Choice of Forum

Our amended and restated certificate of incorporation to be effective immediately after the closing of this offering will provide that the Court of Chancery of the State of Delaware (or, if and only if the Court of Chancery of the State of Delaware lacks subject matter jurisdiction, any state court located within the State of Delaware or, if and only if all such state courts lack subject matter jurisdiction, the federal district court for the District of

Delaware) and any appellate court therefrom is the sole and exclusive forum for the following claims or causes of action under the Delaware statutory or common law: (i) any derivative claim or cause of action brought on our behalf; (ii) any claim or cause of action for a breach of fiduciary duty owed by any of our current or former directors, officers, or other employees to us or our stockholders; (iii) any claim or cause of action against us or any of our current or former directors, officers or other employees arising out of or pursuant to any provision of the DGCL, our amended and restated certificate of incorporation, or our bylaws (as each may be amended from time to time); (iv) any claim or cause of action seeking to interpret, apply, enforce or determine the validity of our amended and restated certificate of incorporation or our amended and restated bylaws (as each may be amended from time to time, including any right, obligation, or remedy thereunder); (v) any claim or cause of action as to which the DGCL confers jurisdiction to the Court of Chancery of the State of Delaware; and (vi) any claim or cause of action against us or any of our current or former directors, officers, or other employees governed by the internal-affairs doctrine, in all cases to the fullest extent permitted by law and subject to the court's having personal jurisdiction over the indispensable parties named as defendants. This choice of forum provision would not apply to claims or causes of action brought to enforce a duty or liability created by the Securities Act, the Exchange Act or any other claim for which the federal courts have exclusive jurisdiction, or the Securities Act. Our amended and restated certificate of incorporation to be effective on the closing of this offering will further provide that the federal district courts of the United States of America will be the exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act. Additionally, our amended and restated certificate of incorporation to be effective immediately after the closing of this offering will provide that any person or entity holding, owning or otherwise acquiring any interest in any of our securities shall be deemed to have notice of and consented to these provisions.

Amendment of Charter Provisions

The amendment of any of the above provisions, except for the provision making it possible for our board of directors to issue convertible preferred stock, would require approval by holders of at least two thirds of the total voting power of all of our outstanding voting stock.

The provisions of Delaware law, our amended and restated certificate of incorporation and our amended and restated bylaws could have the effect of discouraging others from attempting hostile takeovers and, as a consequence, they may also inhibit temporary fluctuations in the market price of our common stock that often result from actual or rumored hostile takeover attempts. These provisions may also have the effect of preventing changes in the composition of our board and management. It is possible that these provisions could make it more difficult to accomplish transactions that stockholders may otherwise deem to be in their best interests.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock will be American Stock Transfer & Trust Company, LLC. The transfer agent's address is 6201 15th Avenue, Brooklyn, New York 11219.

Exchange Listing

We have applied to list our common stock on the Nasdaq Global Market under the symbol "SNSE".

SHARES ELIGIBLE FOR FUTURE SALE

Immediately prior to this offering, there was no public market for our common stock. Future sales of substantial amounts of common stock in the public market, or the perception that such sales may occur, could adversely affect the market price of our common stock. Although we intent to apply to list our common stock on the Nasdaq Global Market, we cannot assure you that there will be an active public market for our common stock.

Following the closing of this offering, based on the number of shares of our common stock outstanding as of January 14, 2021, we will have outstanding an aggregate of 28,443,200 shares of common stock.

Of these shares, all shares of common stock sold in this offering will be freely tradable without restriction or further registration under the Securities Act, except for any shares purchased by our "affiliates," as that term is defined in Rule 144 under the Securities Act. Shares purchased by our affiliates would be subject to the Rule 144 resale restrictions described below, other than the holding period requirement.

The remaining shares of our common stock outstanding after this offering will be "restricted securities," as that term is defined in Rule 144 under the Securities Act. These restricted securities are eligible for public sale only if they are registered under the Securities Act or if they qualify for an exemption from registration under Rule 144 or 701 under the Securities Act, each of which is summarized below. We expect that substantially all of these shares will be subject to the lock-up period under the lock-up agreements described below.

Shares of common stock that are either subject to outstanding options or warrants or reserved for future issuance under our equity incentive plans will become eligible for sale in the public market to the extent permitted by the provisions of various vesting schedules, the lock-up agreements described below and Rules 144 and 701 under the Securities Act.

Lock-Up Agreements

We, along with our directors, executive officers and substantially all of our other stockholders, optionholders and warrantholders, have agreed with the underwriters that for a period of 180 days after the date of this prospectus, or, with respect to the shares purchased in our Series BB financing, 120 days, subject to specified exceptions, we or they will not offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to sale of, or otherwise dispose of or transfer any shares of common stock, or any securities convertible into or exercisable or exchangeable for shares of common stock, request or demand that we file a registration statement related to our common stock or enter into any swap or other agreement that transfers to another, in whole or in part, directly or indirectly, the economic consequence of ownership of the common stock. Upon expiration of the lock-up period, certain of our stockholders and warrantholders will have the right to require us to register their shares under the Securities Act. See "—Registration Rights" below and "Description of Capital Stock—Registration Rights."

Upon the expiration of the lock-up period, substantially all of the shares subject to such lock-up restrictions will become eligible for sale, subject to the limitations discussed above.

Rule 144

In general, non-affiliate persons who have beneficially owned restricted shares of our common stock for at least six months, and any affiliate of the company who owns either restricted or unrestricted shares of our common stock, are entitled to sell their securities without registration with the SEC under an exemption from registration provided by Rule 144 under the Securities Act.

Non-Affiliates

Any person who is not deemed to have been one of our affiliates at the time of, or at any time during the three months preceding, a sale may sell an unlimited number of restricted securities under Rule 144 if:

- the restricted securities have been held for at least six months, including the holding period of any prior owner other than one of our affiliates (subject to certain exceptions);
- we have been subject to the Exchange Act periodic reporting requirements for at least 90 days before the sale; and
- we are current in our Exchange Act reporting at the time of sale.

Any person who is not deemed to have been an affiliate of ours at the time of, or at any time during the three months preceding, a sale and has held the restricted securities for at least one year, including the holding period of any prior owner other than one of our affiliates, will be entitled to sell an unlimited number of restricted securities without regard to the length of time we have been subject to Exchange Act periodic reporting or whether we are current in our Exchange Act reporting. Non-affiliate resales are not subject to the manner of sale, volume limitation or notice filing provisions of Rule 144.

Affiliates

Persons seeking to sell restricted securities who are our affiliates at the time of, or any time during the three months preceding, a sale, would be subject to the restrictions described above. They are also subject to additional restrictions, by which such person would be required to comply with the manner of sale and notice provisions of Rule 144 and would be entitled to sell within any three-month period only that number of securities that does not exceed the greater of either of the following:

- 1% of the number of shares of our common stock then outstanding; or
- the average weekly trading volume of our common stock on the stock exchange on which our shares are listed during the four calendar weeks preceding the filing of a notice on Form 144 with respect to the sale.

Additionally, persons who are our affiliates at the time of, or any time during the three months preceding, a sale may sell unrestricted securities under the requirements of Rule 144 described above, without regard to the six month holding period of Rule 144, which does not apply to sales of unrestricted securities.

Rule 701

In general, under Rule 701 of the Securities Act, any of our employees, directors, officers, consultants or advisors who purchases shares from us in connection with a compensatory stock or option plan or other written agreement before the effective date of a registration statement under the Securities Act is entitled to sell such shares 90 days after such effective date in reliance on Rule 144. Securities issued in reliance on Rule 701 are restricted securities and, subject to the contractual restrictions described above, beginning 90 days after the date of this prospectus, may be sold by persons other than “affiliates,” as defined in Rule 144, subject only to the manner of sale provisions of Rule 144 and by “affiliates” under Rule 144 without compliance with its one-year minimum holding period requirement. However, substantially all Rule 701 shares are subject to lock-up agreements as described above and will become eligible for sale upon the expiration of the restrictions set forth in those agreements.

Form S-8 Registration Statements

We intend to file one or more registration statements on Form S-8 under the Securities Act to register all shares of common stock subject to outstanding stock options and common stock issued or issuable under the 2021 Plan, ESPP and 2018 Plan. We expect to file the registration statement covering shares offered pursuant to

these stock plans shortly after the date of this prospectus, permitting the resale of such shares by non-affiliates in the public market without restriction under the Securities Act and the sale by affiliates in the public market subject to compliance with the resale provisions of Rule 144.

Registration Rights

Holders of approximately 19.0 million shares of our common stock, which includes all of the shares of common stock issuable upon the automatic conversion of our convertible convertible preferred stock immediately prior to the closing of this offering, or their transferees will be entitled to various rights with respect to the registration of these shares under the Securities Act upon the completion of this offering. Registration of these shares under the Securities Act would result in these shares becoming fully tradable without restriction under the Securities Act immediately upon the effectiveness of the registration, except for shares purchased by affiliates.

See “Description of Capital Stock—Registration Rights” for additional information. Shares covered by a registration statement will be eligible for sale in the public market upon the expiration or release from the terms of the lock-up agreement.

MATERIAL U.S. FEDERAL INCOME TAX CONSIDERATIONS FOR NON-U.S. HOLDERS

The following summary describes certain material U.S. federal income tax consequences of the acquisition, ownership, and disposition of our common stock acquired in this offering by Non-U.S. Holders (as defined below). This discussion is not a complete analysis of all potential U.S. federal income tax consequences relating thereto, and does not address foreign, state, and local consequences that may be relevant to Non-U.S. Holders in light of their particular circumstances, nor does it address U.S. federal tax consequences (such as gift and estate taxes) other than income taxes. This discussion is limited to Non-U.S. Holders that hold our common stock as a "capital asset" within the meaning of Section 1221 of the Code (generally, property held for investment). This discussion does not address all U.S. federal income tax consequences relevant to a Non-U.S. Holder's particular circumstances, including the impact of the alternative minimum tax, the special tax accounting rules under Section 451(b) of the Code, and the Medicare contribution tax on net investment income. Special rules different from those described below may apply to certain Non-U.S. Holders that are subject to special treatment under the Internal Revenue Code of 1986, as amended, or the Code, such as financial institutions, insurance companies, tax-exempt organizations, broker-dealers and traders in securities, U.S. expatriates, "controlled foreign corporations," "passive foreign investment companies," corporations that accumulate earnings to avoid U.S. federal income tax, corporations organized outside of the United States, any state thereof or the District of Columbia that are nonetheless treated as U.S. taxpayers for U.S. federal income tax purposes, persons that hold our common stock as part of a "straddle," "hedge," "conversion transaction," "synthetic security" or integrated investment or other risk reduction strategy, persons who acquire our common stock through the exercise of an option or otherwise as compensation, "qualified foreign pension funds" as defined in Section 897(l)(2) of the Code and entities all of the interests of which are held by qualified foreign pension funds, partnerships and other pass-through entities or arrangements, and investors in such pass-through entities or arrangements. Such Non-U.S. Holders are urged to consult their own tax advisors to determine the U.S. federal, state, local, and other tax consequences that may be relevant to them. Furthermore, the discussion below is based upon the provisions of the Code, and Treasury Regulations, rulings, and judicial decisions thereunder as of the date hereof, and such authorities may be repealed, revoked, or modified, perhaps retroactively, so as to result in U.S. federal income tax consequences different from those discussed below. We have not requested a ruling from the U.S. Internal Revenue Service, or the IRS, with respect to the statements made and the conclusions reached in the following summary, and there can be no assurance that the IRS will agree with such statements and conclusions.

This discussion is for informational purposes only and is not tax advice. Persons considering the purchase of our common stock pursuant to this offering should consult their own tax advisors concerning the U.S. federal income, estate, and other tax consequences of acquiring, owning, and disposing of our common stock in light of their particular situations as well as any consequences arising under the laws of any other taxing jurisdiction, including any state, local, or foreign tax consequences.

For the purposes of this discussion, a "Non-U.S. Holder" is, for U.S. federal income tax purposes, a beneficial owner of common stock that is neither a U.S. Holder, nor a partnership (or other entity treated as a partnership for U.S. federal income tax purposes regardless of its place of organization or formation). A "U.S. Holder" means a beneficial owner of our common stock that is for U.S. federal income tax purposes any of the following:

- an individual who is a citizen or resident of the United States;
- a corporation or other entity treated as a corporation for U.S. federal income tax purposes created or organized in or under the laws of the United States, any state thereof, or the District of Columbia;
- an estate the income of which is subject to U.S. federal income taxation regardless of its source; or
- a trust if it (1) is subject to the primary supervision of a court within the United States and one or more U.S. persons have the authority to control all substantial decisions of the trust or (2) has a valid election in effect under applicable U.S. Treasury Regulations to be treated as a U.S. person.

Distributions

Distributions, if any, made on our common stock to a Non-U.S. Holder to the extent made out of our current or accumulated earnings and profits (as determined under U.S. federal income tax principles) generally will constitute dividends for U.S. tax purposes and will be subject to withholding tax at a 30% rate or such lower rate as may be specified by an applicable income tax treaty, subject to the discussions below regarding effectively connected income, backup withholding, and foreign accounts. To obtain a reduced rate of withholding under a treaty, a Non-U.S. Holder generally will be required to provide us with a properly executed IRS Form W-8BEN (in the case of individuals) or IRS Form W-8BEN-E (in the case of entities), or other appropriate form, certifying the Non-U.S. Holder's entitlement to benefits under that treaty. This certification must be provided to us and/or our paying agent prior to the payment of dividends and must be updated periodically. In the case of a Non-U.S. Holder that is an entity, Treasury Regulations and the relevant tax treaty provide rules to determine whether, for purposes of determining the applicability of a tax treaty, dividends will be treated as paid to the entity or to those holding an interest in that entity. If a Non-U.S. Holder holds stock through a financial institution or other agent acting on the holder's behalf, the holder will be required to provide appropriate documentation to such agent. The holder's agent will then be required to provide certification to us and/or our paying agent, either directly or through other intermediaries. If a Non-U.S. Holder is eligible for a reduced rate of U.S. federal withholding tax under an income tax treaty and such Non-U.S. Holder does not timely file the required certification, such Non-U.S. Holder may be able to obtain a refund or credit of any excess amounts withheld by timely filing an appropriate claim for a refund with the IRS.

We generally are not required to withhold tax on dividends paid to a Non-U.S. Holder that are effectively connected with the Non-U.S. Holder's conduct of a trade or business within the United States (and, if required by an applicable income tax treaty, are attributable to a permanent establishment or fixed base that such holder maintains in the United States) if a properly executed IRS Form W-8ECI, stating that the dividends are so connected, is furnished to us (or, if stock is held through a financial institution or other agent, to such agent). In general, such effectively connected dividends will be subject to U.S. federal income tax, on a net income basis at the regular rates applicable to U.S. residents. A corporate Non-U.S. Holder receiving effectively connected dividends may also be subject to an additional "branch profits tax," which is imposed, under certain circumstances, at a rate of 30% (or such lower rate as may be specified by an applicable treaty) on the corporate Non-U.S. Holder's effectively connected earnings and profits, subject to certain adjustments. Non-U.S. Holders should consult their tax advisors regarding any applicable income tax treaties that may provide for different rules.

To the extent distributions on our common stock, if any, exceed our current and accumulated earnings and profits, they will first reduce the Non-U.S. Holder's adjusted basis in our common stock, but not below zero, and then will be treated as gain to the extent of any excess amount distributed, and taxed in the same manner as gain realized from a sale or other disposition of common stock as described in the next section.

Gain on Disposition of Our Common Stock

Subject to the discussions below regarding backup withholding and foreign accounts, a Non-U.S. Holder generally will not be subject to U.S. federal income tax with respect to gain realized on a sale or other taxable disposition of our common stock unless (a) the gain is effectively connected with a trade or business of such holder in the United States (and, if required by an applicable income tax treaty, is attributable to a permanent establishment or fixed base that such holder maintains in the United States), (b) the Non-U.S. Holder is a nonresident alien individual and is present in the United States for 183 or more days in the taxable year of the disposition and certain other conditions are met, or (c) we are or have been a "United States real property holding corporation" within the meaning of Code Section 897(c)(2) at any time within the shorter of the five-year period preceding such disposition or such holder's holding period in our common stock. In general, we would be a United States real property holding corporation if our interests in U.S. real property comprise (by fair market value) at least half of our worldwide real property interests and our other assets used or held for use in a trade or business. We believe that we are not, and do not anticipate becoming, a United States real property holding

corporation. Even if we are treated as a United States real property holding corporation, gain realized by a Non-U.S. Holder on a disposition of our common stock will not be subject to U.S. federal income tax so long as (1) the Non-U.S. Holder owned, directly, indirectly and constructively, no more than 5% of our common stock at all times within the shorter of (i) the five-year period preceding the disposition or (ii) the holder's holding period and (2) our common stock is regularly traded on an established securities market, as defined in applicable Treasury Regulations. There can be no assurance that our common stock will continue to qualify as regularly traded on an established securities market. If a Non-U.S. Holder's gain on disposition of our common stock is taxable because we are a United States real property holding corporation and such Non-U.S. Holder's ownership of our common stock exceeds 5%, such Non-U.S. Holder will be taxed on such disposition generally in the manner as gain that is effectively connected with the conduct of a U.S. trade or business (subject to the provisions under an applicable income tax treaty), except that the branch profits tax generally will not apply to a corporate Non-U.S. Holder.

Non-U.S. Holders described in (a) above will be required to pay tax on the net gain derived from the sale at regular U.S. federal income tax rates, and corporate Non-U.S. Holders described in (a) above may be subject to the additional branch profits tax on such gain at a 30% rate or such lower rate as may be specified by an applicable income tax treaty. Gain described in (b) above will be subject to U.S. federal income tax at a flat 30% rate or such lower rate as may be specified by an applicable income tax treaty, which gain may be offset by certain U.S.-source capital losses (even though a Non-U.S. Holder is not considered a resident of the United States), provided that the Non-U.S. Holder has timely filed U.S. federal income tax returns with respect to such losses.

Information Reporting Requirements and Backup Withholding

Generally, we must report information to the IRS with respect to any dividends we pay on our common stock (even if the payments are exempt from withholding), including the amount of any such dividends, the name and address of the recipient, and the amount, if any, of tax withheld. A similar report is sent to the holder to whom any such dividends are paid. Pursuant to tax treaties or certain other agreements, the IRS may make its reports available to tax authorities in the recipient's country of residence.

Dividends paid by us (or our paying agents) to a Non-U.S. Holder may also be subject to U.S. backup withholding. U.S. backup withholding generally will not apply to a Non-U.S. Holder who provides a properly executed IRS Form W-8BEN, IRS Form W-8BEN-E, or IRS Form W-ECI, or otherwise establishes an exemption. Notwithstanding the foregoing, backup withholding may apply if the payor has actual knowledge, or reason to know, that the holder is a U.S. person who is not an exempt recipient.

U.S. information reporting and backup withholding requirements generally will apply to the proceeds of a disposition of our common stock effected by or through a U.S. office of any broker, U.S. or foreign, except that information reporting and such requirements may be avoided if the holder provides a properly executed IRS Form W-8BEN or IRS Form W-8BEN-E or otherwise meets documentary evidence requirements for establishing non-U.S. person status or otherwise establishes an exemption. Generally, U.S. information reporting and backup withholding requirements will not apply to a payment of disposition proceeds to a Non-U.S. Holder where the transaction is effected outside the United States through a non-U.S. office of a non-U.S. broker. Information reporting and backup withholding requirements may, however, apply to a payment of disposition proceeds if the broker has actual knowledge, or reason to know, that the holder is, in fact, a U.S. person. For information reporting purposes, certain brokers with substantial U.S. ownership or operations will generally be treated in a manner similar to U.S. brokers.

Backup withholding is not an additional tax. Any amounts withheld under the backup withholding rules may be credited against the tax liability of persons subject to backup withholding, provided that the required information is timely furnished to the IRS.

Foreign Accounts

Sections 1471 through 1474 of the Code (commonly referred to as FATCA) impose a U.S. federal withholding tax of 30% on certain payments to a foreign financial institution (as specifically defined by applicable rules) unless such institution enters into an agreement with the U.S. government to withhold on certain payments and to collect and provide to the U.S. tax authorities substantial information regarding U.S. account holders of such institution (which includes certain equity holders of such institution, as well as certain account holders that are foreign entities with U.S. owners). FATCA also generally imposes a federal withholding tax of 30% on certain payments to a non-financial foreign entity unless such entity provides the withholding agent with either a certification that it does not have any substantial direct or indirect U.S. owners or provides information regarding substantial direct and indirect U.S. owners of the entity. An intergovernmental agreement between the United States and an applicable foreign country may modify those requirements. The withholding tax described above will not apply if the foreign financial institution or non-financial foreign entity otherwise qualifies for an exemption from the rules.

FATCA withholding currently applies to payments of dividends, if any, on our common stock and, subject to the proposed Treasury Regulations described in this paragraph, generally also would apply to payments of gross proceeds from the sale or other disposition of our common stock. The U.S. Treasury Department released proposed regulations which, if finalized in their present form, would eliminate the federal withholding tax of 30% applicable to the gross proceeds of a disposition of our common stock. In its preamble to such proposed regulations, the U.S. Treasury Department stated that taxpayers may generally rely on the proposed regulations until final regulations are issued. Non-U.S. holders are encouraged to consult with their own tax advisors regarding the possible implications of FATCA on their investment in our common stock.

EACH PROSPECTIVE INVESTOR SHOULD CONSULT ITS OWN TAX ADVISOR REGARDING THE TAX CONSEQUENCES OF PURCHASING, HOLDING, AND DISPOSING OF OUR COMMON STOCK, INCLUDING THE CONSEQUENCES OF ANY RECENT OR PROPOSED CHANGE IN APPLICABLE LAW.

UNDERWRITING

Citigroup Global Markets Inc., Piper Sandler & Co. and Berenberg Capital Markets LLC, the Representatives, are acting as joint book-running managers of this offering and as representatives of the underwriters named below. Subject to the terms and conditions stated in the underwriting agreement dated the date of this prospectus, the underwriters named below have severally agreed to purchase, and we have agreed to sell to them, the number of shares of our common stock indicated below:

Underwriter	Number of Shares
Citigroup Global Markets Inc.	
Piper Sandler & Co.	
Berenberg Capital Markets LLC	
Oppenheimer & Co. Inc.	
Total	

The underwriting agreement provides that the obligations of the underwriters to purchase the shares of our common stock included in this offering are subject to approval of legal matters by counsel and to other conditions. The underwriters are obligated to purchase all of the shares of our common stock (other than those covered by the over-allotment option described below) if they purchase any of the shares.

Shares of our common stock sold by the underwriters to the public will initially be offered at the initial public offering price set forth on the cover of this prospectus. Any shares of our common stock sold by the underwriters to securities dealers may be sold at a discount from the initial public offering price not to exceed $ per share. After the initial public offering of the shares of our common stock, if all the shares of our common stock are not sold at the initial public offering price, the underwriters may change the offering price and the other selling terms. Any shares sold by the underwriters to securities dealers may be sold at a discount of up to $ per share from the initial public offering price. The representatives have advised us that the underwriters do not intend to make sales to discretionary accounts.

If the underwriters sell more shares of our common stock than the total number set forth in the table above, we have granted to the underwriters an option, exercisable for 30 days from the date of this prospectus, to purchase up to 882,750 additional shares of our common stock at the initial public offering price less the underwriting discount. The underwriters may exercise the option solely for the purpose of covering over-allotments, if any, in connection with this offering. To the extent the option is exercised, each underwriter must purchase a number of additional shares of our common stock approximately proportionate to that underwriter's initial purchase commitment set forth in the table above. Any shares of our common stock issued or sold under the option will be issued and sold on the same terms and conditions as the other shares of our common stock that are the subject of this offering.

We, our officers and directors and substantially all of our stockholders have agreed that, subject to specified limited exceptions, for a period of 180 days from the date of this prospectus, or, with respect to the shares purchased in our December 2020 Series BB financing, 120 days, we and they will not, without the prior written consent of the Representatives, offer, sell, contract to sell, pledge or otherwise dispose of, including the filing of a registration statement in respect of, or hedge any shares of our common stock or any securities convertible into, or exercisable or exchangeable for, our common stock. The Representatives in their sole discretion may release any of the securities subject to these lock-up agreements at any time, which, in the case of officers and directors, shall be with notice.

Prior to this offering, there has been no public market for our common stock. Consequently, the initial public offering price for the shares of our common stock will be determined by negotiations between us and the representatives. Among the factors considered in determining the initial public offering price will be our results

of operations, our current financial condition, our future prospects, our markets, the economic conditions in and future prospects for the industry in which we compete, our management, and currently prevailing general conditions in the equity securities markets, including current market valuations of publicly traded companies considered comparable to our company. We cannot assure you, however, that the price at which the shares of our common stock will sell in the public market after this offering will not be lower than the initial public offering price or that an active trading market in our shares of common stock will develop and continue after this offering.

We have applied to list our common stock on the Nasdaq Global Market under the symbol "SNSE."

The following table shows the per share and total public offering price, underwriting discounts and commissions that we are to pay to the underwriters and proceeds to us, before expenses, in connection with this offering. These amounts are shown assuming both no exercise and full exercise of the underwriters' over-allotment option:

		Total	
	Per share	No exercise	Full exercise
Public offering price	$	$	$
Underwriting discounts and commissions paid by us	$	$	$
Proceeds to us, before expenses	$	$	$

We estimate that expenses payable by us in connection with this offering, exclusive of underwriting discounts and commissions, will be approximately $3.4 million. We have also agreed to reimburse the underwriters for expenses in an amount up to $30,000 relating to the clearance of this offering with the Financial Industry Regulatory Authority, Inc. In addition, the underwriters have agreed to reimburse us for certain of our expenses that we have incurred in connection with this offering.

At our request, the underwriters have reserved for sale, at the initial public offering price, up to six percent of the shares offered by this prospectus for sale to some of our directors, officers, employees, business associates and related persons through a directed share program. If these persons purchase reserved shares, this will reduce the number of shares available for sale to the general public. Any reserved shares that are not so purchased will be offered by the underwriters to the general public on the same terms as the other shares offered by this prospectus. In addition, we have requested that the underwriters make issuer directed allocations to certain existing investors.

In connection with this offering, the underwriters may purchase and sell shares of our common stock in the open market. Purchases and sales in the open market may include short sales, purchases to cover short positions, which may include purchases pursuant to the underwriters' over-allotment option, and other transactions that would stabilize, maintain or otherwise affect the price of our common stock.

- Short sales involve secondary market sales by the underwriters of a greater number of shares of our common stock than they are required to purchase in this offering:
  - "Covered" short sales are sales of shares of our common stock in an amount up to the number of shares of our common stock represented by the underwriters' over-allotment option.
  - "Naked" short sales are sales of shares of our common stock in an amount in excess of the number of shares of our common stock represented by the underwriters' over-allotment option.
- The underwriters can close out a short position by purchasing additional shares of our common stock, either pursuant to the underwriters' over-allotment option or in the open market.
  - To close a naked short position, the underwriters must purchase shares of our common stock in the open market. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of the shares of our common stock in the open market after pricing that could adversely affect investors who purchase in this offering.

- To close a covered short position, the underwriters must purchase shares of our common stock in the open market or exercise their over-allotment option. In determining the source of shares of our common stock to close the covered short position, the underwriters will consider, among other things, the price of shares of our common stock available for purchase in the open market as compared to the price at which they may purchase shares of our common stock through their over-allotment option.
- As an additional means of facilitating this offering, the underwriters may bid for, and purchase, shares of our common stock on the Nasdaq Global Market, as long as such bids do not exceed a specified maximum, to stabilize the price of the shares of our common stock.

Purchases to cover short positions and stabilizing purchases, as well as other purchases by the underwriters for their own accounts, may have the effect of preventing or retarding a decline in the market price of the shares. They may also cause the price of the shares of our common stock to be higher than the price that would otherwise prevail in the open market in the absence of these transactions. The underwriters may conduct these transactions on the Nasdaq Global Market, in the over-the-counter market or otherwise. The underwriters are not required to engage in any of these transactions and may discontinue them at any time.

We have agreed to indemnify the underwriters against certain liabilities, including liabilities under the Securities Act, or to contribute to payments the underwriters may be required to make because of any of those liabilities.

A prospectus in electronic format may be made available on websites maintained by one or more of the underwriters or their respective affiliates. The representatives may agree with us to allocate a number of shares of our common stock to underwriters for sale to their online brokerage account holders. Any such allocation for online distributions will be made by the underwriters on the same basis as other allocations. Other than the prospectus in electronic format, the information on the underwriters' or their respective affiliates' websites and any information contained in any other website maintained by any of the underwriters or their respective affiliates is not part of this prospectus, has not been approved and/or endorsed by us or the underwriters and should not be relied upon by investors in this offering.

Baader Helvea Inc. is acting as financial advisor to us in connection with this offering and will receive customary fees in connection with such services.

Other Relationships

The underwriters are full-service financial institutions engaged in various activities, which may include securities trading, commercial and investment banking, financial advisory, investment management, principal investment, hedging, financing and brokerage activities. The underwriters and their respective affiliates may, from time to time, engage in transactions with and perform services for us in the ordinary course of their business for which they may receive customary fees and reimbursement of expenses. In the ordinary course of their various business activities, the underwriters and their respective affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (which may include bank loans or credit default swaps) for their own account and for the accounts of their customers and may at any time hold long and short positions in such securities and instruments. Such investments and securities activities may involve securities and/or instruments of ours or our affiliates. The underwriters and their affiliates may also make investment recommendations and/or publish or express independent research views in respect of such securities or financial instruments and may hold, or recommend to clients that they acquire, long or short positions in such securities and instruments.

Notice to Prospective Investors in the European Economic Area

In relation to each member state of the European Economic Area (each, a Relevant Member State), an offer of shares of our common stock described in this prospectus may not be made to the public in that Relevant Member State other than under the following exemptions under the EU Prospectus Regulation:

- to any legal entity which is a qualified investor as defined under the EU Prospectus Regulation;

- to fewer than 150 natural or legal persons (other than qualified investors as defined under the EU Prospectus Regulation), subject to obtaining the prior consent of the relevant Dealer or Dealers nominated by us for any such offer; or
- in any other circumstances falling within Article 1(4) of the EU Prospectus Regulation,

provided that no such offer of shares of our common stock shall require us or any underwriter to publish a prospectus pursuant to Article 3 of the EU Prospectus Regulation or supplement a prospectus pursuant to Article 23 of the EU Prospectus Regulation.

For purposes of this provision, the expression an "offer to the public" in any Relevant Member State means the communication in any form and by any means of sufficient information on the terms of the offer and the shares of our common stock to be offered so as to enable an investor to decide to purchase or subscribe for any shares of our common stock, the expression "EU Prospectus Regulation" means Regulation (EU) 2017/1129.

The sellers of the shares of our common stock have not authorized and do not authorize the making of any offer of shares of our common stock through any financial intermediary on their behalf, other than offers made by the underwriters with a view to the final placement of the shares of our common stock as contemplated in this prospectus. Accordingly, no purchaser of the shares of our common stock, other than the underwriters, is authorized to make any further offer of the shares of our common stock on behalf of the sellers or the underwriters.

Notice to Prospective Investors in the United Kingdom

This prospectus is only being distributed to, and is only directed at, persons in the United Kingdom that are qualified investors within the meaning of the UK version of the EU Prospectus Regulation which is part of UK law by virtue of the European Union (Withdrawal) Act 2018, that are also (1) investment professionals falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (the Order), or (2) high net worth entities, and other persons to whom it may lawfully be communicated, falling within Article 49(2)(a) to (d) of the Order; or (3) any other person to whom this prospectus may otherwise lawfully be communicated or caused to be communicated to under the Order (each such person being referred to as a relevant person).

This prospectus and its contents are confidential and should not be distributed, published or reproduced (in whole or in part) or disclosed by recipients to any other persons in the United Kingdom. Any person in the United Kingdom that is not a relevant person should not act or rely on this document or any of its contents.

Notice to Prospective Investors in Switzerland

An offer of shares of our common stock described in this prospectus may not be made to the public in Switzerland (within the meaning of Sections 3 and 35 the Swiss Financial Services Act (the FinSA) and of its implementing ordinance) other than under any of the statutory exemptions from the requirement to prepare and publish a prospectus, in particular Sections 36 to 38 FinSA, including (without limitations):

- the offering in Switzerland is limited to professional clients (as defined in the FinSA) only;
- the offering in Switzerland is addressed at fewer than 500 investors;
- the offering in Switzerland is limited to shares of our common stock allocated to current or former members of the board of directors or management board or employees of our company or affiliated entities; or
- the shares of our common stock are admitted to trading on a foreign trading venue whose regulation, supervision and transparency are acknowledged as being appropriate by the domestic trading venue or whose transparency for investors is ensured in another manner.

Moreover, the shares of our common stock described in the prospectus are not admitted to trading on any trading venue (exchange or multilateral trading facility) in Switzerland. This prospectus and its contents do not constitute a prospectus pursuant to the FinSA, and no such prospectus within the meaning of the FinSA has been or will be prepared for or in connection with the offering of the shares of our common stock.

Notice to Prospective Investors in Australia

No prospectus or other disclosure document (as defined in the Corporations Act 2001 (Cth) of Australia, or Corporations Act) in relation to our common stock has been or will be lodged with the Australian Securities & Investments Commission, or ASIC. This document has not been lodged with ASIC and is only directed to certain categories of exempt persons. Accordingly, if you receive this document in Australia:

- you confirm and warrant that you are either:
  - a "sophisticated investor" under Section 708(8)(a) or (b) of the Corporations Act;
  - a "sophisticated investor" under Section 708(8)(c) or (d) of the Corporations Act and that you have provided an accountant's certificate to us which complies with the requirements of Section 708(8)(c)(i) or (ii) of the Corporations Act and related regulations before the offer has been made; a person associated with the company under Section 708(12) of the Corporations Act; or
  - a "professional investor" within the meaning of Section 708(11)(a) or (b) of the Corporations Act, and to the extent that you are unable to confirm or warrant that you are an exempt sophisticated investor, associated person or professional investor under the Corporations Act any offer made to you under this document is void and incapable of acceptance; and
- you warrant and agree that you will not offer any of our common stock for resale in Australia within 12 months of that common stock being issued unless any such resale offer is exempt from the requirement to issue a disclosure document under Section 708 of the Corporations Act.

Notice to Prospective Investors in Canada

The securities may be sold only to purchasers purchasing, or deemed to be purchasing, as principal that are accredited investors, as defined in National Instrument 45-106 Prospectus Exemptions or subsection 73.3(1) of the Securities Act (Ontario), and are permitted clients, as defined in National Instrument 31-103 Registration Requirements, Exemptions and Ongoing Registrant Obligations. Any resale of the securities must be made in accordance with an exemption from, or in a transaction not subject to, the prospectus requirements of applicable securities laws.

Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if this prospectus (including any amendment thereto) contains a misrepresentation, provided that the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser's province or territory. The purchaser should refer to any applicable provisions of the securities legislation of the purchaser's province or territory for particulars of these rights or consult with a legal advisor.

Pursuant to Section 3A.3 of National Instrument 33-105 Underwriting Conflicts (NI 33-105), the underwriters are not required to comply with the disclosure requirements of NI 33-105 regarding underwriter conflicts of interest in connection with this offering.

Notice to Prospective Investors in Chile

The shares of our common stock are not registered in the Securities Registry (Registro de Valores) or subject to the control of the Chilean Securities and Exchange Commission (Superintendencia de Valores y

Seguros de Chile). This prospectus and other offering materials relating to the offer of the shares do not constitute a public offer of, or an invitation to subscribe for or purchase, the shares in the Republic of Chile, other than to individually identified purchasers pursuant to a private offering within the meaning of Article 4 of the Chilean Securities Market Act (Ley de Mercado de Valores) (an offer that is not "addressed to the public at large or to a certain sector or specific group of the public").

Notice to Prospective Investors in France

Neither this prospectus nor any other offering material relating to the shares of our common stock described in this prospectus has been submitted to the clearance procedures of the *Autorité des Marchés Financiers* or of the competent authority of another member state of the European Economic Area and notified to the *Autorité des Marchés Financiers*. The shares of our common stock have not been offered or sold and will not be offered or sold, directly or indirectly, to the public in France. Neither this prospectus nor any other offering material relating to the shares of our common stock has been or will be:

- released, issued, distributed or caused to be released, issued or distributed to the public in France; or
- used in connection with any offer for subscription or sale of the shares of our common stock to the public in France.

Such offers, sales and distributions will be made in France only:

- to qualified investors (*investisseurs qualifiés*) and/or to a restricted circle of investors (*cercle restreint d'investisseurs*), in each case investing for their own account, all as defined in and in accordance with articles L.411-2, D.411-1, D.411-2, D.734-1, D.744-1, D.754-1and D.764-1 of the French Code monétaire et financier;
- to investment services providers authorized to engage in portfolio management on behalf of third parties; or
- in a transaction that, in accordance with article L.411-2-II-1° -or-2° -or 3° of the French Code *monétaire et financier* and article 211-2 of the General Regulations (*Règlement Général*) of the *Autorité des Marchés Financiers*, does not constitute a public offer (*appel public à l'épargne*).

The shares of our common stock may be resold directly or indirectly, only in compliance with articles L.411-1, L.411-2, L.412-1 and L.621-8 through L.621-8-3 of the French Code *monétaire et financier*.

Notice to Prospective Investors in Germany

Neither this prospectus nor any other offering material relating to shares of our common stock described in this prospectus has been filed with or approved by the German Financial Services Supervisory Authority (*undesanstalt für Finanzdienstleistungsaufsicht*, or BaFin) according to the German Securities Prospectus Act (*Wertpapierprospektgesetz*, or WpPG), the German Investment Code (*Kapitalanlagegesetzbuch*) or the German Capital Investment Act (*Vermögensanlagengesetz*) or with any other governmental or regulatory authority in Germany.

The offering is not being made, and may not be made to the public in Germany as a Relevant Member State, except pursuant to one of the exemptions under the EU Prospectus Regulation set out in the Notice to Prospective Investors in the European Economic Area above. For Germany as on Relevant Member State, the EU Prospectus Regulation was supplemented by the WpPG.

Notice to Prospective Investors in Hong Kong

The shares of our common stock may not be offered or sold in Hong Kong by means of any document other than (1) in circumstances which do not constitute an offer to the public within the meaning of the Companies

Ordinance (Cap. 32, Laws of Hong Kong), or (2) to "professional investors" within the meaning of the Securities and Futures Ordinance (Cap. 571, Laws of Hong Kong) and any rules made thereunder, or (3) in other circumstances which do not result in the document being a "prospectus" within the meaning of the Companies Ordinance (Cap. 32, Laws of Hong Kong) and no advertisement, invitation or document relating to the shares of our common stock may be issued or may be in the possession of any person for the purpose of issue (in each case whether in Hong Kong or elsewhere), which is directed at, or the contents of which are likely to be accessed or read by, the public in Hong Kong (except if permitted to do so under the laws of Hong Kong) other than with respect to shares of our common stock which are or are intended to be disposed of only to persons outside Hong Kong or only to "professional investors" within the meaning of the Securities and Futures Ordinance (Cap. 571, Laws of Hong Kong) and any rules made thereunder.

Notice to Prospective Investors in the State of Israel

In the State of Israel this prospectus shall not be regarded as an offer to the public to purchase shares of common stock under the Israeli Securities Law, 5728 - 1968, which requires a prospectus to be published and authorized by the Israel Securities Authority, if it complies with certain provisions of Section 15 of the Israeli Securities Law, 5728 - 1968, including, inter alia, if: (1) the offer is made, distributed or directed to not more than 35 investors, subject to certain conditions, or the Addressed Investors; or (2) the offer is made, distributed or directed to certain qualified investors defined in the First Addendum of the Israeli Securities Law, 5728 - 1968, subject to certain conditions, or Qualified Investors. The Qualified Investors shall not be taken into account in the count of the Addressed Investors and may be offered to purchase securities in addition to the 35 Addressed Investors. We have not and will not take any action that would require us to publish a prospectus in accordance with and subject to the Israeli Securities Law, 5728 - 1968. We have not and will not distribute this prospectus or make, distribute or direct an offer to subscribe for our common stock to any person within the State of Israel, other than to Qualified Investors and up to 35 Addressed Investors.

Qualified Investors may have to submit written evidence that they meet the definitions set out in of the First Addendum to the Israeli Securities Law, 5728 - 1968. In particular, we may request that Qualified Investors will each represent, warrant and certify to us and/or to anyone acting on our behalf: (1) that it is an investor falling within one of the categories listed in the First Addendum to the Israeli Securities Law, 5728 - 1968; (2) which of the categories listed in the First Addendum to the Israeli Securities Law, 5728 - 1968 regarding Qualified Investors is applicable to it; (3) that it will abide by all provisions set forth in the Israeli Securities Law, 5728 - 1968 and the regulations promulgated thereunder in connection with this offering; (4) that the shares of common stock that it will be issued are, subject to exemptions available under the Israeli Securities Law, 5728 - 1968: (a) for its own account; (b) for investment purposes only; and (c) not issued with a view to resale within the State of Israel, other than in accordance with the provisions of the Israeli Securities Law, 5728 -1968; and (5) that it is willing to provide further evidence of its Qualified Investor status. Addressed Investors may have to submit written evidence in respect of their identity and may have to sign and submit a declaration containing, inter alia, the Addressed Investor's name, address and passport number or Israeli identification number.

Notice to Prospective Investors in Japan

The shares of our common stock offered in this prospectus have not been and will not be registered under the Financial Instruments and Exchange Law of Japan. The shares of our common stock have not been offered or sold and will not be offered or sold, directly or indirectly, in Japan or to or for the account of any resident of Japan (including any corporation or other entity organized under the laws of Japan), except (1) pursuant to an exemption from the registration requirements of the Financial Instruments and Exchange Law and (2) in compliance with any other applicable requirements of Japanese law.

Notice to Prospective Investors in Singapore

This prospectus has not been registered as a prospectus with the Monetary Authority of Singapore. Accordingly, this prospectus and any other document or material in connection with the offer or sale, or

invitation for subscription or purchase, of the shares of our common stock may not be circulated or distributed, nor may the shares of our common stock be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to persons in Singapore other than (1) to an institutional investor under Section 274 of the Securities and Futures Act, Chapter 289 of Singapore, or the SFA, (2) to a relevant person pursuant to Section 275(1), or any person pursuant to Section 275(1A), and in accordance with the conditions specified in Section 275 of the SFA or (3) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA, in each case subject to compliance with conditions set forth in the SFA.

Where the shares of our common stock are subscribed or purchased under Section 275 of the SFA by a relevant party which is:

- a corporation (which is not an accredited investor (as defined in Section 4A of the SFA)) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor; or
- a trust (where the trustee is not an accredited investor) whose sole purpose is to hold investments and each beneficiary of the trust is an individual who is an accredited investor, shares, debentures and units of shares of our common stock and debentures of that corporation or the beneficiaries' rights and interest (howsoever described) in that trust shall not be transferred within six months after that corporation or that trust has acquired the shares of our common stock pursuant to an offer made under Section 275 of the SFA except:
  - to an institutional investor (for corporations, under Section 274 of the SFA) or to a relevant person defined in Section 275(2) of the SFA, or to any person pursuant to an offer that is made on terms that such shares, debentures and units of shares of our common stock and debentures of that corporation or such rights and interest in that trust are acquired at a consideration of not less than $200,000 (or its equivalent in a foreign currency) for each transaction, whether such amount is to be paid for in cash or by exchange of securities or other assets, and further for corporations, in accordance with the conditions specified in Section 275 of the SFA;
  - where no consideration is or will be given for the transfer; or
  - where the transfer is by operation of law.

LEGAL MATTERS

The validity of the shares of common stock being offered by this prospectus will be passed upon for us by Cooley LLP, Palo Alto, California. The underwriters are being represented by Goodwin Procter LLP, New York, New York.

EXPERTS

The financial statements as of December 31, 2019 and 2018, and for each of the two years in the period ended December 31, 2019, included in this Prospectus, have been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in their report appearing herein (which report expresses an unqualified opinion on the financial statements and includes an explanatory paragraph referring to substantial doubt about the Company's ability to continue as a going concern). Such financial statements have been so included in reliance upon the report of such firm given upon their authority as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC a registration statement on Form S-1, including exhibits and schedules, under the Securities Act, with respect to the shares of common stock being offered by this prospectus. This prospectus, which constitutes part of the registration statement, does not contain all of the information in the registration statement and its exhibits. For further information with respect to us and the common stock offered by this prospectus, we refer you to the registration statement and its exhibits. Statements contained in this prospectus as to the contents of any contract or any other document referred to are not necessarily complete, and in each instance, we refer you to the copy of the contract or other document filed as an exhibit to the registration statement. Each of these statements is qualified in all respects by this reference. You can read our SEC filings, including the registration statement, over the Internet at the SEC's website at www.sec.gov.

Upon the completion of this offering, we will be subject to the information reporting requirements of the Securities Exchange Act of 1934 and we will file reports, proxy statements and other information with the SEC. These reports, proxy statements and other information will be available for inspection and copying at the public reference room and web site of the SEC referred to above. We also maintain a website at www.senseibio.com, at which, following the completion of this offering, you may access these materials free of charge as soon as reasonably practicable after they are electronically filed with, or furnished to, the SEC. Information contained on or accessible through our website is not a part of this prospectus, and the inclusion of our website address in this prospectus is an inactive textual reference only.

SENSEI BIOTHERAPEUTICS, INC.

INDEX TO FINANCIAL STATEMENTS

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the stockholders and the Board of Directors of Sensei Biotherapeutics, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Sensei Biotherapeutics, Inc. and subsidiary (the "Company") as of December 31, 2019 and 2018, the related consolidated statements of operations, convertible preferred stock, common stock and stockholders' deficit, and cash flows, for each of the two years in the period ended December 31, 2019, and the related notes (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2019 and 2018, and the results of its operations and its cash flows for each of the two years in the period ended December 31, 2019, in conformity with accounting principles generally accepted in the United States of America.

Going Concern

The accompanying financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note 1 to the financial statements, the Company has incurred cumulative operating losses and negative cash flows from operations and has stated that substantial doubt exists about its ability to continue as a going concern. Management's plans in regard to these matters are also described in Note 1. The financial statements do not include any adjustments that might result from the outcome of this uncertainty.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits, we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ Deloitte & Touche LLP

Baltimore, Maryland

November 12, 2020 (February 1, 2021 as to the effects of the reverse stock split discussed in Note 15)

We have served as the Company's auditor since 2016.

SENSEI BIOTHERAPEUTICS, INC.
CONSOLIDATED BALANCE SHEETS
(In thousands, except share and per share data)

	December 31, 2019	December 31, 2018
Assets		
Current assets:		
Cash and cash equivalents	$ 251	$ 653
Prepaid expenses	251	504
Other current assets	—	123
Total current assets	502	1,280
Property and equipment, net	268	123
Deposits	447	447
Total assets	$ 1,217	$ 1,850
Liabilities, convertible preferred stock and stockholders' deficit		
Current liabilities:		
Accounts payable	$ 3,451	$ 1,108
Current portion of long-term debt, including $6,187 and $696 with related parties as of December 31, 2019 and 2018, respectively	16,055	696
Accrued interest, including $323 and $3 with related parties as of December 31, 2019 and 2018, respectively	1,398	3
Other current liabilities	810	856
Total current liabilities	21,714	2,663
Non-current liabilities:		
Long-term debt, net of current portion	—	4,050
Accrued interest	—	501
Other non-current liabilities	620	571
Total liabilities	22,334	7,785
Commitments and contingencies (Note 7)		
Convertible preferred stock, $0.0001 par value; 20,000,000 shares authorized, 15,257,663 issued and outstanding at December 31, 2019 and 2018; liquidation value of $85,683 thousand at December 31, 2019	47,545	47,545
Stockholders' deficit:		
Common stock, $0.0001 par value; 90,000,000 shares authorized, 369,491 shares and 367,213 shares issued and outstanding at December 31, 2019 and 2018, respectively	—	—
Additional paid-in capital	23,650	22,092
Accumulated deficit	(92,312)	(75,572)
Total stockholders' deficit	(68,662)	(53,480)
Total liabilities, convertible preferred stock and stockholders' deficit	$ 1,217	$ 1,850

The accompanying notes are an integral part of these consolidated financial statements.

SENSEI BIOTHERAPEUTICS, INC.
CONSOLIDATED STATEMENTS OF OPERATIONS
(In thousands, except share and per share data)

	Year Ended December 31,	
	2019	2018
Operating expenses:		
Research and development	$ 8,350	$ 8,227
General and administrative	4,085	4,513
Total operating expenses	12,435	12,740
Loss from operations	(12,435)	(12,740)
Other expense:		
Interest expense, including $320 and $3 with related parties in 2019 and 2018, respectively	(2,256)	(327)
Fair value adjustments on embedded debt derivatives, including $1,070 with related parties in 2019	(1,973)	—
Loss on extinguishment	(75)	—
Other (expense) income, net	(1)	28
Net loss	(16,740)	(13,039)
Cumulative dividends on convertible preferred stock	(3,804)	(3,804)
Net loss attributable to common stockholders	(20,544)	(16,843)
Net loss per common share, basic and diluted	$ (55.92)	$ (45.87)
Weighted-average number of shares used in computing net loss per common share, basic and diluted	367,359	367,213

The accompanying notes are an integral part of these consolidated financial statements.

SENSEI BIOTHERAPEUTICS, INC.
CONSOLIDATED STATEMENTS OF CONVERTIBLE PREFERRED STOCK, COMMON STOCK AND STOCKHOLDERS' DEFICIT
(In thousands, except share data)

	Convertible Preferred Stock		Common Stock		Additional Paid-In Capital	Accumulated Deficit	Total Stockholders' Deficit
	Shares	Amount	Shares	Amount			
Balance at January 1, 2018	15,257,663	$47,545	367,213	$ 37	$ 20,809	$ (62,533)	$ (41,687)
Stock-based compensation expense	—	—	—	—	1,192	—	1,192
Change in par value	—	—	—	(37)	37	—	—
Issuance of common stock warrants	—	—	—	—	54	—	54
Net loss	—	—	—	—	—	(13,039)	(13,039)
Balance at December 31, 2018	15,257,663	47,545	367,213	—	22,092	(75,572)	(53,480)
Stock-based compensation expense	—	—	—	—	1,176	—	1,176
Exercise of common stock warrants	—	—	2,278	—	154	—	154
Issuance of common stock warrants	—	—	—	—	228	—	228
Net loss	—	—	—	—	—	(16,740)	(16,740)
Balance at December 31, 2019	15,257,663	$47,545	369,491	$ —	$ 23,650	$ (92,312)	$ (68,662)

The accompanying notes are an integral part of these consolidated financial statements.

SENSEI BIOTHERAPEUTICS, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands)

	Year Ended December 31,	
	2019	2018
Operating activities		
Net loss	$ (16,740)	$ (13,039)
Adjustments to reconcile net loss to net cash used in operating activities:		
Stock-based compensation expense	1,176	1,192
Depreciation and amortization	73	44
Accretion on debt	1,469	—
Fair value adjustments on embedded debt derivatives	1,973	—
Interest on capital lease	9	—
Changes in operating assets and liabilities:		
Prepaid expenses and other current assets	377	(267)
Deposit	—	(447)
Accounts payable	2,342	931
Accrued interest	894	327
Other liabilities	(144)	946
Net cash used in operating activities	(8,571)	(10,313)
Investing activities		
Purchases of property and equipment	(53)	(31)
Net cash used in investing activities	(53)	(31)
Financing activities		
Proceeds from the exercise of common stock warrants	154	—
Capital lease payments	(27)	—
Proceeds on the issuance of debt, including $3,750 and $750 with related parties in 2019 and 2018, respectively	8,095	750
Net cash provided by financing activities	8,222	750
Net decrease in cash and cash equivalents	(402)	(9,594)
Cash and cash equivalents at beginning of period	653	10,247
Cash and cash equivalents at end of period	$ 251	$ 653
Supplemental disclosure of noncash financing information:		
Capital equipment	$ 166	$ —
Interest on financing	$ 9	$ —

The accompanying notes are an integral part of these consolidated financial statements.

SENSEI BIOTHERAPEUTICS, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
AS OF AND FOR THE YEARS ENDED DECEMBER 31, 2019 AND 2018

1. ORGANIZATION AND OPERATIONS

Business

Sensei Biotherapeutics, Inc. (the "Company" or "Sensei") is a clinical-stage immunotherapy company that was incorporated in Delaware on December 1, 2017. The Company is engaged in the discovery and development of next generation therapies with an initial focus on treatments for cancer.

The total numbers of authorized preferred stock and common stock of Sensei are 20,000,000 and 90,000,000, respectively, with a par value of $0.0001 for each share. Panacea Pharmaceuticals, Inc. ("Panacea"), was incorporated in 1999 as a Maryland corporation. Panacea is a wholly owned subsidiary of Sensei and is currently doing business under the name Sensei Biotherapeutics, Inc.

Going Concern

Since inception, the Company has incurred cumulative operating losses and negative cash flows from operations. These operating losses and negative cash flows have been financed principally from the issuance of debt and equity securities. The Company's ability to continue as a going concern is dependent upon the ability to raise additional debt or equity capital. There can be no assurance that such capital will be available in sufficient amounts or on terms acceptable to the Company. These factors raise substantial doubt about the Company's ability to continue as a going concern. The accompanying consolidated financial statements do not include any adjustments relating to the recoverability of the recorded assets or the classification of liabilities that may be necessary should the Company be unable to continue as a going concern. Risks to which the Company is exposed include uncertainties related to the ability to achieve revenue-generating products; current and potential competitors with greater financial, technological, production, and marketing resources; dependence on key management personnel; and raising additional capital, as needed. Based upon the Company's current plans, management believes there currently is insufficient financial resources to fund the Company's operations for at least 12 months from the issuance date of the 2019 consolidated financial statements.

To address the Company's capital needs, including planned clinical trials, the Company must continue to actively pursue additional equity or debt financing. The Company has been in ongoing discussions with potential venture and institutional investors including investment bankers with respect to such financing. Adequate financing opportunities might not be available to the Company, when and if needed, on acceptable terms or at all. If the Company is unable to obtain additional financing in sufficient amounts or on acceptable terms under such circumstances, the Company's operating results and prospects will be adversely affected.

The accompanying consolidated financial statements have been prepared on a going concern basis, which contemplates the realization of assets and satisfaction of liabilities in the ordinary course of business. The consolidated financial statements do not include any adjustments relating to the recoverability and classification of recorded asset amounts or the amounts and classification of liabilities that might result from the outcome of this uncertainty.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Presentation and Principles of Consolidation

The Company has prepared the accompanying consolidated financial statements in conformity with generally accepted accounting principles in the United States ("US GAAP"). The consolidated financial statements include those accounts of the Company and its subsidiaries after elimination of all intercompany accounts and transactions.

Use of Estimates

The preparation of consolidated financial statements in conformity with US GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities at the date of the consolidated financial statements, and the reported amounts of expenses during the reporting periods presented. Estimates are used for, but are not limited to, the Company's ability to continue as a going concern, depreciation of equipment, the Company's enterprise value, fair value of financial instruments, and contingencies. Actual results may differ from those estimates.

Cash and Cash Equivalents

Cash equivalents are highly liquid investments with an original maturity of 90 days or less at the date of purchase and consist of time deposits and investments in money market funds with commercial banks and financial institutions.

Concentrations of Credit Risk and Off-Balance Sheet Risk

The Company maintains its cash in bank deposit and checking accounts that at times exceed insured limits. The Company has not experienced any losses in such accounts and believes it is not exposed to any significant credit risk.

Property and Equipment

Property and equipment are recorded at cost and depreciated or amortized over the estimated useful lives of the assets. Repairs or maintenance costs are expensed as incurred. Depreciation is computed using the straight-line method over the following estimated useful lives:

Office equipment and furniture	3—7 years
Research equipment	1—7 years
Capital lease	Lesser of the asset life or lease term

Fair Value of Financial Instruments

US GAAP requires disclosure of fair value information about financial instruments, whether or not recognized in the balance sheet, for which it is practicable to estimate that value. The framework provides a fair value hierarchy that prioritizes the inputs for the valuation techniques. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to unobservable inputs (Level 3 measurements) and minimizes the use of unobservable inputs. The most observable inputs are used, when available. The three levels of the fair value hierarchy are described as follows:

Level 1—Inputs to the valuation methodology are unadjusted quoted prices for identical assets or liabilities in active markets that the Company has the ability to access.

Level 2—Inputs to the valuation methodology include quoted prices for similar assets and liabilities in active markets; quoted prices for identical or similar assets and liabilities in markets that are not active; inputs other than quoted prices that are observable for the asset or liability; and inputs that are derived from, or corroborated by, observable market data by correlation or other means.

Level 3—Inputs to the valuation methodology are unobservable and significant to the fair value measurement.

Classification of Convertible Preferred Stock

The Company classifies convertible preferred stock outside of stockholders' deficit on its balance sheets as the requirements of triggering a deemed liquidation event are not within the Company's control. In the event of a deemed liquidation event, the proceeds from the event are distributed in accordance with liquidation preferences (Note 8). The Company adjusts the carrying value of the convertible preferred stock to their redemption values when it becomes probable a redemption event will occur.

Research and Development

Research and development costs are expensed in the period incurred. Research and development costs include payroll and personnel expense; consulting costs; external contract research and development costs; raw materials and allocated overhead such as depreciation and amortization, rent and utilities. Advance payments for goods and services to be used in future research and development activities are recorded as prepaid expenses and are expensed over the service period as the services are provided or when the goods are consumed.

Clinical trial costs are a component of research and development expenses. The Company estimates expenses incurred for clinical trials that are in process based on services performed under contractual agreements with clinical research organizations and actual clinical investigators. Included in the estimates are (1) the fee per patient enrolled as specified in the clinical trial contract with each institution participating in the clinical trial and (2) progressive data on patient enrollments obtained from participating clinical trial sites and the actual services performed. Changes in clinical trial assumptions, such as the length of time estimated to enroll all patients, rate of screening failures, patient drop-out rates, number and nature of adverse event reports, and the total number of patients enrolled can impact the average and expected cost per patient and the overall cost of the clinical trial. The Company monitors the progress of the trials and their related activities and adjusts, when applicable, the accruals accordingly. Adjustments to accruals are charged to expense in the period in which the facts that give rise to the adjustment become known. In the event of early termination of a clinical trial or site, the Company would accrue an amount based on estimates of the remaining noncancellable obligations associated with winding down the clinical trial or cancelation of a participating site.

Stock-Based Compensation

The Company accounts for all stock-based compensation, including stock options and warrants, at fair value and recognizes stock-based compensation expense for those equity awards, net of actual forfeitures, over the requisite service period, which is generally the vesting period of the respective award.

The fair value of the Company's stock options and warrants on the date of grant was determined by the Company with the assistance of a third-party valuation specialist in accordance with the guidance in the American Institute of Certified Public Accountants Valuation Guide, *Valuation of Privately-Held-Company Equity Securities Issued as Compensation*, as the Company's common stock is not actively traded.

Income Taxes

Income taxes are accounted for using the asset and liability method of accounting for taxes. Deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the consolidated financial statement carrying amounts of existing assets and liabilities and their respective tax bases, including operating loss carryforwards. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the year in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date.

A valuation allowance is established when necessary to reduce net deferred tax assets to the amount expected to be realized through future operations. Income tax expense consists of taxes payable for the current period and the net change during the period in deferred tax assets and liabilities.

The Company evaluates its uncertain tax positions based on a determination of whether and how much of a tax benefit taken by the Company in its tax filings or positions is more likely than not to be realized. Potential interest and penalties associated with any uncertain tax positions are recorded as a component of income tax expense. Management has evaluated the Company's tax position and concluded that the Company has taken no uncertain tax positions that would require adjustment or disclosure in the consolidated financial statements.

Net Loss Per Share

The Company follows the two-class method when computing net loss per share as the Company has issued shares that meet the definition of participating securities. The two-class method determines net loss per share for each class of common and participating securities according to dividends declared or accumulated, and participation rights in undistributed earnings. The two-class method requires income available to common stockholders for the period to be allocated between common and participating securities based upon their respective rights to receive dividends as if all income for the period had been distributed.

Basic net loss per share attributable to common stockholders is computed by dividing the net loss attributable to common stockholders by the weighted average number of common shares outstanding for the period. Diluted net loss attributable to common stockholders is computed by adjusting net loss attributable to common stockholders to reallocate undistributed earnings based on the potential impact of dilutive securities. Diluted loss per share attributable to common stockholders is computed by dividing the diluted net loss attributable to common stockholders by the weighted average number of common shares outstanding for the period, including potential dilutive common stock. For purpose of this calculation, outstanding stock options, stock warrants and convertible preferred stock are considered potential dilutive common stock and are excluded from the computation of net loss per share as their effect is anti-dilutive.

The Company's convertible preferred stock contractually entitles the holders of such shares to participate in dividends but does not contractually require the holders of such shares to participate in losses of the Company. Accordingly, in periods in which the Company reports a net loss, such losses are not allocated to such participating securities. In periods in which the Company reports a net loss attributable to common stockholders, diluted net loss per share attributable to common stockholders is the same as basic net loss per share attributable to common stockholders, since dilutive common shares are not assumed to be outstanding if their effect is anti-dilutive. The Company reported a net loss attributable to common stockholders for the years ended December 31, 2019 and 2018.

Comprehensive Loss

There were no differences between net loss and comprehensive loss presented in the consolidated statements of operations for 2019 and 2018.

Segments

Operating segments are defined as components of an entity for which separate financial information is available and that is regularly reviewed by the chief operating decision maker ("CODM'), in deciding how to allocate resources to an individual segment and in assessing performance. The Company's CODM is its chief executive officer. The Company has determined it operates in one segment.

Emerging Growth Company Status

The Company is an "emerging growth company," ("EGC") as defined in the Jumpstart Our Business Startups Act, (the "JOBS Act"), and may take advantage of certain exemptions from various reporting requirements that are applicable to other public companies that are not EGCs. The Company may take advantage of these exemptions until it is no longer an EGC under Section 107 of the JOBS Act and has elected to use the

extended transition period for complying with new or revised accounting standards. As a result of this election, the Company's financial statements may not be comparable to companies that comply with public company Financial Accounting Standards Board ("FASB") standards' effective dates. The Company may take advantage of these exemptions up until the last day of the fiscal year following the fifth anniversary of an offering or such earlier time that it is no longer an EGC.

Recently Issued Accounting Standards

In February 2016, the FASB issued Accounting Standards Updates ("ASU") No. 2016-02, *Leases (Topic 842)*, as amended, with guidance regarding the accounting for and disclosure of leases. The update requires lessees to recognize the liabilities related to all leases, including operating leases on the balance sheet. This update also requires lessees and lessors to disclose key information about their leasing transactions. This update is effective for entities other than public business entities, including emerging growth companies that elected to defer compliance with new or revised financial accounting standards until a company that is not an issuer is required to comply with such standards, for annual reporting periods beginning after December 15, 2021, and interim periods within annual periods beginning after December 15, 2022. Early adoption is permitted. The Company is currently assessing the impact of adopting ASU No. 2016-02 on the consolidated financial statements and related disclosures.

In June 2016, the FASB issued ASU No. 2016-13, *Financial Instruments-Credit Losses: Measurement of Credit Losses on Financial Instruments (Topic 326)*. ASU No. 2016-13 requires measurement and recognition of expected credit losses for financial assets. In April 2019, the FASB issued clarification to ASU No. 2016-13 within ASU No. 2019-04, *Codification Improvements to Topic 326, Financial Instruments-Credit Losses, Topic 815, Derivatives and Hedging, and Topic 825, Financial Instruments*. This update is effective for entities other than public business entities, including emerging growth companies that elected to defer compliance with new or revised financial accounting standards until a company that is not an issuer is required to comply with such standards, for annual reporting periods beginning after December 15, 2021.The Company is currently evaluating the impact that ASU No. 2016-13 will have on the consolidated financial statements and related disclosures.

In August 2018, the FASB issued ASU No. 2018-13, *Fair Value Measurement* (*Topic 820*), Disclosure Framework—Changes to the Disclosure Requirements for Fair Value Measurement. This update removed the following disclosure requirements: (1) the amount of and reasons for transfers between Level 1 and Level 2 of the fair value hierarchy; (2) the policy for timing of transfers between levels; and (3) the valuation processes for Level 3 fair value measurements. Additionally, this update added the following disclosure requirements: (1) the changes in unrealized gains and losses for the period included in other comprehensive income and loss for recurring Level 3 fair value measurements held at the end of the reporting period; (2) the range and weighted average of significant unobservable inputs used to develop Level 3 fair value measurements. For certain unobservable inputs, an entity may disclose other quantitative information (such as the median or arithmetic average) in lieu of the weighted average if the entity determines that other quantitative information would be a more reasonable and rational method to reflect the distribution of unobservable inputs used to develop Level 3 fair value measurements. ASU No. 2018-13 will be effective for fiscal years beginning after December 15, 2019 with early adoption permitted. As of December 31, 2019, the Company has not elected to early adopt this update but does not expect that the adoption of this update will have a material effect on the consolidated financial statements and related disclosures.

In December 2019, the FASB issued ASU No. 2019-12, *Simplifying the Accounting for Income Taxes*. ASU No. 2019-12 eliminates certain exceptions related to the approach for intra-period tax allocation, the methodology for calculating income taxes in an interim period and the recognition of deferred tax liabilities for outside basis differences. It also clarifies and simplifies other aspects of the accounting for income taxes. This update is effective for entities other than public business entities, including emerging growth companies that elected to defer compliance with new or revised financial accounting standards until a company that is not an issuer is required to comply with such standards, for annual reporting periods beginning after December 15,

2021, and interim periods within annual periods beginning after December 15, 2022. The Company is currently evaluating the impact that ASU No. 2019-12 will have on the consolidated financial statements and related disclosures.

In August 2020, the FASB issued ASU No. 2020-06, *Debt – Debt with Conversion and Other (Subtopic 470-20) and Derivatives and Hedging – Contracts in Entity's Own Equity (Subtopic 815-40)*. This update simplifies the accounting for convertible debt instruments by removing certain accounting separation models as well as the accounting for debt instruments with embedded conversion features that are not required to be accounted for as derivative instruments. The update also updates and improves the consistency of earnings per share calculations for convertible instruments. The amendments in this ASU are effective for fiscal years beginning after December 15, 2021, including interim periods within those fiscal years. The Company is currently evaluating the impact that the implementation of this update will have on the Company's consolidated financial statements and related disclosures.

3. PROPERTY AND EQUIPMENT, NET

Property and equipment, net consist of the following (in thousands):

	December 31,	
	2019	2018
Office equipment and furniture	$ 14	$ 14
Research equipment	641	423
Total property and equipment	655	437
Less accumulated depreciation and amortization	(387)	(314)
Property and equipment, net	$ 268	$ 123

Depreciation and amortization expense for the years ended December 31, 2019 and 2018, was $73 thousand and $44 thousand, respectively.

4. OTHER CURRENT LIABILITIES

Other current liabilities consist of the following (in thousands):

	December 31,	
	2019	2018
Compensation and benefits	$685	$649
Other	125	207
Total other current liabilities	$810	$856

5. DEBT

Debt consists of the following (in thousands):

	December 31,	
	2019	2018
2019 Notes	$ 2,345	$ —
2019 Secured Notes (related party)	3,854	—
2019 Bridge Note	1,000	—
2019 Special Note	2,570	—
2018 Bridge Notes (related party)	3,000	750
2017 Notes	4,050	4,050
Discounts	(764)	(54)
Total debt	16,055	4,746
Less current portion	(16,055)	(696)
Noncurrent debt	$ —	$4,050

As of December 31, 2019, all debts are due in 2020 and are presented as current liabilities in the Company's consolidated balance sheet.

2019 Notes

During the period from April 2019 through September 2019, the Company issued $2,345 thousand of convertible promissory notes ("2019 Notes"). Interest on the principal amount outstanding is fixed at 10% with a one-year maturity date, if not previously converted to shares of the Company's equity securities.

The 2019 Notes can convert at the option of the holders in the event the Company sells shares of its equity securities on or before the maturity date with total proceeds of not less than $5 million or $20 million, depending upon the underlying 2019 Notes agreement, to any third-party investor. The 2019 Notes and unpaid interest will convert into equity securities subject to the same terms and conditions applicable to the equity securities sold.

The 2019 Notes include detachable warrants to purchase 7,313 of the Company's common stock at exercise prices between $64.80 and $122.88 per share. The detachable warrants have an expiration date of ten years from the issuance date, or fiscal year 2029. The estimated fair value of the detachable warrants was determined using the Black-Scholes option-pricing model (Level 3 hierarchy) and totaled $51 thousand upon issuance. The fair value of the detachable warrants was treated as a discount on the 2019 Notes and amortized as incremental interest expense using the effective interest method over the life of the 2019 Notes.

2019 Secured Notes (Related Party)

In September and October 2019, the Company issued an aggregate of $1,500 thousand in secured convertible promissory notes ("2019 Secured Notes") with a repayment premium of 150% of the principal amount. Interest on the principal amount outstanding is fixed at 10% with a maturity date of December 31, 2020. The repayment premium of $2,250 thousand is being amortized as incremental interest expense using the effective interest method over the life of the 2019 Secured Notes.

The 2019 Secured Notes will automatically convert in the event the Company sells shares of its equity securities on or before the maturity date with total proceeds of not less than $25 million to any third-party investor, excluding the conversion of the 2019 Secured Notes or other convertible securities for capital raising purposes. The 2019 Secured Notes, unpaid interest plus the repayment premium shall convert into equity securities subject to the same terms and conditions applicable to the equity securities sold.

The automatic conversion features of the 2019 Secured Notes were determined by management to be embedded derivative instruments. The embedded derivative instruments are initially measured at fair value and classified as a liability on the balance sheet, within the same line item as the 2019 Secured Notes. Subsequent changes in fair value are in net loss as fair value adjustments on embedded debt derivatives expense. To determine the fair value of the aggregated automatic conversion features, management utilized a "with-and-without" in a modified convertible bond model, incorporating the automatic conversion features. Key assumptions utilized in determining the initial fair value were: (a) 5% to 10% probability of settlement at the maturity date of December 31, 2020; (b) 25% probability of settlement on a change of control or upon a qualified initial public offering in 9 to 10 months of issuance; and (c) 65% probability of settlement on a qualified financing in 6 months of issuance. Based upon the modified convertible bond model utilized by management, the fair value of the automatic conversion features was determined to be $940 thousand upon issuance of the 2019 Secured Notes and is being amortized as incremental interest expense using the effective interest method over the life of the 2019 Secured Notes.

In 2019, the Company recognized an additional $617 thousand of interest expense relating to amortization of the repayment premium and the initial discount related to the embedded derivative instrument.

2019 Bridge Note

In November 2019, the Company issued a $1,000 thousand bridge convertible promissory note ("2019 Bridge Note"). Interest on the principal amount is fixed at 7% and commences 60 days after the issuance date with a maturity date of December 31, 2020.

The 2019 Bridge Note is convertible in the event the Company sells shares of its preferred equity security on or before the maturity date with total proceeds of not less than $8 million to any third-party investor, including the conversion of the certain secured 2019 Note but excluding the principal and interest under any other promissory notes.

2019 Special Note

In April 2019, the Company issued a $1,000 thousand convertible promissory note ("2019 Special Note"). Interest on the principal amount outstanding is fixed at 10% with a one-year maturity date, if not previously converted to shares of the Company's equity securities.

The 2019 Special Note can convert at the option of the holders in the event the Company sells shares of its equity securities on or before the maturity date with total proceeds of not less than $20 million to any third-party investor. The 2019 Special Note and unpaid interest will convert into equity securities subject to the same terms and conditions applicable to the equity securities sold.

The 2019 Special Note contains a feature requiring amendment of the original instrument if the Company issues additional instruments with preferable terms relative to those contained in the 2019 Special Note. In September 2019, the original agreement was amended requiring a 150% repayment premium in addition to the original 10% interest rate based upon the Company's issuance of the 2019 Secured Notes. The contractual amendment was treated as a debt extinguishment and a loss of $75 thousand was recorded in net loss as a loss on extinguishment expense. The repayment premium of $1,500 thousand is being amortized as incremental interest expense using the effective interest method over the life of the 2019 Special Note.

The automatic conversion features of the 2019 Special Note were determined by management to be embedded derivative instruments. The embedded derivative instruments are initially measured at fair value and classified as a liability on the balance sheet, within the same line item as the 2019 Special Note. Subsequent changes in fair value are in net loss as fair value adjustments on embedded debt derivatives expense. To determine the fair value of the aggregated automatic conversion features, management utilized a

"with-and-without" in a modified convertible bond model, incorporating the automatic conversion features. Key assumptions utilized in determining the initial fair value were: (a) 10% probability of settlement at the maturity date of December 31, 2020; (b) 25% probability of settlement on a change of control or upon a qualified initial public offering in 10 months of issuance; and (c) 65% probability of settlement on a qualified financing in 6 months of issuance. Based upon the modified convertible bond model utilized by management, the fair value of the automatic conversion features was determined to be $663 thousand upon issuance of the 2019 Special Note and is being amortized as incremental interest expense using the effective interest method over the life of the 2019 Special Note.

The 2019 Special Note includes a detachable warrant allowing the purchase of 3,886 of the Company's common stock at an exercise price of $64.32 per share. The detachable warrant has an expiration date of ten years from the issuance date, or fiscal year 2029. The fair value of the detachable warrant was treated as a discount on the 2019 Special Note and amortized as incremental interest expense using the effective interest method over the life of the 2019 Special Note. The estimated fair value of the detachable warrant was determined using the Black-Scholes option-pricing model (Level 3 hierarchy) and totaled $74 thousand upon issuance.

In 2019, the Company recognized an additional $609 thousand of interest expense relating to amortization of the repayment premium, discount related to the detachable warrant and the initial discount related to embedded derivative instruments.

On March 27, 2020, the Company consented to the exchange of the 2019 Special Note where the original holder of the 2019 Special Note sold it to a current equity owner of the Company. The detachable warrant issued in conjunction with the 2019 Special Note for 3,886 common stock were not included in the exchange and were subsequently canceled.

2018 Bridge Notes (Related Party)

The Company issued $2,250 thousand and $750 thousand 2018 convertible promissory notes ("2018 Bridge Notes") in 2019 and 2018, respectively, to fund the Company's operations. Interest on the principal amount outstanding is fixed at 10% with an amended maturity date to permit the conversion of all 2018 Bridge Notes into Series AA preferred stock, as described further in Note 16, *Subsequent Events*.

The 2018 Bridge Notes are convertible in the event the Company sells shares of its equity securities with total proceeds of not less than $5 million to any third-party investor, excluding the conversion of the 2018 Bridge Notes or other convertible securities for capital raising purposes. At the election of the lender, the 2018 Bridge Notes and unpaid interest shall convert into equity securities subject to the same terms and conditions applicable to the equity securities sold.

The 2018 Bridge Notes include detachable warrants to purchase 11,718 and 3,906 shares issued in 2019 and 2018, respectively, of the Company's common stock at an exercise price of $122.88 per share. The detachable warrants expire on December 19, 2028. The estimated fair value of the detachable warrants was determined using the Black-Scholes option-pricing model (Level 3 hierarchy), treated as a discount on the 2018 Bridge Notes and amortized as incremental interest expense using the effective interest method over the life of the 2018 Bridge Notes.

2017 Notes

The Company issued $4,050 thousand convertible promissory notes in 2017 ("2017 Notes") in exchange for cash of the same amount. Interest on the principal amount outstanding is fixed at 8% with an original maturity date of April 30, 2018, convertible into preferred stock at a share price equal to $13.50, unless converted prior to the maturity date. After December 31, 2019, the maturity date was extended to December 31, 2020.

The 2017 Notes provide the lenders with certain conversion rights for all unpaid principal and interest in the event (i) the Company sells shares of its preferred stock on or before December 31, 2020, with total proceeds of not less than $5 million to any third-party investor, including the conversion of the 2017 Notes or such lower amount as agreed by the lenders; (ii) the Company enters into a merger, combination, or sale of all or substantially all of the stock or assets of the Company—at such time all unpaid principal and interest shall convert to Series G preferred shares at a share price equal to $13.50; or (iii) of maturity on December 31, 2020.

6. FAIR VALUE MEASUREMENTS

The following table presents information about the Company's financial liabilities measured at fair value on a recurring basis and indicate the level of the fair value hierarchy utilized to determine such fair values (in thousands):

	Fair Value Measurements as of December 31, 2019			
	Level 1	Level 2	Level 3	Total
Current liabilities				
Embedded debt derivatives	$ —	$ —	$3,920	$3,920
Total liabilities measured at fair value	$ —	$ —	$3,920	$3,920

The Company's embedded debt derivatives are measured at fair value using a probability-weighted discounted cash flow valuation methodology. The determination of the fair value of embedded debt derivatives includes inputs not observable in the market and as such, represents a Level 3 measurement. The methodology utilized requires inputs based on certain subjective assumptions, including probabilities of debt settlement scenarios and a discount rate. This approach results in the classification of these embedded debt derivatives as Level 3 of the fair value hierarchy. The assumptions utilized to value the embedded debt derivatives at December 31, 2019 were the probability of (a) 3% probability of settlement at the contractual maturity date; (b) 5% probability of settlement on a change of control or upon a qualified initial public offering prior to the contractual maturity date; and (c) 92% probability of settlement on a qualified financing prior to the contractual maturity date. For the year ended December 31, 2019, the Company recognized a $2.0 million expense in the statement of operations as other expense—fair value adjustments on embedded debt derivatives.

The following table provides a reconciliation of embedded debt derivatives measured at fair value on a recurring basis using significant unobservable inputs (Level 3) (in thousands):

	Amount
Balance at December 31, 2018	$ —
Additions	1,947
Change in fair value	1,973
Balance at December 31, 2019	$3,920

There were no transfers among Level 1, Level 2 or Level 3 categories in the year ended December 31, 2019.

7. COMMITMENTS AND CONTINGENCIES

Operating Lease

As of December 31, 2019, the Company leases office facility and other equipment under operating leases, which expire at various dates through 2024. Lease expense for the years ended December 31, 2019 and 2018 was $1,107 thousand and $1,028 thousand, respectively.

The following table presents the future annual minimum payments required under noncancellable operating leases at December 31, (in thousands):

2020	$1,171
2021	1,177
2022	1,204
2023	1,234
2024	524
2025	—
Total operating lease obligations	$5,310

Capital Lease

The Company leases research equipment under a capital finance lease. The capital lease asset is classified within property and equipment, net within the Company's consolidated balance sheets.

The following table presents the future annual minimum payments under the capitalized lease, together with the present value of net minimum lease payments at December 31, (in thousands):

2020	$ 41
2021	41
2022	41
2023	41
2024	14
Total capital lease obligations	178
Less amount representing interest	(31)
Present value of minimum capital lease obligations	$147

License Agreements

In the normal course of business, the Company enters into licensing agreements with various parties to obtain the right to make, use, and sell licensed products currently in development.

Litigation

The Company records estimated losses from loss contingencies (such as a loss arising from a litigation) when it determines that it is probable a liability has been incurred and the amount of loss can be reasonably estimated. Litigation is subject to many factors that are difficult to predict so that there can be no assurance, in the event of a material unfavorable result in one or more claims, the Company will not incur material costs.

During 2017, the Company became actively involved in a matter pending in the Ontario (Canada) Superior Court of Justice which names, among multiple other defendants, the Company and two former officers of the Company. The claims pending in this matter allege breach of contract by the Company and seek declaratory and other relief, including monetary damages from the Company, and the individual defendants, including the Company's former officers. The claims by such plaintiffs were originally made in a lawsuit filed in Ontario in October 2011, but was not pursued by such plaintiffs in any material manner until 2017. The Company believes that there is no merit to the claims alleged against the Company and its former officers, including no alleged breach of contract by the Company and intends to vigorously defend against the claims pertaining to the Company and its former officers. At the present stage of the suit, management believes the outcome in this matter is not likely to have any material impact on the Company's results, cash flows, or financial position.

8. CONVERTIBLE PREFERRED STOCK

For the years ended 2019 and 2018, there were no transactions involving Series A, B, C, D, E, and F convertible preferred stock. During 2018, the Company changed the par value of its convertible preferred stock from $0.10 to $0.0001 per share. The change had no impact on the number of shares of convertible preferred stock outstanding.

The following is a summary of the Company's Series A, B, C, D, E, and F convertible preferred stock at December 31, 2019 and 2018 (in thousands, except for share and par value data):

	Par Value	Outstanding	Value
Series A convertible preferred stock	$ 0.0001	2,035,428	$ 1,425
Series B convertible preferred stock	$ 0.0001	1,809,996	2,715
Series C convertible preferred stock	$ 0.0001	2,156,667	6,470
Series D convertible preferred stock	$ 0.0001	2,969,693	9,800
Series E convertible preferred stock	$ 0.0001	4,285,879	17,135
Series F convertible preferred stock	$ 0.0001	2,000,000	10,000
Total		15,257,663	$ 47,545

A summary of the more significant rights and preferences of the Company's convertible preferred stock are as follows:

Dividend Rights

Dividends are cumulative and accrue annually on all outstanding series of preferred stock at 8% per annum.

Dividends are payable in cash, when and if determined and declared by the board of directors. The dividend rate is subject to adjustment for stock splits, stock dividends, recapitalizations, and other similar events that impact the number of shares outstanding.

Holders of Series C, D, E, and F convertible preferred stock are entitled to receive dividends pari passu prior and in preference to holders of Series A and B convertible preferred stock and common stock. Holders of Series A and B convertible preferred stock are entitled to receive dividends pari passu prior and in preference to common stockholders.

Cumulative and unpaid dividends will convert into shares of common stock when the underlying convertible preferred stock is converted to common stock. The conversion rates for the cumulative and unpaid dividends are the same as those for the underlying convertible preferred stock.

The following is a summary of cumulative and unpaid dividends on the Company's convertible preferred stock (in thousands):

	December 31,	
	2019	2018
Series A convertible preferred stock	$ 2,173	$ 2,059
Series B convertible preferred stock	3,872	3,655
Series C convertible preferred stock	8,071	7,551
Series D convertible preferred stock	10,965	10,181
Series E convertible preferred stock	10,751	9,379
Series F convertible preferred stock	2,311	1,511
Total	$ 38,143	$ 34,336

Liquidation Rights

In the event of liquidation, before any distribution of assets shall be made to the common stockholders, the holders of outstanding shares of convertible preferred stock are first entitled to be paid the following per share amounts on a pari passu basis, prior to the payment of accrued but unpaid dividends described above:

Series A convertible preferred stock	$0.70
Series B convertible preferred stock	$1.50
Series C convertible preferred stock	$3.00
Series D convertible preferred stock	$3.30
Series E convertible preferred stock	$4.00
Series F convertible preferred stock	$5.00

Voting Rights

Holders of outstanding shares of convertible preferred stock are entitled to the number of votes equal to the number of whole shares of common stock into which the applicable convertible preferred stock is convertible. The Company may not undertake certain defined actions—such as the repurchase or redemption of any shares of common stock, the disposal of substantially all of its assets, the amendment of the articles of incorporation or by-laws, or the creation of any new class or series of equity or debt instruments—without first obtaining the consent or approval of 66.67% of the holders of Series A and Series B convertible preferred stock. Holders of the Series C, D, E, and F convertible preferred stock have additional voting rights that require the Company to obtain the consent or approval of 66.67% of these shareholders prior to (i) redeeming any shares of common stock or convertible preferred stock over 5% of the Company's issued and outstanding stock, (ii) creating a class of stock with rights and preferences superior to the Series E convertible preferred stock, (iii) declaring or paying dividends on shares of common stock, or (iv) recapitalizing or merging with any other corporation or increasing the number of members of the board of directors.

Conversion Rights

Prior to the reverse stock split disclosed in Note 15, each share of all series of convertible preferred stock is convertible into an equal number of shares of common stock at the option of the holder. The conversion price is subject to adjustment should specified dilutive events occur. All shares of the convertible preferred stock automatically convert into shares of the Company's common stock upon the earlier of (i) an underwritten firm commitment public offering resulting in aggregate net cash proceeds of $40 million at a per share price equal to or greater than $384.00 or (ii) the execution of a definitive agreement for the purchase of common stock of the Company sufficient to effect a change of control, merger, or reorganization at a per share price in excess of $192.00. The Company has reserved approximately 317,805 shares of common stock for the potential conversion of the convertible preferred stock.

9. COMMON STOCK

During 2018, the Company changed the par value of its common stock from $0.10 to $0.0001 per share. The change had no impact on the number of shares of common stock outstanding. Common stockholders are entitled to one vote for each share of common stock held at all meetings of stockholders and written actions in lieu of meetings. Common stockholders are entitled to receive dividends, if and when declared by the board of directors. No dividends have been declared or paid by the Company through December 31, 2019.

10. STOCK-BASED COMPENSATION

In 2018, the board of directors approved the Company's 2018 Stock Incentive Plan (the "2018 Plan")—which supersedes and replaces previous incentive stock plans—and reserved 104,167 common shares for issuance under the 2018 Plan. All previously issued and outstanding stock-based awards issued under

predecessor incentive plans were adopted into the 2018 Plan. The 2018 Plan provides the issuance of stock awards to attract and retain employees, directors, consultants and advisors and to provide incentive for individuals to contribute to the growth of the Company. As of December 31, 2019, approximately 22,145 common shares remain available for future awards under the 2018 Plan.

Stock Options

During 2019, the Company granted options to purchase 6,246 shares of common stock to employees, consultants, and nonexecutive directors pursuant to the 2018 Plan. The stock options granted during 2019 vest over a period of 6 to 48 months with an exercise price between $16.32 and $122.88 per share. The Company uses the Black-Scholes option-pricing model to estimate the fair value of the stock options on the grant dates between $0.48 and $2.88 per share.

During 2018, the Company granted options to purchase 66,033 shares of common stock to employees, consultants, and nonexecutive directors pursuant to the 2018 Plan. The stock options granted during 2018 vest over a period of 24 to 48 months with an exercise price of $122.88 per share. The Company uses the Black-Scholes option-pricing model to estimate the fair value of the stock options on the grant dates between $10.56 and $80.16 per share.

The following is a summary of the stock option award activity under the 2018 Plan during the years ended December 31, 2019 and 2018:

	Number of Shares	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Term (in years)	Aggregate Intrinsic Value (in thousands)
Outstanding at December 31, 2017	14,917	$ 109.92	9.05	$ 193
Granted	66,033	$ 122.88		
Exercised	—	$ —		
Forfeited	(156)	$ 122.88		
Expired	—	$ —		
Outstanding at December 31, 2018	80,794	$ 120.73	9.20	$ —
Granted	6,246	$ 42.96		
Exercised	—	$ —		
Forfeited	(8,160)	$(122.47)		
Expired	(1,276)	$(116.53)		
Outstanding at December 31, 2019	77,604	$ 114.11	8.12	$ —
Exercisable at December 31, 2019	45,831	$ 118.56	7.79	$ —
Options expected to vest at December 31, 2019	31,773	$ 95.04	8.09	$ —

At December 31, 2019, there was approximately $1,226 thousand of unrecognized stock-based compensation expense associated with the stock options, which is expected to be recognized over a weighted-average period of 2.26 years.

Common Stock Warrants

During 2019, the Company granted warrants to purchase approximately 208 shares of the Company's common stock to a vendor. The common stock warrants granted during 2019 vested immediately with an exercise price of $122.88 per share. The Company uses the Black-Scholes option-pricing model to estimate the fair value of the awards on the grant date of $10.08 per share. During 2018, the Company granted warrants to purchase approximately 312 of the Company's common stock. The common stock warrants granted during 2018 vested immediately with an exercise price of $144.00. The Company uses the Black-Scholes option-pricing model to estimate the fair value of the common stock warrants on the grant date of $74.40 per share.

The following is a summary of the common stock warrant activity during the years ended December 31, 2019 and 2018:

	Number of Shares	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Term (in years)	Aggregate Intrinsic Value (in thousands)
Outstanding at December 31, 2017	74,808	$ 23.68	3.33	$ 7,579
Granted	312	$ 144.00		
Exercised	—	$ —		
Expired	—	$ —		
Outstanding at December 31, 2018	75,120	$ 24.19	2.34	$ 596
Granted	208	$ 122.88		
Exercised	(2,278)	$ (67.51)		
Expired	(15,630)	$ (78.72)		
Outstanding at December 31, 2019	57,420	$ 7.95	4.83	$ —
Exercisable at December 31, 2019	57,420	$ 7.95	4.83	$ —

As of December 31, 2019, there was no unrecognized stock-based compensation expense associated with the common stock warrants.

During 2019 and 2018, the Company utilized the Black-Scholes option-pricing model for estimating the fair value of the stock options and common stock warrants granted. The following table presents the assumptions and the Company's methodology for developing each of the assumptions used:

	2019	2018
Volatility	90.0%	72.5%–75.0%
Expected life (years)	0.5–10.0	6.0–10.0
Risk-free interest rate	1.4%–2.5%	2.2%–2.8%
Dividend rate	— %	— %

- Volatility—The Company estimates the expected volatility of its common stock at the date of grant based on the historical volatility of comparable public companies over the expected term.
- Expected life—The expected life is estimated as the contractual term.
- Risk-free interest rate—The risk-free rate for periods within the estimated life of the stock award is based on the U.S. Treasury yield curve in effect at the time of grant.
- Dividend rate—The assumed dividend yield is based upon the Company's expectation of not paying dividends in the foreseeable future.

Stock-based compensation expense was recorded in the following line items in the consolidated statements of operations for the years ended December 31, 2019 and 2018 (in thousands):

	2019	2018
Research and development	$ 588	$ 672
General and administrative	588	520
Total stock-based compensation	$1,176	$1,192

11. EMPLOYEE RETIREMENT PLAN

The Company maintains a defined contribution 401(k) profit-sharing plan (the "Plan") for all employees. Under the Plan, participants may make voluntary contributions up to the maximum amount allowable by law.

The Plan is based on employees' salary deferral, and the Company matches employees' contributions up to 4% of the employees' base salary. Employees are 100% vested in the Company's match contributions. During the years ended December 31, 2019 and 2018, the Company's matching contributions were approximately $102 thousand and $75 thousand, respectively.

12. RELATED-PARTY TRANSACTIONS

Debt

During 2019 and 2018, the Company entered debt arrangements with a principal owner of the Company. These arrangements relate to the 2019 Secured Notes and 2018 Bridge Notes disclosed in Note 5 of these financial statements.

Consulting Agreement

During 2018, the Company entered into a consulting agreement with the son of the Company's founder and prior chief scientific officer for services to the Company. Under the terms of the agreement, the Company paid $18 thousand for services performed in 2018. The agreement was terminated by mutual consent in 2018.

13. INCOME TAXES

Income tax expense consists of the following (in thousands):

	Year Ended December 31,	
	2019	2018
Current:		
Federal	$ —	$ —
State	—	—
Current tax provision	—	—
Deferred:		
Federal	(2,551)	(2,580)
State	(776)	(782)
Deferred tax benefit	(3,327)	(3,362)
Less change in valuation allowance	3,327	3,362
Total income tax provision	$ —	$ —

The effective income tax rate for the years ended December 31, 2019 and 2018 is different from the federal statutory income tax rate primarily due to the change in valuation allowance against deferred tax assets and permanent differences primarily related to non-deductible interest and embedded debt derivatives expense. The reconciliation of the federal statutory income tax rate to the Company's effective income tax rate is as follows:

	Year Ended December 31,	
	2019	2018
Federal statutory income tax rate	21.0%	21.0%
State income taxes, net of federal benefit	4.6	6.0
Non-deductible interest and embedded debt derivative expense	(5.4)	(0.6)
Other	(0.4)	(0.6)
Change in valuation allowance	(19.8)	(25.8)
Effective income tax rate	— %	— %

The Company's deferred tax assets consist primarily of its net operating loss and research and development tax credit carryforwards, along with other minor temporary differences. No amounts are being considered as an uncertain tax position or disclosed as an unrecognized tax benefit. The Company has provided a valuation allowance against its total net deferred tax assets because the Company's ability to generate sufficient future taxable income is uncertain.

Significant components of the Company's deferred tax assets and liabilities consist of the following (in thousands):

	December 31,	
	2019	2018
Net operating loss carryforwards	$ 18,338	$ 15,400
Equity-based compensation	2,384	2,137
Research and development tax credit carryforwards	1,364	1,364
Other accruals	142	—
Total deferred tax assets	22,228	18,901
Valuation allowance	(22,228)	(18,901)
Net deferred tax assets	$ —	$ —

The Company has incurred annual net operating losses in each year since inception. The Company believes it could be subject to certain limitations on the utilization of these net operating losses pursuant to Internal Revenue Code Section 382. Therefore, the Company has not reflected the benefit of any such net operating loss carryforwards in the financial statements. Due to the Company's history of losses, and lack of other positive evidence, the Company has determined that it is more likely than not that its net deferred tax assets will not be realized, and therefore, the net deferred tax assets are fully offset by a valuation allowance at December 31, 2019 and 2018.

As of December 31, 2019, the Company has net operating loss carryforwards for federal and state tax reporting purposes of $65,688 thousand, a portion of which expire beginning in 2020. Net operating loss carryforwards generated in 2019 and 2018 for federal tax reporting purposes of $10,702 thousand and $10,377 thousand, respectively, have an indefinite life. The remaining federal net operating losses are subject to a 20-year carryforward period. As of December 31, 2019, the Company has research and development tax credit carryforwards of approximately $1,364 thousand, which expire beginning in 2026.

The Company evaluates its uncertain tax positions under ASC 740-10, which requires that realization of an uncertain income tax position be recognized in the financial statements. The benefit to be recorded in the financial statements is the amount most likely to be realized assuming a review by tax authorities having all relevant information and applying current conventions. The Company concluded that there are no uncertain tax positions in any of the periods presented.

We are subject to taxation in federal and various state jurisdictions, which are generally subject to a three-year statute of limitations. The Company is not currently subject to any income tax examinations.

14. NET LOSS PER SHARE

Basic and diluted net loss per share attributable to common stockholders is calculated as follows (in thousands except share and per share amounts):

	Year Ended December 31,	
	2019	2018
Net loss	$ (16,740)	$ (13,039)
Cumulative dividends on convertible preferred stock	(3,804)	(3,804)
Net loss attributable to common stockholders	$ (20,544)	$ (16,843)
Net loss per share—basic and diluted	$ (55.92)	$ (45.87)
Weighted-average number of shares used in computing net loss per share—basic and diluted	367,359	367,213

The following outstanding potentially dilutive securities have been excluded from the calculation of diluted net loss per share, as their effect is anti-dilutive:

	December 31,	
	2019	2018
Convertible preferred stock	15,257,663	15,257,663
Stock options to purchase common stock	77,604	80,794
Warrants issued to employees and contractor to purchase common stock	57,420	75,120
Warrants issued related to convertible notes and other equity agreements	26,823	3,906

15. SUBSEQUENT EVENTS

The Company has evaluated subsequent events through November 12, 2020, which represents the date the consolidated financial statements were available for issuance, and through February 1, 2021 as it relates to the Reverse Stock Split, in order to ensure that these consolidated financial statements include appropriate recognition and/or disclosure of events. Since December 31, 2019, the following material subsequent events occurred:

Convertible preferred stock

In January 2020, the Company closed a series AA preferred stock financing and exchange round with new institutional investors whereby existing preferred stakeholders were invited to participate. Under the financing agreement the following events occurred:

(i) Certificate of incorporation was amended to increase the number of authorized shares of the Company's common stock to a total of 1,230,000,000 shares and authorize and designate 870,211,737 shares of the preferred stock as Series AA convertible preferred stock.

(ii) Current board members were revised by retiring three prior board members and adding one new board member bringing the total to five directors, including four nonemployee directors and one employee director.

(iii) The Company's 2018 Plan was amended to increase the number of shares of common stock reserved for issuance under the Plan from 104,167 shares to 1,864,746 shares in the aggregate.

(iv) All outstanding Series A, B, C, D, E and F convertible preferred stock, which was a total of 15,257,663 shares, were converted into common stock before consideration of participation by the holders in (viii) below.

(v) Accrued dividends on the Series A, B, C, D, E and F convertible preferred stock of approximately $38,247 thousand were converted into 310,066 shares of common stock before consideration of participation by the holders in (viii) below.

(vi) The Company received approximately $10,567 thousand in cash and issued 128,655,237 shares of Series AA convertible preferred stock at $0.082135 per share.

(vii) The Company converted approximately $15,456 thousand of debt including accrued interest and repayment premium into 188,173,050 shares of Series AA convertible preferred stock.

(viii) Existing preferred stockholders who participated in the Series AA convertible preferred stock financing were granted rights to exchange shares of common stock received upon conversion of preferred stock for additional shares of Series AA convertible preferred stock equal to a pro rata portion multiplied by the "Preferred Conversion Pool" exchanged shares. The Company issued an additional 206,976,317 of Series AA convertible preferred stock as exchange shares to eligible stockholders forfeited 148,732 shares of common stock.

(ix) The Company issued warrants to purchase 634,118 shares of common stock with an exercise price of $0.01 per common share. The warrants have a 30-day maturity date and expire on February 10, 2020. On January 30, 2020, all warrants under the agreement were exercised.

(x) In June 2020, the Company initiated a second financing round of the Series AA convertible preferred stock financing to raise proceeds to further advance its research programs. The Company received approximately $15,520 thousand and issued 188,593,000 Series AA convertible preferred stock at $0.082135 per share. The second financing round closed in October 2020.

Acquisition

In May 2020, the Company entered into a Stock Purchase Agreement to purchase 100% of the shares of Alvaxa Biosciences, Inc. ("Alvaxa"). The former majority shareholder of Alvaxa is the Company's current Chief Scientific Officer. Under the Stock Purchase Agreement, the Company paid $197 thousand and issued 304,376 shares of the Company's common stock to the shareholders of Alvaxa. The Company has evaluated the acquisition under ASC 805, Business Combinations, and concluded that the acquisition was an asset acquisition and not a business acquisition.

Coronavirus pandemic

On January 30, 2020, the World Health Organization ("WHO") announced a global health emergency because of a new strain of coronavirus originating in Wuhan, China (the "COVID-19 outbreak") and the risks to the international community as the virus spreads globally beyond its point of origin. In March 2020, the WHO classified the COVID- 19 outbreak as a pandemic, based on the rapid increase in exposure globally. The full impact of the COVID-19 outbreak continues to evolve as of the date of this report. As such, it is uncertain as to the full magnitude that the pandemic will have on the Company's financial condition, liquidity, and future results of operations. Management is actively monitoring the global situation on its financial condition, liquidity, operations, suppliers, industry, and workforce. Given the daily evolution of the COVID-19 outbreak and the global responses to curb its spread, the Company is not able to estimate the effects of the COVID-19 outbreak on its results of operations, financial condition, or liquidity for 2020. Although the Company cannot estimate the length or gravity of the impact of the COVID-19 outbreak at this time, if the pandemic continues, it may have a material adverse effect on the Company's results of future operations, financial position, and liquidity in 2021.

Debt

In March 2020, the Company consented to the exchange of the 2019 Special Note as further described in Note 5, *Debt* where the original holder of the 2019 Special Note sold it to a current equity owner of the Company. The detachable warrants issued in conjunction with the 2019 Special Note for 3,886 shares were not included in the exchange and were subsequently cancelled.

In May 2020, the Company received $567 thousand in loan funding from the Payroll Protection Program ("PPP") pursuant to the Coronavirus Aid, Relief, and Economic Security Act, as amended by the Flexibility Act, and administered by the Small Business Administration. The unsecured loan (the "PPP Loan") is with Silicon Valley Bank.

Under the terms of the PPP Loan, interest accrues on the outstanding principal at a rate of 1.0% per annum. The term of the PPP Loan is two years, though it may be payable sooner in connection with an event of default under the PPP Loan. To the extent the PPP Loan amount is not forgiven under the PPP, the Company is obligated to make equal monthly payments of principal and interest, beginning after determination of forgiveness by the lender. The Company may apply for forgiveness any time on or before the maturity date of the PPP Loan. If the Company does not apply for loan forgiveness within ten months after the last day of the covered period, the PPP Loan is no longer deferred, and the Company will be obligated to begin paying principal and interest.

Operating lease

In July 2020, the Company entered into a termination agreement with the sublandlord to terminate its corporate headquarters lease agreement. Under the terms of the agreement, the Company will vacate the property on or before December 31, 2020 and the sublandlord shall retain the $447 thousand security deposit previously remitted in 2018.

In October 2020, the Company entered into a new operating lease for its current corporate headquarters, with a term commencing on November 1, 2020 and continuing through February 2027. The Company's minimum commitment under the new lease is approximately $350 thousand dollars annually.

Stock-based compensation

Subsequent to December 31, 2019, the board of directors approved and granted options to purchase 1,569,208 shares of the common stock under the 2018 Plan. The awards vest over periods from six months to four years with an exercise price of $1.23 per share.

Reverse stock split

On January 29, 2021, the Company effected a reverse stock split of the Company's common stock on a 48-for-1 basis (the "Reverse Stock Split"). In connection with the Reverse Stock Split, the conversion ratio for the Company's series AA and series BB preferred stock was proportionately adjusted such that the common stock issuable upon conversion of such preferred stock was decreased in proportion to the Reverse Stock Split. The Company's series BB preferred stock is discussed below. Accordingly, all common stock share and per share amounts, as well as all preferred stock conversion ratios, for all periods presented in these financial statements have been retroactively adjusted, to reflect this reverse stock split and adjustment of the series AA and BB preferred stock conversion ratios.

SUBSEQUENT EVENTS (UNAUDITED)

The Company has evaluated subsequent events through February 1, 2021, in order to ensure that these consolidated financial statements include appropriate recognition and/or disclosure of events. Since December 31, 2019, in addition to the events disclosed above, the following material subsequent events occurred:

Massachusetts operating lease

In January 2021, the Company entered into a new operating lease for general office purposes including laboratory use in Boston, Massachusetts, with a term commencing on April 1, 2021 and continuing through December 2026. The amount of square feet of office space is 10,082 square feet and the Company's minimum commitment under the new lease is approximately $880 thousand dollars annually.

Common stock warrants

In January 2021, the Company issued warrants as a result of the Series AA and Series BB raises to an existing principal owner to purchase 1,648,707 shares of common stock with an exercise price of $0.01 per common share. The warrants had a maturity date of 30 days and was exercised in January 2021.

Stock-based compensation

In December 2020, the Company's 2018 Plan was amended to increase the number of shares of common stock reserved for issuance under the Plan from 1,864,746 shares to 2,552,083 shares in the aggregate.

In December 2020, the board of directors approved and granted options to purchase 316,247 shares of the common stock under the 2018 Plan. The awards vest over four years with a fair value of $4.32 per share.

In January 2021, the board of directors approved and granted options to purchase 72,916 shares of the common stock under the 2018 Plan. The awards vest over four years with a fair value of $6.72 per share.

Series BB convertible preferred stock

On December 29, 2020, the Company entered into a Series BB Preferred Stock Purchase Agreement (the "Series BB Agreement"), that provided for the sale of up to 168,769,860 shares of Series BB convertible preferred stock at a purchase price of $0.207383 per share. The Company notes the Series BB convertible preferred stock has comparable terms and rights to the Series AA convertible preferred stock.

In December 2020, the Company issued and sold 52,680,306 shares of Series BB convertible preferred stock at $0.207383 per share in exchange for $10.9 million in gross proceeds.

In January 2021, the Company issued and sold 113,275,902 shares of Series BB convertible preferred stock at $0.207383 per share in exchange for $23.5 million in gross proceeds.

SENSEI BIOTHERAPEUTICS, INC.
CONDENSED CONSOLIDATED BALANCE SHEETS (UNAUDITED)
(In thousands, except share and per share data)

	September 30, 2020	December 31, 2019
Assets		
Current assets:		
Cash and cash equivalents	$ 3,733	$ 251
Prepaid expenses	696	251
Total current assets	4,429	502
Property and equipment, net	1,050	268
Deposits	36	447
Total assets	$ 5,515	$ 1,217
Liabilities, convertible preferred stock and stockholders' deficit		
Current liabilities:		
Accounts payable	$ 974	$ 3,451
Current portion of long-term debt, including $2,489 and $6,187 with related parties as of September 30, 2020 and December 31, 2019, respectively	2,489	16,055
Accrued interest, including $95 and $323 with related parties as of September 30, 2020 and December 31, 2019, respectively	96	1,398
Other current liabilities	1,156	810
Total current liabilities	4,715	21,714
Other non-current liabilities	126	620
Non-current portion of long-term debt	567	—
Total liabilities	5,408	22,334
Commitments and contingencies (Note 8)		
Convertible preferred stock (Series A-F), $0.0001 par value; no shares authorized, issued or outstanding at September 30, 2020; 20,000,000 shares authorized, 15,257,663 issued and outstanding at December 31, 2019	—	47,545
Convertible preferred stock (Series AA), $0.0001 par value; 870,211,737 shares authorized, 630,592,111 issued and outstanding at September 30, 2020; liquidation value of $51,794 thousand at September 30, 2020; no shares authorized, issued or outstanding at December 31, 2019	51,788	—
Stockholders' deficit:		
Common stock, $0.0001 par value; 1,230,000,000 shares authorized as of September 30, 2020, 1,787,124 shares and 369,491 shares issued and outstanding at September 30, 2020 and December 31, 2019, respectively	—	—
Additional paid-in capital	55,600	23,650
Accumulated deficit	(107,281)	(92,312)
Total stockholders' deficit	(51,681)	(68,662)
Total liabilities, convertible preferred stock and stockholders' deficit	$ 5,515	$ 1,217

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.

SENSEI BIOTHERAPEUTICS, INC.
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS (UNAUDITED)
(In thousands, except share and per share data)

	Nine Months Ended September 30,	
	2020	2019
Operating expenses:		
Research and development	$ 8,629	$ 5,925
General and administrative	5,007	3,103
Alvaxa IPR&D	738	—
Total operating expenses	14,374	9,028
Loss from operations	(14,374)	(9,028)
Other expense:		
Interest expense, including $645 and $208 with related parties in 2020 and 2019, respectively	(1,635)	(860)
Fair value adjustments on embedded debt derivatives, including $575 and $71 with related parties in 2020 and 2019, respectively	995	(71)
Gain/(loss) on debt extinguishment	45	(75)
Other (expense) income, net	—	(1)
Net loss	(14,969)	(10,035)
Cumulative dividends on convertible preferred stock	(104)	(2,853)
Net loss attributable to common stockholders	(15,073)	(12,888)
Net loss per common share, basic and diluted	$ (9.82)	$ (35.10)
Weighted-average number of shares used in computing net loss per common share, basic and diluted	1,535,033	367,213

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.

SENSEI BIOTHERAPEUTICS, INC.
CONDENSED CONSOLIDATED STATEMENTS OF CONVERTIBLE PREFERRED STOCK, COMMON STOCK AND STOCKHOLDERS' DEFICIT (UNAUDITED)
(In thousands, except share data)

	Convertible Preferred Stock (Series A-F)		Convertible Preferred Stock (Series AA)		Common Stock		Additional Paid-In Capital	Accumulated Deficit	Total Stockholders' Deficit
	Shares	Amount	Shares	Amount	Shares	Amount			
Balance at January 1, 2019	15,257,663	$ 47,545	—	$ —	367,213	$ —	$ 22,092	$ (75,572)	$ (53,480)
Stock-based compensation expense	—	—	—	—	—	—	785	—	785
Issuance of common stock warrants	—	—	—	—	—	—	228	—	228
Net loss	—	—	—	—	—	—	—	(10,035)	(10,035)
Balance at September 30, 2019	15,257,663	$ 47,545	—	$ —	367,213	$ —	$ 23,105	$ (85,607)	$ (62,502)
Balance at January 1, 2020	15,257,663	$ 47,545	—	$ —	369,491	$ —	$ 23,650	$ (92,312)	$ (68,662)
Stock-based compensation expense	—	—	—	—	—	—	1,138	—	1,138
Conversion of series A, B, C, D, E, F convertible preferred stock into common stock	(15,257,663)	(47,545)	—	—	627,871	—	47,545	—	47,545
Conversion of common stock into series AA convertible preferred stock	—	—	210,310,025	17,274	(148,732)	—	(17,274)	—	(17,274)
Series AA convertible preferred stock in exchange for debt redemption	—	—	188,173,050	15,456	—	—	—	—	—
Sale of series AA convertible preferred stock	—	—	232,109,036	19,058	—	—	—	—	—
Issuance of common stock	—	—	—	—	634,118	—	—	—	—
Issuance of common stock related to Alvaxa acquisition	—	—	—	—	304,376	—	541	—	541
Net loss	—	—	—	—	—	—	—	(14,969)	(14,969)
Balance at September 30, 2020	—	$ —	630,592,111	$ 51,788	1,787,124	$ —	$ 55,600	$ (107,281)	$ (51,681)

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.

SENSEI BIOTHERAPEUTICS, INC.
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS (UNAUDITED)
(In thousands)

	Nine Months Ended September 30,	
	2020	2019
Operating activities		
Net loss	$ (14,969)	$ (10,035)
Adjustments to reconcile net loss to net cash used in operating activities:		
Stock-based compensation expense	1,138	785
Depreciation and amortization	139	50
Accretion on debt	1,578	280
Fair value adjustments on embedded debt derivatives	(995)	71
Interest on capital lease	8	6
Issuance of common stock for Alvaxa acquisition	541	—
(Gain) loss on debt extinguishment	(45)	75
Changes in operating assets and liabilities:		
Prepaid expenses and other current assets	(445)	254
Deposit	411	—
Accounts payable	(2,477)	718
Accrued interest	50	613
Other liabilities	41	263
Net cash used in operating activities	(15,025)	(6,920)
Investing activities		
Purchases of property and equipment	(890)	(9)
Purchase of Alvaxa IPR&D	(197)	—
Net cash used in investing activities	(1,087)	(9)
Financing activities		
Proceeds from the PPP loan	567	—
Capital lease payments	(31)	(19)
Proceeds on the issuance of series AA convertible preferred stock	19,058	—
Proceeds on the issuance of debt, including $3,250 with related parties in 2019	—	6,595
Net cash provided by financing activities	19,594	6,576
Net increase (decrease) in cash and cash equivalents	3,482	(353)
Cash and cash equivalents at beginning of period	251	653
Cash and cash equivalents at end of period	$ 3,733	$ 300
Supplemental disclosure of noncash financing information:		
Capital equipment	$ —	$ 166
Interest on financing	$ 8	$ 6
Conversion of series A, B, C, D, E, F convertible preferred stock into common stock	$ 47,545	$ —
Conversion of common stock into series AA convertible preferred stock	$ 17,274	$ —
Convertible preferred stock issued in exchange for note redemption	$ 15,456	$ —

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.

SENSEI BIOTHERAPEUTICS, INC.

NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

1. ORGANIZATION AND OPERATIONS

Business

Sensei Biotherapeutics, Inc. (the "Company" or "Sensei") is a clinical-stage immunotherapy company that was incorporated in Delaware on December 1, 2017. The Company is engaged in the discovery and development of next generation therapies with an initial focus on treatments for cancer.

The total numbers of authorized common stock and preferred stock of Sensei are 1,230,000,000 and 870,211,737 respectively, with a par value of $0.0001 for each share. Panacea Pharmaceuticals, Inc. ("Panacea"), was incorporated in 1999 as a Maryland corporation. Panacea is a wholly owned subsidiary of Sensei and is currently doing business under the name Sensei Biotherapeutics, Inc.

On May 18, 2020, the Company acquired Alvaxa Biosciences, Inc. ("Alvaxa") in a cash and stock purchase ("Stock Purchase Agreement"). Under the terms of the Stock Purchase Agreement, the Company acquired Alvaxa's existing camelid nanobodies and other biomaterials ("Biomaterials"), expertise in nanobody discovery, as well as a license agreement with a research organization. The former majority shareholder of Alvaxa is the Company's current Chief Scientific Officer. Under the Stock Purchase Agreement, the Company paid $197 thousand to settle liabilities assumed from Alvaxa and issued 304,376 shares of the Company's common stock to the shareholders of Alvaxa. The Company has evaluated the acquisition under ASC 805, *Business Combinations* and determined this to be an asset acquisition.

The 304,376 shares of common stock was valued at $1.78 per share, or $541 thousand in total, based on a valuation determined with the assistance of a third party. The Company determined that substantially all the value acquired in the transaction related to the Biomaterials and represents in-process research and development ("IPR&D"). The liabilities of $197 thousand assumed were related to previously incurred employee costs as well as contractually required vendor payments. The consideration transferred in this transaction was recorded as an expense in the IPR&D line item within the Statement of Operations during the nine months ended September 30, 2020.

Going Concern

Since inception, the Company has incurred cumulative operating losses and negative cash flows from operations. These operating losses and negative cash flows have been financed principally from the issuance of debt and equity securities. The Company's ability to continue as a going concern is dependent upon the ability to raise additional debt or equity capital. There can be no assurance that such capital will be available in sufficient amounts or on terms acceptable to the Company. These factors raise substantial doubt about the Company's ability to continue as a going concern. Risks to which the Company is exposed include uncertainties related to the ability to achieve revenue-generating products; current and potential competitors with greater financial, technological, production, and marketing resources; dependence on key management personnel; and raising additional capital, as needed. Based upon the Company's current plans, management believes there currently is insufficient financial resources to fund the Company's operations for at least 12 months from the issuance date of the unaudited condensed consolidated financial statements as of September 30, 2020.

To address the Company's capital needs, including planned clinical trials, the Company must continue to actively pursue additional equity or debt financing. The Company has been in ongoing discussions with potential venture and institutional investors with respect to such financing. Adequate financing opportunities might not be available to the Company, when and if needed, on acceptable terms or at all. If the Company is unable to obtain additional financing in sufficient amounts or on acceptable terms under such circumstances, the Company's operating results and prospects will be adversely affected.

The accompanying unaudited condensed consolidated financial statements have been prepared on a going concern basis, which contemplates the realization of assets and satisfaction of liabilities in the ordinary course of business. The consolidated financial statements do not include any adjustments relating to the recoverability and classification of recorded asset amounts or the amounts and classification of liabilities that might result from the outcome of this uncertainty.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Presentation and Principles of Consolidation

The Company has prepared the accompanying unaudited condensed consolidated financial statements in conformity with generally accepted accounting principles in the United States of America ("US GAAP") and in accordance with the rules of the Securities and Exchange Commission ("SEC") for interim reporting. The financial statements include adjustments of a normal recurring nature considered necessary by management for a fair presentation of the Company's unaudited condensed consolidated financial position, results of operations and cash flows. Any reference in these notes to appliable guidance is meant to refer to the authoritative U.S. GAAP as found in the Accounting Standards Codification ("ASC") and as amended by Accounting Standards Updates ("ASU") of the Financial Accounting Standards Board ("FASB").

The accompanying unaudited condensed consolidated financial statements should be read in conjunction with the Company's audited consolidated financial statements and the accompanying notes for the year ended December 31, 2019, which are included elsewhere in this prospectus. The unaudited condensed consolidated balance sheet data as of December 31, 2019 presented for comparative purposes was derived from the Company's audited consolidated financial statements but does not include all disclosures required by U.S. GAAP. The results for the nine months ended September 30, 2020 are not necessarily indicative of the operating results to be expected for the full year or for any other subsequent interim period.

The Company's significant accounting policies are disclosed in the audited consolidated financial statements for the year ended December 31, 2019, included elsewhere in this prospectus. Since the date of those financial statements, there have been no changes to its significant accounting policies except as noted below.

Deferred Offering Costs

The Company capitalizes as prepaid expenses certain legal, professional accounting and other third-party fees that are directly associated with preferred stock or common stock financings as deferred offering costs until such financings are consummated. After consummation of the equity financing, these costs are recorded as a reduction of additional paid-in capital generated as a result of the offering. Should a planned equity financing be abandoned, the deferred offering costs will be expensed immediately as a charge to operating expenses in the statements of operations. The Company had no deferred offering costs in prepaid expenses as of December 31, 2019 and September 30, 2020.

Recently Issued Accounting Pronouncements

In February 2016, the FASB issued ASU No. 2016-02, *Leases (Topic 842)*, as amended, with guidance regarding the accounting for and disclosure of leases. The update requires lessees to recognize the liabilities related to all leases, including operating leases on the balance sheet. This update also requires lessees and lessors to disclose key information about their leasing transactions. This update is effective for entities other than public business entities, including emerging growth companies that elected to defer compliance with new or revised financial accounting standards until a company that is not an issuer is required to comply with such standards, for annual reporting periods beginning after December 15, 2021, and interim periods within annual periods beginning after December 15, 2022. Early adoption is permitted. The Company is currently assessing the impact of adopting ASU No. 2016-02 on the consolidated financial statements and related disclosures.

In June 2016, the FASB issued ASU No. 2016-13, *Financial Instruments-Credit Losses: Measurement of Credit Losses on Financial Instruments (Topic 326)*. ASU No. 2016-13 requires measurement and recognition of expected credit losses for financial assets. In April 2019, the FASB issued clarification to ASU No. 2016-13 within ASU No. 2019-04, Codification Improvements to Topic 326, Financial Instruments-Credit Losses, Topic 815, Derivatives and Hedging, and Topic 825, Financial Instruments. This update is effective for entities other than public business entities, including emerging growth companies that elected to defer compliance with new or revised financial accounting standards until a company that is not an issuer is required to comply with such standards, for annual reporting periods beginning after December 15, 2021. The Company is currently evaluating the impact that ASU No. 2016-13 will have on the consolidated financial statements and related disclosures.

In August 2018, the FASB issued ASU No. 2018-13, *Fair Value Measurement (Topic 820)*, Disclosure Framework—Changes to the Disclosure Requirements for Fair Value Measurement. This update removed the following disclosure requirements: (1) the amount of and reasons for transfers between Level 1 and Level 2 of the fair value hierarchy; (2) the policy for timing of transfers between levels; and (3) the valuation processes for Level 3 fair value measurements. Additionally, this update added the following disclosure requirements: (1) the changes in unrealized gains and losses for the period included in other comprehensive income and loss for recurring Level 3 fair value measurements held at the end of the reporting period; (2) the range and weighted average of significant unobservable inputs used to develop Level 3 fair value measurements. For certain unobservable inputs, an entity may disclose other quantitative information (such as the median or arithmetic average) in lieu of the weighted average if the entity determines that other quantitative information would be a more reasonable and rational method to reflect the distribution of unobservable inputs used to develop Level 3 fair value measurements. ASU No. 2018-13 will be effective for fiscal years beginning after December 15, 2019 with early adoption permitted. As of December 31, 2019, the Company has not elected to early adopt this update but does not expect that the adoption of this update will have a material effect on the consolidated financial statements and related disclosures.

In December 2019, the FASB issued ASU No. 2019-12, *Simplifying the Accounting for Income Taxes*. ASU No. 2019-12 eliminates certain exceptions related to the approach for intra-period tax allocation, the methodology for calculating income taxes in an interim period and the recognition of deferred tax liabilities for outside basis differences. It also clarifies and simplifies other aspects of the accounting for income taxes. This update is effective for entities other than public business entities, including emerging growth companies that elected to defer compliance with new or revised financial accounting standards until a company that is not an issuer is required to comply with such standards, for annual reporting periods beginning after December 15, 2021, and interim periods within annual periods beginning after December 15, 2022. The Company is currently evaluating the impact that ASU No. 2019-12 will have on the consolidated financial statements and related disclosures.

In August 2020, the FASB issued ASU No. 2020-06, *Debt – Debt with Conversion and Other (Subtopic 470-20) and Derivatives and Hedging – Contracts in Entity's Own Equity (Subtopic 815-40)*. This update simplifies the accounting for convertible debt instruments by removing certain accounting separation models as well as the accounting for debt instruments with embedded conversion features that are not required to be accounted for as derivative instruments. The update also updates and improves the consistency of earnings per share calculations for convertible instruments. The amendments in this ASU are effective for fiscal years beginning after December 15, 2021, including interim periods within those fiscal years. The Company is currently evaluating the impact that the implementation of this update will have on the Company's consolidated financial statements and related disclosures.

3. PREPAID EXPENSES

Prepaid expenses consist of the following (in thousands):

	September 30, 2020	December 31, 2019
Prepaid research	$ 274	$ 151
Prepaid rent	324	—
Other	98	100
Total prepaid expenses	$ 696	$ 251

4. PROPERTY AND EQUIPMENT, NET

Property and equipment, net consist of the following (in thousands):

	September 30, 2020	December 31, 2019
Office equipment and furniture	$ 39	$ 14
Research equipment	1,537	641
Total property and equipment	1,576	655
Less accumulated depreciation and amortization	(526)	(387)
Property and equipment, net	$ 1,050	$ 268

Depreciation and amortization expense for the nine months ended September 30, 2020 and 2019 was $139 thousand, and $50 thousand, respectively.

5. OTHER CURRENT LIABILITIES

Other current liabilities consist of the following (in thousands):

	September 30, 2020	December 31, 2019
Compensation and benefits	$ 885	$ 685
Other	271	125
Total other current liabilities	$ 1,156	$ 810

6. DEBT

Debt consists of the following (in thousands):

	September 30, 2020	December 31, 2019
PPP Loan	$ 567	$ —
2019 Notes	—	2,345
2019 Secured Notes (related party)	—	3,854
2019 Bridge Note	—	1,000
2019 Special Note (related party in 2020)	2,489	2,570
2018 Bridge Notes (related party)	—	3,000
2017 Notes	—	4,050
Discounts	—	(764)
Total debt	3,056	16,055
Less current portion	(2,489)	(16,055)
Noncurrent debt	$ 567	$ —

Debt Redemption

The 2019 notes ("2019 Notes"), 2019 secured notes ("2019 Secured Notes"), 2019 bridge note ("2019 Notes"), 2018 bridge notes ("2018 Bridge Notes") and 2017 notes ("2017 Notes") were redeemed for shares of the Company's preferred stock series AA ("Series AA convertible preferred stock") on January 10, 2020. The details of this transaction are further discussed in Note 9 of these unaudited condensed consolidated financial statements.

2019 Special Note

On March 27, 2020, the Company consented to the sale of the 2019 special note ("2019 Special Note") by the original holder to a purchaser, where the purchaser is a principal owner related party to the Company. The detachable warrant issued in conjunction with the 2019 Special Note for 3,886 common stock was canceled as part of the sale. The fair value of the detachable warrant on the date of the sale was insignificant.

The 2019 Special Note matured in April 2020 and stopped accruing interest at that time. Management determined the fair value of the conversion features within the 2019 Special Note was zero as of September 30, 2020 since it had matured, and the conversion features provided no incremental value to the holder beyond the contractually obligated amount. In November 2020, the 2019 Special Note, repayment premium and accrued interest was redeemed into 31,591,824 shares of Series AA convertible preferred stock. The delay from maturity in April 2020 to redemption in November 2020 was administrative in nature, as the holder is a principle owner related party.

PPP Loan

In May 2020, the Company received $567 thousand in unsecured loan funding from the Payroll Protection Program ("PPP") pursuant to the Coronavirus Aid, Relief, and Economic Security Act of 2020, as amended by the Payroll Protection Flexibility Act of 2020, and administered by the Small Business Administration. The unsecured loan (the "PPP Loan") is with Silicon Valley Bank.

Under the terms of the PPP Loan, interest accrues on the outstanding principal at a rate of 1.0% per annum. The term of the PPP Loan is two years, though it may be payable sooner in connection with an event of default under the PPP Loan. To the extent the PPP Loan is not forgiven under the PPP, the Company is obligated to make equal monthly payments of principal and interest, beginning after determination of forgiveness by the lender. The Company may apply for forgiveness any time on or before the maturity date of the PPP Loan. If the Company does not apply for loan forgiveness by October 2021, principal and interest payment will be required on a monthly basis for a period of 24 months.

The Company elected to account for the PPP Loan as debt and will derecognize the liability when the loan is forgiven and the Company is relieved of its obligation under the PPP Loan or is legally released from being the primary obligor.

7. FAIR VALUE MEASUREMENTS

The following table presents information about the Company's financial liabilities measured at fair value on a recurring basis and indicate the level of the fair value hierarchy utilized to determine such fair values (in thousands):

	Fair Value Measurements as of September 30, 2020			
	Level 1	Level 2	Level 3	Total
Current liabilities				
Embedded debt derivatives	$ —	$ —	$ —	$—
Total liabilities measured at fair value	$ —	$ —	$ —	$—

	Fair Value Measurements as of December 31, 2019			
	Level 1	Level 2	Level 3	Total
Current liabilities				
Embedded debt derivatives	$ —	$ —	$3,920	$3,920
Total liabilities measured at fair value	$ —	$ —	$3,920	$3,920

The Company's embedded debt derivatives are measured at fair value using a probability-weighted discounted cash flow valuation methodology. The determination of the fair value of embedded debt derivatives includes inputs not observable in the market and as such, represents a Level 3 measurement. The methodology utilized requires inputs based on certain subjective assumptions, including probabilities of debt settlement scenarios and a discount rate. This approach results in the classification of these embedded debt derivatives as Level 3 of the fair value hierarchy. The assumptions utilized to value the embedded debt derivatives at September 30, 2019 were the probability of (a) 3% probability of settlement at the contractual maturity date; (b) 5% probability of settlement on a change of control or upon a qualified initial public offering prior to the contractual maturity date; and (c) 92% probability of settlement on a qualified financing prior to the contractual maturity date, respectively. For the nine months ended September 30, 2019 and 2020, the Company recognized $71 thousand and ($995) thousand expense/(income), respectively, in the statement of operations as other expense—fair value adjustments on embedded debt derivatives.

The following table provides a reconciliation of embedded debt derivatives measured at fair value on a recurring basis using significant unobservable inputs (Level 3) (in thousands):

	Amount
Balance at January 1, 2019	$ —
Additions	663
Change in fair value	71
Balance at September 30, 2019	$ 734
Balance at January 1, 2020	$ 3,920
Change in fair value	(995)
Settlement	(2,925)
Balance at September 30, 2020	$ —

There were no transfers among Level 1, Level 2 or Level 3 categories in the nine months ended September 30, 2020 and 2019.

8. COMMITMENTS AND CONTINGENCIES

Operating Lease

The Company leases office facility and other equipment under various operating leases. In July 2020, the Company entered into an agreement with the sublandlord to terminate its corporate headquarters lease agreement, effective as of August 12, 2020. Under the terms of the agreement, the Company is obligated for its original lease payments through December 31, 2020 and the sublandlord will retain the Company's $0.4 million security deposit previously remitted in 2018. Subsequent to the termination, minimum lease payments under the Company's operating leases as of September 30, 2020 were insignificant. Lease expense for the nine months ended September 30, 2019 and 2020 was $759 thousand and $955 thousand, respectively. The 2020 lease expense is inclusive of the corporate headquarters termination costs.

Capital Lease

The Company leases research equipment under a capital finance lease. The capital lease asset is classified within property and equipment, net within the Company's consolidated balance sheets.

License Agreements

In the normal course of business, the Company enters into licensing agreements with various parties to obtain the right to make, use, and sell licensed products currently in development.

Litigation

The Company records estimated losses from loss contingencies (such as a loss arising from a litigation) when it determines that it is probable a liability has been incurred and the amount of loss can be reasonably estimated. Litigation is subject to many factors that are difficult to predict so that there can be no assurance, in the event of a material unfavorable result in one or more claims, the Company will not incur material costs.

During 2017, the Company became actively involved in a matter pending in the Ontario (Canada) Superior Court of Justice which names, among multiple other defendants, the Company and two former officers of the Company. The claims pending in this matter allege breach of contract by the Company and seek declaratory and other relief, including monetary damages from the Company, and the individual defendants, including the Company's former officers. The claims by such plaintiffs were originally made in a lawsuit filed in Ontario in October 2011, but was not pursued by such plaintiffs in any material manner until 2017. The Company believes that there is no merit to the claims alleged against the Company and its former officers, including no alleged breach of contract by the Company and intends to vigorously defend against the claims pertaining to the Company and its former officers. At the present stage of the suit, management believes the outcome in this matter is not likely to have any material impact on the Company's results, cash flows, or financial position.

Coronavirus pandemic

On January 30, 2020, the World Health Organization ("WHO") announced a global health emergency because of a new strain of coronavirus originating in Wuhan, China (the "COVID-19 outbreak") and the risks to the international community as the virus spreads globally beyond its point of origin. In March 2020, the WHO classified the COVID- 19 outbreak as a pandemic, based on the rapid increase in exposure globally. The full impact of the COVID-19 outbreak continues to evolve as of the date of this report. As such, it is uncertain as to the full magnitude that the pandemic will have on the Company's financial condition, liquidity, and future results of operations. Management is actively monitoring the global situation on its financial condition, liquidity, operations, suppliers, industry, and workforce. Given the daily evolution of the COVID-19 outbreak and the global responses to curb its spread, the Company is not able to estimate the effects of the COVID-19 outbreak on its results of operations, financial condition, or liquidity for 2020. Although the Company cannot estimate the length or gravity of the impact of the COVID-19 outbreak at this time, if the pandemic continues, it may have a material adverse effect on the Company's results of future operations, financial position, and liquidity in 2021.

9. EQUITY

January Recapitalization

In January 2020, the Company entered into an agreement with a third party, who is the holder of the 2019 Bridge Note, and the majority of the Company's convertible preferred stock series A through F holders ("Majority Legacy Preferred Stockholders") that provided a new source of capital and restructured the Company's existing capital structure (the "Recapitalization"). The third party invested $4 million in exchange for 48,700,311 shares of Series AA convertible preferred stock and a warrant to purchase 634,118 shares of the Company's common stock at an exercise price of $0.01 per share. The warrant was subsequently exercised in January 2020. Additionally, the agreement with the Majority Legacy Preferred Stockholders caused all other holders of convertible preferred stock series A through F holders ("Minority Legacy Preferred Stockholders") and the Majority Legacy Preferred Stockholders to receive 627,871 shares of the Company's common stock ("Newly Issued Common Stock") in exchange for their holdings of the Company's convertible preferred stock series A through F, including cumulative and unpaid dividends, as part of the Recapitalization.

The Majority Legacy Preferred Stockholders agreed to invest additional capital into the Company in exchange for Series AA convertible preferred stock. Minority Legacy Preferred Stockholders were provided the opportunity to invest additional capital into the Company in exchange for Series AA convertible preferred stock. All Majority and Minority Legacy Preferred Stockholders who invested additional capital into the Company during January 2020 were allowed to convert their Newly Issued Common Stock into Series AA convertible preferred stock at a conversion rate based upon their incremental and historical investment into the Company. The Majority and Minority Legacy Preferred Stockholders invested $6.6 million in exchange for 79,954,952 shares of Series AA convertible preferred stock. The Majority and Minority Legacy Preferred Stockholders also exchanged 148,732 shares of Newly Issued Common Stock for 210,310,025 shares of Series AA convertible preferred stock under the Recapitalization agreement.

The Company's issuance of Series AA convertible preferred stock triggered the redemption of the 2019 Notes, 2019 Secured Notes, 2019 Bridge Note, 2018 Bridge Notes, and 2017 Notes, as well as accrued and unpaid interest and repayment premium on the 2019 Secured Notes, into shares of Series AA convertible preferred stock. These debt instruments were redeemed for 188,173,050 shares of the Series AA convertible preferred stock, which resulted in a gain on debt extinguishment of $45 thousand.

The Company amended and restated its certificate of incorporation as part of the Recapitalization authorizing a total number of common stock and preferred stock of 1,230,000,000 and 870,211,737 respectively, with a par value of $0.0001 for each share.

Secondary Series AA Convertible Preferred Stock Issuance

From July to September 2020, the Company issued and sold 103,453,773 shares of Series AA convertible preferred stock at $0.082135 per share in exchange for $8.5 million in gross proceeds.

Series AA Convertible Preferred Stock Terms

A summary of the more significant rights and preferences of the Series AA convertible preferred stock are as follows:

Dividend Rights

The Company shall not declare, pay, or set aside any dividends on shares of any other class or series of capital stock unless the holders of the Series AA convertible preferred stock then outstanding shall first receive a dividend at the rate of 8% of the Series AA original issue price ("Series AA Original Issue Price"); provided that the Company declares, pays, and sets aside a dividend on the shares of common stock.

The Company has not declared or paid any dividends or authorized or made any distribution upon or with respect to any class or series of its capital stock.

Unpaid dividends will convert into shares of common stock when the underlying convertible preferred stock is converted to common stock. The conversion rates for the unpaid dividends are the same as those for the underlying convertible preferred stock.

Liquidation Rights

In the event of any voluntary or involuntary liquidation, the holders of the shares of Series AA convertible preferred stock then outstanding shall be entitled to be paid out of the assets of the Company available for distribution to its stockholders before any payment shall be made to holders of common stock, an amount per share equal to the Series AA Original Issue Price, plus any dividends declared but unpaid ("Series AA Liquidation Amount").

After payment in full of all Series AA Liquidation Amount and payments made to holders of common stock, the remaining assets of the Company available for distribution to its stockholders, shall be distributed among the holders of the shares of Series AA convertible preferred stock and common stock, pro rata based on the number of shares held by each holder, treating for this purpose all such securities as if they had been converted to common stock prior to liquidation.

A merger or consolidation of substantially all or a significant portion of assets of the Company shall be considered a "Deemed Liquidation Event" unless the holders of at least two-thirds of the outstanding shares of Series AA convertible preferred stock elect otherwise by written notice sent to the Company at least 10 days prior to the effective date of the any such event.

Voting Rights

Holders of outstanding shares of Series AA convertible preferred stock shall be entitled to cast the number of votes equal to the number of whole shares of common stock into which the shares of Series AA convertible preferred stock held by such holder are convertible as of the record date for determining stockholders entitled to vote on such matter. Except as provided by law or by the other provisions, holders of Series AA convertible preferred stock shall vote together with the holders of common stock as a single class and on an as-converted to common stock basis.

Conversion Rights

Each share of Series AA convertible preferred stock shall be convertible, at the option of the holder thereof, at any time and from time to time, and without the payment of additional consideration by the holder thereof, into such number of fully paid and non-assessable shares of common stock as is determined by dividing the Series AA Original Issue Price by the Series AA conversion price ("Series AA Conversion Price") in effect at the time of conversion. The Series AA Conversion Price shall initially be equal to $0.082135. Such initial Series AA Conversion Price, and the rate at which shares of Series AA convertible preferred stock may be converted into shares of common stock, shall be subject to adjustment should specified dilutive events occur. All shares of the Series AA convertible preferred stock automatically convert into shares of the Company's common stock upon the earlier of (i) an underwritten firm commitment public offering resulting in aggregate net cash proceeds of $40.0 million at a per share price equal to or greater than $384.00 or (ii) the execution of a definitive agreement for the purchase of common stock of the Company sufficient to effect a change of control, merger, or reorganization at a per share price in excess of $192.00.

Common Stock

During 2020, the certificate of incorporation was amended to increase the number of authorized shares of the Company's common stock to a total of 1,230,000,000 shares. Common stockholders are entitled to one vote for each share of common stock held at all meetings of stockholders and written actions in lieu of meetings. Common stockholders are entitled to receive dividends, if any, when declared by the board of directors. No dividends have been declared or paid by the Company through September 30, 2020.

Common Stock Warrants

The following is a summary of the common stock warrant activity related to common stock warrants issued in conjunction with the issuance of convertible promissory notes or other financial instruments during the nine months ended September 30, 2020:

	Number of Shares	Weighted-Average Exercise Price
Outstanding at December 31, 2019	26,823	$ 102.74
Granted	1,023,443	$ 1.23
Exercised	(634,118)	$ —
Expired	(3,886)	$ —
Outstanding at September 30, 2020	412,262	$ 9.60
Exercisable at September 30, 2020	412,262	$ 9.60

10. STOCK-BASED COMPENSATION

In 2018, the board of directors approved the Company's 2018 Stock Incentive Plan (the "2018 Plan")—which supersedes and replaces previous incentive stock plans—and reserved 104,167 common shares for issuance under the 2018 Plan. All previously issued and outstanding stock-based awards issued under predecessor incentive plans were adopted into the 2018 Plan. The 2018 Plan provides the issuance of stock awards to attract and retain employees, directors, consultants and advisors and to provide incentive for individuals to contribute to the growth of the Company.

In January 2020, the Company's 2018 Plan was amended to increase the number of shares of common stock reserved for issuance under the Plan from 104,167 shares to 1,864,746 shares in the aggregate. As of September 30, 2020, approximately 203,719 common shares remain available for future awards under the 2018 Plan.

Stock Options

During the nine mounts ended September 30, 2020, the Company granted options to purchase 1,583,260 shares of common stock to employees, consultants, and nonexecutive directors pursuant to the 2018 Plan. The stock options granted during the nine mounts ended September 30, 2020 vest over a period of 6 to 48 months with an exercise price of $1.23 per share. The Company uses the Black-Scholes option-pricing model to estimate the fair value of the stock options on the grant dates between $1.92 and $2.40 per share.

The following is a summary of the stock option award activity under the 2018 Plan during the nine months ended September 30, 2020:

	Number of Shares	Weighted-Average Exercise Price
Outstanding at December 31, 2019	77,604	$ 114.11
Granted	1,583,260	$ 1.23
Exercised	—	$ —
Forfeited	—	$ —
Expired	—	$ —
Outstanding at September 30, 2020	1,660,864	$ 6.72
Exercisable at September 30, 2020	117,667	$ 61.12
Options expected to vest at September 30, 2020	1,543,149	$ 2.40

At September 30, 2020, there was approximately $4,047 thousand of unrecognized stock-based compensation expense associated with the stock options, which is expected to be recognized over a weighted-average period of 1.66 years.

The following is a summary of the common stock warrant activity under the 2018 Plan during the nine months ended September 30, 2020:

	Number of Shares	Weighted-Average Exercise Price
Outstanding at December 31, 2019	57,420	$ 7.95
Granted	—	
Exercised	—	
Expired	—	
Outstanding at September 30, 2020	57,420	$ 7.95
Exercisable at September 30, 2020	57,420	$ 7.95

As of September 30, 2020, there was no unrecognized stock-based compensation expense associated with the common stock warrants.

During the nine months ended September 30, 2019 and 2020, the Company utilized the Black-Scholes option-pricing model for estimating the fair value of the stock options and common stock warrants granted. The following table presents the assumptions and the Company's methodology for developing each of the assumptions used:

	Nine Months Ended September 30,	
	2020	2019
Volatility	90.0%	90%
Expected life (years)	0.5–4.0	0.05–10.0
Risk-free interest rate	.11%–.18%	1.4%–2.5%
Dividend rate	— %	— %

- Volatility—The Company estimates the expected volatility of its common stock at the date of grant based on the historical volatility of comparable public companies over the expected term.
- Expected life—The expected life is estimated as the contractual term.

- Risk-free interest rate—The risk-free rate for periods within the estimated life of the stock award is based on the U.S. Treasury yield curve in effect at the time of grant.
- Dividend rate—The assumed dividend yield is based upon the Company's expectation of not paying dividends in the foreseeable future.

Stock-based compensation expense was recorded in the following line items in the consolidated statements of operations for the nine months ended September 30, 2019 and 2020 (in thousands):

	Nine Months Ended September 30,	
	2020	2019
Research and development	$ 441	$ 345
General and administrative	697	440
Total stock-based compensation	$ 1,138	$ 785

11. RELATED-PARTY TRANSACTIONS

Debt

In January 2020, principal owner related parties holding the Company 2019 Secured Notes and 2018 Bridge Notes redeemed these instruments into shares of Series AA convertible preferred stock. Additionally, in March 2020, a principal owner related party purchased the 2019 Special Note from the originally holder and subsequently redeemed it into shares of Series AA convertible preferred stock in November 2020.

Acquisition

In May 2020, the Company acquired Alvaxa as described in Note 1 to these unaudited condensed consolidated financial statements. The Company's Chief Scientific Offer and spouse together held a majority of the shares of Alvaxa.

12. INCOME TAXES

The Company estimates an annual effective tax rate of 0% for the year ending December 31, 2020 as the Company incurred losses for the nine months ended September 30, 2020 and is forecasting additional losses through the remainder of fiscal year ending December 31, 2020, resulting in an estimated net loss for both financial statement and tax purposes for the year ending December 31, 2020. Therefore, no federal or state income taxes are expected and none have been recorded at this time. Income taxes have been accounted for using the liability method.

Due to the Company's history of losses since inception, there is not enough evidence at this time to support that the Company will generate future income of a sufficient amount and nature to utilize the benefits of its net deferred tax assets. Accordingly, the deferred tax assets have been reduced by a full valuation allowance, since the Company does not currently believe that realization of its deferred tax assets is more likely than not.

As of September 30, 2020, the Company had no unrecognized income tax benefits that would reduce the Company's effective tax rate if recognized.

13. NET LOSS PER SHARE

Basic and diluted net loss per share attributable to common stockholders is calculated as follows (in thousands except share and per share amounts):

	Nine Months Ended September 30,	
	2020	2019
Net loss	$ (14,969)	$ (10,035)
Cumulative dividends on convertible preferred stock	(104)	(2,853)
Net loss attributable to common stockholders	$ (15,073)	$ (12,888)
Net loss per share—basic and diluted	$ (9.82)	$ (35.10)
Weighted-average number of shares used in computing net loss per share—basic and diluted	1,535,033	367,213

The following outstanding potentially dilutive securities have been excluded from the calculation of diluted net loss per share, as their effect is anti-dilutive:

	September 30,	
	2020	2019
Convertible preferred stock	630,592,111	15,257,663
Stock options to purchase common stock	1,660,864	83,762
Warrants issued to employees and contractor to purchase common stock	57,420	57,420
Warrants issued related to convertible notes and other equity agreements	412,262	26,823

14. SUBSEQUENT EVENTS

The Company has evaluated subsequent events through December 22, 2020, which represents the date the consolidated financial statements were available for issuance, and through February 1, 2021 as it relates to the Reverse Stock Split, Massachusetts operating lease, common stock warrants, stock-based compensation, and series BB convertible preferred stock discussed below, in order to ensure that these consolidated financial statements include appropriate recognition and/or disclosure of events. Since September 30, 2020, the following material subsequent events occurred:

Maryland operating lease

In October 2020, the Company entered into a new operating lease for its current corporate headquarters, with a term commencing on November 1, 2020 and continuing through February 2027. The Company's minimum commitment under the new lease is approximately $350 thousand dollars annually.

Series AA convertible preferred stock

In October 2020, the Company issued and sold 85,499,239 shares of Series AA convertible preferred stock at $0.082135 per share in exchange for $7.0 million in gross proceeds.

Reverse stock split

On January 29, 2021, the Company effected a reverse stock split of the Company's common stock on a 48-for-1 basis (the "Reverse Stock Split"). In connection with the Reverse Stock Split, the conversion ratio for the Company's series AA and series BB preferred stock was proportionately adjusted such that the common stock issuable upon conversion of such preferred stock was decreased in proportion to the Reverse Stock Split. The Company's series BB preferred stock is discussed below. Accordingly, all common stock share and per

share amounts, as well as all preferred stock conversion ratios, for all periods presented in these financial statements have been retroactively adjusted, to reflect this reverse stock split and adjustment of the series AA and BB preferred stock conversion ratios.

Massachusetts operating lease

In January 2021, the Company entered into a new operating lease for general office purposes including laboratory use in Boston, Massachusetts, with a term commencing on April 1, 2021 and continuing through December 2026. The amount of square feet of office space is 10,082 square feet and the Company's minimum commitment under the new lease is approximately $880 thousand dollars annually.

Common stock warrants

In January 2021, the Company issued warrants as a result of the Series AA and Series BB raises to an existing principal owner to purchase 1,648,707 shares of common stock with an exercise price of $0.01 per common share. The warrants had a maturity date of 30 days and was exercised in January 2021.

Stock-based compensation

In December 2020, the Company's 2018 Plan was amended to increase the number of shares of common stock reserved for issuance under the Plan from 1,864,746 shares to 2,552,083 shares in the aggregate.

In December 2020, the board of directors approved and granted options to purchase 316,247 shares of the common stock under the 2018 Plan. The awards vest over four years with a fair value of $4.32 per share.

In January 2021, the board of directors approved and granted options to purchase 72,916 shares of the common stock under the 2018 Plan. The awards vest over four years with a fair value of $6.72 per share.

Series BB convertible preferred stock

On December 29, 2020, the Company entered into a Series BB Preferred Stock Purchase Agreement (the "Series BB Agreement"), that provided for the sale of up to 168,769,860 shares of Series BB convertible preferred stock at a purchase price of $0.207383 per share. The Company notes the Series BB convertible preferred stock has comparable terms and rights to the Series AA convertible preferred stock.

In December 2020, the Company issued and sold 52,680,306 shares of Series BB convertible preferred stock at $0.207383 per share in exchange for $10.9 million in gross proceeds.

In January 2021, the Company issued and sold 113,275,902 shares of Series BB convertible preferred stock at $0.207383 per share in exchange for $23.5 million in gross proceeds.

5,885,000 Shares

Common Stock

PRELIMINARY PROSPECTUS

, 2021

Citigroup **Piper Sandler** **Berenberg**

Oppenheimer & Co.

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 13. Other Expenses of Issuance and Distribution.

The following table indicates the expenses to be incurred in connection with the offering described in this registration statement, other than underwriting discounts and commissions, all of which will be paid by us. All amounts are estimated except the Securities and Exchange Commission registration fee, the Financial Industry Regulatory Authority, Inc., or FINRA, filing fee and the exchange listing fee.

	Amount
Securities and Exchange Commission registration fee	$ 13,291
FINRA filing fee	18,773
NASDAQ listing fee	150,000
Accountants' fees and expenses	1,300,000
Legal fees and expenses	1,500,000
Transfer Agent's fees and expenses	20,000
Printing and engraving expenses	300,000
Miscellaneous	97,936
Total expenses	$ 3,400,000

Item 14. Indemnification of Directors and Officers.

Section 145 of the Delaware General Corporation Law authorizes a court to award, or a corporation's board of directors to grant, indemnity to directors and officers in terms sufficiently broad to permit such indemnification under certain circumstances for liabilities, including reimbursement for expenses incurred, arising under the Securities Act. Our amended and restated certificate of incorporation that will be in effect on the completion of this offering permits indemnification of our directors, officers, employees and other agents to the maximum extent permitted by the Delaware General Corporation Law, and our amended and restated bylaws that will be in effect on the completion of this offering provide that we will indemnify our directors and officers and permit us to indemnify our employees and other agents, in each case to the maximum extent permitted by the Delaware General Corporation Law.

We have entered into indemnification agreements with our directors and officers, whereby we have agreed to indemnify our directors and officers to the fullest extent permitted by law, including indemnification against expenses and liabilities incurred in legal proceedings to which the director or officer was, or is threatened to be made, a party by reason of the fact that such director or officer is or was a director, officer, employee or agent, provided that such director or officer acted in good faith and in a manner that the director or officer reasonably believed to be in, or not opposed to, our best interest. At present, there is no pending litigation or proceeding involving a director or officer regarding which indemnification is sought, nor is the registrant aware of any threatened litigation that may result in claims for indemnification.

We maintain insurance policies that indemnify our directors and officers against various liabilities arising under the Securities Act and the Securities Exchange Act of 1934, as amended, that might be incurred by any director or officer in his capacity as such.

Item 15. Recent Sales of Unregistered Securities.

The following sets forth information regarding all unregistered securities sold since January 1, 2018.

Sale of Series BB Convertible Preferred Stock

From December 2020 through the date of this prospectus, we sold an aggregate of 165,956,208 shares of Series BB convertible preferred stock to a total of 43 accredited investors at a purchase price per share of $0.207383 per share for an aggregate gross proceeds of $34.4 million.

Sale of Series AA Convertible Preferred Stock

From January 2020 through the date of this prospectus, we issued an aggregate of 747,683,172 shares of our Series AA convertible preferred stock to a total of 128 accredited investors at a price per share of $0.082135 per share. We received aggregate gross proceeds of $26.1 million for the sale of 317,608,273 shares of Series AA convertible preferred stock. The redemption of convertible notes resulted in the issuance of 219,764,874 shares of Series AA convertible preferred stock. In exchange for our convertible preferred stock series A through F, including cumulative and unpaid dividends, we issued 210,310,025 shares of Series AA convertible preferred stock as part of the Recapitalization.

Warrants to Purchase Common Stock

From January 1, 2018 through the date of this prospectus, we issued warrants to purchase 2,775,854 shares of common stock to accredited investors, at exercise prices ranging from $0.01 to $144.00 per share. Of these, warrants to purchase an aggregate of 19,516 shares have been cancelled without being exercised and 2,361,196 shares have been issued upon the exercise of warrants, at a weighted average exercise price of $0.07 per share, for aggregate proceeds of approximately $155,132.

Option and Common Stock Issuances

From January 1, 2018 through the date of this prospectus, we granted to certain employees, consultants and directors options to purchase an aggregate of 2,044,702 shares of common stock under our 2018 Plan, at exercise prices ranging from $1.23 to $122.88 per share. Of these, options to purchase an aggregate of 22,708 shares have been cancelled without being exercised and 16,666 shares have been issued upon the exercise of stock options, at a weighted average exercise price of $1.23 per share, for aggregate proceeds of approximately $53,600.

None of the foregoing transactions involved any underwriters, underwriting discounts or commissions, or any public offering. Unless otherwise specified above, we believe these transactions were exempt from registration under the Securities Act in reliance on Section 4(a)(2) of the Securities Act (and Regulation D or Regulation S promulgated thereunder) or Rule 701 promulgated under Section 3(b) of the Securities Act as transactions by an issuer not involving any public offering or under benefit plans and contracts relating to compensation as provided under Rule 701. The recipients of the securities in each of these transactions represented their intentions to acquire the securities for investment only and not with a view to or for sale in connection with any distribution thereof, and appropriate legends were placed on the share certificates issued in these transactions. All recipients had adequate access, through their relationships with us, to information about us. The sales of these securities were made without any general solicitation or advertising.

Item 16. Exhibits and Financial Statement Schedules.

(a) Exhibits.

Exhibit Index

Exhibit Number	Description of Exhibit
1.1	Form of Underwriting Agreement.
2.1+^*	Stock Purchase Agreement, by and among Sensei Biotherapeutics, Inc. and the stockholders of Alvaxa Biosciences, Inc., dated as of May 18, 2020.
3.1	Amended and Restated Certificate of Incorporation, as currently in effect.
3.2*	Bylaws, as currently in effect.
3.3	Form of Amended and Restated Certificate of Incorporation, to be effective immediately prior to the closing of this offering.
3.4	Form of Amended and Restated Bylaws, to be effective immediately prior to the closing of this offering.
4.1	Investors' Rights Agreement, dated as of December 29, 2020, by and among the Registrant and certain of its stockholders.
4.2	Form of warrant to purchase common stock.
4.3	Form of warrant to purchase common stock.
4.4	Form of warrant to purchase common stock.
5.1	Opinion of Cooley LLP.
10.1#*	Sensei Biotherapeutics, Inc. 2018 Equity Incentive Plan, as amended, and forms of agreements thereunder.
10.2#	Sensei Biotherapeutics, Inc. 2021 Equity Incentive Plan and forms of agreements thereunder.
10.3+*	Non-exclusive License Agreement, by and between Alvaxa Biosciences, Incorporated and Fred Hutch Cancer Research Center, dated as of January 3, 2020.
10.4#*	Form of Indemnification Agreement entered into by and between Sensei Biotherapeutics, Inc. and each director and executive officer.
10.5*	Amended and Restated Employment Agreement, by and between Sensei Biotherapeutics, Inc. and John Celebi, dated as of January 1, 2021.
10.6*	Amended and Restated Employment Agreement, by and between Sensei Biotherapeutics, Inc. and Marie-Louise Fjaellskog, dated as of December 4, 2020.
10.7*	Employment Agreement, by and between Sensei Biotherapeutics, Inc. and Robert H Pierce, dated as of February 9, 2020.
10.8*	Independent Contractor and Strategic Advisory Services Agreement entered into by and between Sensei Biotherapeutics, Inc. and Samuel Broder M.D., dated as of May 8, 2018, as amended on April 5, 2020.
10.9*	Lease Agreement, by and between Sensei Biotherapeutics, Inc. and Are-Maryland No. 8 Corp., dated as of October 22, 2020.
10.10	Sensei Biotherapeutics, Inc. 2021 Employee Stock Purchase Plan
10.11*	Employment Agreement, by and between Sensei Biotherapeutics, Inc. and Anupama Hoey, dated as of October 13, 2020.

Exhibit Number	Description of Exhibit
10.12	Amended and Restated Employment Agreement, by and between Sensei Biotherapeutics, Inc. and John Celebi, dated as of January 28, 2021.
10.13	Amended and Restated Employment Agreement, by and between Sensei Biotherapeutics, Inc. and Marie-Louise Fjaellskog, dated as of January 28, 2021.
10.14	Amended and Restated Employment Agreement, by and between Sensei Biotherapeutics, Inc. and Robert H. Pierce, dated as of January 28, 2021.
10.15	Amended and Restated Employment Agreement, by and between Sensei Biotherapeutics, Inc. and Anupama Hoey, dated as of January 28, 2021.
21.1*	Subsidiaries of the Registrant.
23.1	Consent of Deloitte & Touche LLP, independent registered public accounting firm.
23.2	Consent of Cooley LLP (included in Exhibit 5.1).
24.1	Power of Attorney (included on signature page).

+ Portions of this exhibit (indicated by asterisks) have been omitted as the Registrant has determined that (i) the omitted information is not material and (ii) the omitted information would likely cause competitive harm if publicly disclosed.
# Indicates management contract or compensatory plan.
* Previously filed.
^ Pursuant to Item 601(b)(2) of Regulation S-K, the schedules and exhibits to this agreement are omitted, but will be furnished to the Securities and Exchange Commission upon request.

(b) Financial Statement Schedules.

All financial statement schedules are omitted because the information required to be set forth therein is not applicable or is shown in the consolidated financial statements or the notes thereto.

Item 17. Undertakings.

The undersigned registrant hereby undertakes to provide to the underwriters at the closing specified in the underwriting agreement certificates in such denominations and registered in such names as required by the underwriters to permit prompt delivery to each purchaser.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the registrant under the foregoing provisions or otherwise, the registrant has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

The undersigned registrant hereby undertakes that:

(1) For purposes of determining any liability under the Securities Act, the information omitted from the form of prospectus filed as part of this registration statement in reliance on Rule 430A and contained in a form of

prospectus filed by the registrant under Rule 424(b)(1) or (4) or 497(h) under the Securities Act will be deemed to be part of this registration statement as of the time it was declared effective.

(2) For the purpose of determining any liability under the Securities Act of 1933, each post-effective amendment that contains a form of prospectus will be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time will be deemed to be the initial bona fide offering thereof.

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SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this Amendment No. 1 to registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in City of Rockville, State of Maryland, on February 1, 2021.

SENSEI BIOTHERAPEUTICS, INC.

By: /s/ John Celebi
John Celebi
President and Chief Executive Officer

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints John Celebi and Erin Colgan, and each one of them, as his or her true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him or her and in their name, place and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments) to this registration statement, and to sign any registration statement for the same offering covered by this registration statement that is to be effective on filing pursuant to Rule 462(b) under the Securities Act of 1933, as amended, and all post-effective amendments thereto, and to file the same, with all exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents or any of them, or his or her substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this Amendment No. 1 to registration statement has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
/s/ John Celebi John Celebi	President, Chief Executive Officer and Director *(Principal Executive Officer)*	February 1, 2021
* Erin Colgan	Senior Vice President of Finance *(Principal Financial and Accounting Officer)*	February 1, 2021
* Bob Holmen	Director	February 1, 2021
* James Peyer, Ph.D.	Director	February 1, 2021
* Samuel Broder, M.D.	Director	February 1, 2021
* Thomas Ricks	Director	February 1, 2021
/s/ Deneen Vojta, M.D. Deneen Vojta, M.D.	Director	February 1, 2021

*By: John Celebi
John Celebi
Attorney-in-fact

Exhibit 1.1

Sensei Biotherapeutics, Inc.

[•] Shares
Common Stock
($0.0001 par value)

Underwriting Agreement

[•], 2021

Citigroup Global Markets Inc.
Piper Sandler & Co.
Berenberg Capital Markets LLC

As Representatives of the several Underwriters,

c/o Citigroup Global Markets Inc.
388 Greenwich Street
New York, New York 10013

c/o Piper Sandler & Co.
345 Park Avenue, 12th Floor
New York, New York 10154

c/o Berenberg Capital Markets LLC
1251 Avenue of the Americas, 53rd Floor
New York, New York 10020

Ladies and Gentlemen:

Sensei Biotherapeutics, Inc., a corporation organized under the laws of Delaware (the "Company"), proposes to sell to the several underwriters named in Schedule I hereto (the "Underwriters"), for whom you (the "Representatives") are acting as representatives, [•] shares of common stock, $0.0001 par value ("Common Stock") of the Company (said shares to be issued and sold by the Company being hereinafter called the "Underwritten Securities"). The Company also proposes to grant to the Underwriters an option to purchase up to [•] additional shares of Common Stock solely to cover over-allotments, if any (the "Option Securities"; the Option Securities, together with the Underwritten Securities, being hereinafter called the "Securities"). To the extent there are no additional Underwriters listed on Schedule I other than you, the term Representatives as used herein shall mean you, as Underwriters, and the terms Representatives and Underwriters shall mean either the singular or plural as the context requires. As part of the offering contemplated by this underwriting agreement (this "Agreement"), Citigroup Global Markets Inc. has agreed to reserve out of the Securities set forth opposite its name on the Schedule I to this Agreement, up to [•] shares, for sale to the Company's employees, officers, and directors and other parties associated with the Company (collectively,

"Participants"), as set forth in the Prospectus under the heading "Underwriting" (the "Directed Share Program"). The Securities to be sold by Citigroup Global Markets Inc. pursuant to the Directed Share Program (the "Directed Shares") will be sold by Citigroup Global Markets Inc. pursuant to this Agreement at the public offering price. Any Directed Shares not orally confirmed for purchase by any Participants by [7:30 A.M.] New York City time on the business day following the date on which this Agreement is executed will be offered to the public by Citigroup Global Markets Inc. as set forth in the Prospectus.

As used in this Agreement, the "Registration Statement" means the registration statement referred to in paragraph 1(a) hereof, including the exhibits, schedules and financial statements and any prospectus supplement relating to the Securities that is filed with the Securities and Exchange Commission (the "SEC") pursuant to Rule 424(b) under the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder (the "Securities Act") and deemed part of such registration statement pursuant to Rule 430A under the Securities Act ("Rule 430A"), as amended at the date and time that this Agreement is executed and delivered by the parties hereto (the "Execution Time"), and, in the event any post-effective amendment thereto or any registration statement and any amendments thereto filed pursuant to Rule 462(b) under the Securities Act (a "Rule 462(b) Registration Statement") becomes effective prior to the Closing Date (as defined in Section 3 hereof), shall also mean such registration statement as so amended or such Rule 462(b) Registration Statement, as the case may be; the "Effective Date" means each date and time that the Registration Statement, any post-effective amendment or amendments thereto or any Rule 462(b) Registration Statement became or becomes effective; the "Preliminary Prospectus" means any preliminary prospectus referred to in paragraph 1(a) hereof and any preliminary prospectus included in the Registration Statement at the Effective Date that omits information with respect to the Securities and the offering thereof permitted to be omitted from the Registration Statement when it becomes effective pursuant to Rule 430A (the "Rule 430A Information"); and the "Prospectus" means the prospectus relating to the Securities that is first filed pursuant to Rule 424(b) under the Securities Act ("Rule 424(b)") after the Execution Time.

As used in this Agreement, the "Disclosure Package" shall mean (i) the Preliminary Prospectus that is generally distributed to investors and used to offer the Securities, (ii) any issuer free writing prospectus, as defined in Rule 433 under the Securities Act ("Rule 433" and, any such issuer free writing prospectus, an "Issuer Free Writing Prospectus"), identified in Schedule II hereto, and (iii) any other free writing prospectus, as defined in Rule 405 under the Securities Act ("Rule 405" and, any such free writing prospectus, a "Free Writing Prospectus"), that the parties hereto shall hereafter expressly agree in writing to treat as part of the Disclosure Package.

1. Representations and Warranties. The Company represents and warrants to, and agrees with, each Underwriter as set forth below in this Section 1.

(a) The Company has prepared and filed with the SEC a registration statement (file number 333-[•]) on Form S-1, including the Preliminary Prospectus, for the registration of the offering and sale of the Securities under the Securities Act. Such Registration Statement, including any amendments thereto filed prior to the Execution Time, has become effective. The Company may have filed one or more amendments

thereto, including the Preliminary Prospectus, each of which has previously been furnished to you. The Company will file with the SEC a final Prospectus relating to the Securities in accordance with Rule 424(b) after the Execution Time. As filed, such final prospectus shall contain all information required by the Securities Act and the rules thereunder and, except to the extent the Representatives shall agree in writing to a modification, shall be in all substantive respects in the form furnished to you prior to the Execution Time or, to the extent not completed at the Execution Time, shall contain only such specific additional information and other changes (beyond that contained in the latest Preliminary Prospectus) as the Company has advised you, prior to the Execution Time, will be included or made therein.

(b) On the Effective Date, the Registration Statement did, and when the Prospectus is first filed in accordance with Rule 424(b) and on the Closing Date (as defined herein) and on any date on which Option Securities are purchased, if such date is not the Closing Date (a "settlement date"), the Prospectus (and any supplement thereto) will, comply in all material respects with the applicable requirements of the Securities Act and the rules thereunder; on the Effective Date, at the Execution Time and on the Closing Date, the Registration Statement did not and will not contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary in order to make the statements therein not misleading; and on the date of any filing pursuant to Rule 424(b) and on the Closing Date and any settlement date, the Prospectus (together with any supplement thereto) will not include any untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading; provided, however, that the Company makes no representations or warranties as to the information contained in or omitted from the Registration Statement or the Prospectus (or any supplement thereto) in reliance upon and in conformity with information furnished in writing to the Company by or on behalf of any Underwriter through the Representatives specifically for inclusion in the Registration Statement or the Prospectus (or any supplement thereto), it being understood and agreed that the only such information furnished by or on behalf of any Underwriter consists of the information described as such in Section 8 hereof.

(c) (i) The Disclosure Package and the price to the public, the number of Underwritten Securities and the number of Option Securities to be included on the cover page of the Prospectus, when taken together as a whole, (ii) each electronic road show, when taken together as a whole with the Disclosure Package and the price to the public, the number of Underwritten Securities and the number of Option Securities to be included on the cover page of the Prospectus, and (iii) any individual Written Testing-the-Waters Communication (as defined below), when taken together as a whole with the Disclosure Package, and the price to the public, the number of Underwritten Securities and the number of Option Securities to be included on the cover page of the Prospectus, does not contain any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading. The preceding sentence does not apply to statements in or omissions from the Disclosure Package based upon and in conformity with written information furnished to the Company by or on behalf of any Underwriter

through the Representatives specifically for use therein, it being understood and agreed that the only such information furnished by or on behalf of any Underwriter consists of the information described as such in Section 8 hereof. "Written Testing-the-Waters Communication" means any Testing-the-Waters Communication that is a written communication within the meaning of Rule 405.

(d) (i) At the time of filing the Registration Statement and (ii) as of the Execution Time (with such date being used as the determination date for purposes of this clause (ii)), the Company was not and is not an Ineligible Issuer (as defined in Rule 405), without taking account of any determination by the SEC pursuant to Rule 405 that it is not necessary that the Company be considered an Ineligible Issuer.

(e) From the time of initial confidential submission of the Registration Statement to the SEC (or, if earlier, the first date on which the Company engaged directly or through any Person authorized to act on its behalf in any Testing-the-Waters Communication) through the Execution Time, the Company has been and is an "emerging growth company," as defined in Section 2(a) of the Securities Act (an "Emerging Growth Company"). "Testing-the-Waters Communication" means any oral or written communication with potential investors undertaken in reliance on Section 5(d) of the Securities Act.

(f) The Company (i) has not alone engaged in any Testing-the-Waters Communication other than Testing-the-Waters Communications with the consent of the Representatives with entities that are qualified institutional buyers within the meaning of Rule 144A under the Securities Act or institutions that are accredited investors within the meaning of Rule 501 under the Securities Act and (ii) has not authorized anyone other than the Representatives to engage in Testing-the-Waters Communications. The Company reconfirms that the Representatives have been authorized to act on its behalf in undertaking Testing-the-Waters Communications. The Company has not distributed any Written Testing-the-Waters Communications other than those listed on Schedule III hereto.

(g) Each Issuer Free Writing Prospectus does not include any information that conflicts with the information contained in the Registration Statement. The foregoing sentence does not apply to statements in or omissions from any Issuer Free Writing Prospectus based upon and in conformity with written information furnished to the Company by or on behalf of any Underwriter through the Representatives specifically for use therein, it being understood and agreed that the only such information furnished by or on behalf of any Underwriter consists of the information described as such in Section 8 hereof.

(h) Each of the Company and its subsidiaries has been duly incorporated and is validly existing as a corporation in good standing under the laws of the jurisdiction in which it is chartered or organized with full corporate power and authority to own or lease, as the case may be, and to operate its properties and conduct its business as described in the Disclosure Package and the Prospectus, and is duly qualified to do business as a foreign corporation and is in good standing under the laws of each

jurisdiction which requires such qualification, except when the failure to be qualified or in good standing would not reasonably be expected, individually or in the aggregate, to have a material adverse effect on the condition (financial or otherwise), prospects, earnings, business or properties of the Company and its subsidiaries, taken as a whole , whether or not arising from transactions in the ordinary course of business (a "Material Adverse Effect").

(i) All the outstanding shares of capital stock of each subsidiary have been duly and validly authorized and issued and are fully paid and non-assessable, and, except as otherwise set forth in the Disclosure Package and the Prospectus, all outstanding shares of capital stock of the subsidiaries are owned by the Company either directly or through wholly owned subsidiaries free and clear of any perfected security interest or any other security interests, claims, liens or encumbrances.

(j) There is no franchise, contract or other document of a character required to be described in the Registration Statement or Prospectus, or to be filed as an exhibit thereto, which is not described or filed as required (and the Preliminary Prospectus contains in all material respects the same description of the foregoing matters contained in the Prospectus).

(k) This Agreement has been duly authorized, executed and delivered by the Company.

(l) The Company is not and, after giving effect to the offering and sale of the Securities and the application of the proceeds thereof as described in the Disclosure Package and the Prospectus, will not be an "investment company" as defined in the Investment Company Act of 1940, as amended.

(m) No consent, approval, authorization, filing with or order of any court or governmental agency or body is required in connection with the transactions contemplated herein, except such as have been obtained under the Securities Act, the listing rules of the Nasdaq Global Market and the applicable rules of the Financial Industry Regulatory Authority, Inc. and such as may be required under the blue sky laws of any jurisdiction in connection with the purchase and distribution of the Securities by the Underwriters in the manner contemplated herein and in the Disclosure Package and the Prospectus.

(n) Neither the issue and sale of the Securities nor the consummation of any other of the transactions herein contemplated nor the fulfillment of the terms hereof will conflict with, result in a breach or violation of, or imposition of any lien, charge or encumbrance upon any property or assets of the Company or any of its subsidiaries pursuant to, (i) the charter or by-laws of the Company or any of its subsidiaries, (ii) the terms of any indenture, contract, lease, mortgage, deed of trust, note agreement, loan agreement or other agreement, obligation, condition, covenant or instrument to which the Company or any of its subsidiaries is a party or bound or to which its or their property is subject, or (iii) any statute, law, rule, regulation, judgment, order or decree applicable to the Company or any of its subsidiaries of any court, regulatory body, administrative

agency, governmental body, arbitrator or other authority having jurisdiction over the Company or any of its subsidiaries or any of its or their properties, except in the case of clauses (ii) and (iii) for any such breach, violation or imposition as would not reasonably be expected, individually or in the aggregate, to result in a material adverse effect.

(o) No holders of securities of the Company have rights to the registration of such securities under the Registration Statement or the issuance of the Securities.

(p) The consolidated historical financial statements and schedules of the Company and its consolidated subsidiaries included in the Preliminary Prospectus, the Prospectus and the Registration Statement present fairly in all material respects the financial condition, results of operations and cash flows of the Company as of the dates and for the periods indicated, comply as to form in all material respects with the applicable accounting requirements of the Securities Act and have been prepared in conformity with generally accepted accounting principles applied on a consistent basis throughout the periods involved (except as otherwise noted therein). The selected financial data set forth under the caption “Selected Financial Information” in the Preliminary Prospectus, the Prospectus and Registration Statement fairly present in all material respects, on the basis stated in the Preliminary Prospectus, the Prospectus and the Registration Statement, the information included therein.

(q) No action, suit or proceeding by or before any court or governmental agency, authority or body or any arbitrator involving the Company or any of its subsidiaries or its or their property is pending or, to the best knowledge of the Company, threatened that (i) would be reasonably expected to have a material adverse effect on the performance of this Agreement or the consummation of any of the transactions contemplated hereby or (ii) would be reasonably expected to have a Material Adverse Effect, except as set forth in or contemplated in the Disclosure Package and the Prospectus (exclusive of any amendment or supplement thereto).

(r) Each of the Company and each of its subsidiaries owns or leases all such properties as are necessary to the conduct of its operations as presently conducted, excepted as would not reasonably be expected to have, individually or in the aggregate, a Material Adverse Effect.

(s) Neither the Company nor any subsidiary is in violation or default of (i) any provision of its charter or bylaws, (ii) the terms of any indenture, contract, lease, mortgage, deed of trust, note agreement, loan agreement or other agreement, obligation, condition, covenant or instrument to which it is a party or bound or to which its property is subject, or (iii) any statute, law, rule, regulation, judgment, order or decree of any court, regulatory body, administrative agency, governmental body, arbitrator or other authority having jurisdiction over the Company or such subsidiary or any of its properties, as applicable, except in the cases of clauses (ii) and (iii), for any such violation or default as would not be reasonably expected, individually or in the aggregate, to have a Material Adverse Effect.

(t) Deloitte & Touche LLP, who have certified certain consolidated financial statements of the Company and its consolidated subsidiaries and delivered their report with respect to the audited consolidated financial statements and schedules included in the Disclosure Package and the Prospectus, are independent public accountants with respect to the Company within the meaning of the Securities Act and the applicable published rules and regulations thereunder.

(u) The Company has filed all tax returns that are required to be filed or has requested extensions thereof (except in any case in which the failure so to file would not reasonably be expected to have a Material Adverse Effect, except as set forth in or contemplated in the Disclosure Package and the Prospectus (exclusive of any amendment or supplement thereto)) and has paid all taxes required to be paid by it and any other assessment, fine or penalty levied against it, to the extent that any of the foregoing is due and payable, except for any such assessment, fine or penalty that is currently being contested in good faith or as would not reasonably be expected to have a Material Adverse Effect, except as set forth in or contemplated in the Disclosure Package and the Prospectus (exclusive of any amendment or supplement thereto).

(v) No labor problem or dispute with the employees of the Company or any of its subsidiaries exists or, to the knowledge of the Company, is threatened or imminent, and the Company is not aware of any existing or imminent labor disturbance by the employees of any of its or its subsidiaries' principal suppliers, contractors or customers, that would reasonably be expected to have a Material Adverse Effect, except as set forth in or contemplated in the Disclosure Package and the Prospectus (exclusive of any amendment or supplement thereto).

(w) The Company and each of its subsidiaries are insured by insurers of recognized financial responsibility against such losses and risks and in such amounts as the Company reasonably believes are prudent and customary in the businesses in which they are engaged; all policies of insurance insuring the Company or any of its subsidiaries or their respective businesses, assets, employees, officers and directors are in full force and effect; the Company and its subsidiaries are in compliance with the terms of such policies and instruments in all material respects; and there are no material claims by the Company or any of its subsidiaries under any such policy or instrument as to which any insurance company is denying liability or defending under a reservation of rights clause; neither the Company nor any such subsidiary has been refused any insurance coverage sought or applied for; and neither the Company nor any such subsidiary has any reason to believe that it will not be able to renew its existing insurance coverage as and when such coverage expires or to obtain similar coverage from similar insurers as may be necessary to continue its business at a cost that would not reasonably be expected to have a Material Adverse Effect, except as set forth in or contemplated in the Disclosure Package and the Prospectus (exclusive of any amendment or supplement thereto).

(x) No subsidiary of the Company is currently prohibited, directly or indirectly, from paying any dividends to the Company, from making any other distribution on such subsidiary's capital stock, from repaying to the Company any loans or advances to such subsidiary from the Company or from transferring any of such subsidiary's property or assets to the Company or any other subsidiary of the Company, except as described in or contemplated by the Disclosure Package and the Prospectus (exclusive of any amendment or supplement thereto).

(y) The Company and its subsidiaries possess all licenses, certificates, permits and other authorizations issued by all applicable authorities necessary to conduct their respective businesses, except where the failure to possess such license, certificate, permit and other authorization would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect; neither the Company nor any such subsidiary has received any notice of proceedings relating to the revocation or modification of any such certificate, authorization or permit which, singly or in the aggregate, if the subject of an unfavorable decision, ruling or finding, would reasonably be expected to have a Material Adverse Effect, except as set forth in or contemplated in the Disclosure Package and the Prospectus (exclusive of any amendment or supplement thereto).

(z) The Company and each of its subsidiaries, considered together as one entity, maintain a system of internal accounting controls designed to provide reasonable assurance that (i) transactions are executed in accordance with management's general or specific authorizations; (ii) transactions are recorded as necessary to permit preparation of financial statements in conformity with generally accepted accounting principles and to maintain asset accountability; (iii) access to assets is permitted only in accordance with management's general or specific authorization; and (iv) the recorded accountability for assets is compared with the existing assets at reasonable intervals and appropriate action is taken with respect to any differences. The Company and its subsidiaries' internal controls over financial reporting are effective and the Company and its subsidiaries are not aware of any material weakness in their internal controls over financial reporting.

(aa) The Company and its subsidiaries, considered together as one entity, maintain "disclosure controls and procedures" (as such term is defined in Rule 13a-15(e) under the Securities and Exchange Act 1934, as amended, and the rules and regulations promulgated thereunder (the "Exchange Act"); such disclosure controls and procedures are effective.

(bb) The Company has not taken, directly or indirectly, without giving effect to activities by the Underwriters, any action designed to or that would constitute or that might reasonably be expected to cause or result in, under the Exchange Act or otherwise, stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of the Securities.

(cc) The Company and its subsidiaries are (i) in compliance with any and all applicable foreign, federal, state and local laws and regulations relating to the protection of human health and safety, the environment or hazardous or toxic substances or wastes, pollutants or contaminants (collectively, "Environmental Laws"), (ii) have received and are in compliance with all permits, licenses or other approvals required of them under applicable Environmental Laws to conduct their respective businesses and (iii) have not received notice of any actual or potential liability under any environmental law, except where such non-compliance with Environmental Laws, failure to receive required

permits, licenses or other approvals, or liability would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect, except as set forth in or contemplated in the Disclosure Package and the Prospectus (exclusive of any amendment or supplement thereto). Except as set forth in the Disclosure Package and the Prospectus, neither the Company nor any of the subsidiaries has been named as a "potentially responsible party" under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended.

(dd) None of the following events has occurred or exists, except where the occurrence of any such event would not reasonably be expected to result in a Material Adverse Effect: (i) a failure to fulfill the obligations, if any, under the minimum funding standards of Section 302 of the United States Employee Retirement Income Security Act of 1974, as amended ("ERISA"), and the regulations and published interpretations thereunder with respect to a Plan, determined without regard to any waiver of such obligations or extension of any amortization period; (ii) an audit or investigation by the Internal Revenue Service, the U.S. Department of Labor, the Pension Benefit Guaranty Corporation or any other federal or state governmental agency or any foreign regulatory agency with respect to the employment or compensation of employees by any of the Company or any of its subsidiaries; (iii) any breach of any contractual obligation, or any violation of law or applicable qualification standards, with respect to the employment or compensation of employees by the Company or any of its subsidiaries. None of the following events has occurred or, to the Company's knowledge, is reasonably likely to occur, except where the occurrence of any such event would not reasonably be expected to result in a Material Adverse Effect: (i) a material increase in the aggregate amount of contributions required to be made to all Plans in the current fiscal year of the Company and its subsidiaries compared to the amount of such contributions made in the most recently completed fiscal year of the Company and its subsidiaries; (ii) an increase in the "accumulated post-retirement benefit obligations" (within the meaning of Statement of Financial Accounting Standards 106) of the Company and its subsidiaries compared to the amount of such obligations in the most recently completed fiscal year of the Company and its subsidiaries; (iii) any event or condition giving rise to a liability under Title IV of ERISA; or (iv) the filing of a claim by one or more employees or former employees of the Company or any of its subsidiaries related to their employment. For purposes of this paragraph, the term "Plan" means a plan (within the meaning of Section 3(3) of ERISA) subject to Title IV of ERISA with respect to which the Company or any of its subsidiaries may have any liability.

(ee) There is and has been no failure on the part of the Company and any of the Company's directors or officers, in their capacities as such, to comply with any provision of the Sarbanes-Oxley Act of 2002, as amended, and the rules and regulations promulgated in connection thereunder, that are then in effect and with which the Company is required to comply as of the effectiveness of the Registration Statement.

(ff) Neither the Company nor any of its subsidiaries nor, to the knowledge of the Company, any director, officer, agent, employee, affiliate or other person acting on behalf of the Company or any of its subsidiaries is aware of or has (i) taken any action, directly or indirectly, that could result in a violation or a sanction for violation by such

persons of the Foreign Corrupt Practices Act of 1977 or the U.K. Bribery Act 2010, each as may be amended, or similar law of any other relevant jurisdiction, or the rules or regulations thereunder (collectively, "Anti-Corruption Laws"); (ii) promised, offered, provided, attempted to provide, or authorized the provision of money or anything of value, directly or indirectly, to any person for the purpose of obtaining or retaining business, influencing any act or decision of the recipient, or securing any improper advantage; or (iii) made, offered, agreed, or requested any unlawful bribe or unlawful benefit including, without limitation, any rebate, payoff, influence payment, kickback, or other unlawful or improper payment or benefit. The Company and its subsidiaries have instituted and maintain policies and procedures to ensure compliance with Anti-Corruption Laws. No part of the proceeds of the offering will be used, directly or indirectly, in violation of Anti-Corruption Laws.

(gg) The operations of the Company and its subsidiaries are and have been conducted at all times in compliance with applicable financial recordkeeping and reporting requirements and the money laundering statutes and the rules and regulations thereunder and any related or similar rules, regulations or guidelines, issued, administered or enforced by any governmental agency (collectively, the "Money Laundering Laws") and no action, suit or proceeding by or before any court or governmental agency, authority or body or any arbitrator involving the Company or any of its subsidiaries with respect to the Money Laundering Laws is pending or, to the best knowledge of the Company, threatened.

(hh) Neither the Company nor any of its subsidiaries nor, to the knowledge of the Company, any director, officer, agent, employee or affiliate of the Company or any of its subsidiaries (i) is, or is controlled or 50% or more owned in the aggregate by or is acting on behalf of, one or more individuals or entities that are currently the subject of any sanctions administered or enforced by the United States (including any administered or enforced by the Office of Foreign Assets Control of the U.S. Department of the Treasury, the U.S. Department of State or the Bureau of Industry and Security of the U.S. Department of Commerce), the United Nations Security Council, the European Union, a member state of the European Union (including sanctions administered or enforced by Her Majesty's Treasury of the United Kingdom) or other relevant sanctions authority (collectively, "Sanctions" and such persons, "Sanctioned Persons" and each such person, a "Sanctioned Person"), (ii) is located, organized or resident in a country or territory that is, or whose government is, the subject of Sanctions that broadly prohibit dealings with that country or territory (collectively, "Sanctioned Countries" and each, a "Sanctioned Country") or (iii) will, directly or indirectly, use the proceeds of this offering, or lend, contribute or otherwise make available such proceeds to any subsidiary, joint venture partner or other individual or entity in any manner that would result in a violation of any Sanctions by, or could result in the imposition of Sanctions against, any individual or entity (including any individual or entity participating in the offering, whether as underwriter, advisor, investor or otherwise).

(ii) Neither the Company nor any of its subsidiaries has engaged in any dealings or transactions with or for the benefit of a Sanctioned Person, or with or in a Sanctioned Country, in the preceding 3 years, nor does the Company or any of its subsidiaries have any plans to engage in dealings or transactions with or for the benefit of a Sanctioned Person, or with or in a Sanctioned Country.

(jj) The Company has no significant subsidiaries as defined by Rule 1-02 of Regulation S-X.

(kk) The Company and its subsidiaries own, possess, license or have other rights to use, on reasonable terms, all patents, patent applications, trade and service marks, trade and service mark registrations, trade names, copyrights, licenses, inventions, trade secrets, technology, know-how and other intellectual property (collectively, the "Intellectual Property") necessary for the conduct of the Company's business as now conducted or as proposed in the Disclosure Package and Prospectus to be conducted. Except as set forth in the Disclosure Package and the Prospectus under the caption ["Business—Patents and Proprietary Rights,"] (a) there are no rights of third parties to any such Intellectual Property; (b) there is no material infringement by third parties of any such Intellectual Property; (c) there is no pending or threatened action, suit, proceeding or claim by others challenging the Company's rights in or to any such Intellectual Property, and the Company is unaware of any facts which, in the Company's view, would form a reasonable basis for any such claim; (d) there is no pending or threatened action, suit, proceeding or claim by others challenging the validity or scope of any such Intellectual Property, and the Company is unaware of any facts which, in the Company's view, would form a reasonable basis for any such claim; (e) there is no pending or threatened action, suit, proceeding or claim by others that the Company infringes or otherwise violates any patent, trademark, copyright, trade secret or other proprietary rights of others, and the Company is unaware of any other fact which, in the Company's view, would form a reasonable basis for any such claim; (f) there is no U.S. patent or published U.S. patent application which contains claims that dominate or may dominate any Intellectual Property described in the Disclosure Package and the Prospectus as being owned by or licensed to the Company or that interferes with the issued or pending claims of any such Intellectual Property; and (g) there is no prior art of which the Company is aware that may render any U.S. patent held by the Company invalid or any U.S. patent application held by the Company un-patentable which has not been disclosed to the U.S. Patent and Trademark Office.

(ll) Except as disclosed in the Registration Statement, the Disclosure Package and the Prospectus, the Company (i) does not have any material lending or other relationship with any bank or lending affiliate of Citigroup Global Markets Holdings Inc., Piper Sandler & Co. or Berenberg Capital Markets LLC and (ii) does not intend to use any of the proceeds from the sale of the Securities hereunder to repay any outstanding debt owed to any affiliate of Citigroup Global Markets Holdings Inc., Piper Sandler & Co. or Berenberg Capital Markets LLC.

(mm) Neither the Company nor any of its subsidiaries nor any of its or their properties or assets has any immunity from the jurisdiction of any court or from any legal process (whether through service or notice, attachment prior to judgment, attachment in aid of execution or otherwise) under the laws of Delaware.

(nn) The Company is, and at all relevant times has been, in material compliance with all applicable Health Care Laws. For purposes of this Agreement, "Health Care Laws" means: (i) the Federal Food, Drug, and Cosmetic Act (21 U.S.C. Section 301 et seq.), the Public Health Service Act (42 U.S.C. Section 201 et seq.), and the regulations promulgated thereunder; (ii) all applicable federal, state, local and foreign health care fraud and abuse laws, including, without limitation, the Anti-Kickback Statute (42 U.S.C. Section 1320a-7b(b)), the Civil False Claims Act (31 U.S.C. Section 3729 et seq.), the criminal false statements law (42 U.S.C. Section 1320a-7b(a)), 18 U.S.C. Sections 286 and 287, the health care fraud criminal provisions under the U.S. Health Insurance Portability and Accountability Act of 1996 ("HIPAA") (42 U.S.C. Section 1320d et seq.), the Stark Law (42 U.S.C. Section 1395nn), the civil monetary penalties law (42 U.S.C. Section 1320a-7a), the exclusion law (42 U.S.C. Section 1320a-7), the Physician Payments Sunshine Act (42 U.S.C. Section 1320-7h), and applicable laws governing government funded or sponsored healthcare programs; (iii) HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act (42 U.S.C. Section 17921 et seq.); (iv) the Patient Protection and Affordable Care Act of 2010, as amended by the Health Care and Education Reconciliation Act of 2010; (v) licensure, quality, safety and accreditation requirements under applicable federal, state, local or foreign laws or regulatory bodies; (vi) all other local, state, federal, national, supranational and foreign laws, relating to the regulation of the Company or its subsidiaries, and (vii) the directives and regulations promulgated pursuant to such statutes and any state or non-U.S. counterpart thereof. Neither the Company nor any of its subsidiaries has received any FDA Form 483, notice of adverse finding, warning letter, untitled letter or notice of any claim, action, suit, proceeding, hearing, enforcement, investigation, arbitration or other action from any court or arbitrator or governmental or regulatory authority or third party alleging that any product operation or activity is in material violation of any Health Care Laws nor, to the Company's knowledge, is any such claim, action, suit, proceeding, hearing, enforcement, investigation, arbitration or other action threatened. The Company and its subsidiaries have filed, maintained or submitted all reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments as required by any Health Care Laws, and all such reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments were complete and accurate on the date filed or were corrected or supplemented by a subsequent submission, except as would not cause a Material Adverse Effect. Neither the Company nor any subsidiary is a party to any corporate integrity agreement, monitoring agreement, consent decree, settlement order, or similar agreement with or imposed by any governmental or regulatory authority. Additionally, neither the Company, any of its subsidiaries, nor any of its or their respective employees, officers, directors or, to the Company's knowledge, agents, has been excluded, suspended or debarred from participation in any U.S. federal health care program or human clinical research or, to Company's knowledge, is subject to a governmental inquiry, investigation, proceeding, or other similar action that could reasonably be expected to result in debarment, suspension, or exclusion.

(oo) The Company's information technology assets and equipment, computers, systems, networks, hardware, software, websites, applications, and databases (collectively, "IT Systems and Data") operate and perform as required in connection with the operation of the business of the Company and its subsidiaries as currently conducted, free and clear of all bugs, errors, defects, Trojan horses, time bombs, malware and other corruptants, except as would not reasonably be expected to result in a Material Adverse Effect. The Company and its subsidiaries have implemented and maintain commercially reasonable physical, technical and administrative controls, policies, procedures, and safeguards designed to maintain and protect their material confidential information and the integrity, redundancy and security of all IT Systems and Data, including "Personal Data," used in connection with their businesses. "Personal Data" means (i) a natural person's name, street address, telephone number, e-mail address, photograph, social security number or tax identification number, driver's license number, passport number, credit card number, bank information, or customer or account number; (ii) any information which would qualify as "personally identifying information" under the Federal Trade Commission Act, as amended; (iii) "personal data" as defined by the European Union General Data Protection Regulation (EU 2016/679); (iv) any information which would qualify as "protected health information" under HIPAA; and (v) any other piece of information that allows the identification of such natural person, or his or her family, or permits the collection or analysis of any data related to an identified person's health or sexual orientation. To the knowledge of the Company, there have been no breaches, violations, outages or unauthorized uses of or accesses to Personal Data, except for those that have been remedied without material cost or liability or the duty to notify any other person, nor any incidents under internal review or investigations relating to the same. The Company and its subsidiaries have been and are presently in material compliance with (a) all applicable laws, directives, or statutes and all judgments, orders, rules and regulations of any court or arbitrator or governmental or regulatory authority relating to the privacy and security of IT Systems and Data, including Personal Data (collectively, the "Privacy Laws") and (b) all officially released internal policies and contractual obligations relating to the privacy and security of IT Systems and Data, including Personal Data and to the protection of such IT Systems and Data and Personal Data from unauthorized use, access, misappropriation or modification, except as would not reasonably be expected to result in a Material Adverse Effect. To the knowledge of the Company, there has been no security breach or other material compromise of or relating to any of the Company's IT Systems and Data and the Company has not been notified of, and has no knowledge of any event or condition that would reasonably be expected to result in, any security breach or other material compromise to their IT Systems and Data, except for any breaches or compromises that would not, individually or in the aggregate, reasonably be expected to result in a Material Adverse Effect.

(pp) To ensure compliance with the Privacy Laws, the Company and each of its subsidiaries has in place, complies with, and takes commercially reasonable steps reasonably designed to ensure compliance in all material respects with their officially released policies and contractual obligations governing the collection, storage, use, disclosure, handling and analysis of Personal Data. The Company has at all times made all material disclosures to users or customers required by the Privacy Laws, except as would not, individually or in the aggregate, result in a Material Adverse Effect. The Company further certifies that neither the Company nor any of its subsidiaries: (i) have received

notice of, any actual or potential liability under or relating to, or actual or potential violation of, any of the Privacy Laws, and has no knowledge of any event or condition that would reasonably be expected to result in, any such notice; (ii) are currently conducting or paying for, in whole or in part, any investigation, remediation, or other corrective action pursuant to any Privacy Laws; or (iii) is a party to any order, decree, or agreement that imposes any obligation or liability under any Privacy Law, except with respect to subsection (i), (ii) and (iii) as would not, individually or in the aggregate, result in a Material Adverse Effect.

(qq) The preclinical studies and clinical trials that are described in the Registration Statement, the Disclosure Package or the Prospectus (collectively, "Studies") were conducted by or, to the knowledge of the Company, on behalf of the Company or its subsidiaries were and, if still ongoing, are being conducted in all material respects in accordance with the protocols, procedures and controls designed for such Studies and pursuant to, where applicable, accepted professional scientific standards; the descriptions of the results of such studies contained in the Registration Statement, the Disclosure Package or the Prospectus are accurate and complete descriptions in all material respects and fairly present the data derived from such Studies, in each case in all material respects, and the Company and its subsidiaries have no knowledge of any other Studies the results of which are materially inconsistent with, or otherwise call into question, the results described or referred to in the Registration Statement, the Disclosure Package or the Prospectus; the Company and its subsidiaries have made all such filings and obtained all such approvals as may be required by the FDA or any committee thereof or from any other U.S. or foreign government or drug or medical device regulatory agency, or health care facility Institutional Review Board (collectively, the "Regulatory Agencies"), except as would not, individually or in the aggregate, reasonably be expected to result in a Material Adverse Effect; neither the Company nor any of its subsidiaries have received any notice from, or correspondence from, any Regulatory Agency requiring the termination, suspension or material modification of any Studies conducted by or on behalf of the Company or its subsidiaries; and the Company and its subsidiaries are in compliance in all material respects with all applicable rules, regulations and policies of the Regulatory Agencies.

Furthermore, the Company represents and warrants to Citigroup Global Markets Inc. that the Registration Statement, the Prospectus, any preliminary prospectus and any Issuer Free Writing Prospectuses comply, and any further amendments or supplements thereto will comply, with any applicable laws or regulations of foreign jurisdictions in which the Prospectus or any preliminary prospectus and any Issuer Free Writing Prospectus, as amended or supplemented, if applicable, are distributed in connection with the Directed Share Program, and that no authorization, approval, consent, license, order, registration or qualification of or with any government, governmental instrumentality or court, other than such as have been obtained, is necessary under the securities laws and regulations of foreign jurisdictions in which the Directed Shares are offered outside the United States. The Company has not offered, or caused the Underwriters to offer, Securities to any person pursuant to the Directed Share Program with the specific intent to unlawfully influence (i) a customer or supplier of the Company to alter the customer's or supplier's level or type of business with the Company, or (ii) a trade journalist or publication to write or publish favorable information about the Company or its products.

Any certificate signed by any officer of the Company and delivered to the Representatives or counsel for the Underwriters in connection with the offering of the Securities shall be deemed a representation and warranty by the Company, as to matters covered thereby, to each Underwriter.

2. Purchase and Sale.

(a) Subject to the terms and conditions and in reliance upon the representations and warranties herein set forth, the Company agrees to sell to each Underwriter, and each Underwriter agrees, severally and not jointly, to purchase from the Company, at a purchase price of $[•] per share, the amount of the Underwritten Securities set forth opposite such Underwriter's name in Schedule I hereto.

(b) Subject to the terms and conditions and in reliance upon the representations and warranties herein set forth, the Company hereby grants an option to the several Underwriters to purchase, severally and not jointly, up to [•] Option Securities at the same purchase price per share as the Underwriters shall pay for the Underwritten Securities, less an amount per share equal to any dividends or distributions declared by the Company and payable on the Underwritten Securities but not payable on the Option Securities. Said option may be exercised only to cover over-allotments in the sale of the Underwritten Securities by the Underwriters. Said option may be exercised in whole or in part at any time on or before the 30th day after the date of the Prospectus upon written or telegraphic notice by the Representatives to the Company setting forth the number of shares of the Option Securities as to which the several Underwriters are exercising the option and the settlement date. The number of Option Securities to be purchased by each Underwriter shall be the same percentage of the total number of shares of the Option Securities to be purchased by the several Underwriters as such Underwriter is purchasing of the Underwritten Securities, subject to such adjustments as you in your absolute discretion shall make to eliminate any fractional shares.

3. Delivery and Payment. Delivery of and payment for the Underwritten Securities and the Option Securities (if the option provided for in Section 2(b) hereof shall have been exercised on or before the second Business Day immediately preceding the Closing Date) shall be made at 10:00 AM, New York City time, on [•], 2021, or at such time on such later date not more than two Business Days after the foregoing date as the Representatives shall designate, which date and time may be postponed by agreement between the Representatives and the Company or as provided in Section 9 hereof (such date and time of delivery and payment for the Securities being herein called the "Closing Date"). As used herein, "Business Day" shall mean any day other than a Saturday, a Sunday or a legal holiday or a day on which banking institutions or trust companies are authorized or obligated by law to close in New York City. Delivery of the Securities shall be made to the Representatives for the respective accounts of the several Underwriters against payment by the several Underwriters through the Representatives of the purchase price thereof to or upon the order of the Company by wire transfer payable in same-day funds to an account specified by the Company. Delivery of the Underwritten Securities and the Option Securities shall be made through the facilities of The Depository Trust Company unless the Representatives shall otherwise instruct.

If the option provided for in Section 2(b) hereof is exercised after the second Business Day immediately preceding the Closing Date, the Company will deliver the Option Securities (at the expense of the Company) to the Representatives, at 388 Greenwich Street, New York, New York, on the date specified by the Representatives (which shall be within two Business Days after exercise of said option) for the respective accounts of the several Underwriters, against payment by the several Underwriters through the Representatives of the purchase price thereof to or upon the order of the Company by wire transfer payable in same-day funds to an account specified by the Company. If settlement for the Option Securities occurs after the Closing Date, the Company will deliver to the Representatives on the settlement date for the Option Securities, and the obligation of the Underwriters to purchase the Option Securities shall be conditioned upon receipt of, supplemental opinions, certificates and letters confirming as of such date the opinions, certificates and letters delivered on the Closing Date pursuant to Section 6 hereof.

4. Offering by Underwriters. It is understood that the several Underwriters propose to offer the Securities for sale to the public as set forth in the Prospectus.

5. Agreements. The Company agrees with the several Underwriters that:

(a) Prior to the termination of the offering of the Securities, the Company will not file any amendment of the Registration Statement or supplement to the Prospectus or any Rule 462(b) Registration Statement unless the Company has furnished you a copy for your review prior to filing and will not file any such proposed amendment or supplement to which you reasonably object. The Company will cause the Prospectus, properly completed, and any supplement thereto to be filed in a form approved by the Representatives with the SEC pursuant to the applicable paragraph of Rule 424(b) within the time period prescribed and will provide evidence satisfactory to the Representatives of such timely filing. The Company will promptly advise the Representatives (i) when the Prospectus, and any supplement thereto, shall have been filed (if required) with the SEC pursuant to Rule 424(b) or when any Rule 462(b) Registration Statement shall have been filed with the SEC, (ii) when, prior to termination of the offering of the Securities, any amendment to the Registration Statement shall have been filed or become effective, (iii) of any request by the SEC or its staff for any amendment of the Registration Statement, or any Rule 462(b) Registration Statement, or for any supplement to the Prospectus or for any additional information, (iv) of the issuance by the SEC of any stop order suspending the effectiveness of the Registration Statement or of any notice objecting to its use or the institution or threatening of any proceeding for that purpose and (v) of the receipt by the Company of any notification with respect to the suspension of the qualification of the Securities for sale in any jurisdiction or the institution or threatening of any proceeding for such purpose. The Company will use its reasonable best efforts to prevent the issuance of any such stop order or the occurrence of any such suspension or objection to the use of the Registration Statement and, upon such issuance, occurrence or notice of objection, to obtain as soon as possible the withdrawal of such stop order or relief from such occurrence or objection, including, if necessary, by filing an amendment to the Registration Statement or a new registration statement and using its reasonable best efforts to have such amendment or new registration statement declared effective as soon as practicable.

(b) If, at any time prior to the filing of the Prospectus pursuant to Rule 424(b) , any event occurs as a result of which the Disclosure Package would include any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein in the light of the circumstances under which they were made or the circumstances then prevailing not misleading, the Company will (i) notify promptly the Representatives so that any use of the Disclosure Package may cease until it is amended or supplemented; (ii) amend or supplement the Disclosure Package to correct such statement or omission; and (iii) supply any amendment or supplement to you in such quantities as you may reasonably request.

(c) If, at any time when a prospectus relating to the Securities is required to be delivered under the Securities Act (including in circumstances where such requirement may be satisfied pursuant to Rule 172 under the Securities Act ("Rule 172")), any event occurs as a result of which the Prospectus as then supplemented would include any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein in the light of the circumstances under which they were made or the circumstances then prevailing not misleading, or if it shall be necessary to amend the Registration Statement or supplement the Prospectus to comply with the Securities Act or the rules thereunder, the Company promptly will (i) notify the Representatives of any such event; (ii) prepare and file with the SEC, subject to the second sentence of paragraph (a) of this Section 5, an amendment or supplement which will correct such statement or omission or effect such compliance; and (iii) supply any supplemented Prospectus to you in such quantities as you may reasonably request.

(d) As soon as practicable, the Company will make generally available to its security holders and to the Representatives an earnings statement or statements of the Company and its subsidiaries which will satisfy the provisions of Section 11(a) of the Securities Act and Rule 158 under the Securities Act.

(e) Upon request, the Company will furnish to the Representatives and counsel for the Underwriters, without charge, signed copies of the Registration Statement (including exhibits thereto) and to each other Underwriter a copy of the Registration Statement (without exhibits thereto) and, so long as delivery of a prospectus by an Underwriter or dealer may be required (including in circumstances where such requirement may be satisfied pursuant to Rule 172) by the Securities Act, as many copies of each Preliminary Prospectus, the Prospectus and each Issuer Free Writing Prospectus and any supplement thereto as the Representatives may reasonably request. The Company will pay the expenses of printing or other production of all documents relating to the offering.

(f) The Company will arrange, if necessary, for the qualification of the Securities for sale under the laws of such jurisdictions as the Representatives may reasonably designate and will use its reasonable best efforts to maintain such qualifications in effect so long as required for the distribution of the Securities; provided that in no event shall the Company be obligated to qualify to do business in any jurisdiction where it is not now so qualified or to take any action that would subject it to service of process in suits, other than those arising out of the offering or sale of the Securities, in any jurisdiction where it is not now so subject.

(g) The Company will not, without the prior written consent of the Representatives, offer, sell, contract to sell, pledge, or otherwise dispose of, (or enter into any transaction which is designed to, or might reasonably be expected to, result in the disposition (whether by actual disposition or effective economic disposition due to cash settlement or otherwise) by the Company or any affiliate of the Company or any person in privity with the Company or any affiliate of the Company) directly or indirectly, including the filing (or participation in the filing) of a registration statement with the SEC in respect of, or establish or increase a put equivalent position or liquidate or decrease a call equivalent position within the meaning of Section 16 of the Exchange Act, any other shares of Common Stock or any securities convertible into, or exercisable, or exchangeable for, shares of Common Stock; or publicly announce an intention to effect any such transaction, for a period of 180 days after the date of this Agreement, provided, however, that the Company may: (i) effect the transactions contemplated hereby, (ii) issue and sell Common Stock, or any securities convertible into or exercisable or exchangeable for shares of Common Stock, pursuant to any stock option plan, incentive plan, employee stock purchase place, stock bonus plan, stock ownership plan or dividend reinvestment plan or other plan or arrangement of the Company described in the Registration Statement, the Disclosure Package and the Prospectus (collectively, the "Company Plans"), (iii) issue shares of Common Stock issuable upon the conversion of securities or the exercise of warrants or options or the settlement of restricted stock units outstanding at the Execution Time or issued thereafter pursuant to a Company Plan, (iv) file one or more registration statements on Form S-8 relating to any Company Plan, and (v) issue shares of Common Stock, or any securities convertible into or exercisable or exchangeable for shares of Common Stock, or enter into an agreement to issue shares of Common Stock, or any securities convertible into or exercisable or exchangeable for shares of Common Stock, in connection with any bona fide merger, joint venture, strategic alliance, commercial or other collaborative transaction, or the acquisition or license of the business, property, technology or other assets of another individual or entity, or the assumption of an employee benefit plan in connection with such a merger or acquisition, provided, however, that the aggregate number of shares of Common Stock, or securities convertible into or exercisable or exchangeable for shares of Common Stock, that the Company may issue or agree to issue pursuant to this clause (v) shall not exceed 5% of the total outstanding shares of Common Stock immediately after the Offering, and provided, further, that the recipients of such securities issued pursuant to clauses (ii)-(v) provide to the Representatives a signed lock-up agreement in the form described in Section 6(k) hereof.

(h) If the Representatives in their sole discretion, agree to release or waive the restrictions set forth in a lock-up letter described in Section [6(k)] hereof for an officer or director of the Company and provide the Company with notice of the impending release or waiver at least three Business Days before the effective date of the release or waiver, the Company agrees to announce the impending release or waiver by a press release substantially in the form of Exhibit B hereto through a major news service at least two Business Days before the effective date of the release or waiver.

(i) The Company will not take, directly or indirectly (without giving effect to activities by the Underwriters), any action designed to or that would constitute or that might reasonably be expected to cause or result in, under the Exchange Act or otherwise, stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of the Securities.

(j) The Company agrees to pay the costs and expenses relating to the following matters: (i) the preparation, printing or reproduction and filing with the SEC of the Registration Statement (including financial statements and exhibits thereto), each Preliminary Prospectus, the Prospectus and each Issuer Free Writing Prospectus, and each amendment or supplement to any of them; (ii) the printing (or reproduction) and delivery (including postage, air freight charges and charges for counting and packaging) of such copies of the Registration Statement, each Preliminary Prospectus, the Prospectus and each Issuer Free Writing Prospectus, and all amendments or supplements to any of them, as may, in each case, be reasonably requested for use in connection with the offering and sale of the Securities; (iii) the preparation, printing, authentication, issuance and delivery of certificates for the Securities, including any stamp or transfer taxes in connection with the original issuance and sale of the Securities; (iv) the printing (or reproduction) and delivery of this Agreement, any blue sky memorandum and all other agreements or documents printed (or reproduced) and delivered in connection with the offering of the Securities; (v) the registration of the Securities under the Exchange Act and the listing of the Securities on the Nasdaq Stock Market; (vi) any registration or qualification of the Securities for offer and sale under the securities or blue sky laws of the several states (including filing fees and the reasonable fees and expenses of counsel for the Underwriters relating to such registration and qualification); (vii) any filings required to be made with the Financial Industry Regulatory Authority, Inc. ("FINRA") (including filing fees and the reasonable fees and expenses of counsel for the Underwriters relating to such filings); (viii) the transportation and other expenses incurred by or on behalf of Company representatives in connection with presentations to prospective purchasers of the Securities; provided, however, that if the Representatives and the Company mutually agree that an aircraft shall be chartered in connection with any road show, the Company shall be responsible for 50% of the costs and expenses of such chartered aircraft and the Underwriters shall be responsible for the remaining 50% of such costs and expenses; (ix) the fees and expenses of the Company's accountants and the fees and expenses of counsel (including local and special counsel) for the Company; and (x) all other costs and expenses incident to the performance by the Company of its obligations hereunder; provided, however, that the reasonable fees and expenses of counsel for the Underwriters incurred pursuant clauses (vi) and (vii) of this Section 5(j) shall not exceed $30,000 in the aggregate.

(k) The Company agrees to pay (i) all reasonable fees and disbursements of counsel incurred by the Underwriters in connection with the Directed Share Program, (ii) all costs and expenses incurred by the Underwriters in connection with the printing (or reproduction) and delivery (including postage, air freight charges and charges for counting and packaging) of copies of the Directed Share Program material and (iii) all stamp duties, similar taxes or duties or other taxes, if any, incurred by the Underwriters in connection with the Directed Share Program.

(l) The Company agrees that, unless it has or shall have obtained the prior written consent of the Representatives, and each Underwriter, severally and not jointly, agrees with the Company that, unless it has or shall have obtained, as the case may be, the prior written consent of the Company, it has not made and will not make any offer relating to the Securities that would constitute an Issuer Free Writing Prospectus or that would otherwise constitute a Free Writing Prospectus required to be filed by the Company with the SEC or retained by the Company under Rule 433; provided that the prior written consent of the parties hereto shall be deemed to have been given in respect of the Free Writing Prospectuses included in Schedule II hereto and any electronic road show. Any such free writing prospectus consented to by the Representatives or the Company is hereinafter referred to as a "Permitted Free Writing Prospectus." The Company agrees that (x) it has treated and will treat, as the case may be, each Permitted Free Writing Prospectus as an Issuer Free Writing Prospectus and (y) it has complied and will comply, as the case may be, with the requirements of Rule 164 under the Securities Act ("Rule 164") and Rule 433 applicable to any Permitted Free Writing Prospectus, including in respect of timely filing with the SEC, legending and record keeping.

(m) The Company will promptly notify the Representatives if the Company ceases to be an Emerging Growth Company at any time prior to the later of (a) completion of the distribution of the Securities within the meaning of the Securities Act and (b) completion of the 180-day restricted period referred to in Section 5(g) hereof.

(n) If at any time following the distribution of any Written Testing-the-Waters Communication, any event occurs as a result of which such Written Testing-the-Waters Communication would include any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein in the light of the circumstances under which they were made or the circumstances then prevailing not misleading, the Company will (i) notify promptly the Representatives so that use of the Written Testing-the-Waters Communication may cease until it is amended or supplemented; (ii) amend or supplement the Written Testing-the-Waters Communication to correct such statement or omission; and (iii) supply any amendment or supplement to the Representatives in such quantities as may be reasonably requested.

Furthermore, the Company covenants with Citigroup Global Markets Inc. that the Company will comply with all applicable securities and other applicable laws, rules and regulations in each foreign jurisdiction in which the Directed Shares are offered in connection with the Directed Share Program.

6. Conditions to the Obligations of the Underwriters. The obligations of the Underwriters to purchase the Underwritten Securities and the Option Securities, as the case may be, shall be subject to the accuracy of the representations and warranties on the part of the Company contained herein as of the Execution Time, the Closing Date and any settlement date pursuant to Section 3 hereof, to the accuracy of the statements of the Company made in any certificates pursuant to the provisions hereof, to the performance by the Company of its obligations hereunder and to the following additional conditions:

(a) The Prospectus, and any supplement thereto, have been filed in the manner and within the time period required by Rule 424(b); any material required to be filed by the Company pursuant to Rule 433(d) shall have been filed with the SEC within the applicable time periods prescribed for such filings by Rule 433; and no stop order suspending the effectiveness of the Registration Statement or any notice objecting to its use shall have been issued and no proceedings for that purpose shall have been instituted or threatened.

(b) The Company shall have requested and caused Cooley LLP, counsel for the Company, to have furnished to the Representatives their opinion, dated as of the Closing Date and addressed to the Representatives, in form and substance reasonably satisfactory to the Underwriters.

(c) The Company shall have requested and caused Cooley LLP, intellectual property counsel for the Company, to have furnished to the Representatives their opinion, dated as of the Closing Date and addressed to the Representatives, in form and substance reasonably satisfactory to the Underwriters.

(d) The Representatives shall have received from Goodwin Procter LLP, counsel for the Underwriters, such opinion or opinions, dated the Closing Date and addressed to the Representatives, with respect to the issuance and sale of the Securities, the Registration Statement, the Disclosure Package, the Prospectus (together with any supplement thereto) and other related matters as the Representatives may reasonably require, and the Company shall have furnished to such counsel such documents as they reasonably request for the purpose of enabling them to pass upon such matters.

(e) The Company shall have furnished to the Representatives a certificate of the Company, signed by the Chairman of the Board or the Chief Executive Officer and principal financial or accounting officer of the Company, dated as of the Closing Date, to the effect that the signers of such certificate have carefully examined the Registration Statement, the Disclosure Package, the Prospectus and any amendment or supplement thereto, as well as each electronic road show used in connection with the offering of the Securities, and this Agreement and that:

(i) the representations and warranties of the Company in this Agreement are true and correct on and as of the Closing Date with the same effect as if made on the Closing Date and the Company has complied with all the agreements and satisfied all the conditions on its part to be performed or satisfied at or prior to the Closing Date;

(ii) no stop order suspending the effectiveness of the Registration Statement or any notice objecting to its use has been issued and no proceedings for that purpose have been instituted or, to the Company's knowledge, threatened; and

(iii) since the date of the most recent financial statements included in the Disclosure Package and the Prospectus (exclusive of any amendment or

supplement thereto), there has been no material adverse change in the condition (financial or otherwise), prospects, earnings, business or properties of the Company and its subsidiaries, taken as a whole, whether or not arising from transactions in the ordinary course of business, except as set forth in or contemplated in the Disclosure Package and the Prospectus (exclusive of any amendment or supplement thereto).

(f) The Company shall have requested and caused Deloitte and Touche LLP to have furnished to the Representatives, at the Execution Time and at the Closing Date, letters, dated respectively as of the Execution Time and as of the Closing Date, in form and substance satisfactory to the Representatives, confirming that they are independent accountants within the meaning of the Securities Act and the Exchange Act and the applicable rules and regulations adopted by the SEC thereunder and containing statements and information of the type customarily included in accountants' "comfort letters" to underwriters with respect to the financial statements and certain financial information contained in the Registration Statement, the Disclosure Package and the Prospectus.

(g) Subsequent to the Execution Time or, if earlier, the dates as of which information is given in the Registration Statement (exclusive of any amendment thereof) and the Prospectus (exclusive of supplement thereto), there shall not have been (i) any change or decrease specified in the letter or letters referred to in paragraph (f) of this Section 6 or (ii) any change, or any development involving a prospective change, in or affecting the condition (financial or otherwise), earnings, business or properties of the Company and its subsidiaries taken as a whole, whether or not arising from transactions in the ordinary course of business, except as set forth in or contemplated in the Disclosure Package and the Prospectus (exclusive of any amendment or supplement thereto) the effect of which, in any case referred to in clause (i) or (ii) above, is, in the sole judgment of the Representatives, so material and adverse as to make it impractical or inadvisable to proceed with the offering or delivery of the Securities as contemplated by the Registration Statement (exclusive of any amendment thereof), the Disclosure Package and the Prospectus (exclusive of any amendment or supplement thereto).

(h) Prior to the Closing Date, the Company shall have furnished to the Representatives such further information, certificates and documents as the Representatives may reasonably request.

(i) Subsequent to the Execution Time, there shall not have been any decrease in the rating of any of the Company's debt securities by any "nationally recognized statistical rating organization" (as defined for purposes of Rule 3(a)(62) under the Exchange Act) or any notice given of any intended or potential decrease in any such rating or of a possible change in any such rating that does not indicate the direction of the possible change.

(j) The Securities shall have been listed and admitted and authorized for trading on the [Nasdaq Stock Market], and satisfactory evidence of such actions shall have been provided to the Representatives.

(k) At the Execution Time, the Company shall have furnished to the Representatives a letter substantially in the form of Exhibit A hereto from each officer, director and substantially all of the security holders of the Company addressed to the Representatives.

If any of the conditions specified in this Section 6 shall not have been fulfilled when and as provided in this Agreement, or if any of the opinions and certificates mentioned above or elsewhere in this Agreement shall not be reasonably satisfactory in form and substance to the Representatives and counsel for the Underwriters, this Agreement and all obligations of the Underwriters hereunder may be canceled at, or at any time prior to, the Closing Date by the Representatives. Notice of such cancellation shall be given to the Company in writing or by telephone or facsimile confirmed in writing.

The documents required to be delivered by this Section 6 shall be delivered at the office of Goodwin Procter LLP, counsel for the Underwriters, at 620 Eighth Avenue, New York, New York 10018, on the Closing Date.

7. Reimbursement of Underwriters' Expenses. If the sale of the Securities provided for herein is not consummated because any condition to the obligations of the Underwriters set forth in Section 6 hereof is not satisfied, because of any termination pursuant to Section 10 hereof or because of any refusal, inability or failure on the part of the Company to perform any agreement herein or comply with any provision hereof other than by reason of a default by any of the Underwriters, the Company will reimburse the Underwriters severally through Citigroup Global Markets Inc. on demand for all documented out-of-pocket expenses (including reasonable fees and disbursements of counsel) that shall have been reasonably incurred by them in connection with the proposed purchase and sale of the Securities.

8. Indemnification and Contribution.

(a) The Company agrees to indemnify and hold harmless each Underwriter, the directors, officers, employees, affiliates and agents of each Underwriter and each person who controls any Underwriter within the meaning of either the Securities Act or the Exchange Act against any and all losses, claims, damages or liabilities, joint or several, to which they or any of them may become subject under the Securities Act, the Exchange Act or other Federal or state statutory law or regulation, at common law or otherwise, insofar as such losses, claims, damages or liabilities (or actions in respect thereof) arise out of or are based upon any untrue statement or alleged untrue statement of a material fact contained in the Registration Statement for the registration of the Securities as originally filed or in any amendment thereof, or in any Preliminary Prospectus, or the Prospectus, any Issuer Free Writing Prospectus, or any Written Testing-the-Waters Communication or in any amendment thereof or supplement thereto, or arise out of or are based upon the omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading, and agrees to reimburse each such indemnified party, as incurred, for any legal or other expenses reasonably incurred by them in connection with investigating or defending any such loss, claim, damage, liability or action; provided, however, that the Company will not be liable in any such case to the extent that any such loss, claim,

damage or liability arises out of or is based upon any such untrue statement or alleged untrue statement or omission or alleged omission made therein in reliance upon and in conformity with written information furnished to the Company by or on behalf of any Underwriter through the Representatives specifically for inclusion therein. This indemnity agreement will be in addition to any liability which the Company may otherwise have.

(b) Each Underwriter severally and not jointly agrees to indemnify and hold harmless the Company, each of its directors, each of its officers who signs the Registration Statement, and each person who controls the Company within the meaning of either the Securities Act or the Exchange Act, to the same extent as the foregoing indemnity from the Company to each Underwriter, but only with reference to written information relating to such Underwriter furnished to the Company by or on behalf of such Underwriter through the Representatives specifically for inclusion in the documents referred to in the foregoing indemnity. This indemnity agreement will be in addition to any liability which any Underwriter may otherwise have. The Company acknowledges that the statements set forth [(i) in the last paragraph of the cover page regarding delivery of the Securities and, under the heading "Underwriting" or "Plan of Distribution," (ii) the list of Underwriters and their respective participation in the sale of the Securities, (iii) the sentences related to concessions and reallowances and (iv) the paragraph related to stabilization, syndicate covering transactions and penalty bids] in the Preliminary Prospectus and the Prospectus constitute the only information furnished in writing by or on behalf of the several Underwriters for inclusion in the Preliminary Prospectus, the Prospectus or any Issuer Free Writing Prospectus.

(c) The Company agrees to indemnify and hold harmless Citigroup Global Markets Inc., the directors, officers, employees, affiliates and agents of Citigroup Global Markets Inc. and each person, who controls Citigroup Global Markets Inc. within the meaning of either the Securities Act or the Exchange Act ("Citigroup Entities"), from and against any and all losses, claims, damages and liabilities to which they may become subject under the Securities Act, the Exchange Act or other Federal or state statutory law or regulation, at common law or otherwise (including, without limitation, any legal or other expenses reasonably incurred in connection with defending or investigating any such action or claim), insofar as such losses, claims damages or liabilities (or actions in respect thereof) (i) arise out of or are based upon any untrue statement or alleged untrue statement of a material fact contained in the prospectus wrapper material prepared by or with the consent of the Company for distribution in foreign jurisdictions in connection with the Directed Share Program attached to the Prospectus, any preliminary prospectus or any Issuer Free Writing Prospectus, or arise out of or are based upon the omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statement therein, when considered in conjunction with the Prospectus or any applicable preliminary prospectus, not misleading; (ii) caused by the failure of any Participant to pay for and accept delivery of the securities which immediately following the Effective Date of the Registration Statement, were subject to a properly confirmed agreement to purchase; or (iii) related to, arising out of, or in connection with the Directed Share Program, except that this clause (iii) shall not apply to the extent that such loss, claim, damage or liability is finally judicially determined to have resulted primarily from the gross negligence or willful misconduct of the Citigroup Entities.

(d) Promptly after receipt by an indemnified party under this Section 8 of notice of the commencement of any action, such indemnified party will, if a claim in respect thereof is to be made against the indemnifying party under this Section 8, notify the indemnifying party in writing of the commencement thereof; but the failure so to notify the indemnifying party (i) will not relieve it from liability under paragraph (a), (b) or (c) above unless and to the extent it did not otherwise learn of such action and such failure results in the forfeiture by the indemnifying party of substantial rights and defenses and (ii) will not, in any event, relieve the indemnifying party from any obligations to any indemnified party other than the indemnification obligation provided in paragraph (a), (b) or (c) above. The indemnifying party shall be entitled to appoint counsel of the indemnifying party's choice at the indemnifying party's expense to represent the indemnified party in any action for which indemnification is sought (in which case the indemnifying party shall not thereafter be responsible for the fees and expenses of any separate counsel retained by the indemnified party or parties except as set forth below); provided, however, that such counsel shall be satisfactory to the indemnified party. Notwithstanding the indemnifying party's election to appoint counsel to represent the indemnified party in an action, the indemnified party shall have the right to employ separate counsel (including local counsel), and the indemnifying party shall bear the reasonable fees, costs and expenses of such separate counsel if (i) the use of counsel chosen by the indemnifying party to represent the indemnified party would present such counsel with a conflict of interest, (ii) the actual or potential defendants in, or targets of, any such action include both the indemnified party and the indemnifying party and the indemnified party shall have reasonably concluded that there may be legal defenses available to it and/or other indemnified parties which are different from or additional to those available to the indemnifying party, (iii) the indemnifying party shall not have employed counsel satisfactory to the indemnified party to represent the indemnified party within a reasonable time after notice of the institution of such action or (iv) the indemnifying party shall authorize the indemnified party to employ separate counsel at the expense of the indemnifying party. An indemnifying party will not, without the prior written consent of the indemnified parties, settle or compromise or consent to the entry of any judgment with respect to any pending or threatened claim, action, suit or proceeding in respect of which indemnification or contribution may be sought hereunder (whether or not the indemnified parties are actual or potential parties to such claim or action) unless such settlement, compromise or consent (i) includes an unconditional release of each indemnified party from all liability arising out of such claim, action, suit or proceeding and (ii) does not include a statement as to or an admission of fault, culpability or a failure to act, by or on behalf of any indemnified party. Notwithstanding anything contained herein to the contrary, if indemnity may be sought pursuant to Section 8(c) hereof in respect of such action or proceeding, then in addition to such separate firm for the indemnified parties, the indemnifying party shall be liable for the reasonable fees and expenses of not more than one separate firm (in addition to any local counsel) for Citigroup Global Markets Inc., the directors, officers, employees and agents of Citigroup Global Markets Inc., and all persons, if any, who control Citigroup Global Markets Inc. within the meaning of either the Securities Act or the Exchange Act for the defense of any losses, claims, damages and liabilities arising out of the Directed Share Program.

(e) In the event that the indemnity provided in paragraph (a), (b), (c) or (d) of this Section 8 is unavailable to or insufficient to hold harmless an indemnified party for any reason, the Company and the Underwriters severally agree to contribute to the aggregate losses, claims, damages and liabilities (including legal or other expenses reasonably incurred in connection with investigating or defending the same) (collectively, "Losses") to which the Company and one or more of the Underwriters may be subject in such proportion as is appropriate to reflect the relative benefits received by the Company on the one hand and by the Underwriters on the other from the offering of the Securities. If the allocation provided by the immediately preceding sentence is unavailable for any reason, the Company and the Underwriters severally shall contribute in such proportion as is appropriate to reflect not only such relative benefits but also the relative fault of the Company on the one hand and of the Underwriters on the other in connection with the statements or omissions which resulted in such Losses as well as any other relevant equitable considerations. Benefits received by the Company shall be deemed to be equal to the total net proceeds from the offering (before deducting expenses) received by it, and benefits received by the Underwriters shall be deemed to be equal to the total underwriting discounts and commissions, in each case as set forth on the cover page of the Prospectus. Relative fault shall be determined by reference to, among other things, whether any untrue or any alleged untrue statement of a material fact or the omission or alleged omission to state a material fact relates to information provided by the Company on the one hand or the Underwriters on the other, the intent of the parties and their relative knowledge, access to information and opportunity to correct or prevent such untrue statement or omission. The Company and the Underwriters agree that it would not be just and equitable if contribution were determined by pro rata allocation or any other method of allocation which does not take account of the equitable considerations referred to above. Notwithstanding the provisions of this paragraph (e), in no event shall an Underwriter be required to contribute any amount in excess of the amount by which the total underwriting discounts and commissions received by such Underwriter with respect to the offering of the Securities exceeds the amount of any damages that such Underwriter has otherwise been required to pay by reason of such untrue or alleged untrue statement or omission or alleged omission Notwithstanding the provisions of this paragraph (e), no person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) shall be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation. For purposes of this Section 8, each person who controls an Underwriter within the meaning of either the Securities Act or the Exchange Act and each director, officer, employee, affiliate and agent of an Underwriter shall have the same rights to contribution as such Underwriter, and each person who controls the Company within the meaning of either the Securities Act or the Exchange Act, each officer of the Company who shall have signed the Registration Statement and each director of the Company shall have the same rights to contribution as the Company, subject in each case to the applicable terms and conditions of this paragraph (e).

9. Default by an Underwriter. If any one or more Underwriters shall fail to purchase and pay for any of the Securities agreed to be purchased by such Underwriter or Underwriters hereunder and such failure to purchase shall constitute a default in the performance of its or their obligations under this Agreement, the remaining Underwriters shall be obligated severally to take up and pay for (in the respective proportions which the amount of Securities set forth opposite their names in Schedule I hereto bears to the aggregate amount of Securities set forth opposite the names of all the remaining Underwriters) the Securities which the defaulting Underwriter or Underwriters agreed but failed to purchase; provided, however, that in the event that the aggregate amount of Securities which the defaulting Underwriter or Underwriters agreed but failed to purchase shall exceed 10% of the aggregate amount of Securities set forth in Schedule I hereto, the remaining Underwriters shall have the right to purchase all, but shall not be under any obligation to purchase any, of the Securities, and if such non-defaulting Underwriters do not purchase all the Securities, this Agreement will terminate without liability to any non-defaulting Underwriter or the Company. In the event of a default by any Underwriter as set forth in this Section 9, the Closing Date shall be postponed for such period, not exceeding five Business Days, as the Representatives shall determine in order that the required changes in the Registration Statement and the Prospectus or in any other documents or arrangements may be effected. Nothing contained in this Agreement shall relieve any defaulting Underwriter of its liability, if any, to the Company and any non-defaulting Underwriter for damages occasioned by its default hereunder.

10. Termination. This Agreement shall be subject to termination in the absolute discretion of the Representatives, by notice given to the Company prior to delivery of and payment for the Securities, if at any time prior to such delivery and payment (i) trading in the Company's Common Stock shall have been suspended by the SEC or [Nasdaq Stock Market] or trading in securities generally on the New York Stock Exchange or the Nasdaq Stock Market shall have been suspended or limited or minimum prices shall have been established on either of such exchanges, (ii) a banking moratorium shall have been declared either by Federal or New York State authorities, (iii) there shall have occurred a material disruption in commercial banking or securities settlement or clearance services or (iv) there shall have occurred any outbreak or escalation of hostilities, declaration by the United States of a national emergency or war, or other calamity or crisis the effect of which on financial markets is such as to make it, in the sole judgment of the Representatives, impractical or inadvisable to proceed with the offering or delivery of the Securities as contemplated by the Preliminary Prospectus or the Prospectus (exclusive of any amendment or supplement thereto).

11. Representations and Indemnities to Survive. The respective agreements, representations, warranties, indemnities and other statements of the Company or its officers and of the Underwriters set forth in or made pursuant to this Agreement will remain in full force and effect, regardless of any investigation made by or on behalf of any Underwriter or the Company or any of the officers, directors, employees, agents, affiliates or controlling persons referred to in Section 8 hereof, and will survive delivery of and payment for the Securities. The provisions of Sections 7 and 8 hereof shall survive the termination or cancellation of this Agreement.

12. Notices. All communications hereunder will be in writing and effective only on receipt, and, if sent to the Representatives, will be mailed, delivered or telefaxed to Citigroup Global Markets Inc. at 388 Greenwich Street, New York, New York 10013, Attention:

General Counsel, facsimile number: +1 (646) 291-1469; Piper Sandler & Co. at 345 Park Avenue, 12th Floor, New York, New York 10154, Attention: Equity Capital Markets, facsimile number: +1 (212) 284-9394; and Berenberg Capital Markets LLC at 1251 Avenue of the Americas, 53rd Floor, New York, New York 10020, Attention: Equity Syndicate Desk, with a copy to the Legal Department; or, if sent to Sensei Biotherapeutics, Inc., will be mailed, delivered or telefaxed to 620 Professional Drive, Gaithersburg, Maryland 20879, **[***facsimile number***]**, Attention: Chief Executive Officer.

13. Successors. This Agreement will inure to the benefit of and be binding upon the parties hereto and their respective successors and the officers, directors, employees, agents and controlling persons referred to in Section 8 hereof, and no other person will have any right or obligation hereunder.

14. Jurisdiction. The Company agrees that any suit, action or proceeding against the Company brought by any Underwriter, the directors, officers, employees, affiliates and agents of any Underwriter, or by any person who controls any Underwriter, arising out of or based upon this Agreement or the transactions contemplated hereby may be instituted in any State or U.S. federal court in The City of New York and County of New York, and waives any objection which it may now or hereafter have to the laying of venue of any such proceeding, and irrevocably submits to the non-exclusive jurisdiction of such courts in any suit, action or proceeding. The Company hereby appoints **[**John Celebi**]** as its authorized agent (the "Authorized Agent") upon whom process may be served in any suit, action or proceeding arising out of or based upon this Agreement or the transactions contemplated herein that may be instituted in any State or U.S. federal court in The City of New York and County of New York, by any Underwriter, the directors, officers, employees, affiliates and agents of any Underwriter, or by any person who controls any Underwriter, and expressly accepts the non-exclusive jurisdiction of any such court in respect of any such suit, action or proceeding. The Company hereby represents and warrants that the Authorized Agent has accepted such appointment and has agreed to act as said agent for service of process, and the Company agrees to take any and all action, including the filing of any and all documents that may be necessary to continue such appointment in full force and effect as aforesaid. Service of process upon the Authorized Agent shall be deemed, in every respect, effective service of process upon the Company. Notwithstanding the foregoing, any action arising out of or based upon this Agreement may be instituted by any Underwriter, the directors, officers, employees and agents of any Underwriter, or by any person who controls any Underwriter, in any court of competent jurisdiction in Delaware.

15. Recognition of the U.S. Special Resolution Regimes.

(a) In the event that any Underwriter that is a Covered Entity becomes subject to a proceeding under a U.S. Special Resolution Regime, the transfer from such Underwriter of this Agreement, and any interest and obligation in or under this Agreement, will be effective to the same extent as the transfer would be effective under the U.S. Special Resolution Regime if this Agreement, and any such interest and obligation, were governed by the laws of the United States or a state of the United States.

(b) In the event that any Underwriter that is a Covered Entity or a BHC Act Affiliate of such Underwriter becomes subject to a proceeding under a U.S. Special Resolution Regime, Default Rights under this Agreement that may be exercised against such Underwriter are permitted to be exercised to no greater extent than such Default Rights could be exercised under the U.S. Special Resolution Regime if this Agreement were governed by the laws of the United States or a state of the United States.

As used in this Section 15, "BHC Act Affiliate" has the meaning assigned to the term "affiliate" in, and shall be interpreted in accordance with, 12 U.S.C. § 1841(k); "Covered Entity" means any of the following: (i) a "covered entity" as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 252.82(b), (ii) a "covered bank" as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 47.3(b) or (iii) a "covered FSI" as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 382.2(b); "Default Right" has the meaning assigned to that term in, and shall be interpreted in accordance with, 12 C.F.R. §§ 252.81, 47.2 or 382.1, as applicable; and "U.S. Special Resolution Regime" means each of (i) the Federal Deposit Insurance Act and the regulations promulgated thereunder and (ii) Title II of the Dodd-Frank Wall Street Reform and Consumer Protection Act and the regulations promulgated thereunder.

16. No Fiduciary Duty. The Company hereby acknowledges that (a) the purchase and sale of the Securities pursuant to this Agreement is an arm's-length commercial transaction between the Company, on the one hand, and the Underwriters and any affiliate through which it may be acting, on the other, (b) the Underwriters are acting as principal and not as an agent or fiduciary of the Company and (c) the Company's engagement of the Underwriters in connection with the offering and the process leading up to the offering is as independent contractors and not in any other capacity. Furthermore, the Company agrees that it is solely responsible for making its own judgments in connection with the offering (irrespective of whether any of the Underwriters has advised or is currently advising the Company on related or other matters). The Company agrees that it will not claim that the Underwriters have rendered advisory services of any nature or respect, or owe an agency, fiduciary or similar duty to the Company, in connection with such transaction or the process leading thereto.

17. Integration. This Agreement supersedes all prior agreements and understandings (whether written or oral) between the Company and the Underwriters, or any of them, with respect to the subject matter hereof.

18. Applicable Law. This Agreement will be governed by and construed in accordance with the laws of the State of New York applicable to contracts made and to be performed within the State of New York.

19. Waiver of Jury Trial. The Company hereby irrevocably waives, to the fullest extent permitted by applicable law, any and all right to trial by jury in any legal proceeding arising out of or relating to this Agreement or the transactions contemplated hereby.

20. Counterparts. This Agreement may be signed in one or more counterparts, each of which shall constitute an original and all of which together shall constitute one and the same agreement.

21. Headings. The section headings used herein are for convenience only and shall not affect the construction hereof.

If the foregoing is in accordance with your understanding of our agreement, please sign and return to us the enclosed duplicate hereof, whereupon this letter and your acceptance shall represent a binding agreement among the Company and the several Underwriters.

Very truly yours,

Sensei Biotherapeutics, Inc.

By: _____
Name:
Title:

[*Signature Page to Underwriting Agreement*]

The foregoing Agreement is hereby
confirmed and accepted as of the date
first above written.

CITIGROUP GLOBAL MARKETS INC.
PIPER SANDLER & CO.
BERENBERG CAPITAL MARKETS LLC

By: CITIGROUP GLOBAL MARKETS INC.

By: _____
Name:
Title:

By: PIPER SANDLER & CO.

By: _____
Name:
Title:

By: BERENBERG CAPITAL MARKETS LLC

By: _____
Name:
Title:

By: _____
Name:
Title:

For themselves and the other several
Underwriters named in Schedule I to
the foregoing Agreement.

SCHEDULE I

Underwriters	Number of Underwritten Securities to be Purchased
Citigroup Global Markets Inc.	
Piper Sandler & Co.	
Berenberg Capital Markets LLC	
Oppenheimer & Co. Inc.	
Total	

SCHEDULE II

Schedule of Free Writing Prospectuses included in the Disclosure Package

[None]

SCHEDULE III

Schedule of Written Testing-the-Waters Communication

[*list all Written Testing-the-Waters Communications*]

[Provided under separate cover]

Sensei Biotherapeutics, Inc.
[*insert date***]**

Sensei Biotherapeutics, Inc. (the "Company") announced today that Citigroup Global Markets Inc., Piper Sandler & Co. and Berenberg Capital Markets LLC, the lead book-running managers in the Company's recent public sale of [•] shares of common stock, are [waiving] [releasing] a lock-up restriction with respect to [•] shares of the Company's common stock held by [certain officers or directors] [an officer or director] of the Company. The [waiver] [release] will take effect on **[***insert date***],** 20__, and the shares may be sold on or after such date.

This press release is not an offer for sale of the securities in the United States or in any other jurisdiction where such offer is prohibited, and such securities may not be offered or sold in the United States absent registration or an exemption from registration under the United States Securities Act of 1933, as amended.

Sensei Biotherapeutics, Inc.
Public Offering of Common Stock

[*insert date***]**, 20__

[*name and address of officer or director requesting waiver***]**

Dear Mr./Ms. **[***insert name***]**:

This letter is being delivered to you in connection with the offering by Sensei Biotherapeutics, Inc. (the "Company") of [•] shares of common stock, $0.0001 par value (the "Common Stock"), of the Company and the lock-up letter dated **[***insert date***]**, 2021(the "Lock-up Letter"), executed by you in connection with such offering, and your request for a [waiver] [release] dated **[***insert date***]**, 20__, with respect to [•] shares of Common Stock (the "Shares").

Citigroup Global Markets Inc., Piper Sandler & Co. and Berenberg Capital Markets LLC hereby agree to [waive] [release] the transfer restrictions set forth in the Lock-up Letter, but only with respect to the Shares, effective **[***insert date***]**, 20__; provided, however, that such [waiver] [release] is conditioned on the Company announcing the impending [waiver] [release] by press release through a major news service at least two business days before effectiveness of such [waiver] [release]. This letter will serve as notice to the Company of the impending [waiver] [release].

Except as expressly [waived] [released] hereby, the Lock-up Letter shall remain in full force and effect.

Yours very truly,

Citigroup Global Markets Inc.

By: _____
Name:
Title:

Piper Sandler & Co.

By: _____
Name:
Title:

Berenberg Capital Markets Inc.

By: _____

Name:

Title:

cc: Sensei Biotherapeutics, Inc.

Exhibit 3.1

AMENDED AND RESTATED
CERTIFICATE OF INCORPORATION
OF
SENSEI BIOTHERAPEUTICS, INC.

(Pursuant to Sections 242 and 245 of the
General Corporation Law of the State of Delaware)

Sensei Biotherapeutics, Inc., a corporation organized and existing under and by virtue of the provisions of the General Corporation Law of the State of Delaware (the "***General Corporation Law***"),

DOES HEREBY CERTIFY:

1. That the name of this corporation is Sensei Biotherapeutics, Inc., and that this corporation was originally incorporated pursuant to the General Corporation Law on December 1, 2017 under the name PPI Holdings, Inc. and that this corporation filed a Certificate of Amendment to the Certificate of Incorporation of PPI Holdings, Inc. to change its name from "PPI Holdings, Inc." to "Sensei Biotherapeutics, Inc." on December 4, 2018.

2. That the Board of Directors duly adopted resolutions proposing to amend and restate the Amended and Restated Certificate of Incorporation of this corporation, declaring said amendment and restatement to be advisable and in the best interests of this corporation and its stockholders, and authorizing the appropriate officers of this corporation to solicit the consent of the stockholders therefor, which resolution setting forth the proposed amendment and restatement is as follows:

RESOLVED, that the Amended and Restated Certificate of Incorporation of this corporation be amended and restated in its entirety to read as follows:

FIRST: The name of this corporation is Sensei Biotherapeutics, Inc. (the "***Corporation***").

SECOND: The address of the registered office of the Corporation in the State of Delaware is 3500 South DuPont Highway, City of Dover, County of Kent, 19901. The name of its registered agent at such address is Incorporating Services, Ltd.

THIRD: The nature of the business or purposes to be conducted or promoted is to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law.

FOURTH: The total number of shares of all classes of stock which the Corporation shall have authority to issue is (i) 1,300,000,000 shares of Common Stock and (ii) 930,000,000 shares of Preferred Stock, $0.0001 par value per share ("***Preferred Stock***"). The following is a statement of the designations and the powers, privileges and rights, and the qualifications, limitations or restrictions thereof in respect of each class of capital stock of the Corporation

COMMON STOCK

1. General. The voting, dividend and liquidation rights of the holders of the Common Stock are subject to and qualified by the rights, powers and preferences of the holders of the Preferred Stock set forth herein.

2. Voting. The holders of the Common Stock are entitled to one vote for each share of Common Stock held at all meetings of stockholders (and written actions in lieu of meetings). There shall be no cumulative voting. The number of authorized shares of Common Stock may be increased or decreased (but not below the number of shares thereof then outstanding) by (in addition to any vote of the holders of one or more series of Preferred Stock that may be required by the terms of this Amended and Restated Certificate of Incorporation) the affirmative vote of the holders of shares of capital stock of the Corporation representing a majority of the votes represented by all outstanding shares of capital stock of the Corporation entitled to vote, irrespective of the provisions of Section 242(b)(2) of the General Corporation Law.

B. PREFERRED STOCK

750,000,000 shares of the authorized and unissued Preferred Stock of the Corporation are hereby designated "***Series AA Preferred Stock***" and 180,000,000 shares of the authorized and unissued Preferred Stock of the Corporation are hereby designated "***Series BB Preferred Stock***", each with the following rights, preferences, powers, privileges and restrictions, qualifications and limitations. Unless otherwise indicated, references to "sections" or "subsections" in this Part B of this Article Fourth refer to sections and subsections of Part B of this Article Fourth.

1. Dividends.

The Corporation shall not declare, pay or set aside any dividends on shares of any other class or series of capital stock of the Corporation (other than dividends on shares of Common Stock payable in shares of Common Stock) unless (in addition to the obtaining of any consents required elsewhere in the Certificate of Incorporation) the holders of the Preferred Stock then outstanding shall first receive, or simultaneously receive, a dividend at the rate of 8% of the applicable Original Issue Price (as defined below); provided that, if the Corporation declares, pays or sets aside, a dividend on shares of Common Stock (other than dividends on shares of Common Stock payable in shares of Common Stock), the dividend payable to the holders of Preferred Stock pursuant to this Section 1 shall be calculated based upon the dividend on the class or series of capital stock that would result in the highest dividend being paid to the holders of the Preferred Stock, and, if the Corporation declares, pays or sets aside, a dividend on shares of Common Stock payable in shares of Common Stock, the holders of the Preferred Stock then outstanding shall first receive, or simultaneously receive, such dividend of shares of Common Stock. The "***Original Issue Price***" of the Series AA Preferred Stock means $0.082135 per share of Series AA Preferred Stock, subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series AA Preferred Stock. The "***Original Issue Price***" of the Series BB Preferred Stock means $0.207383 per share of Series BB Preferred Stock, subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series BB Preferred Stock. Such dividends shall be payable only when, as and if declared by the Board of Directors (the "***Board***") and shall be non-cumulative.

2. Liquidation, Dissolution or Winding Up; Certain Mergers, Consolidations and Asset Sales.

2.1 Preferential Payments to Holders of Series BB Preferred Stock. In the event of any voluntary or involuntary liquidation, dissolution or winding up of the Corporation, the holders of shares of Series BB Preferred Stock then outstanding shall be entitled to be paid out of the assets of the Corporation available for distribution to its stockholders or, in the case of a Deemed Liquidation Event (as defined below), out of the consideration payable to stockholders in such Deemed Liquidation Event or the Available Proceeds (as defined below), before any payment shall be made to the holders of Series AA Preferred Stock or Common Stock by reason of their ownership thereof, an amount per share equal to the

Original Issue Price of the Series BB Preferred Stock, plus any dividends declared but unpaid thereon (the amount payable pursuant to this sentence is hereinafter referred to as the "***Series BB Liquidation Amount***"). If upon any such liquidation, dissolution or winding up of the Corporation or Deemed Liquidation Event, the assets of the Corporation available for distribution to its stockholders shall be insufficient to pay the holders of shares of Series BB Preferred Stock the full amount to which they shall be entitled under this Section 2.1, the holders of shares of Series BB Preferred Stock shall share ratably in any distribution of the assets available for distribution in proportion to the respective amounts which would otherwise be payable in respect of the shares held by them upon such distribution if all amounts payable on or with respect to such shares were paid in full.

2.2 Preferential Payments to Holders of Series AA Preferred Stock. In the event of any voluntary or involuntary liquidation, dissolution or winding up of the Corporation, after the payment in full of all Series BB Liquidation Amounts required to be paid to the holders of shares of Series BB Preferred Stock and before any payment shall be made to the holders of Common Stock by reason of their ownership thereof, the holders of shares of Series AA Preferred Stock then outstanding shall be entitled to be paid out of the assets of the Corporation available for distribution to its stockholders or, in the case of a Deemed Liquidation Event (as defined below), out of the consideration payable to stockholders in such Deemed Liquidation Event or the Available Proceeds (as defined below), before any payment shall be made to the holders of Common Stock by reason of their ownership thereof, an amount per share equal to the Original Issue Price of the Series AA Preferred Stock, plus any dividends declared but unpaid thereon (the amount payable pursuant to this sentence is hereinafter referred to as the "***Series AA Liquidation Amount***"). If upon any such liquidation, dissolution or winding up of the Corporation or Deemed Liquidation Event, the assets of the Corporation available for distribution to its stockholders shall be insufficient to pay the holders of shares of Series AA Preferred Stock the full amount to which they shall be entitled under this Section 2.2, the holders of shares of Series AA Preferred Stock shall share ratably in any distribution of the assets available for distribution in proportion to the respective amounts which would otherwise be payable in respect of the shares held by them upon such distribution if all amounts payable on or with respect to such shares were paid in full.

2.3 Distribution of Remaining Assets. In the event of any voluntary or involuntary liquidation, dissolution or winding up of the Corporation, after the payment in full of the Series BB Liquidation Amount and Series AA Liquidation Amount required to be paid to the holders of shares of Series BB Preferred Stock and Series AA Preferred Stock, the remaining assets of the Corporation available for distribution to its stockholders or, in the case of a Deemed Liquidation Event, the consideration not payable to the holders of shares of Series BB Preferred Stock and Series AA Preferred Stock pursuant to Section 2.1 and Section 2.2 or the remaining Available Proceeds, as the case may be, shall be distributed among the holders of the shares of Series BB Preferred Stock, Series AA Preferred Stock and Common Stock, pro rata based on the number of shares held by each such holder, treating for this purpose all such securities as if they had been converted to Common Stock pursuant to the terms of this Amended and Restated Certificate of Incorporation immediately prior to such liquidation, dissolution or winding up of the Corporation.

2.4 Deemed Liquidation Events.

2.4.1 Definition. Each of the following events shall be considered a "***Deemed Liquidation Event***" unless the holders of at least two-thirds of the outstanding shares of Preferred Stock voting together as a single class on an as-converted to Common Stock basis (the "***Requisite Holders***") elect otherwise by written notice sent to the Corporation at least 10 days prior to the effective date of any such event:

(a) a merger or consolidation in which

(i) the Corporation is a constituent party or

(ii) a subsidiary of the Corporation is a constituent party and the Corporation issues shares of its capital stock pursuant to such merger or consolidation,

(b) except any such merger or consolidation involving the Corporation or a subsidiary in which the shares of capital stock of the Corporation outstanding immediately prior to such merger or consolidation continue to represent, or are converted into or exchanged for shares of capital stock that represent, immediately following such merger or consolidation, a majority, by voting power, of the capital stock of (1) the surviving or resulting corporation; or (2) if the surviving or resulting corporation is a wholly owned subsidiary of another corporation immediately following such merger or consolidation, the parent corporation of such surviving or resulting corporation; or (1) the sale, lease, transfer, exclusive license or other disposition, in a single transaction or series of related transactions, by the Corporation or any subsidiary of the Corporation of all or substantially all the assets of the Corporation and its subsidiaries taken as a whole, or (2) the sale or disposition (whether by merger, consolidation or otherwise, and whether in a single transaction or a series of related transactions) of one or more subsidiaries of the Corporation if substantially all of the assets of the Corporation and its subsidiaries taken as a whole are held by such subsidiary or subsidiaries, except where such sale, lease, transfer, exclusive license or other disposition is to a wholly owned subsidiary of the Corporation.

2.4.2 Effecting a Deemed Liquidation Event.

(a) The Corporation shall not have the power to effect a Deemed Liquidation Event referred to in Section 2.4.1(a)(i) unless the agreement or plan of merger or consolidation for such transaction (the "***Merger Agreement***") provides that the consideration payable to the stockholders of the Corporation in such Deemed Liquidation Event shall be paid to the holders of capital stock of the Corporation in accordance with Sections 2.1, 2.2 and 2.3.

(b) In the event of a Deemed Liquidation Event referred to in Section 2.4.1(a)(ii) or 2.4.1(b), if the Corporation does not effect a dissolution of the Corporation under the General Corporation Law within 90 days after such Deemed Liquidation Event, then (i) the Corporation shall send a written notice to each holder of Preferred Stock no later than the 90th day after the Deemed Liquidation Event advising such holders of their right (and the requirements to be met to secure such right) pursuant to the terms of the following clause; (ii) to require the redemption of such shares of Preferred Stock, and (iii) if the Requisite Holders so request in a written instrument delivered to the Corporation not later than 120 days after such Deemed Liquidation Event, the Corporation shall use the consideration received by the Corporation for such Deemed Liquidation Event (net of any retained liabilities associated with the assets sold or technology licensed, as determined in good faith by the Board of Directors of the Corporation), together with any other assets of the Corporation available for distribution to its stockholders, all to the extent permitted by Delaware law governing distributions to stockholders (the "***Available Proceeds***"), on the 150th day after such Deemed Liquidation Event, to redeem all outstanding shares of Preferred Stock at a price per share equal to the Series BB Liquidation Amount or Series AA Liquidation Amount, as applicable. Notwithstanding the foregoing, in the event of a redemption pursuant to the preceding sentence, if the Available Proceeds are not sufficient to redeem all outstanding shares of Preferred Stock, the Corporation shall redeem a pro rata portion of each holder's shares of Preferred Stock to the fullest extent of such Available Proceeds, based on the respective amounts which would otherwise be payable in respect of the shares to be redeemed if the Available Proceeds were distributed in accordance with Sections 2.1 and 2.2, and shall redeem the remaining shares as soon as it may lawfully do so under Delaware law governing distributions to stockholders. Prior to the distribution or redemption provided for in this Section 2.4.2(b), the Corporation shall not expend or dissipate the consideration received for such Deemed Liquidation Event, except to discharge expenses incurred in connection with such Deemed Liquidation Event.

2.4.3 Amount Deemed Paid or Distributed. The amount deemed paid or distributed to the holders of capital stock of the Corporation upon any such merger, consolidation, sale, transfer, exclusive license, other disposition or redemption shall be the cash or the value of the property, rights or securities to be paid or distributed to such holders pursuant to such Deemed Liquidation Event. The value of such property, rights or securities shall be determined in good faith by the Board of Directors of the Corporation, including the approval of at least two Series AA Directors (as defined herein).

2.4.4 Allocation of Escrow and Contingent Consideration. In the event of a Deemed Liquidation Event pursuant to Section 2.3.1(a)(i), if any portion of the consideration payable to the stockholders of the Corporation is payable only upon satisfaction of contingencies (the "***Additional Consideration***"), the Merger Agreement shall provide that (a) the portion of such consideration that is not Additional Consideration (such portion, the "***Initial Consideration***") shall be allocated among the holders of capital stock of the Corporation in accordance with Sections 2.1, 2.2 and 2.3 as if the Initial Consideration were the only consideration payable in connection with such Deemed Liquidation Event; and (b) any Additional Consideration which becomes payable to the stockholders of the Corporation upon satisfaction of such contingencies shall be allocated among the holders of capital stock of the Corporation in accordance with Sections 2.1, 2.2 and 2.3 after taking into account the previous payment of the Initial Consideration as part of the same transaction. For the purposes of this Section 2.4.4, consideration placed into escrow or retained as a holdback to be available for satisfaction of indemnification or similar obligations in connection with such Deemed Liquidation Event shall be deemed to be Additional Consideration.

2.4.5 Events Not Constituting A Deemed Liquidation Event. In the event that the Corporation determines to distribute the proceeds (cash or otherwise) resulting from any sale or other transfer of a significant portion of its assets (which would not be a Deemed Liquidation Event) or the proceeds from an option to acquire securities or assets of the Corporation, the proceeds resulting therefrom (including in respect of any ongoing payments, such as a royalty or milestone payment) will be distributed to the holders of capital stock of the Corporation in accordance with Sections 2.1, 2.2 and 2.3 (and not as a dividend under Section 1) and shall be deemed to be a payment (or partial payment, as applicable) with respect to the Series BB Liquidation Amount and the Series AA Liquidation Amount.

3. Voting.

3.1 General. On any matter presented to the stockholders of the Corporation for their action or consideration at any meeting of stockholders of the Corporation (or by written consent of stockholders in lieu of meeting), each holder of outstanding shares of Preferred Stock shall be entitled to cast the number of votes equal to the number of whole shares of Common Stock into which the shares of Preferred Stock held by such holder are convertible as of the record date for determining stockholders entitled to vote on such matter. Except as provided by law or by the other provisions of this Amended and Restated Certificate of Incorporation, holders of Preferred Stock shall vote together with the holders of Common Stock as a single class and on an as-converted to Common Stock basis.

3.2 Election of Directors. The holders of record of the shares of Series AA Preferred Stock, exclusively and as a separate class, shall be entitled to elect three directors of the Corporation (the "***Series AA Directors***") and the holders of record of the shares of Common Stock, exclusively and as a separate class, shall be entitled to elect one director of the Corporation. Any director elected as provided in the preceding sentence may be removed without cause by, and only by, the affirmative vote of the holders of the shares of the class or series of capital stock entitled to elect such director or directors, given either at a special meeting of such stockholders duly called for that purpose or pursuant to a written consent of stockholders. If the holders of shares of Series AA Preferred Stock or Common Stock, as the case may be, fail to elect a sufficient number of directors to fill all directorships for which they are entitled to elect directors, voting exclusively and as a separate class, pursuant to the first sentence of this

Section 3.2, then any directorship not so filled shall remain vacant until such time as the holders of the Series AA Preferred Stock or Common Stock, as the case may be, elect a person to fill such directorship by vote or written consent in lieu of a meeting; and no such directorship may be filled by stockholders of the Corporation other than by the stockholders of the Corporation that are entitled to elect a person to fill such directorship, voting exclusively and as a separate class. The holders of record of the shares of Common Stock and Preferred Stock voting together as a single class on an as-converted to Common Stock basis shall be entitled to elect the balance of the total number of directors of the Corporation. At any meeting held for the purpose of electing a director, the presence in person or by proxy of the holders of a majority of the outstanding shares of the class or series entitled to elect such director shall constitute a quorum for the purpose of electing such director. Except as otherwise provided in this Section 3.2, a vacancy in any directorship filled by the holders of any class or series shall be filled only by vote or written consent in lieu of a meeting of the holders of such class or series or by any remaining director or directors elected by the holders of such class or series pursuant to this Section 3.2. Any director may be removed during his or her term of office, either with or without cause, by, and only by, the affirmative vote of the holders of the shares of the class or series of stock entitled to elect such director or directors, given either at a special meeting of such stockholders duly called for that purpose or pursuant to a written consent of stockholders, and any vacancy thereby created may be filled by the holders of that class or series of stock represented at the meeting or pursuant to written consent. Notwithstanding the provisions of Section 223(a)(1) and 223(a)(2) of the General Corporation Law, any vacancy, including newly created directorships resulting from any increase in the authorized number of directors or amendment of this Amended and Restated Certificate of Incorporation, and vacancies created by removal or resignation of a director, may be filled by a majority of the directors then in office, though less than a quorum, or by a sole remaining director, and the directors so chosen shall hold office until the next annual election and until their successors are duly elected and shall qualify, unless sooner displaced; provided, however, that where such vacancy occurs among the directors elected by the holders of a class or series of stock, the holders of shares of such class or series may override the Board of Directors' action to fill such vacancy by (A) voting for their own designee to fill such vacancy at a meeting of the Corporation's stockholders or (B) written consent, if the consenting stockholders hold a sufficient number of shares of the applicable class or series to elect their designee at a meeting of the stockholders. The rights of the holders of the Series AA Preferred Stock and the rights of the holders of the Common Stock under the first sentence of this Section 3.2 shall terminate on the first date following the Series BB Original Issue Date (as defined below) on which there are issued and outstanding less than 217,552,934 shares of Series AA Preferred Stock (subject to appropriate adjustment in the event of any stock dividend, stock split, combination, or other similar recapitalization with respect to the Series AA Preferred Stock).

3.3 Preferred Stock Protective Provisions. At any time when at least 217,552,934 shares of Preferred Stock (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Preferred Stock) are outstanding, the Corporation shall not, either directly or indirectly by amendment, merger, consolidation or otherwise, do any of the following without (in addition to any other vote required by law or this Amended and Restated Certificate of Incorporation) the written consent or affirmative vote of the Requisite Holders given in writing or by vote at a meeting, consenting or voting (as the case may be) separately as a class, and any such act or transaction entered into without such consent or vote shall be null and void *ab initio*, and of no force or effect:

(a) liquidate, dissolve or wind-up the business and affairs of the Corporation, effect any merger or consolidation or any other Deemed Liquidation Event, or consent to any of the foregoing;

(b) create, or authorize the creation of, or issue or obligate itself to issue shares of, any additional class or series of capital stock, or increase the authorized number of shares of Preferred Stock or increase the authorized number of shares of any additional class or series of capital stock of the Corporation;

(c) (i) reclassify, alter or amend any existing security of the Corporation that is pari passu with any series of Preferred Stock in respect of the distribution of assets on the liquidation, dissolution or winding up of the Corporation, the payment of dividends or rights of redemption, if such reclassification, alteration or amendment would render such other security senior to any series of Preferred Stock in respect of any such right, preference, or privilege or (ii) reclassify, alter or amend any existing security of the Corporation that is junior to any series of Preferred Stock in respect of the distribution of assets on the liquidation, dissolution or winding up of the Corporation, the payment of dividends or rights of redemption, if such reclassification, alteration or amendment would render such other security senior to or pari passu with any series of Preferred Stock in respect of any such right, preference or privilege;

(d) purchase or redeem (or permit any subsidiary to purchase or redeem) or pay or declare any dividend or make any distribution on, any shares of capital stock of the Corporation other than (i) redemptions of or dividends or distributions on the Preferred Stock as expressly authorized herein, (ii) dividends or other distributions payable on the Common Stock solely in the form of additional shares of Common Stock and (iii) repurchases of stock from former employees, officers, directors, consultants or other persons who performed services for the Corporation or any subsidiary in connection with the cessation of such employment or service at the lower of the original purchase price or the then-current fair market value thereof or (iv) as approved by the Board of Directors, including the approval of at least two Series AA Directors;

(e) increase the number of shares authorized for issuance under any existing equity inventive plan or create any new equity incentive plan;

(f) amend, alter, or repeal any provision of the Certificate of Incorporation in a manner that adversely affects any series of Preferred Stock;

(g) alter any provision of the Corporation's Bylaws;

(h) increase or decrease the authorized number of shares of Preferred Stock or any series of Preferred Stock; or

(i) encumber or grant a security interest in all or substantially all of the assets of the Corporation in connection with an indebtedness of the Corporation.

3.4 Series BB Preferred Stock Protective Provisions. At any time when at least 30,000,000 shares of Series BB Preferred Stock (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series BB Preferred Stock) are outstanding, in addition to any other vote or consent required herein or by law, the vote or written consent of holders of at least a majority of the then outstanding shares of Series BB Preferred Stock voting as a single class on an as-converted to Common Stock basis, shall be required to amend, modify, add, repeal or waive any provision of this Amended and Restated Certificate of Incorporation (including any filing of a Certificate of Designation), whether directly or indirectly by merger, consolidation or otherwise, (i) to increase or decrease the aggregate number of authorized shares of Series BB Preferred Stock, (ii) to alter or change the powers, preferences, or special rights of the shares of the Series BB Preferred Stock, or (iii) to amend this Section 3.4, and any such act or transaction entered into without such consent or vote shall be null and void *ab initio*, and of no force or effect, *provided*, *however*, for the avoidance of doubt, for

purposes of this Section 3.4, the following actions shall not be considered actions which alter or change the powers, preferences, or special rights of the shares of Series BB Preferred Stock: the creation of any new class or series of shares having powers, preferences or special rights on a parity with or senior to the Series BB Preferred Stock; the sale of shares of Common Stock to the public in a public offering; or the consummation of any Deemed Liquidation Event.

4. Optional Conversion.

The holders of the Preferred Stock shall have conversion rights as follows (the "***Conversion Rights***"):

4.1 Right to Convert.

4.1.1 Conversion Ratio. Each share of Preferred Stock shall be convertible, at the option of the holder thereof, at any time and from time to time, and without the payment of additional consideration by the holder thereof, into such number of fully paid and non-assessable shares of Common Stock as is determined by dividing the applicable Original Issue Price by the applicable Conversion Price (as defined below) in effect at the time of conversion. The "***Conversion Price***" of the Series AA Preferred Stock shall initially be equal to $0.082135; and the "***Conversion Price***" of the Series BB Preferred Stock shall initially be equal to $0.207383. Such initial Conversion Price, and the rate at which shares of the applicable series of Preferred Stock may be converted into shares of Common Stock, shall be subject to adjustment as provided below.

4.1.2 Termination of Conversion Rights. In the event of a liquidation, dissolution or winding up of the Corporation or a Deemed Liquidation Event, the Conversion Rights shall terminate at the close of business on the last full day preceding the date fixed for the payment of any such amounts distributable on such event to the holders of Preferred Stock.

4.2 Fractional Shares. No fractional shares of Common Stock shall be issued upon conversion of the Preferred Stock. In lieu of any fractional shares to which the holder would otherwise be entitled, the Corporation shall pay cash equal to such fraction multiplied by the fair market value of a share of Common Stock as determined in good faith by the Board of Directors of the Corporation. Whether or not fractional shares would be issuable upon such conversion shall be determined on the basis of the total number of shares of Preferred Stock the holder is at the time converting into Common Stock and the aggregate number of shares of Common Stock issuable upon such conversion.

4.3 Mechanics of Conversion.

4.3.1 Notice of Conversion. In order for a holder of Preferred Stock to voluntarily convert shares of Preferred Stock into shares of Common Stock, such holder shall (a) provide written notice to the Corporation's transfer agent at the office of the transfer agent for the Preferred Stock (or at the principal office of the Corporation if the Corporation serves as its own transfer agent) that such holder elects to convert all or any number of such holder's shares of Preferred Stock and, if applicable, any event on which such conversion is contingent and (b), if such holder's shares are certificated, surrender the certificate or certificates for such shares of Preferred Stock (or, if such registered holder alleges that such certificate has been lost, stolen or destroyed, a lost certificate affidavit and agreement reasonably acceptable to the Corporation to indemnify the Corporation against any claim that may be made against the Corporation on account of the alleged loss, theft or destruction of such certificate), at the office of the transfer agent for the Preferred Stock (or at the principal office of the Corporation if the Corporation serves as its own transfer agent). Such notice shall state such holder's name or the names of the nominees in which such holder wishes the shares of Common Stock to be issued. If required by the Corporation, any certificates

surrendered for conversion shall be endorsed or accompanied by a written instrument or instruments of transfer, in form satisfactory to the Corporation, duly executed by the registered holder or his, her or its attorney duly authorized in writing. The close of business on the date of receipt by the transfer agent (or by the Corporation if the Corporation serves as its own transfer agent) of such notice and, if applicable, certificates (or lost certificate affidavit and agreement) shall be the time of conversion (the "***Conversion Time***"), and the shares of Common Stock issuable upon conversion of the specified shares shall be deemed to be outstanding of record as of such date. The Corporation shall, as soon as practicable after the Conversion Time (i) issue and deliver to such holder of Preferred Stock, or to his, her or its nominees, a certificate or certificates for the number of full shares of Common Stock issuable upon such conversion in accordance with the provisions hereof and a certificate for the number (if any) of the shares of Preferred Stock represented by the surrendered certificate that were not converted into Common Stock, (ii) pay in cash such amount as provided in Section 4.2 in lieu of any fraction of a share of Common Stock otherwise issuable upon such conversion and (iii) pay all declared but unpaid dividends on the shares of Preferred Stock converted.

4.3.2 Reservation of Shares. The Corporation shall at all times when the Preferred Stock shall be outstanding, reserve and keep available out of its authorized but unissued capital stock, for the purpose of effecting the conversion of the Preferred Stock, such number of its duly authorized shares of Common Stock as shall from time to time be sufficient to effect the conversion of all outstanding Preferred Stock; and if at any time the number of authorized but unissued shares of Common Stock shall not be sufficient to effect the conversion of all then outstanding shares of the Preferred Stock, the Corporation shall take such corporate action as may be necessary to increase its authorized but unissued shares of Common Stock to such number of shares as shall be sufficient for such purposes, including, without limitation, engaging in best efforts to obtain the requisite stockholder approval of any necessary amendment to this Amended and Restated Certificate of Incorporation. Before taking any action which would cause an adjustment reducing the applicable Conversion Price below the then par value of the shares of Common Stock issuable upon conversion of the Preferred Stock, the Corporation will take any corporate action which may, in the opinion of its counsel, be necessary in order that the Corporation may validly and legally issue fully paid and non-assessable shares of Common Stock at such adjusted applicable Conversion Price.

4.3.3 Effect of Conversion. All shares of Preferred Stock which shall have been surrendered for conversion as herein provided shall no longer be deemed to be outstanding and all rights with respect to such shares shall immediately cease and terminate at the Conversion Time, except only the right of the holders thereof to receive shares of Common Stock in exchange therefor, to receive payment in lieu of any fraction of a share otherwise issuable upon such conversion as provided in Section 4.2 and to receive payment of any dividends declared but unpaid thereon. Any shares of Preferred Stock so converted shall be retired and cancelled and may not be reissued as shares of such series, and the Corporation may thereafter take such appropriate action (without the need for stockholder action) as may be necessary to reduce the authorized number of shares of Preferred Stock accordingly.

4.3.4 No Further Adjustment. Upon any such conversion, no adjustment to the applicable Conversion Price shall be made for any declared but unpaid dividends on the Preferred Stock surrendered for conversion or on the Common Stock delivered upon conversion.

4.3.5 Taxes. The Corporation shall pay any and all issue and other similar taxes that may be payable in respect of any issuance or delivery of shares of Common Stock upon conversion of shares of Preferred Stock pursuant to this Section 4. The Corporation shall not, however, be required to pay any tax which may be payable in respect of any transfer involved in the issuance and delivery of shares of Common Stock in a name other than that in which the shares of Preferred Stock so converted were registered, and no such issuance or delivery shall be made unless and until the person or entity requesting such issuance has paid to the Corporation the amount of any such tax or has established, to the satisfaction of the Corporation, that such tax has been paid.

4.4 Adjustments to Conversion Price for Diluting Issues.

4.4.1 Special Definitions. For purposes of this Article Fourth, the following definitions shall apply:

(a) "***Option***" shall mean rights, options or warrants to subscribe for, purchase or otherwise acquire Common Stock or Convertible Securities.

(b) "***Series BB Original Issue Date***" shall mean the date on which the first share of Series BB Preferred Stock was issued.

(c) "***Convertible Securities***" shall mean any evidences of indebtedness, shares or other securities directly or indirectly convertible into or exchangeable for Common Stock, but excluding Options.

(d) "***Additional Shares of Common Stock***" shall mean all shares of Common Stock issued (or, pursuant to Section 4.4.3 below, deemed to be issued) by the Corporation after the Series BB Original Issue Date, other than (1) the following shares of Common Stock and (2) shares of Common Stock deemed issued pursuant to the following Options and Convertible Securities (clauses (1) and (2), collectively, "***Exempted Securities***"):

(i) shares of Common Stock, Options or Convertible Securities issued as a dividend or distribution on Preferred Stock;

(ii) shares of Common Stock, Options or Convertible Securities issued by reason of a dividend, stock split, split-up or other distribution on shares of Common Stock that is covered by Section 4.5, 4.6, 4.7 or 4.8;

(iii) shares of Common Stock or Options issued to employees or directors of, or consultants or advisors to, the Corporation or any of its subsidiaries pursuant to a plan, agreement or arrangement approved by the Board of Directors of the Corporation, including the approval of at least two Series AA Directors;

(iv) shares of Common Stock or Convertible Securities actually issued upon the exercise of Options or shares of Common Stock actually issued upon the conversion or exchange of Convertible Securities, in each case provided such issuance is pursuant to the terms of such Option or Convertible Security;

(v) shares of Common Stock, Options or Convertible Securities issued to banks, equipment lessors or other financial institutions, or to real property lessors, pursuant to a debt financing, equipment leasing or real property leasing transaction approved by the Board of Directors of the Corporation, including the approval of at least two Series AA Directors;

(vi) shares of Common Stock, Options or Convertible Securities issued to suppliers or third party service providers in connection with the provision of goods or services pursuant to transactions approved by the Board of Directors of the Corporation, including the approval of at least two Series AA Directors;

(vii) shares of Common Stock, Options or Convertible Securities issued as acquisition consideration pursuant to the acquisition of another corporation by the Corporation by merger, purchase of substantially all of the assets or other reorganization or to a joint venture agreement, *provided* that such issuances are approved by the Board of Directors of the Corporation, including the approval of at least two Series AA Directors;

(viii) any shares of Common Stock issued in connection with a reclassification; or

(ix) shares of Common Stock, Options or Convertible Securities issued in connection with sponsored research, collaboration, technology license, development, original equipment manufacturing, marketing or other similar agreements or strategic partnerships approved by the Board of Directors of the Corporation, including the approval of at least two Series AA Directors.

4.4.2 No Adjustment of Conversion Price. No adjustment in the applicable Conversion Price of a particular series of Preferred Stock shall be made as the result of the issuance or deemed issuance of Additional Shares of Common Stock if the Corporation receives written notice from the majority of the outstanding shares of such series either before or after the issuance causing the adjustment agreeing that no such adjustment shall be made as the result of the issuance or deemed issuance of such Additional Shares of Common Stock.

4.4.3 Deemed Issue of Additional Shares of Common Stock.

(a) If the Corporation at any time or from time to time after the Series BB Original Issue Date shall issue any Options or Convertible Securities (excluding Options or Convertible Securities which are themselves Exempted Securities) or shall fix a record date for the determination of holders of any class of securities entitled to receive any such Options or Convertible Securities, then the maximum number of shares of Common Stock (as set forth in the instrument relating thereto, assuming the satisfaction of any conditions to exercisability, convertibility or exchangeability but without regard to any provision contained therein for a subsequent adjustment of such number) issuable upon the exercise of such Options or, in the case of Convertible Securities and Options therefor, the conversion or exchange of such Convertible Securities, shall be deemed to be Additional Shares of Common Stock issued as of the time of such issue or, in case such a record date shall have been fixed, as of the close of business on such record date.

(b) If the terms of any Option or Convertible Security, the issuance of which resulted in an adjustment to the applicable Conversion Price pursuant to the terms of Section 4.4.4, are revised as a result of an amendment to such terms or any other adjustment pursuant to the provisions of such Option or Convertible Security (but excluding automatic adjustments to such terms pursuant to anti-dilution or similar provisions of such Option or Convertible Security) to provide for either (1) any increase or decrease in the number of shares of Common Stock issuable upon the exercise, conversion and/or exchange of any such Option or Convertible Security or (2) any increase or decrease in the consideration payable to the Corporation upon such exercise, conversion and/or exchange, then, effective upon such increase or decrease becoming effective, the applicable Conversion Price computed upon the original issue of such Option or Convertible Security (or upon the occurrence of a record date with respect thereto) shall be readjusted to such applicable Conversion Price as would have obtained had such revised terms been in effect upon the original date of issuance of such Option or Convertible Security. Notwithstanding the foregoing, no readjustment pursuant to this clause (b) shall have the effect of increasing the applicable Conversion Price to an amount which exceeds the lower of (i) the applicable Conversion Price in effect immediately prior to the original adjustment made as a result of the issuance of such Option or Convertible Security, or (ii) the applicable Conversion Price that would have resulted from any issuances of Additional Shares of Common Stock (other than deemed issuances of Additional Shares of Common Stock as a result of the issuance of such Option or Convertible Security) between the original adjustment date and such readjustment date.

(c) If the terms of any Option or Convertible Security (excluding Options or Convertible Securities which are themselves Exempted Securities), the issuance of which did not result in an adjustment to the applicable Conversion Price pursuant to the terms of Section 4.4.4 (either because the consideration per share (determined pursuant to Section 4.4.5) of the Additional Shares of Common Stock subject thereto was equal to or greater than the applicable Conversion Price then in effect, or because such Option or Convertible Security was issued before the Series BB Original Issue Date), are revised after the Series BB Original Issue Date as a result of an amendment to such terms or any other adjustment pursuant to the provisions of such Option or Convertible Security (but excluding automatic adjustments to such terms pursuant to anti-dilution or similar provisions of such Option or Convertible Security) to provide for either (1) any increase in the number of shares of Common Stock issuable upon the exercise, conversion or exchange of any such Option or Convertible Security or (2) any decrease in the consideration payable to the Corporation upon such exercise, conversion or exchange, then such Option or Convertible Security, as so amended or adjusted, and the Additional Shares of Common Stock subject thereto (determined in the manner provided in Section 4.4.3(a)) shall be deemed to have been issued effective upon such increase or decrease becoming effective.

(d) Upon the expiration or termination of any unexercised Option or unconverted or unexchanged Convertible Security (or portion thereof) which resulted (either upon its original issuance or upon a revision of its terms) in an adjustment to the applicable Conversion Price pursuant to the terms of Section 4.4.4, the applicable Conversion Price shall be readjusted to such applicable Conversion Price as would have obtained had such Option or Convertible Security (or portion thereof) never been issued.

(e) If the number of shares of Common Stock issuable upon the exercise, conversion and/or exchange of any Option or Convertible Security, or the consideration payable to the Corporation upon such exercise, conversion and/or exchange, is calculable at the time such Option or Convertible Security is issued or amended but is subject to adjustment based upon subsequent events, any adjustment to the applicable Conversion Price provided for in this Section 4.4.3 shall be effected at the time of such issuance or amendment based on such number of shares or amount of consideration without regard to any provisions for subsequent adjustments (and any subsequent adjustments shall be treated as provided in clauses (b) and (c) of this Section 4.4.3). If the number of shares of Common Stock issuable upon the exercise, conversion and/or exchange of any Option or Convertible Security, or the consideration payable to the Corporation upon such exercise, conversion and/or exchange, cannot be calculated at all at the time such Option or Convertible Security is issued or amended, any adjustment to the applicable Conversion Price that would result under the terms of this Section 4.4.3 at the time of such issuance or amendment shall instead be effected at the time such number of shares and/or amount of consideration is first calculable (even if subject to subsequent adjustments), assuming for purposes of calculating such adjustment to the applicable Conversion Price that such issuance or amendment took place at the time such calculation can first be made.

4.4.4 Adjustment of Conversion Price Upon Issuance of Additional Shares of Common Stock. In the event the Corporation shall at any time after the Series BB Original Issue Date issue Additional Shares of Common Stock (including Additional Shares of Common Stock deemed to be issued pursuant to Section 4.4.3), without consideration or for a consideration per share less than the applicable Conversion Price in effect immediately prior to such issuance or deemed issuance, then the applicable Conversion Price shall be reduced, concurrently with such issue, to a price (calculated to the nearest one-hundredth of a cent) determined in accordance with the following formula:

$$CP_2 = CP_1 * (A + B) \div (A + C).$$

For purposes of the foregoing formula, the following definitions shall apply:

"***CP_2***" shall mean the applicable Conversion Price in effect immediately after such issuance or deemed issuance of Additional Shares of Common Stock

"***CP_1***" shall mean the applicable Conversion Price in effect immediately prior to such issuance or deemed issuance of Additional Shares of Common Stock;

"***A***" shall mean the number of shares of Preferred Stock outstanding immediately prior to such issuance or deemed issuance of Additional Shares of Common Stock;

"**B**" shall mean the number of shares of Common Stock that would have been issued if such Additional Shares of Common Stock had been issued or deemed issued at a price per share equal to CP_1 (determined by dividing the aggregate consideration received by the Corporation in respect of such issue by CP_1); and

"***C***" shall mean the number of such Additional Shares of Common Stock issued in such transaction.

4.4.5 Determination of Consideration. For purposes of this Section 4.4, the consideration received by the Corporation for the issuance or deemed issuance of any Additional Shares of Common Stock shall be computed as follows:

(a) **Cash and Property**: Such consideration shall:

(i) insofar as it consists of cash, be computed at the aggregate amount of cash received by the Corporation, excluding amounts paid or payable for accrued interest;

(ii) insofar as it consists of property other than cash, be computed at the fair market value thereof at the time of such issue, as determined in good faith by the Board of Directors of the Corporation; and

(iii) in the event Additional Shares of Common Stock are issued together with other shares or securities or other assets of the Corporation for consideration which covers both, be the proportion of such consideration so received, computed as provided in clauses (i) and (ii) above, as determined in good faith by the Board of Directors of the Corporation.

(b) **Options and Convertible Securities**. The consideration per share received by the Corporation for Additional Shares of Common Stock deemed to have been issued pursuant to Section 4.4.3, relating to Options and Convertible Securities, shall be determined by dividing:

(i) The total amount, if any, received or receivable by the Corporation as consideration for the issue of such Options or Convertible Securities, plus the minimum aggregate amount of additional consideration (as set forth in the instruments relating thereto, without regard to any provision contained therein for a subsequent adjustment of such consideration) payable to the Corporation upon the exercise of such Options or the conversion or exchange of such Convertible Securities, or in the case of Options for Convertible Securities, the exercise of such Options for Convertible Securities and the conversion or exchange of such Convertible Securities, by

(ii) the maximum number of shares of Common Stock (as set forth in the instruments relating thereto, without regard to any provision contained therein for a subsequent adjustment of such number) issuable upon the exercise of such Options or the conversion or exchange of such Convertible Securities, or in the case of Options for Convertible Securities, the exercise of such Options for Convertible Securities and the conversion or exchange of such Convertible Securities.

4.4.6 Multiple Closing Dates. In the event the Corporation shall issue on more than one date Additional Shares of Common Stock that are a part of one transaction or a series of related transactions and that would result in an adjustment to the applicable Conversion Price pursuant to the terms of Section 4.4.4 then, upon the final such issuance, the applicable Conversion Price shall be readjusted to give effect to all such issuances as if they occurred on the date of the first such issuance (and without giving effect to any additional adjustments as a result of any such subsequent issuances within such period).

4.5 Adjustment for Stock Splits and Combinations. If the Corporation shall at any time or from time to time after the Series BB Original Issue Date effect a subdivision of the outstanding Common Stock, the applicable Conversion Price in effect immediately before that subdivision shall be proportionately decreased so that the number of shares of Common Stock issuable on conversion of each share of such series shall be increased in proportion to such increase in the aggregate number of shares of Common Stock outstanding. If the Corporation shall at any time or from time to time after the Series BB Original Issue Date combine the outstanding shares of Common Stock, the applicable Conversion Price in effect immediately before the combination shall be proportionately increased so that the number of shares of Common Stock issuable on conversion of each share of such series shall be decreased in proportion to such decrease in the aggregate number of shares of Common Stock outstanding. Any adjustment under this subsection shall become effective at the close of business on the date the subdivision or combination becomes effective.

4.6 Adjustment for Certain Dividends and Distributions. In the event the Corporation at any time or from time to time after the Series BB Original Issue Date shall make or issue, or fix a record date for the determination of holders of Common Stock entitled to receive, a dividend or other distribution payable on the Common Stock in additional shares of Common Stock, then and in each such event the applicable Conversion Price in effect immediately before such event shall be decreased as of the time of such issuance or, in the event such a record date shall have been fixed, as of the close of business on such record date, by multiplying the applicable Conversion Price then in effect by a fraction:

(i) the numerator of which shall be the total number of shares of Common Stock issued and outstanding immediately prior to the time of such issuance or the close of business on such record date, and

(ii) the denominator of which shall be the total number of shares of Common Stock issued and outstanding immediately prior to the time of such issuance or the close of business on such record date plus the number of shares of Common Stock issuable in payment of such dividend or distribution.

Notwithstanding the foregoing (a) if such record date shall have been fixed and such dividend is not fully paid or if such distribution is not fully made on the date fixed therefor, the applicable Conversion Price shall be recomputed accordingly as of the close of business on such record date and thereafter the applicable Conversion Price shall be adjusted pursuant to this subsection as of the time of actual payment of such dividends or distributions; and (b) that no such adjustment shall be made if the holders of Preferred Stock simultaneously receive a dividend or other distribution of shares of Common Stock in a number equal to the number of shares of Common Stock as they would have received if all outstanding shares of Preferred Stock had been converted into Common Stock on the date of such event.

4.7 Adjustments for Other Dividends and Distributions. In the event the Corporation at any time or from time to time after the Series BB Original Issue Date shall make or issue, or fix a record date for the determination of holders of Common Stock entitled to receive, a dividend or other distribution payable in securities of the Corporation (other than a distribution of shares of Common Stock in respect of outstanding shares of Common Stock) or in other property and the provisions of Section 1 do not apply to such dividend or distribution, then and in each such event the holders of Preferred Stock shall receive, simultaneously with the distribution to the holders of Common Stock, a dividend or other distribution of such securities or other property in an amount equal to the amount of such securities or other property as they would have received if all outstanding shares of Preferred Stock had been converted into Common Stock on the date of such event.

4.8 Adjustment for Merger or Reorganization, etc. Subject to the provisions of Section 2.4, if there shall occur any reorganization, recapitalization, reclassification, consolidation or merger involving the Corporation in which the Common Stock (but not the Preferred Stock) is converted into or exchanged for securities, cash or other property (other than a transaction covered by Section 4.4, 4.6 or 4.7), then, following any such reorganization, recapitalization, reclassification, consolidation or merger, each share of Preferred Stock shall thereafter be convertible in lieu of the Common Stock into which it was convertible prior to such event into the kind and amount of securities, cash or other property which a holder of the number of shares of Common Stock of the Corporation issuable upon conversion of one share of Preferred Stock immediately prior to such reorganization, recapitalization, reclassification, consolidation or merger would have been entitled to receive pursuant to such transaction; and, in such case, appropriate adjustment (as determined in good faith by the Board of Directors of the Corporation) shall be made in the application of the provisions in this Section 4 with respect to the rights and interests thereafter of the holders of the Preferred Stock, to the end that the provisions set forth in this Section 4 (including provisions with respect to changes in and other adjustments of the applicable Conversion Price) shall thereafter be applicable, as nearly as reasonably may be, in relation to any securities or other property thereafter deliverable upon the conversion of the Preferred Stock.

4.9 Certificate as to Adjustments. Upon the occurrence of each adjustment or readjustment of the applicable Conversion Price pursuant to this Section 4, the Corporation at its expense shall, as promptly as reasonably practicable but in any event not later than 10 days thereafter, compute such adjustment or readjustment in accordance with the terms hereof and furnish to each holder of Preferred Stock a certificate setting forth such adjustment or readjustment (including the kind and amount of securities, cash or other property into which the Preferred Stock is convertible) and showing in detail the facts upon which such adjustment or readjustment is based. The Corporation shall, as promptly as reasonably practicable after the written request at any time of any holder of Preferred Stock (but in any event not later than 10 days thereafter), furnish or cause to be furnished to such holder a certificate setting forth (i) the applicable Conversion Price then in effect, and (ii) the number of shares of Common Stock and the amount, if any, of other securities, cash or property which then would be received upon the conversion of Preferred Stock.

4.10 Notice of Record Date. In the event:

(a) the Corporation shall take a record of the holders of its Common Stock (or other capital stock or securities at the time issuable upon conversion of the Preferred Stock) for the purpose of entitling or enabling them to receive any dividend or other distribution, or to receive any right to subscribe for or purchase any shares of capital stock of any class or any other securities, or to receive any other security; or

(b) of any capital reorganization of the Corporation, any reclassification of the Common Stock of the Corporation, or any Deemed Liquidation Event; or

(c) of the voluntary or involuntary dissolution, liquidation or winding-up of the Corporation,

then, and in each such case, the Corporation will send or cause to be sent to the holders of the Preferred Stock a notice specifying, as the case may be, (i) the record date for such dividend, distribution or right, and the amount and character of such dividend, distribution or right, or (ii) the effective date on which such reorganization, reclassification, consolidation, merger, transfer, dissolution, liquidation or winding-up is proposed to take place, and the time, if any is to be fixed, as of which the holders of record of Common Stock (or such other capital stock or securities at the time issuable upon the conversion of the Preferred Stock) shall be entitled to exchange their shares of Common Stock (or such other capital stock or securities) for securities or other property deliverable upon such reorganization, reclassification, consolidation, merger, transfer, dissolution, liquidation or winding-up, and the amount per share and character of such exchange applicable to the Preferred Stock and the Common Stock. Such notice shall be sent at least 10 days prior to the record date or effective date for the event specified in such notice.

5. Mandatory Conversion.

5.1 Trigger Events. Upon either (a) the closing of the sale of shares of Common Stock to the public at a price of at least $0.207383 per share (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Common Stock) in a firm-commitment underwritten public offering pursuant to an effective registration statement under the Securities Act of 1933, as amended, resulting in at least $50,000,000 of gross proceeds to the Corporation (a "***Qualified IPO***") or (b) the date and time, or the occurrence of an event, specified by vote or written consent of holders of (x) two-thirds of the outstanding shares of Series AA Preferred Stock and (y) a majority of the outstanding shares of Series BB Preferred Stock (the time of such closing or the date and time specified or the time of the event specified in such vote or written consent is referred to herein as the "***Mandatory Conversion Time***"), then (i) all outstanding shares of Preferred Stock shall automatically be converted into shares of Common Stock, at the then effective conversion rate as calculated pursuant to Section 4.1.1 and (ii) such shares may not be reissued by the Corporation.

5.2 Procedural Requirements. All holders of record of shares of Preferred Stock shall be sent written notice of the Mandatory Conversion Time and the place designated for mandatory conversion of all such shares of Preferred Stock pursuant to this Section 5. Such notice need not be sent in advance of the occurrence of the Mandatory Conversion Time. Upon receipt of such notice, each holder of shares of Preferred Stock in certificated form shall surrender his, her or its certificate or certificates for all such shares (or, if such holder alleges that such certificate has been lost, stolen or destroyed, a lost certificate affidavit and agreement reasonably acceptable to the Corporation to indemnify the Corporation against any claim that may be made against the Corporation on account of the alleged loss, theft or destruction of such certificate) to the Corporation at the place designated in such notice. If so required by the Corporation, any certificates surrendered for conversion shall be endorsed or accompanied by written instrument or instruments of transfer, in form satisfactory to the Corporation, duly executed by the registered holder or by his, her or its attorney duly authorized in writing. All rights with respect to the Preferred Stock converted pursuant to Section 5.1, including the rights, if any, to receive notices and vote (other than as a holder of Common Stock), will terminate at the Mandatory Conversion Time

(notwithstanding the failure of the holder or holders thereof to surrender any certificates at or prior to such time), except only the rights of the holders thereof, upon surrender of any certificate or certificates of such holders (or lost certificate affidavit and agreement) therefor, to receive the items provided for in the next sentence of this Section 5.2. As soon as practicable after the Mandatory Conversion Time and, if applicable, the surrender of any certificate or certificates (or lost certificate affidavit and agreement) for Preferred Stock, the Corporation shall (a) issue and deliver to such holder, or to his, her or its nominees, a certificate or certificates for the number of full shares of Common Stock issuable on such conversion in accordance with the provisions hereof and (b) pay cash as provided in Section 4.2 in lieu of any fraction of a share of Common Stock otherwise issuable upon such conversion and the payment of any declared but unpaid dividends on the shares of Preferred Stock converted. Such converted Preferred Stock shall be retired and cancelled and may not be reissued as shares of such series, and the Corporation may thereafter take such appropriate action (without the need for stockholder action) as may be necessary to reduce the authorized number of shares of Preferred Stock accordingly.

6. Redemption. Other than as set forth in Section 2.4.2(b), the Preferred Stock is not redeemable at the option of the holder or the Corporation.

7. Redeemed or Otherwise Acquired Shares. Any shares of Preferred Stock that are redeemed or otherwise acquired by the Corporation or any of its subsidiaries shall be automatically and immediately cancelled and retired and shall not be reissued, sold or transferred. Neither the Corporation nor any of its subsidiaries may exercise any voting or other rights granted to the holders of Preferred Stock following redemption.

8. Waiver. Any of the rights, powers, preferences and other terms of the Preferred Stock set forth herein may be waived on behalf of all holders of Preferred Stock by the affirmative written consent or vote of the Requisite Holders, other than with respect to the provisions of Section 3.4 which may be waived on behalf of all holders of Series BB Preferred Stock by the affirmative written consent or vote of a majority of the outstanding Series BB Preferred Stock and with respect to the provisions of Section 4.4.2.

9. Notices. Any notice required or permitted by the provisions of this Article Fourth to be given to a holder of shares of Preferred Stock shall be mailed, postage prepaid, to the post office address last shown on the records of the Corporation, or given by electronic communication in compliance with the provisions of the General Corporation Law, and shall be deemed sent upon such mailing or electronic transmission.

FIFTH: Subject to any additional vote required by this Amended and Restated Certificate of Incorporation or Bylaws, in furtherance and not in limitation of the powers conferred by statute, the Board of Directors is expressly authorized to make, repeal, alter, amend and rescind any or all of the Bylaws of the Corporation.

SIXTH: Subject to any additional vote required by this Amended and Restated Certificate of Incorporation, the number of directors of the Corporation shall be determined in the manner set forth in the Bylaws of the Corporation.

SEVENTH: Elections of directors need not be by written ballot unless the Bylaws of the Corporation shall so provide.

EIGHTH: Meetings of stockholders may be held within or without the State of Delaware, as the Bylaws of the Corporation may provide. The books of the Corporation may be kept outside the State of Delaware at such place or places as may be designated from time to time by the Board of Directors or in the Bylaws of the Corporation.

NINTH: To the fullest extent permitted by law, a director of the Corporation shall not be personally liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a director. If the General Corporation Law or any other law of the State of Delaware is amended after approval by the stockholders of this Article Ninth to authorize corporate action further eliminating or limiting the personal liability of directors, then the liability of a director of the Corporation shall be eliminated or limited to the fullest extent permitted by the General Corporation Law as so amended.

Any repeal or modification of the foregoing provisions of this Article Ninth by the stockholders of the Corporation shall not adversely affect any right or protection of a director of the Corporation existing at the time of, or increase the liability of any director of the Corporation with respect to any acts or omissions of such director occurring prior to, such repeal or modification.

TENTH: The following indemnification provisions shall apply to the persons enumerated below.

1. Right to Indemnification of Directors and Officers. The Corporation shall indemnify and hold harmless, to the fullest extent permitted by applicable law as it presently exists or may hereafter be amended, any person (an "***Indemnified Person***") who was or is made or is threatened to be made a party or is otherwise involved in any action, suit or proceeding, whether civil, criminal, administrative or investigative (a "***Proceeding***"), by reason of the fact that such person, or a person for whom such person is the legal representative, is or was a director or officer of the Corporation or, while a director or officer of the Corporation, is or was serving at the request of the Corporation as a director, officer, employee or agent of another corporation or of a partnership, joint venture, limited liability company, trust, enterprise or nonprofit entity, including service with respect to employee benefit plans, against all liability and loss suffered and expenses (including attorneys'01 fees) reasonably incurred by such Indemnified Person in such Proceeding. Notwithstanding the preceding sentence, except as otherwise provided in Section 3 of this Article Tenth the Corporation shall be required to indemnify an Indemnified Person in connection with a Proceeding (or part thereof) commenced by such Indemnified Person only if the commencement of such Proceeding (or part thereof) by the Indemnified Person was authorized in advance by the Board of Directors.

2. Prepayment of Expenses of Directors and Officers. The Corporation shall pay the expenses (including attorneys' fees) incurred by an Indemnified Person in defending any Proceeding in advance of its final disposition, *provided*, *however*, that, to the extent required by law, such payment of expenses in advance of the final disposition of the Proceeding shall be made only upon receipt of an undertaking by the Indemnified Person to repay all amounts advanced if it should be ultimately determined that the Indemnified Person is not entitled to be indemnified under this Article Tenth or otherwise.

3. Claims by Directors and Officers. If a claim for indemnification or advancement of expenses under this Article Tenth is not paid in full within 30 days after a written claim therefor by the Indemnified Person has been received by the Corporation, the Indemnified Person may file suit to recover the unpaid amount of such claim and, if successful in whole or in part, shall be entitled to be paid the expense of prosecuting such claim. In any such action the Corporation shall have the burden of proving that the Indemnified Person is not entitled to the requested indemnification or advancement of expenses under applicable law.

4. Indemnification of Employees and Agents. The Corporation may indemnify and advance expenses to any person who was or is made or is threatened to be made or is otherwise involved in any Proceeding by reason of the fact that such person, or a person for whom such person is the legal representative, is or was an employee or agent of the Corporation or, while an employee or agent of the Corporation, is or was serving at the request of the Corporation as a director, officer, employee or agent of another corporation or of a partnership, joint venture, limited liability company, trust, enterprise or

nonprofit entity, including service with respect to employee benefit plans, against all liability and loss suffered and expenses (including attorneys' fees) reasonably incurred by such person in connection with such Proceeding. The ultimate determination of entitlement to indemnification of persons who are non-director or officer employees or agents shall be made in such manner as is determined by the Board of Directors in its sole discretion. Notwithstanding the foregoing sentence, the Corporation shall not be required to indemnify a person in connection with a Proceeding initiated by such person if the Proceeding was not authorized in advance by the Board of Directors.

5. Advancement of Expenses of Employees and Agents. The Corporation may pay the expenses (including attorneys' fees) incurred by an employee or agent in defending any Proceeding in advance of its final disposition on such terms and conditions as may be determined by the Board of Directors.

6. Non-Exclusivity of Rights. The rights conferred on any person by this Article Tenth shall not be exclusive of any other rights which such person may have or hereafter acquire under any statute, provision of this Amended and Restated Certificate of Incorporation, the Bylaws of the Corporation, or any agreement, or pursuant to any vote of stockholders or disinterested directors or otherwise.

7. Other Indemnification. The Corporation's obligation, if any, to indemnify any person who was or is serving at its request as a director, officer or employee of another Corporation, partnership, limited liability company, joint venture, trust, organization or other enterprise shall be reduced by any amount such person may collect as indemnification from such other Corporation, partnership, limited liability company, joint venture, trust, organization or other enterprise.

8. Insurance. The Board of Directors may, to the full extent permitted by applicable law as it presently exists, or may hereafter be amended from time to time, authorize an appropriate officer or officers to purchase and maintain at the Corporation's expense insurance: (a) to indemnify the Corporation for any obligation which it incurs as a result of the indemnification of directors, officers and employees under the provisions of this Article Tenth; and (b) to indemnify or insure directors, officers and employees against liability in instances in which they may not otherwise be indemnified by the Corporation under the provisions of this Article Tenth.

9. Amendment or Repeal. Any repeal or modification of the foregoing provisions of this Article Tenth shall not adversely affect any right or protection hereunder of any person in respect of any act or omission occurring prior to the time of such repeal or modification. The rights provided hereunder shall inure to the benefit of any Indemnified Person and such person's heirs, executors and administrators.

ELEVENTH: The Corporation renounces, to the fullest extent permitted by law, any interest or expectancy of the Corporation in, or in being offered an opportunity to participate in, any Excluded Opportunity. An "***Excluded Opportunity***" is any matter, transaction or interest that is presented to, or acquired, created or developed by, or which otherwise comes into the possession of (i) any director of the Corporation who is not an employee of the Corporation or any of its subsidiaries, or (ii) any holder of Preferred Stock or any partner, member, director, stockholder, employee, affiliate or agent of any such holder, other than someone who is an employee of the Corporation or any of its subsidiaries (collectively, the persons referred to in clauses (i) and (ii) are "***Covered Persons***"), unless such matter, transaction or interest is presented to, or acquired, created or developed by, or otherwise comes into the possession of, a Covered Person expressly and solely in such Covered Person's capacity as a director of the Corporation. Any repeal or modification of this Article Eleventh will only be prospective and will not affect the rights under this Article Eleventh in effect at the time of the occurrence of any actions or omissions to act giving rise to liability. Notwithstanding anything to the contrary contained elsewhere in this Amended and Restated Certificate of Incorporation, the affirmative vote of the Requisite Holders will be required to amend or repeal, or to adopt any provisions inconsistent with this Article Eleventh.

TWELFTH: Unless the Corporation consents in writing to the selection of an alternative forum, the Court of Chancery in the State of Delaware shall be the sole and exclusive forum for any stockholder (including a beneficial owner) to bring (i) any derivative action or proceeding brought on behalf of the Corporation, (ii) any action asserting a claim of breach of fiduciary duty owed by any director, officer or other employee of the Corporation to the Corporation or the Corporation's stockholders, (iii) any action asserting a claim against the Corporation, its directors, officers or employees arising pursuant to any provision of the Delaware General Corporation Law or the Corporation's certificate of incorporation or bylaws or (iv) any action asserting a claim against the Corporation, its directors, officers or employees governed by the internal affairs doctrine, except for, as to each of (i) through (iv) above, any claim as to which the Court of Chancery determines that there is an indispensable party not subject to the jurisdiction of the Court of Chancery (and the indispensable party does not consent to the personal jurisdiction of the Court of Chancery within 10 days following such determination), which is vested in the exclusive jurisdiction of a court or forum other than the Court of Chancery, or for which the Court of Chancery does not have subject matter jurisdiction. If any provision or provisions of this Article Twelfth shall be held to be invalid, illegal or unenforceable as applied to any person or entity or circumstance for any reason whatsoever, then, to the fullest extent permitted by law, the validity, legality and enforceability of such provisions in any other circumstance and of the remaining provisions of this Article Twelfth (including, without limitation, each portion of any sentence of this Article Twelfth containing any such provision held to be invalid, illegal or unenforceable that is not itself held to be invalid, illegal or unenforceable) and the application of such provision to other persons or entities and circumstances shall not in any way be affected or impaired thereby.

* * *

3. That the foregoing amendment and restatement was approved by the holders of the requisite number of shares of this corporation in accordance with Section 228 of the General Corporation Law.

4. That this Certificate of Incorporation, which restates and integrates and further amends the provisions of this Corporation's Certificate of Incorporation, has been duly adopted in accordance with Sections 242 and 245 of the General Corporation Law.

[**Remainder of Page Intentionally Left Blank**]

This Amended and Restated Certificate of Incorporation has been executed by a duly authorized officer of the Corporation on December 29, 2020.

By: /s/ John Celebi
John Celebi, Chief Executive Officer

[SIGNATURE PAGE TO AMENDED AND RESTATED CERTIFICATE OF INCORPORATION]

CERTIFICATE OF AMENDMENT TO
AMENDED AND RESTATED CERTIFICATE OF INCORPORATION
OF SENSEI BIOTHERAPEUTICS, INC.

SENSEI BIOTHERAPEUTICS, INC., a corporation organized and existing under and by virtue of the General Corporation Law of the State of Delaware (the "DGCL"), does hereby certify:

FIRST: The name of the corporation is Sensei Biotherapeutics, Inc. (the "Corporation").

SECOND: The date on which the Certificate of Incorporation of the Corporation was originally filed with the Secretary of State of the State of Delaware is December 1, 2017.

THIRD: A Certificate of Amendment of the Corporation was filed with the Secretary of State of the State of Delaware on December 4, 2018.

FOURTH: A first Amended and Restated Certificate of Incorporation of the Corporation was filed with the Secretary of State of the State of Delaware on January 10, 2020.

FIFTH: A second Amended and Restated Certificate of Incorporation of the Corporation was filed with the Secretary of State of the State of Delaware on December 29, 2020.

SIXTH: The board of directors of the Corporation, acting in accordance with the provisions of Sections 141 and 242 of the DGCL, adopted resolutions approving a reverse stock split and amending the Corporation's Amended and Restated Certificate of Incorporation by deleting the first paragraph of Article Fourth and replacing it with the following new paragraphs:

"The total number of shares of all classes of stock which the Corporation shall have authority to issue is (i) 1,300,000,000 shares of Common Stock and (ii) 930,000,000 shares of Preferred Stock, $0.0001 par value per share ("***Preferred Stock***").

Effective immediately upon this Certificate of Amendment becoming effective under the General Corporation Law of the State of Delaware, and without any further action by the holders of such shares, every 48 outstanding shares of the Corporation's Common Stock shall be combined into one validly issued, fully paid and non-assessable share of Common Stock (the "Reverse Stock Split").

No fractional shares of Common Stock shall be issued upon combination of the Common Stock in the Reverse Stock Split. All shares of Common Stock so combined that are held by a stockholder shall be aggregated subsequent to the foregoing Reverse Stock Split. If the Reverse Stock Split would result in the issuance of any fractional share, the Corporation shall, in lieu of issuing any fractional share, pay cash equal to the product of such fraction multiplied by the fair market value of one share of Common Stock (as determined by the Corporation's board of directors) on the date that the Reverse Stock Split is effective, rounded up to the nearest whole cent.

The par value of each share of Common Stock shall not be adjusted in connection with the Reverse Stock Split. All of the outstanding share amounts, amounts per share and per share numbers for the Common Stock and each series of Preferred Stock, par value $0.0001 per share, set forth in the Corporation's Second Amended and Restated Certificate of Incorporation shall be appropriately adjusted to give effect to the Reverse Stock Split, as applicable.

The following is a statement of the designations and the powers, privileges and rights, and the qualifications, limitations or restrictions thereof in respect of each class of capital stock of the Corporation."

SEVENTH: Thereafter, pursuant to a resolution of the Corporation's board of directors, this Certificate of Amendment was submitted to the stockholders of the Corporation for their approval, and was duly adopted in accordance with the provisions of Sections 228 and 242 of the General Corporation Law of the State of Delaware.

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, Sensei Biotherapeutics, Inc. has caused this Certificate of Amendment of the Amended and Restated Certificate of Incorporation to be executed by its duly authorized officer on this 29th day of January, 2021

SENSEI BIOTHERAPEUTICS, INC.

By: /s/ John Celebi
John Celebi
President and Chief Executive Officer

[Signature Page to Charter Amendment]

Exhibit 3.3

SENSEI BIOTHERAPEUTICS, INC.

AMENDED AND RESTATED CERTIFICATE OF INCORPORATION

Sensei Biotherapeutics, Inc., **a corporation organized and existing under the laws of the State of Delaware (the "*Company*"), does hereby certify as follows:**

FIRST: That the name of the Company is Sensei Biotherapeutics, Inc.

SECOND: That the Company's original Certificate of Incorporation was filed with the Secretary of State of the State of Delaware on December 1, 2017, under the name PPI Holdings, Inc. The Certificate of Incorporation was last amended and restated by an Amended and Restated Certificate of Incorporation on December 29, 2020.

THIRD: That the Board of Directors of the Company, acting in accordance with the provisions of Sections 141 and 242 of the DGCL, duly adopted resolutions proposing to amend and restate the Certificate of Incorporation of the Company, declaring said amendment and restatement to be advisable and in the best interests of the Company and its stockholders, and authorizing the appropriate officers of the Company to solicit the consent of the stockholders therefore, and this Amended and Restated Certificate of Incorporation was approved by the holders of the requisite number of shares of stock of the Company in accordance with Section 228 of the DGCL.

FOURTH: That this Amended and Restated Certificate of Incorporation has been duly adopted and approved by the Board of Directors and the stockholders of the Company in accordance with Sections 242 and 245 of the DGCL.

FIFTH: That this Amended and Restated Certificate of Incorporation so adopted reads in full as set forth in Exhibit A attached hereto and is incorporated herein by reference in its entirety.

* * * *

IN WITNESS WHEREOF, Sensei Biotherapeutics, Inc. has caused this Amended and Restated Certificate of Incorporation to be signed by its President and Chief Executive Officer on this [___] day of February, 2021.

SENSEI BIOTHERAPEUTICS, INC.

By: _____

John Celebi
President and Chief Executive Officer

EXHIBIT A

AMENDED AND RESTATED CERTIFICATE OF INCORPORATION OF SENSEI BIOTHERAPEUTICS, INC.

I.

The name of this corporation is Sensei Biotherapeutics, Inc. (the "***Company***").

II.

The address of the registered office of the Company in the State of Delaware is Incorporating Services, Ltd., 3500 South DuPont Highway, in the City of Dover, County of Kent, Delaware 19901. The name of the registered agent of the Company in the State of Delaware at such address is Incorporating Services, Ltd.

III.

The purpose of the Company is to engage in any lawful act or activity for which a corporation may be organized under the Delaware General Corporation Law ("***DGCL***").

IV.

A. The Company is authorized to issue two classes of stock to be designated, respectively, "Common Stock" and "Preferred Stock." The total number of shares of all classes of capital stock which the Company shall have authority to issue is 260,000,000 shares, of which 250,000,000 shall be Common Stock (the "***Common Stock***"), each share having a par value of one-hundredth of one cent ($0.0001), and 10,000,000 shares shall be Preferred Stock (the "***Preferred Stock***"), each share having a par value of one-hundredth of one cent ($0.0001).

B. The Preferred Stock may be issued from time to time in one or more series. The Board of Directors of the Company (the "***Board***") is hereby expressly authorized to provide for the issue of the shares of the Preferred Stock in one or more series, and to fix the number of shares and to determine or alter for each such series, such voting powers, full or limited, or no voting powers, and such designation, preferences, and relative, participating, optional, or other rights and such qualifications, limitations, or restrictions thereof, as shall be stated and expressed in the resolution or resolutions adopted by the Board providing for the issuance of such shares and as may be permitted by the DGCL. The Board is also expressly authorized to increase or decrease the number of shares of any series subsequent to the issuance of shares of that series, but not below the number of shares of such series then outstanding. In case the number of shares of any series shall be decreased in accordance with the foregoing sentence, the shares constituting such decrease shall resume the status that they had prior to the adoption of the resolution originally fixing the number of shares of such series. The number of authorized shares of Preferred Stock may be increased or decreased (but not below the number of shares thereof then outstanding) by the affirmative vote of the holders of a majority of the voting power of the stock of the Company entitled to vote thereon, without a separate vote of the holders of the Preferred Stock, or of any series thereof, unless a vote of any such holders is required pursuant to the terms of any certificate of designation filed with respect to any series of Preferred Stock.

C. Each outstanding share of Common Stock shall entitle the holder thereof to one vote on each matter properly submitted to the stockholders of the Company for their vote; *provided, however*, that, except as otherwise required by law, holders of Common Stock shall not be entitled to vote on any amendment to this Amended and Restated Certificate of Incorporation (including any certificate of designation filed with respect to any series of Preferred Stock) that relates solely to the terms of one or more outstanding series of Preferred Stock if the holders of such affected series are entitled, either separately or together as a class with the holders of one or more other such series, to vote thereon by law or pursuant to this Amended and Restated Certificate of Incorporation (including any certificate of designation filed with respect to any series of Preferred Stock).

V.

For the management of the business and for the conduct of the affairs of the Company, and in further definition, limitation and regulation of the powers of the Company, of its directors and of its stockholders or any class thereof, as the case may be, it is further provided that:

A. MANAGEMENT OF BUSINESS. The management of the business and the conduct of the affairs of the Company shall be vested in its Board.

B. BOARD OF DIRECTORS.

1. Number. The number of directors that shall constitute the Board shall be fixed exclusively by resolutions adopted by a majority of the authorized number of directors constituting the Board.

2. Term. Subject to the rights of the holders of any series of Preferred Stock to elect additional directors under specified circumstances, following the closing of the initial public offering pursuant to an effective registration statement under the Securities Act of 1933, as amended (the "***Securities Act***") covering the offer and sale of securities to the public (the "***Initial Public Offering***"), the directors shall be divided into three classes designated as Class I, Class II and Class III, respectively. The Board is authorized to assign members of the Board already in office to such classes at the time the classification becomes effective. At the first annual meeting of stockholders following the closing of the Initial Public Offering, the term of office of the Class I directors shall expire and Class I directors shall be elected for a full term of three years. At the second annual meeting of stockholders following the closing of the Initial Public Offering, the term of office of the Class II directors shall expire and Class II directors shall be elected for a full term of three years. At the third annual meeting of stockholders following the closing of the Initial Public Offering, the term of office of the Class III directors shall expire and Class III directors shall be elected for a full term of three years. At each succeeding annual meeting of stockholders, directors shall be elected for a full term of three years to succeed the directors of the class whose terms expire at such annual meeting. Notwithstanding the foregoing provisions of this section, each director shall serve until his or her successor is duly elected and qualified or until his or her earlier death, resignation or removal. No decrease in the number of directors constituting the Board shall shorten the term of any incumbent director.

3. Removal.

a. Subject to the rights of any series of Preferred Stock to elect additional directors under specified circumstances, following the closing of the Initial Public Offering, neither the Board nor any individual director may be removed without cause.

b. Subject to any limitation imposed by law, any individual director or directors may be removed with cause by the affirmative vote of the holders of at least sixty-six and two-thirds percent (66 2/3%) of the voting power of all then-outstanding shares of capital stock of the Company entitled to vote generally at an election of directors.

4. Vacancies. Subject to the rights of the holders of any series of Preferred Stock, any vacancies on the Board resulting from death, resignation, disqualification, removal or other causes, and any newly created directorships resulting from any increase in the number of directors, shall, unless the Board determines by resolution that any such vacancies or newly created directorships shall be filled by the stockholders, except as otherwise provided by law, be filled only by the affirmative vote of a majority of the directors then in office, even though less than a quorum of the Board, and not by the stockholders. Any director elected in accordance with the preceding sentence shall hold office for the remainder of the full term of the director for which the vacancy was created or occurred and until such director's successor shall have been elected and qualified.

C. BYLAW AMENDMENTS. The Board is expressly empowered to adopt, amend or repeal the Bylaws of the Company. Any adoption, amendment or repeal of the Bylaws of the Company by the Board shall require the approval of a majority of the authorized number of directors. The stockholders shall also have power to adopt, amend or repeal the Bylaws of the Company; *provided, however,* that, in addition to any vote of the holders of any class or series of stock of the Company required by law or by this Amended and Restated Certificate of Incorporation, such action by stockholders shall require the affirmative vote of the holders of at least sixty-six and two-thirds percent (66 2/3%) of the voting power of all of the then-outstanding shares of the capital stock of the Company entitled to vote generally in the election of directors, voting together as a single class.

D. WRITTEN BALLOTS. The directors of the Company need not be elected by written ballot unless the Bylaws so provide.

E. ACTION BY STOCKHOLDERS. No action shall be taken by the stockholders of the Company except at an annual or special meeting of stockholders called in accordance with the Bylaws and no action shall be taken by the stockholders by written consent or electronic transmission.

F. ADVANCE NOTICE. Advance notice of stockholder nominations for the election of directors and of business to be brought by stockholders before any meeting of the stockholders of the Company shall be given in the manner provided in the Bylaws of the Company.

VI.

A. The liability of the directors for monetary damages shall be eliminated to the fullest extent under applicable law. If the DGCL is amended to authorize corporate action further eliminating or limiting the personal liability of directors, then the liability of a director of the Company shall be eliminated to the fullest extent permitted by the DGCL, as so amended.

B. Any repeal or modification of this Article VI shall be prospective and shall not affect the rights under this Article VI in effect at the time of the alleged occurrence of any act or omission to act giving rise to liability or indemnification.

VII.

A. Unless the Company consents in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware (or, if and only if the Court of Chancery of the State of Delaware lacks subject matter jurisdiction, any state court located within the State of Delaware or, if and only if all such state courts lack subject matter jurisdiction, the federal district court for the District of Delaware) and any appellate court therefrom shall be the sole and exclusive forum for the following claims or causes of action under the Delaware statutory or common law: (i) any derivative claim or cause of action brought on behalf of the Company; (ii) any claim or cause of action for breach of a fiduciary duty owed by any current or former director, officer or other employee of the Company, to the Company or the Company's stockholders; (iii) any claim or cause of action against the Company or any current or former director, officer or other employee of the Company, arising out of or pursuant to any provision of the DGCL, this Amended and Restated Certificate of Incorporation or the Bylaws of the Company (as each may be amended from time to time); (iv) any claim or cause of action seeking to interpret, apply, enforce or determine the validity of this Amended and Restated Certificate of Incorporation or the Bylaws of the Company (as each may be amended from time to time, including any right, obligation, or remedy thereunder); (v) any claim or cause of action as to which the DGCL confers jurisdiction on the Court of Chancery of the State of Delaware; and (vi) any claim or cause of action against the Company or any current or former director, officer or other employee of the Company, governed by the internal-affairs doctrine, in all cases to the fullest extent permitted by law and subject to the court having personal jurisdiction over the indispensable parties named as defendants. This Section A of Article VII shall not apply to claims or causes of action brought to enforce a duty or liability created by the Securities Act of 1933, as amended (the "***1933 Act***"), or the Securities Exchange Act of 1934, as amended, or any other claim for which the federal courts have exclusive jurisdiction.

B. Unless the Company consents in writing to the selection of an alternative forum, to the fullest extent permitted by law, the federal district courts of the United States of America shall be the exclusive forum for the resolution of any complaint asserting a cause of action arising under the 1933 Act.

C. Any person or entity holding, owning or otherwise acquiring any interest in any security of the Company shall be deemed to have notice of and consented to the provisions of this Amended and Restated Certificate of Incorporation.

VIII.

A. The Company reserves the right to amend, alter, change or repeal any provision contained in this Amended and Restated Certificate of Incorporation, in the manner now or hereafter prescribed by statute, except as provided in paragraph B. of this Article VIII, and all rights conferred upon the stockholders herein are granted subject to this reservation.

B. Notwithstanding any other provisions of this Amended and Restated Certificate of Incorporation or any provision of law which might otherwise permit a lesser vote or no vote, but in addition to any affirmative vote of the holders of any particular class or series of the Company required by law or by this Amended and Restated Certificate of Incorporation or any certificate of designation filed with respect to a series of Preferred Stock that may be designated from time to time, the affirmative vote of the holders of at least sixty-six and two-thirds percent (66 2/3%) of the voting power of all of the then-outstanding shares of capital stock of the Company entitled to vote generally in the election of directors, voting together as a single class, shall be required to alter, amend or repeal Articles V, VI, VII and VIII.

* * * *

SENSEI BIOTHERAPEUTICS, INC.

AMENDED AND RESTATED BYLAWS

ARTICLE I

OFFICES

Section 1. Registered Office. The registered office shall be established and maintained at the office of Incorporating Services, Ltd., 3500 South DuPont Highway, in the City of Dover, County of Kent, in the State of Delaware, 19901 and said corporation, or other such person or entity as the Board of Directors may from time to time designate, shall be the registered agent of the corporation.

Section 2. Other Offices. The corporation shall also have and maintain an office or principal place of business at such place as may be fixed by the Board of Directors, and may also have offices at such other places, both within and without the State of Delaware as the Board of Directors may from time to time determine or the business of the corporation may require.

ARTICLE II

CORPORATE SEAL

Section 3. Corporate Seal. The Board of Directors may adopt a corporate seal. If adopted, the corporate seal shall consist of a die bearing the name of the corporation and the inscription, "Corporate Seal-Delaware." Said seal may be used by causing it or a facsimile thereof to be impressed or affixed or reproduced or otherwise.

ARTICLE III

STOCKHOLDERS' MEETINGS

Section 4. Place of Meetings. Meetings of the stockholders of the corporation may be held at such place, either within or without the State of Delaware, as may be determined from time to time by the Board of Directors. The Board of Directors may, in its sole discretion, determine that the meeting shall not be held at any place, but may instead be held solely by means of remote communication as provided under the Delaware General Corporation Law (the "***DGCL***").

Section 5. Annual Meetings.

(a) The annual meeting of the stockholders of the corporation, for the purpose of election of directors and for such other business as may properly come before it, shall be held on such date and at such time as may be designated from time to time by the Board of Directors. Nominations of persons for election to the Board of Directors of the corporation and the proposal of business to be considered by the stockholders may be made at an annual meeting of stockholders: (i) pursuant to the corporation's notice of meeting of stockholders (with respect to

business other than nominations); (ii) brought specifically by or at the direction of the Board of Directors; or (iii) by any stockholder of the corporation who was a stockholder of record at the time of giving the stockholder's notice provided for in Section 5(b) below, who is entitled to vote at the meeting and who complied with the notice procedures set forth in this Section 5. For the avoidance of doubt, clause (iii) above shall be the exclusive means for a stockholder to make nominations and submit other business (other than matters properly included in the corporation's notice of meeting of stockholders and proxy statement under Rule 14a-8 under the Securities Exchange Act of 1934, as amended, and the rules and regulations thereunder (the "***1934 Act***")) before an annual meeting of stockholders.

(b) At an annual meeting of the stockholders, only such business shall be conducted as is a proper matter for stockholder action under Delaware law and as shall have been properly brought before the meeting.

(1) For nominations for the election to the Board of Directors to be properly brought before an annual meeting by a stockholder pursuant to clause (iii) of Section 5(a) of these Bylaws, the stockholder must deliver written notice to the Secretary at the principal executive offices of the corporation on a timely basis as set forth in Section 5(b)(3) and must update and supplement such written notice on a timely basis as set forth in Section 5(c). Such stockholder's notice shall set forth: (A) as to each nominee such stockholder proposes to nominate at the meeting: (1) the name, age, business address and residence address of such nominee, (2) the principal occupation or employment of such nominee, (3) the class and number of shares of each class of capital stock of the corporation which are owned of record and beneficially by such nominee, (4) the date or dates on which such shares were acquired and the investment intent of such acquisition and (5) such other information concerning such nominee as would be required to be disclosed in a proxy statement soliciting proxies for the election of such nominee as a director in an election contest (even if an election contest is not involved), or that is otherwise required to be disclosed pursuant to Section 14 of the 1934 Act and the rules and regulations promulgated thereunder (including such person's written consent to being named as a nominee and to serving as a director if elected); and (B) the information required by Section 5(b)(4). The corporation may require any proposed nominee to furnish such other information as it may reasonably require to determine the eligibility of such proposed nominee to serve as an independent director of the corporation or that could be material to a reasonable stockholder's understanding of the independence, or lack thereof, of such proposed nominee.

(2) Other than proposals sought to be included in the corporation's proxy materials pursuant to Rule 14a-8 under the 1934 Act, for business other than nominations for the election to the Board of Directors to be properly brought before an annual meeting by a stockholder pursuant to clause (iii) of Section 5(a) of these Bylaws, the stockholder must deliver written notice to the Secretary at the principal executive offices of the corporation on a timely basis as set forth in Section 5(b)(3), and must update and supplement such written notice on a timely basis as set forth in Section 5(c). Such stockholder's notice shall set forth: (A) as to each matter such stockholder proposes to bring before the meeting, a brief description of the business desired to be brought before the meeting, the reasons for conducting such business at the meeting, and any material interest (including any anticipated benefit of such business to any Proponent (as defined below) other than solely as a result of its ownership of the corporation's capital stock, that is material to any Proponent individually, or to the Proponents in the aggregate) in such business of any Proponent; and (B) the information required by Section 5(b)(4).

(3) To be timely, the written notice required by Section 5(b)(1) or 5(b)(2) must be received by the Secretary at the principal executive offices of the corporation not later than the close of business on the ninetieth (90th) day nor earlier than the close of business on the one hundred twentieth (120th) day prior to the first anniversary of the preceding year's annual meeting; *provided, however,* that, subject to the last sentence of this Section 5(b)(3), in the event that the date of the annual meeting is advanced more than thirty (30) days prior to or delayed by more than thirty (30) days after the anniversary of the preceding year's annual meeting, notice by the stockholder to be timely must be so received not earlier than the close of business on the one hundred twentieth (120th) day prior to such annual meeting and not later than the close of business on the later of the ninetieth (90th) day prior to such annual meeting or the tenth (10th) day following the day on which public announcement of the date of such meeting is first made. In no event shall an adjournment or a postponement of an annual meeting for which notice has been given, or the public announcement thereof has been made, commence a new time period for the giving of a stockholder's notice as described above.

(4) The written notice required by Section 5(b)(1) or 5(b)(2) shall also set forth, as of the date of the notice and as to the stockholder giving the notice and the beneficial owner, if any, on whose behalf the nomination or proposal is made (each, a "***Proponent***" and collectively, the "***Proponents***"): (A) the name and address of each Proponent, as they appear on the corporation's books; (B) the class, series and number of shares of the corporation that are owned beneficially and of record by each Proponent; (C) a description of any agreement, arrangement or understanding (whether oral or in writing) with respect to such nomination or proposal between or among any Proponent and any of its affiliates or associates, and any others (including their names) acting in concert, or otherwise under the agreement, arrangement or understanding, with any of the foregoing; (D) a representation that the Proponents are holders of record or beneficial owners, as the case may be, of shares of the corporation entitled to vote at the meeting and intend to appear in person or by proxy at the meeting to nominate the person or persons specified in the notice (with respect to a notice under Section 5(b)(1)) or to propose the business that is specified in the notice (with respect to a notice under Section 5(b)(2)); (E) a representation as to whether the Proponents intend to deliver a proxy statement and form of proxy to holders of a sufficient number of holders of the corporation's voting shares to elect such nominee or nominees (with respect to a notice under Section 5(b)(1)) or to carry such proposal (with respect to a notice under Section 5(b)(2)); (F) to the extent known by any Proponent, the name and address of any other stockholder supporting the proposal on the date of such stockholder's notice; and (G) a description of all Derivative Transactions (as defined below) by each Proponent during the previous twelve (12) month period, including the date of the transactions and the class, series and number of securities involved in, and the material economic terms of, such Derivative Transactions.

For purposes of Sections 5 and 6, a "***Derivative Transaction***" means any agreement, arrangement, interest or understanding entered into by, or on behalf or for the benefit of, any Proponent or any of its affiliates or associates, whether record or beneficial:

(w) the value of which is derived in whole or in part from the value of any class or series of shares or other securities of the corporation,

(x) which otherwise provides any direct or indirect opportunity to gain or share in any gain derived from a change in the value of securities of the corporation,

(y) the effect or intent of which is to mitigate loss, manage risk or benefit of security value or price changes, or

(z) which provides the right to vote or increase or decrease the voting power of, such Proponent, or any of its affiliates or associates, with respect to any securities of the corporation,

which agreement, arrangement, interest or understanding may include, without limitation, any option, warrant, debt position, note, bond, convertible security, swap, stock appreciation right, short position, profit interest, hedge, right to dividends, voting agreement, performance-related fee or arrangement to borrow or lend shares (whether or not subject to payment, settlement, exercise or conversion in any such class or series), and any proportionate interest of such Proponent in the securities of the corporation held by any general or limited partnership, or any limited liability company, of which such Proponent is, directly or indirectly, a general partner or managing member.

(c) A stockholder providing written notice required by Section 5(b)(1) or (2) shall update and supplement such notice in writing, if necessary, so that the information provided or required to be provided in such notice is true and correct in all material respects as of (i) the record date for the meeting and (ii) the date that is five (5) business days prior to the meeting and, in the event of any adjournment or postponement thereof, five (5) business days prior to such adjourned or postponed meeting. In the case of an update and supplement pursuant to clause (i) of this Section 5(c), such update and supplement shall be received by the Secretary at the principal executive offices of the corporation not later than five (5) business days after the record date for the meeting. In the case of an update and supplement pursuant to clause (ii) of this Section 5(c), such update and supplement shall be received by the Secretary at the principal executive offices of the corporation not later than two (2) business days prior to the date for the meeting, and, in the event of any adjournment or postponement thereof, two (2) business days prior to such adjourned or postponed meeting.

(d) Notwithstanding anything in Section 5(b)(3) to the contrary, in the event that the number of directors in an Expiring Class is increased and there is no public announcement of the appointment of a director to such class, or, if no appointment was made, of the vacancy in such class, made by the corporation at least ten (10) days before the last day a stockholder may deliver a notice of nomination in accordance with Section 5(b)(3), a stockholder's notice required by this Section 5 and which complies with the requirements in Section 5(b)(1), other than the timing requirements in Section 5(b)(3), shall also be considered timely, but only with respect to nominees for any new positions in such Expiring Class created by such increase, if it shall be received by the Secretary at the principal executive offices of the corporation not later than the close of business on the tenth (10th) day following the day on which such public announcement is first made by the corporation. For purposes of this section, an "***Expiring Class***" shall mean a class of directors whose term shall expire at the next annual meeting of stockholders.

(e) A person shall not be eligible for election or re-election as a director unless the person is nominated either in accordance with clause (ii) of Section 5(a), or in accordance with clause (iii) of Section 5(a). Except as otherwise required by law, the chairman of the meeting shall have the power and duty to determine whether a nomination or any business proposed to be brought before the meeting was made, or proposed, as the case may be, in accordance with the procedures set forth in these Bylaws and, if any proposed nomination or business is not in compliance with these Bylaws, or the Proponent does not act in accordance with the representations in Sections 5(b)(4)(D) and 5(b)(4)(E), to declare that such proposal or nomination shall not be presented for stockholder action at the meeting and shall be disregarded, notwithstanding that proxies in respect of such nominations or such business may have been solicited or received.

(f) Notwithstanding the foregoing provisions of this Section 5, in order to include information with respect to a stockholder proposal in the proxy statement and form of proxy for a stockholders' meeting, a stockholder must also comply with all applicable requirements of the 1934 Act and the rules and regulations thereunder. Nothing in these Bylaws shall be deemed to affect any rights of stockholders to request inclusion of proposals in the corporation's proxy statement pursuant to Rule 14a-8 under the 1934 Act; *provided, however,* that any references in these Bylaws to the 1934 Act or the rules and regulations thereunder are not intended to and shall not limit the requirements applicable to proposals and/or nominations to be considered pursuant to Section 5(a)(iii) of these Bylaws.

(g) For purposes of Sections 5 and 6,

(1) "***public announcement***" shall mean disclosure in a press release reported by the Dow Jones News Service, Associated Press or comparable national news service or in a document publicly filed by the corporation with the Securities and Exchange Commission pursuant to Section 13, 14 or 15(d) of the 1934 Act; and

(2) "***affiliates***" and "***associates***" shall have the meanings set forth in Rule 405 under the Securities Act of 1933, as amended (the "***1933 Act***").

Section 6. Special Meetings.

(a) Special meetings of the stockholders of the corporation may be called, for any purpose as is a proper matter for stockholder action under Delaware law, by (i) the Chairman of the Board of Directors, (ii) the Chief Executive Officer, or (iii) the Board of Directors pursuant to a resolution adopted by a majority of the total number of authorized directors (whether or not there exist any vacancies in previously authorized directorships at the time any such resolution is presented to the Board of Directors for adoption).

(b) The Board of Directors shall determine the time and place, if any, of such special meeting. Upon determination of the time and place, if any, of the meeting, the Secretary shall cause a notice of meeting to be given to the stockholders entitled to vote, in accordance with the provisions of Section 7 of these Bylaws. No business may be transacted at such special meeting otherwise than specified in the notice of meeting.

(c) Nominations of persons for election to the Board of Directors may be made at a special meeting of stockholders at which directors are to be elected (i) by or at the direction of the Board of Directors or (ii) by any stockholder of the corporation who is a stockholder of record at the time of giving notice provided for in this paragraph, who shall be entitled to vote at the meeting and who delivers written notice to the Secretary of the corporation setting forth the information required by Section 5(b)(1). In the event the corporation calls a special meeting of stockholders for the purpose of electing one or more directors to the Board of Directors, any such stockholder of record may nominate a person or persons (as the case may be), for election to such position(s) as specified in the corporation's notice of meeting, if written notice setting forth the information required by Section 5(b)(1) of these Bylaws shall be received by the Secretary at the principal executive offices of the corporation not later than the close of business on the later of the ninetieth (90th) day prior to such meeting or the tenth (10th) day following the day on which public announcement is first made of the date of the special meeting and of the nominees proposed by the Board of Directors to be elected at such meeting. The stockholder shall also update and supplement such information as required under Section 5(c). In no event shall an adjournment or a postponement of a special meeting for which notice has been given, or the public announcement thereof has been made, commence a new time period for the giving of a stockholder's notice as described above.

(d) Notwithstanding the foregoing provisions of this Section 6, a stockholder must also comply with all applicable requirements of the 1934 Act and the rules and regulations thereunder with respect to matters set forth in this Section 6. Nothing in these Bylaws shall be deemed to affect any rights of stockholders to request inclusion of proposals in the corporation's proxy statement pursuant to Rule 14a-8 under the 1934 Act; *provided*, *however*, that any references in these Bylaws to the 1934 Act or the rules and regulations thereunder are not intended to and shall not limit the requirements applicable to nominations for the election to the Board of Directors to be considered pursuant to Section 6(c) of these Bylaws.

Section 7. Notice of Meetings. Except as otherwise provided by law, notice, given in writing or by electronic transmission, of each meeting of stockholders shall be given not less than ten (10) nor more than sixty (60) days before the date of the meeting to each stockholder entitled to vote at such meeting, such notice to specify the place, if any, date and hour, in the case of special meetings, the purpose or purposes of the meeting, and the means of remote communications, if any, by which stockholders and proxy holders may be deemed to be present in person and vote at any such meeting. If mailed, notice is deemed given when deposited in the U.S. mail, postage prepaid, directed to the stockholder at such stockholder's address as it appears on the records of the corporation. Notice of the time, place, if any, and purpose of any meeting of stockholders may be waived in writing, signed by the person entitled to notice thereof, or by electronic transmission by such person, either before or after such meeting, and will be waived by any stockholder by his, her or its attendance thereat in person, by remote communication, if applicable, or by proxy, except when the stockholder attends a meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened. Any stockholder so waiving notice of such meeting shall be bound by the proceedings of any such meeting in all respects as if due notice thereof had been given.

Section 8. Quorum. At all meetings of stockholders, except where otherwise provided by statute or by the Certificate of Incorporation, or by these Bylaws, the presence, in person, by remote communication, if applicable, or by proxy duly authorized, of the holders of a majority of the outstanding shares of stock entitled to vote shall constitute a quorum for the transaction of business. In the absence of a quorum, any meeting of stockholders may be adjourned, from time to time, either by the chairman of the meeting or by vote of the holders of a majority of the shares represented thereat, but no other business shall be transacted at such meeting. The stockholders present at a duly called or convened meeting, at which a quorum is present, may continue to transact business until adjournment, notwithstanding the withdrawal of enough stockholders to leave less than a quorum. Except as otherwise provided by statute or by applicable stock exchange rules, or by the Certificate of Incorporation or these Bylaws, in all matters other than the election of directors, the affirmative vote of the majority of shares present in person, by remote communication, if applicable, or represented by proxy at the meeting and entitled to vote generally on the subject matter shall be the act of the stockholders. Except as otherwise provided by statute, the Certificate of Incorporation or these Bylaws, directors shall be elected by a plurality of the votes of the shares present in person, by remote communication, if applicable, or represented by proxy at the meeting and entitled to vote generally on the election of directors. Where a separate vote by a class or classes or series is required, except where otherwise provided by the statute or by the Certificate of Incorporation or these Bylaws, a majority of the outstanding shares of such class or classes or series, present in person, by remote communication, if applicable, or represented by proxy duly authorized, shall constitute a quorum entitled to take action with respect to that vote on that matter. Except where otherwise provided by statute or by the Certificate of Incorporation or these Bylaws, the affirmative vote of the majority (plurality, in the case of the election of directors) of shares of such class or classes or series present in person, by remote communication, if applicable, or represented by proxy at the meeting shall be the act of such class or classes or series.

Section 9. Adjournment and Notice of Adjourned Meetings. Any meeting of stockholders, whether annual or special, may be adjourned from time to time either by the chairman of the meeting or by the vote of a majority of the shares present in person, by remote communication, if applicable, or represented by proxy at the meeting. When a meeting is adjourned to another time or place, if any, notice need not be given of the adjourned meeting if the time and place, if any, thereof are announced at the meeting at which the adjournment is taken. At the adjourned meeting, the corporation may transact any business which might have been transacted at the original meeting. If the adjournment is for more than thirty (30) days or if after the adjournment a new record date is fixed for the adjourned meeting, a notice of the adjourned meeting shall be given to each stockholder of record entitled to vote at the meeting.

Section 10. Voting Rights. For the purpose of determining those stockholders entitled to vote at any meeting of the stockholders, except as otherwise provided by law, only persons in whose names shares stand on the stock records of the corporation on the record date, as provided in Section 12 of these Bylaws, shall be entitled to vote at any meeting of stockholders. Every person entitled to vote shall have the right to do so either in person, by remote communication, if applicable, or by an agent or agents authorized by a proxy granted in accordance with Delaware law. An agent so appointed need not be a stockholder. No proxy shall be voted after three (3) years from its date of creation unless the proxy provides for a longer period.

Section 11. Joint Owners of Stock. If shares or other securities having voting power stand of record in the names of two (2) or more persons, whether fiduciaries, members of a partnership, joint tenants, tenants in common, tenants by the entirety, or otherwise, or if two (2) or more persons have the same fiduciary relationship respecting the same shares, unless the Secretary is given written notice to the contrary and is furnished with a copy of the instrument or order appointing them or creating the relationship wherein it is so provided, their acts with respect to voting shall have the following effect: (a) if only one (1) votes, his or her act binds all; (b) if more than one (1) votes, the act of the majority so voting binds all; (c) if more than one (1) votes, but the vote is evenly split on any particular matter, each faction may vote the securities in question proportionally, or may apply to the Delaware Court of Chancery for relief as provided in the DGCL, Section 217(b). If the instrument filed with the Secretary shows that any such tenancy is held in unequal interests, a majority or even-split for the purpose of subsection (c) shall be a majority or even-split in interest.

Section 12. List of Stockholders. The Secretary shall prepare and make, at leastten (10) days before every meeting of stockholders, a complete list of the stockholders entitled to vote at said meeting, arranged in alphabetical order, showing the address of each stockholder and the number of shares registered in the name of each stockholder. Such list shall be open to the examination of any stockholder, for any purpose germane to the meeting, (a) on a reasonably accessible electronic network, provided that the information required to gain access to such list is provided with the notice of the meeting, or (b) during ordinary business hours, at the principal place of business of the corporation. In the event that the corporation determines to make the list available on an electronic network, the corporation may take reasonable steps to ensure that such information is available only to stockholders of the corporation. The list shall be open to examination of any stockholder during the time of the meeting as provided by law.

Section 13. Action Without Meeting. No action shall be taken by the stockholders except at an annual or special meeting of stockholders called in accordance with these Bylaws, and no action shall be taken by the stockholders by written consent or by electronic transmission.

Section 14. Organization.

(a) At every meeting of stockholders, the Chairman of the Board of Directors, or, if a Chairman has not been appointed or is absent, the President, or, if the President is absent, a chairman of the meeting chosen by a majority in interest of the stockholders entitled to vote, present in person or by proxy, shall act as chairman. The Secretary, or, in his or her absence, an Assistant Secretary directed to do so by the President, shall act as secretary of the meeting.

(b) The Board of Directors of the corporation shall be entitled to make such rules or regulations for the conduct of meetings of stockholders as it shall deem necessary, appropriate or convenient. Subject to such rules and regulations of the Board of Directors, if any, the chairman of the meeting shall have the right and authority to prescribe such rules, regulations and procedures and to do all such acts as, in the judgment of such chairman, are necessary, appropriate or convenient for the proper conduct of the meeting, including, without limitation, establishing an agenda or order of business for the meeting, rules and procedures for maintaining order at the meeting and the safety of those present, limitations on participation in such meeting to stockholders of record of the corporation and their duly authorized and constituted proxies and such other persons as the chairman shall permit, restrictions on entry to the meeting after the time fixed for the commencement thereof, limitations on the time allotted to questions or comments by

participants and regulation of the opening and closing of the polls for balloting on matters which are to be voted on by ballot. The date and time of the opening and closing of the polls for each matter upon which the stockholders will vote at the meeting shall be announced at the meeting. Unless and to the extent determined by the Board of Directors or the chairman of the meeting, meetings of stockholders shall not be required to be held in accordance with rules of parliamentary procedure.

ARTICLE IV

DIRECTORS

Section 15. Number and Term of Office. The authorized number of directors of the corporation shall be fixed in accordance with the Certificate of Incorporation. Directors need not be stockholders unless so required by the Certificate of Incorporation. If for any cause, the directors shall not have been elected at an annual meeting, they may be elected as soon thereafter as convenient at a special meeting of the stockholders called for that purpose in the manner provided in these Bylaws.

Section 16. Powers. The powers of the corporation shall be exercised, its business conducted and its property controlled by the Board of Directors, except as may be otherwise provided by statute or by the Certificate of Incorporation.

Section 17. Classes of Directors. Subject to the rights of the holders of any series of Preferred Stock to elect additional directors under specified circumstances, immediately following the closing of the initial public offering pursuant to an effective registration statement under the 1933 Act covering the offer and sale of Common Stock to the public (the "***Initial Public Offering***"), the directors shall be divided into three classes designated as Class I, Class II and Class III, respectively. The Board of Directors is authorized to assign members of the Board of Directors already in office to such classes at the time the classification becomes effective. At the first annual meeting of stockholders following the closing of the Initial Public Offering, the term of office of the Class I directors shall expire and Class I directors shall be elected for a full term of three years. At the second annual meeting of stockholders following the closing of the Initial Public Offering, the term of office of the Class II directors shall expire and Class II directors shall be elected for a full term of three years. At the third annual meeting of stockholders following the closing of the Initial Public Offering, the term of office of the Class III directors shall expire and Class III directors shall be elected for a full term of three years. At each succeeding annual meeting of stockholders, directors shall be elected for a full term of three years to succeed the directors of the class whose terms expire at such annual meeting.

Notwithstanding the foregoing provisions of this Section 17, each director shall serve until his or her successor is duly elected and qualified or until his or her earlier death, resignation or removal. No decrease in the number of directors constituting the Board of Directors shall shorten the term of any incumbent director.

Section 18. Vacancies. Unless otherwise provided in the Certificate of Incorporation, and subject to the rights of the holders of any series of Preferred Stock, any vacancies on the Board of Directors resulting from death, resignation, disqualification, removal or other causes and any newly created directorships resulting from any increase in the number of directors shall, unless the Board of Directors determines by resolution that any such vacancies or newly created directorships shall be filled by stockholders, be filled only by the affirmative vote of a majority of the directors then in office, even though less than a quorum of the Board of Directors, or by a sole remaining director, and not by the stockholders, *provided*, *however*, that whenever the holders of any class or classes of stock or series thereof are entitled to elect one or more directors by the provisions of the Certificate of Incorporation, vacancies and newly created directorships of such class or classes or series shall, unless the Board of Directors determines by resolution that any such vacancies or newly created directorships shall be filled by stockholders, be filled by a majority of the directors elected by such class or classes or series thereof then in office, or by a sole remaining director so elected, and not by the stockholders. Any director elected in accordance with the preceding sentence shall hold office for the remainder of the full term of the director for which the vacancy was created or occurred and until such director's successor shall have been elected and qualified. A vacancy in the Board of Directors shall be deemed to exist under this Bylaw in the case of the death, removal or resignation of any director.

Section 19. Resignation. Any director may resign at any time by delivering his or her notice in writing or by electronic transmission to the Secretary, such resignation to specify whether it will be effective at a particular time. If no such specification is made, it shall be deemed effective at the time of delivery to the Secretary. When one or more directors shall resign from the Board of Directors, effective at a future date, a majority of the directors then in office, including those who have so resigned, shall have power to fill such vacancy or vacancies, the vote thereon to take effect when such resignation or resignations shall become effective, and each Director so chosen shall hold office for the unexpired portion of the term of the Director whose place shall be vacated and until his or her successor shall have been duly elected and qualified.

Section 20. Removal.

(a) Subject to the rights of holders of any series of Preferred Stock to elect additional directors under specified circumstances, neither the Board of Directors nor any individual director may be removed without cause.

(b) Subject to any limitation imposed by law, any individual director or directors may be removed with cause by the affirmative vote of the holders of at least sixty-six and two-thirds percent (66 2/3%) of the voting power of all then outstanding shares of capital stock of the corporation entitled to vote generally at an election of directors.

Section 21. Meetings.

(a) Regular Meetings. Unless otherwise restricted by the Certificate of Incorporation, regular meetings of the Board of Directors may be held at any time or date and at any place within or without the State of Delaware which has been designated by the Board of Directors and publicized among all directors, either orally or in writing, by telephone, including a voice-messaging system or other system designed to record and communicate messages, facsimile, telegraph or telex, or by electronic mail or other electronic means. No further notice shall be required for regular meetings of the Board of Directors.

(b) Special Meetings. Unless otherwise restricted by the Certificate of Incorporation, special meetings of the Board of Directors may be held at any time and place within or without the State of Delaware whenever called by the Chairman of the Board, the Chief Executive Officer or a majority of the authorized number of directors.

(c) Meetings by Electronic Communications Equipment. Any member of the Board of Directors, or of any committee thereof, may participate in a meeting by means of conference telephone or other communications equipment by means of which all persons participating in the meeting can hear each other, and participation in a meeting by such means shall constitute presence in person at such meeting.

(d) Notice of Special Meetings. Notice of the time and place of all special meetings of the Board of Directors shall be orally or in writing, by telephone, including a voice messaging system or other system or technology designed to record and communicate messages, facsimile, telegraph or telex, or by electronic mail or other electronic means, during normal business hours, at least twenty-four (24) hours before the date and time of the meeting. If notice is sent by US mail, it shall be sent by first class mail, charges prepaid, at least three (3) days before the date of the meeting. Notice of any meeting may be waived in writing, or by electronic transmission, at any time before or after the meeting and will be waived by any director by attendance thereat, except when the director attends the meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened.

(e) Waiver of Notice. The transaction of all business at any meeting of the Board of Directors, or any committee thereof, however called or noticed, or wherever held, shall be as valid as though it had been transacted at a meeting duly held after regular call and notice, if a quorum be present and if, either before or after the meeting, each of the directors not present who did not receive notice shall sign a written waiver of notice or shall waive notice by electronic transmission. All such waivers shall be filed with the corporate records or made a part of the minutes of the meeting.

Section 22. Quorum and Voting.

(a) Unless the Certificate of Incorporation requires a greater number, and except with respect to questions related to indemnification arising under Section 43 herein for which a quorum shall be one-third of the exact number of directors fixed from time to time, a quorum of the Board of Directors shall consist of a majority of the exact number of directors fixed from time to time by the Board of Directors in accordance with the Certificate of Incorporation; *provided, however,* at any meeting whether a quorum be present or otherwise, a majority of the directors present may adjourn from time to time until the time fixed for the next regular meeting of the Board of Directors, without notice other than by announcement at the meeting.

(b) At each meeting of the Board of Directors at which a quorum is present, all questions and business shall be determined by the affirmative vote of a majority of the directors present, unless a different vote be required by law, the Certificate of Incorporation or these Bylaws.

Section 23. Action Without Meeting. Unless otherwise restricted by the Certificate of Incorporation or these Bylaws, any action required or permitted to be taken at any meeting of the Board of Directors or of any committee thereof may be taken without a meeting, if all members of the Board of Directors or committee, as the case may be, consent thereto in writing or by electronic transmission, and such writing or writings or transmission or transmissions are filed with the minutes of proceedings of the Board of Directors or committee. Such filing shall be in paper form if the minutes are maintained in paper form and shall be in electronic form if the minutes are maintained in electronic form.

Section 24. Fees and Compensation. Directors shall be entitled to such compensation for their services as may be approved by the Board of Directors, including, if so approved, by resolution of the Board of Directors, a fixed sum and expenses of attendance, if any, for attendance at each regular or special meeting of the Board of Directors and at any meeting of a committee of the Board of Directors. Nothing herein contained shall be construed to preclude any director from serving the corporation in any other capacity as an officer, agent, employee, or otherwise and receiving compensation therefor.

Section 25. Committees.

(a) Executive Committee. The Board of Directors may appoint an Executive Committee to consist of one (1) or more members of the Board of Directors. The Executive Committee, to the extent permitted by law and provided in the resolution of the Board of Directors shall have and may exercise all the powers and authority of the Board of Directors in the management of the business and affairs of the corporation, and may authorize the seal of the corporation to be affixed to all papers which may require it; but no such committee shall have the power or authority in reference to (i) approving or adopting, or recommending to the stockholders, any action or matter (other than the election or removal of directors) expressly required by the DGCL to be submitted to stockholders for approval, or (ii) adopting, amending or repealing any Bylaw of the corporation.

(b) Other Committees. The Board of Directors may, from time to time, appoint such other committees as may be permitted by law. Such other committees appointed by the Board of Directors shall consist of one (1) or more members of the Board of Directors and shall have such powers and perform such duties as may be prescribed by the resolution or resolutions creating such committees, but in no event shall any such committee have the powers denied to the Executive Committee in these Bylaws.

(c) Term. The Board of Directors, subject to any requirements of any outstanding series of Preferred Stock and the provisions of subsections (a) or (b) of this Section 25, may at any time increase or decrease the number of members of a committee or terminate the existence of a committee. The membership of a committee member shall terminate on the date of his or her death or voluntary resignation from the committee or from the Board of Directors. The Board of Directors may at any time for any reason remove any individual committee member and the Board of Directors may fill any committee vacancy created by death, resignation, removal or increase in the number of members of the committee. The Board of Directors may designate one or more directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of the committee, and, in addition, in the absence or

disqualification of any member of a committee, the member or members thereof present at any meeting and not disqualified from voting, whether or not he or they constitute a quorum, may unanimously appoint another member of the Board of Directors to act at the meeting in the place of any such absent or disqualified member.

(d) Meetings. Unless the Board of Directors shall otherwise provide, regular meetings of the Executive Committee or any other committee appointed pursuant to this Section 25 shall be held at such times and places as are determined by the Board of Directors, or by any such committee, and when notice thereof has been given to each member of such committee, no further notice of such regular meetings need be given thereafter. Special meetings of any such committee may be held at any place which has been determined from time to time by such committee, and may be called by any director who is a member of such committee, upon notice to the members of such committee of the time and place of such special meeting given in the manner provided for the giving of notice to members of the Board of Directors of the time and place of special meetings of the Board of Directors. Notice of any special meeting of any committee may be waived in writing or by electronic transmission at any time before or after the meeting and will be waived by any director by attendance thereat, except when the director attends such special meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened. Unless otherwise provided by the Board of Directors in the resolutions authorizing the creation of the committee, a majority of the authorized number of members of any such committee shall constitute a quorum for the transaction of business, and the act of a majority of those present at any meeting at which a quorum is present shall be the act of such committee.

Section 26. Organization. At every meeting of the directors and stockholders, the Chairman of the Board of Directors, or, if a Chairman has not been appointed or is absent, the Chief Executive Officer (if a director), or, if a Chief Executive Officer is absent, the President (if a director), or if the President is absent, the most senior Vice President (if a director), or, in the absence of any such person, a chairman of the meeting chosen by a majority of the directors present, shall preside over the meeting. The Secretary, or in his or her absence, any Assistant Secretary or other officer or director directed to do so by the President, shall act as secretary of the meeting. The Chairman of the Board of Directors shall also perform such other duties and have such other powers, as the Board of Directors shall designate from time to time.

ARTICLE V

OFFICERS

Section 27. Officers Designated. The officers of the corporation shall include, if and when designated by the Board of Directors, the Chairman of the Board of Directors (provided that notwithstanding anything to the contrary contained in these Bylaws, the Chairman of the Board of Directors shall not be deemed an officer of the corporation unless so designated by the Board of Directors), the Chief Executive Officer, the President, one or more Vice Presidents, the Secretary, the Chief Financial Officer and the Treasurer. The Board of Directors may also appoint one or more Assistant Secretaries and Assistant Treasurers and such other officers and agents with such powers and duties as it shall deem necessary. The Board of Directors may assign such additional titles to one or more of the officers as it shall deem appropriate. Any one person may hold any number of offices of the corporation at any one time unless specifically prohibited therefrom by law. The salaries and other compensation of the officers of the corporation shall be fixed by or in the manner designated by the Board of Directors.

Section 28. Tenure and Duties of Officers.

(a) General. All officers shall hold office at the pleasure of the Board of Directors and until their successors shall have been duly elected and qualified, unless sooner removed. Any officer elected or appointed by the Board of Directors may be removed at any time by the Board of Directors. If the office of any officer becomes vacant for any reason, the vacancy may be filled by the Board of Directors.

(b) Duties of Chief Executive Officer. The Chief Executive Officer shall preside at all meetings of the stockholders and at all meetings of the Board of Directors, unless the Chairman of the Board of Directors has been appointed and is present. Unless an officer has been appointed Chief Executive Officer of the corporation, the President shall be the chief executive officer of the corporation and shall, subject to the control of the Board of Directors, have general supervision, direction and control of the business and officers of the corporation. To the extent that a Chief Executive Officer has been appointed and no President has been appointed, all references in these Bylaws to the President shall be deemed references to the Chief Executive Officer. The Chief Executive Officer shall perform other duties commonly incident to the office and shall also perform such other duties and have such other powers, as the Board of Directors shall designate from time to time.

(c) Duties of President. The President shall preside at all meetings of the stockholders and at all meetings of the Board of Directors, unless the Chairman of the Board of Directors or the Chief Executive Officer has been appointed and is present. Unless another officer has been appointed Chief Executive Officer of the corporation, the President shall be the chief executive officer of the corporation and shall, subject to the control of the Board of Directors, have general supervision, direction and control of the business and officers of the corporation. The President shall perform other duties commonly incident to the office and shall also perform such other duties and have such other powers, as the Board of Directors shall designate from time to time.

(d) Duties of Vice Presidents. The Vice Presidents may assume and perform the duties of the President in the absence or disability of the President or whenever the office of President is vacant. The Vice Presidents shall perform other duties commonly incident to their office and shall also perform such other duties and have such other powers as the Board of Directors or the Chief Executive Officer, or, if the Chief Executive Officer has not been appointed or is absent, the President shall designate from time to time.

(e) Duties of Secretary. The Secretary shall attend all meetings of the stockholders and of the Board of Directors and shall record all acts and proceedings thereof in the minute book of the corporation. The Secretary shall give notice in conformity with these Bylaws of all meetings of the stockholders and of all meetings of the Board of Directors and any committee thereof requiring notice. The Secretary shall perform all other duties provided for in these Bylaws and other duties commonly incident to the office and shall also perform such other duties and have

such other powers, as the Board of Directors shall designate from time to time. The President may direct any Assistant Secretary or other officer to assume and perform the duties of the Secretary in the absence or disability of the Secretary, and each Assistant Secretary shall perform other duties commonly incident to the office and shall also perform such other duties and have such other powers as the Board of Directors or the President shall designate from time to time.

(f) Duties of Chief Financial Officer. The Chief Financial Officer shall keep or cause to be kept the books of account of the corporation in a thorough and proper manner and shall render statements of the financial affairs of the corporation in such form and as often as required by the Board of Directors or the President. The Chief Financial Officer, subject to the order of the Board of Directors, shall have the custody of all funds and securities of the corporation. The Chief Financial Officer shall perform other duties commonly incident to the office and shall also perform such other duties and have such other powers as the Board of Directors or the President shall designate from time to time. To the extent that a Chief Financial Officer has been appointed and no Treasurer has been appointed, all references in these Bylaws to the Treasurer shall be deemed references to the Chief Financial Officer. The President may direct the Treasurer, if any, or any Assistant Treasurer, or the Controller or any Assistant Controller to assume and perform the duties of the Chief Financial Officer in the absence or disability of the Chief Financial Officer, and each Treasurer and Assistant Treasurer and each Controller and Assistant Controller shall perform other duties commonly incident to the office and shall also perform such other duties and have such other powers as the Board of Directors or the President shall designate from time to time.

(g) Duties of Treasurer. Unless another officer has been appointed Chief Financial Officer of the corporation, the Treasurer shall be the chief financial officer of the corporation and shall keep or cause to be kept the books of account of the corporation in a thorough and proper manner and shall render statements of the financial affairs of the corporation in such form and as often as required by the Board of Directors or the President, and, subject to the order of the Board of Directors, shall have the custody of all funds and securities of the corporation. The Treasurer shall perform other duties commonly incident to the office and shall also perform such other duties and have such other powers as the Board of Directors or the President shall designate from time to time.

Section 29. Delegation of Authority. The Board of Directors may from time to time delegate the powers or duties of any officer to any other officer or agent, notwithstanding any provision hereof.

Section 30. Resignations. Any officer may resign at any time by giving notice in writing or by electronic transmission to the Board of Directors or to the President or to the Secretary. Any such resignation shall be effective when received by the person or persons to whom such notice is given, unless a later time is specified therein, in which event the resignation shall become effective at such later time. Unless otherwise specified in such notice, the acceptance of any such resignation shall not be necessary to make it effective. Any resignation shall be without prejudice to the rights, if any, of the corporation under any contract with the resigning officer.

Section 31. Removal. Any officer may be removed from office at any time, either with or without cause, by the affirmative vote of a majority of the directors in office at the time, or by the unanimous written consent of the directors in office at the time, or by any committee or by the Chief Executive Officer or other superior officers upon whom such power of removal may have been conferred by the Board of Directors.

ARTICLE VI

EXECUTION OF CORPORATE INSTRUMENTS AND VOTING OF SECURITIES OWNED BY THE CORPORATION

Section 32. Execution of Corporate Instruments. The Board of Directors may, in its discretion, determine the method and designate the signatory officer or officers, or other person or persons, to execute on behalf of the corporation any corporate instrument or document, or to sign on behalf of the corporation the corporate name without limitation, or to enter into contracts on behalf of the corporation, except where otherwise provided by law or these Bylaws, and such execution or signature shall be binding upon the corporation.

All checks and drafts drawn on banks or other depositaries on funds to the credit of the corporation or in special accounts of the corporation shall be signed by such person or persons as the Board of Directors shall authorize so to do.

Unless authorized or ratified by the Board of Directors or within the agency power of an officer, no officer, agent or employee shall have any power or authority to bind the corporation by any contract or engagement or to pledge its credit or to render it liable for any purpose or for any amount.

Section 33. Voting of Securities Owned by the Corporation. All stock and other securities of other corporations owned or held by the corporation for itself, or for other parties in any capacity, shall be voted, and all proxies with respect thereto shall be executed, by the person authorized so to do by resolution of the Board of Directors, or, in the absence of such authorization, by the Chairman of the Board of Directors, the Chief Executive Officer, the President, or any Vice President.

ARTICLE VII

SHARES OF STOCK

Section 34. Form and Execution of Certificates. The shares of the corporation shall be represented by certificates, or shall be uncertificated if so provided by resolution or resolutions of the Board of Directors. Certificates for the shares of stock, if any, shall be in such form as is consistent with the Certificate of Incorporation and applicable law. Every holder of stock represented by certificate in the corporation shall be entitled to have a certificate signed by or in the name of the corporation by the Chairman of the Board of Directors, or the President or any Vice President and by the Treasurer or Assistant Treasurer or the Secretary or Assistant Secretary, certifying the number of shares owned by him in the corporation. Any or all of the signatures on the certificate may be facsimiles. In case any officer, transfer agent, or registrar who has signed or whose facsimile signature has been placed upon a certificate shall have ceased to be such officer, transfer agent, or registrar before such certificate is issued, it may be issued with the same effect as if he were such officer, transfer agent, or registrar at the date of issue.

Section 35. Lost Certificates. A new certificate or certificates shall be issued in place of any certificate or certificates theretofore issued by the corporation alleged to have been lost, stolen, or destroyed, upon the making of an affidavit of that fact by the person claiming the certificate of stock to be lost, stolen, or destroyed. The corporation may require, as a condition precedent to the issuance of a new certificate or certificates, the owner of such lost, stolen, or destroyed certificate or certificates, or the owner's legal representative, to agree to indemnify the corporation in such manner as it shall require or to give the corporation a surety bond in such form and amount as it may direct as indemnity against any claim that may be made against the corporation with respect to the certificate alleged to have been lost, stolen, or destroyed.

Section 36. Transfers.

(a) Transfers of record of shares of stock of the corporation shall be made only upon its books by the holders thereof, in person or by attorney duly authorized, and, in the case of stock represented by certificate, upon the surrender of a properly endorsed certificate or certificates for a like number of shares.

(b) The corporation shall have power to enter into and perform any agreement with any number of stockholders of any one or more classes of stock of the corporation to restrict the transfer of shares of stock of the corporation of any one or more classes owned by such stockholders in any manner not prohibited by the DGCL.

Section 37. Fixing Record Dates.

(a) In order that the corporation may determine the stockholders entitled to notice of or to vote at any meeting of stockholders or any adjournment thereof, the Board of Directors may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted by the Board of Directors, and which record date shall, subject to applicable law, not be more than sixty (60) nor less than ten (10) days before the date of such meeting. If no record date is fixed by the Board of Directors, the record date for determining stockholders entitled to notice of or to vote at a meeting of stockholders shall be at the close of business on the day next preceding the day on which notice is given, or if notice is waived, at the close of business on the day next preceding the day on which the meeting is held. A determination of stockholders of record entitled to notice of or to vote at a meeting of stockholders shall apply to any adjournment of the meeting; *provided*, *however,* that the Board of Directors may fix a new record date for the adjourned meeting.

(b) In order that the corporation may determine the stockholders entitled to receive payment of any dividend or other distribution or allotment of any rights or the stockholders entitled to exercise any rights in respect of any change, conversion or exchange of stock, or for the purpose of any other lawful action, the Board of Directors may fix, in advance, a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted, and which record date shall be not more than sixty (60) days prior to such action. If no record date is fixed, the record date for determining stockholders for any such purpose shall be at the close of business on the day on which the Board of Directors adopts the resolution relating thereto.

Section 38. Registered Stockholders. The corporation shall be entitled to recognize the exclusive right of a person registered on its books as the owner of shares to receive dividends, and to vote as such owner, and shall not be bound to recognize any equitable or other claim to or interest in such share or shares on the part of any other person whether or not it shall have express or other notice thereof, except as otherwise provided by the laws of Delaware.

ARTICLE VIII

OTHER SECURITIES OF THE CORPORATION

Section 39. Execution of Other Securities. All bonds, debentures and other corporate securities of the corporation, other than stock certificates (covered in Section 34), may be signed by the Chairman of the Board of Directors, the President or any Vice President, or such other person as may be authorized by the Board of Directors, and the corporate seal impressed thereon or a facsimile of such seal imprinted thereon and attested by the signature of the Secretary or an Assistant Secretary, or the Chief Financial Officer or Treasurer or an Assistant Treasurer; *provided, however,* that where any such bond, debenture or other corporate security shall be authenticated by the manual signature, or where permissible facsimile signature, of a trustee under an indenture pursuant to which such bond, debenture or other corporate security shall be issued, the signatures of the persons signing and attesting the corporate seal on such bond, debenture or other corporate security may be the imprinted facsimile of the signatures of such persons. Interest coupons appertaining to any such bond, debenture or other corporate security, authenticated by a trustee as aforesaid, shall be signed by the Treasurer or an Assistant Treasurer of the corporation or such other person as may be authorized by the Board of Directors, or bear imprinted thereon the facsimile signature of such person. In case any officer who shall have signed or attested any bond, debenture or other corporate security, or whose facsimile signature shall appear thereon or on any such interest coupon, shall have ceased to be such officer before the bond, debenture or other corporate security so signed or attested shall have been delivered, such bond, debenture or other corporate security nevertheless may be adopted by the corporation and issued and delivered as though the person who signed the same or whose facsimile signature shall have been used thereon had not ceased to be such officer of the corporation.

ARTICLE IX

DIVIDENDS

Section 40. Declaration of Dividends. Dividends upon the capital stock of the corporation, subject to the provisions of the Certificate of Incorporation and applicable law, if any, may be declared by the Board of Directors pursuant to law at any regular or special meeting. Dividends may be paid in cash, in property, or in shares of the capital stock, subject to the provisions of the Certificate of Incorporation and applicable law.

Section 41. Dividend Reserve. Before payment of any dividend, there may be set aside out of any funds of the corporation available for dividends such sum or sums as the Board of Directors from time to time, in their absolute discretion, think proper as a reserve or reserves to meet contingencies, or for equalizing dividends, or for repairing or maintaining any property of the corporation, or for such other purpose as the Board of Directors shall think conducive to the interests of the corporation, and the Board of Directors may modify or abolish any such reserve in the manner in which it was created.

ARTICLE X

FISCAL YEAR

Section 42. Fiscal Year. The fiscal year of the corporation shall be fixed by resolution of the Board of Directors.

ARTICLE XI

INDEMNIFICATION

Section 43. Indemnification of Directors, Officers, Employees and Other Agents.

(a) Directors. The corporation shall indemnify its directors to the fullest extent not prohibited by the DGCL or any other applicable law; *provided, however,* that the corporation may modify the extent of such indemnification by individual contracts with its directors; and, *provided, further,* that the corporation shall not be required to indemnify any director in connection with any proceeding (or part thereof) initiated by such person unless (i) such indemnification is expressly required to be made by law, (ii) the proceeding was authorized by the Board of Directors of the corporation, (iii) such indemnification is provided by the corporation, in its sole discretion, pursuant to the powers vested in the corporation under the DGCL or any other applicable law or (iv) such indemnification is required to be made under subsection (d).

(b) Officers, Employees and Other Agents. The corporation shall have power to indemnify its officers, employees and other agents as set forth in the DGCL or any other applicable law. The Board of Directors shall have the power to delegate the determination of whether indemnification shall be given to any such person to such officers or other persons as the Board of Directors shall determine.

(c) Expenses. The corporation shall advance to any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative, by reason of the fact that he is or was a director of the corporation, or is or was serving at the request of the corporation as a director or officer of another corporation, partnership, joint venture, trust or other enterprise, prior to the final disposition of the proceeding, promptly following request therefor, all expenses incurred by any director in connection with such proceeding; *provided, however*, that, if the DGCL requires, an advancement of expenses incurred by a director in his or her capacity as a director (and not in any other capacity in which service was or is rendered by such indemnitee, including, without limitation, service to an employee benefit plan) shall be made only upon delivery to the corporation of an undertaking, by or on behalf of such indemnitee, to repay all amounts so advanced if it shall ultimately be determined by final judicial decision from which there is no further right to appeal that such indemnitee is not entitled to be indemnified for such expenses under this section or otherwise.

(d) Enforcement. Without the necessity of entering into an express contract, all rights to indemnification and advances to directors under this Bylaw shall be deemed to be contractual rights and be effective to the same extent and as if provided for in a contract between the corporation and the director. Any right to indemnification or advances granted by this Bylaw to a director shall be enforceable by or on behalf of the person holding such right in any court of competent jurisdiction if (i) the claim for indemnification or advances is denied, in whole or in part, or (ii) no disposition of such claim is made within ninety (90) days of request therefor. To the extent permitted by law, the claimant in such enforcement action, if successful in whole or in part, shall be entitled to be paid also the expense of prosecuting the claim. In connection with any claim for indemnification, the corporation shall be entitled to raise as a defense to any such action that the claimant has not met the standards of conduct that make it permissible under the DGCL or any other applicable law for the corporation to indemnify the claimant for the amount claimed. Neither the failure of the corporation (including its Board of Directors, independent legal counsel or its stockholders) to have made a determination prior to the commencement of such action that indemnification of the claimant is proper in the circumstances because the director has met the applicable standard of conduct set forth in the DGCL or any other applicable law, nor an actual determination by the corporation (including its Board of Directors, independent legal counsel or its stockholders) that the claimant has not met such applicable standard of conduct, shall be a defense to the action or create a presumption that claimant has not met the applicable standard of conduct. In any suit brought by a director to enforce a right to indemnification or to an advancement of expenses hereunder, the burden of proving that the director is not entitled to be indemnified, or to such advancement of expenses, under this section or otherwise shall be on the corporation.

(e) Non-Exclusivity of Rights. The rights conferred on any person by this Bylaw shall not be exclusive of any other right which such person may have or hereafter acquire under any applicable statute, provision of the Certificate of Incorporation, Bylaws, agreement, vote of stockholders or disinterested directors or otherwise, both as to action in his or her official capacity and as to action in another capacity while holding office. The corporation is specifically authorized to enter into individual contracts with any or all of its directors, officers, employees or agents respecting indemnification and advances, to the fullest extent not prohibited by the DGCL, or by any other applicable law.

(f) Survival of Rights. The rights conferred on any person by this Bylaw shall continue as to a person who has ceased to be a director and shall inure to the benefit of the heirs, executors and administrators of such a person.

(g) Insurance. To the fullest extent permitted by the DGCL or any other applicable law, the corporation, upon approval by the Board of Directors, may purchase insurance on behalf of any person required or permitted to be indemnified pursuant to this section.

(h) Amendments. Any repeal or modification of this section shall only be prospective and shall not affect the rights under this Bylaw in effect at the time of the alleged occurrence of any action or omission to act that is the cause of any proceeding against any agent of the corporation.

(i) Saving Clause. If this Bylaw or any portion hereof shall be invalidated on any ground by any court of competent jurisdiction, then the corporation shall nevertheless indemnify each director to the full extent not prohibited by any applicable portion of this section that shall not have been invalidated, or by any other applicable law. If this section shall be invalid due to the application of the indemnification provisions of another jurisdiction, then the corporation shall indemnify each director to the full extent under any other applicable law.

(j) Certain Definitions. For the purposes of this Bylaw, the following definitions shall apply:

(1) The term "proceeding" shall be broadly construed and shall include, without limitation, the investigation, preparation, prosecution, defense, settlement, arbitration and appeal of, and the giving of testimony in, any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative.

(2) The term "expenses" shall be broadly construed and shall include, without limitation, court costs, attorneys' fees, witness fees, fines, amounts paid in settlement or judgment and any other costs and expenses of any nature or kind incurred in connection with any proceeding.

(3) The term the "corporation" shall include, in addition to the resulting corporation, any constituent corporation (including any constituent of a constituent) absorbed in a consolidation or merger which, if its separate existence had continued, would have had power and authority to indemnify its directors, officers, and employees or agents, so that any person who is or was a director, officer, employee or agent of such constituent corporation, or is or was serving at the request of such constituent corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, shall stand in the same position under the provisions of this section with respect to the resulting or surviving corporation as he would have with respect to such constituent corporation if its separate existence had continued.

(4) References to a "director," "executive officer," "officer," "employee," or "agent" of the corporation shall include, without limitation, situations where such person is serving at the request of the corporation as, respectively, a director, executive officer, officer, employee, trustee or agent of another corporation, partnership, joint venture, trust or other enterprise.

(5) References to "other enterprises" shall include employee benefit plans; references to "fines" shall include any excise taxes assessed on a person with respect to an employee benefit plan; and references to "serving at the request of the corporation" shall include any service as a director, officer, employee or agent of the corporation which imposes duties on, or involves services by, such director, officer, employee, or agent with respect to an employee benefit plan, its participants, or beneficiaries; and a person who acted in good faith and in a manner such person reasonably believed to be in the interest of the participants and beneficiaries of an employee benefit plan shall be deemed to have acted in a manner "not opposed to the best interests of the corporation" as referred to in this section.

ARTICLE XII

NOTICES

Section 44. Notices.

(a) Notice to Stockholders. Written notice to stockholders of stockholder meetings shall be given as provided in Section 7 herein. Without limiting the manner by which notice may otherwise be given effectively to stockholders under any agreement or contract with such stockholder, and except as otherwise required by law, written notice to stockholders for purposes other than stockholder meetings may be sent by U.S. mail or nationally recognized overnight courier, or by facsimile, telegraph or telex or by electronic mail or other electronic means.

(b) Notice to Directors. Any notice required to be given to any director may be given by the method stated in subsection (a), as otherwise provided in these Bylaws, or by overnight delivery service, facsimile, telex or telegram, except that such notice other than one which is delivered personally shall be sent to such address as such director shall have filed in writing with the Secretary, or, in the absence of such filing, to the last known post office address of such director.

(c) Affidavit of Mailing. An affidavit of mailing, executed by a duly authorized and competent employee of the corporation or its transfer agent appointed with respect to the class of stock affected, or other agent, specifying the name and address or the names and addresses of the stockholder or stockholders, or director or directors, to whom any such notice or notices was or were given, and the time and method of giving the same, shall in the absence of fraud, be prima facie evidence of the facts therein contained.

(d) Methods of Notice. It shall not be necessary that the same method of giving notice be employed in respect of all recipients of notice, but one permissible method may be employed in respect of any one or more, and any other permissible method or methods may be employed in respect of any other or others.

(e) Notice to Person With Whom Communication Is Unlawful. Whenever notice is required to be given, under any provision of law or of the Certificate of Incorporation or Bylaws of the corporation, to any person with whom communication is unlawful, the giving of such notice to such person shall not be required and there shall be no duty to apply to any governmental authority or agency for a license or permit to give such notice to such person. Any action or meeting which shall be taken or held without notice to any such person with whom communication is unlawful shall have the same force and effect as if such notice had been duly given. In the event that the action taken by the corporation is such as to require the filing of a certificate under any provision of the DGCL, the certificate shall state, if such is the fact and if notice is required, that notice was given to all persons entitled to receive notice except such persons with whom communication is unlawful.

(f) Notice to Stockholders Sharing an Address. Except as otherwise prohibited under DGCL, any notice given under the provisions of DGCL, the Certificate of Incorporation or the Bylaws shall be effective if given by a single written notice to stockholders who share an address if consented to by the stockholders at that address to whom such notice is given. Such consent shall have been deemed to have been given if such stockholder fails to object in writing to the corporation within sixty (60) days of having been given notice by the corporation of its intention to send the single notice. Any consent shall be revocable by the stockholder by written notice to the corporation.

ARTICLE XIII

AMENDMENTS

Section 45. Bylaw Amendments. Subject to the limitations set forth in Section 43(h) of these Bylaws or the provisions of the Certificate of Incorporation, the Board of Directors is expressly empowered to adopt, amend or repeal the Bylaws of the corporation. Any adoption, amendment or repeal of the Bylaws of the corporation by the Board of Directors shall require the approval of a majority of the authorized number of directors. The stockholders also shall have power to adopt, amend or repeal the Bylaws of the corporation; *provided*, *however*, that, in addition to any vote of the holders of any class or series of stock of the corporation required by law or by the Certificate of Incorporation, such action by stockholders shall require the affirmative vote of the holders of at least sixty-six and two-thirds percent (66-2/3%) of the voting power of all of the then-outstanding shares of the capital stock of the corporation entitled to vote generally in the election of directors, voting together as a single class.

ARTICLE XIV

LOANS TO OFFICERS OR EMPLOYEES

Section 46. Loans to Officers or Employees. Except as otherwise prohibited by applicable law, including the Sarbanes-Oxley Act of 2002, the corporation may lend money to, or guarantee any obligation of, or otherwise assist any officer or other employee of the corporation or of its subsidiaries, including any officer or employee who is a director of the corporation or its subsidiaries, whenever, in the judgment of the Board of Directors, such loan, guarantee or assistance may reasonably be expected to benefit the corporation. The loan, guarantee or other assistance may be with or without interest and may be unsecured, or secured in such manner as the Board of Directors shall approve, including, without limitation, a pledge of shares of stock of the corporation. Nothing in these Bylaws shall be deemed to deny, limit or restrict the powers of guaranty or warranty of the corporation at common law or under any statute.

* * * *

Exhibit 4.1

Execution Version

AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT

THIS AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT (this "***Agreement***"), is made as of December 29, 2020, by and among Sensei Biotherapeutics, Inc., a Delaware corporation (the "***Company***"), each of the investors listed on **Schedule A** hereto, each of which is referred to in this Agreement as an "***Investor***" and any Additional Purchaser (as defined in the Purchase Agreement) that becomes a party to this Agreement in accordance with Section 6.9 hereof.

RECITALS:

A. Certain of the Investors (the "***Existing Investors***") hold shares of the Company's Series AA Preferred Stock and/or shares of Common Stock issued upon conversion thereof and possess registration rights, information rights, rights of first offer, and other rights pursuant to that certain Investors' Rights Agreement dated as of January 10, 2020, by and among the Company and such Existing Investors (the "***Prior Agreement***").

B. The Existing Investors are holders of at least two-thirds of the Registrable Securities of the Company (as defined in the Prior Agreement), and desire to amend and restate the Prior Agreement in its entirety and to accept the rights created pursuant to this Agreement in lieu of the rights granted to them under the Prior Agreement.

C. Certain of the Investors are parties to that certain Series BB Preferred Stock Purchase Agreement of even date herewith by and among the Company and such Investors (the "***Purchase Agreement***"), under which certain of the Company's and such Investors' obligations are conditioned upon the execution and delivery of this Agreement.

The Existing Investors agree that the Prior Agreement shall be amended and restated in its entirety by this Agreement and the parties to this Agreement further agree as follows:

1. Definitions. For purposes of this Agreement:

1.1 "***Affiliate***" means, with respect to any specified Person, any other Person who, directly or indirectly, controls, is controlled by, or is under common control with such Person, including without limitation any general partner, managing member, officer, director or trustee of such Person, or any venture capital fund or registered investment company now or hereafter existing that is controlled by one or more general partners, managing members or investment advisers of, or shares the same management company or investment adviser with, such Person.

1.2 "***Board of Directors***" means the board of directors of the Company.

1.3 "***Certificate of Incorporation***" means the Company's Amended and Restated Certificate of Incorporation, as amended and/or restated from time to time.

1.4 "***Common Stock***" means shares of the Company's common stock, par value $0.0001 per share.

1.5 "***Competitor***" means a Person engaged, directly or indirectly (including through any partnership, limited liability company, corporation, joint venture or similar arrangement (whether now existing or formed hereafter)), in the business of the Company, but shall not include any financial investment firm or collective investment vehicle that, together with its Affiliates, holds less than 20% of

the outstanding equity of any Competitor and does not, nor do any of its Affiliates, have a right to designate any members of the board of directors of any Competitor. For the avoidance of doubt, none of the Specified Investors shall be considered a Competitor for purposes of this Agreement.

1.6 "***Damages***" means any loss, damage, claim or liability (joint or several) to which a party hereto may become subject under the Securities Act, the Exchange Act, or other federal or state law, insofar as such loss, damage, claim or liability (or any action in respect thereof) arises out of or is based upon: (i) any untrue statement or alleged untrue statement of a material fact contained in any registration statement of the Company, including any preliminary prospectus or final prospectus contained therein or any amendments or supplements thereto; (ii) an omission or alleged omission to state therein a material fact required to be stated therein, or necessary to make the statements therein not misleading; or (iii) any violation or alleged violation by the indemnifying party (or any of its agents or Affiliates) of the Securities Act, the Exchange Act, any state securities law, or any rule or regulation promulgated under the Securities Act, the Exchange Act, or any state securities law.

1.7 "***Derivative Securities***" means any securities or rights convertible into, or exercisable or exchangeable for (in each case, directly or indirectly), Common Stock, including options and warrants.

1.8 "***Exchange Act***" means the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder.

1.9 "***Excluded Registration***" means (i) a registration relating to the sale or grant of securities to employees of the Company or a subsidiary pursuant to a stock option, stock purchase, equity incentive or similar plan; (ii) a registration relating to an SEC Rule 145 transaction; (iii) a registration on any form that does not include substantially the same information as would be required to be included in a registration statement covering the sale of the Registrable Securities; or (iv) a registration in which the only Common Stock being registered is Common Stock issuable upon conversion of debt securities that are also being registered.

1.10 "***FOIA Party***" means a Person that, in the reasonable determination of the Board of Directors, may be subject to, and thereby required to disclose non-public information furnished by or relating to the Company under, the Freedom of Information Act, 5 U.S.C. 552 ("***FOIA***"), any state public records access law, any state or other jurisdiction's laws similar in intent or effect to FOIA, or any other similar statutory or regulatory requirement.

1.11 "***Form S-1***" means such form under the Securities Act as in effect on the date hereof or any successor registration form under the Securities Act subsequently adopted by the SEC.

1.12 "***Form S-3***" means such form under the Securities Act as in effect on the date hereof or any registration form under the Securities Act subsequently adopted by the SEC that permits forward incorporation of substantial information by reference to other documents filed by the Company with the SEC.

1.13 "***GAAP***" means generally accepted accounting principles in the United States as in effect from time to time.

1.14 "***Holder***" means any holder of Registrable Securities who is a party to this Agreement.

1.15 "***Immediate Family Member***" means a child, stepchild, grandchild, parent, stepparent, grandparent, spouse, sibling, mother-in-law, father-in-law, son-in-law, daughter-in-law, brother-in-law, or sister-in-law, including, adoptive relationships, of a natural person referred to herein.

1.16 "***Initiating Holders***" means, collectively, Holders who properly initiate a registration request under this Agreement.

1.17 "***IPO***" means the Company's first underwritten public offering of its Common Stock under the Securities Act.

1.18 "***Key Employee***" means any c- and executive vice president-level executive officers.

1.19 "***Major Investor***" means any Investor that, individually or together with such Investor's Affiliates, holds at least 10,000,000 shares of Registrable Securities (as adjusted for any stock split, stock dividend, combination, or other recapitalization or reclassification effected after the date hereof).

1.20 "***New Securities***" means, collectively, equity securities of the Company, whether or not currently authorized, as well as rights, options, or warrants to purchase such equity securities, or securities of any type whatsoever that are, or may become, convertible or exchangeable into or exercisable for such equity securities.

1.21 "***Person***" means any individual, corporation, partnership, trust, limited liability company, association or other entity.

1.22 "***Preferred Director***" means any director of the Company that the holders of record of the Preferred Stock are entitled to elect, exclusively and as a separate class, pursuant to the Certificate of Incorporation.

1.23 "***Preferred Stock***" means, collectively, shares of Series AA Preferred Stock and Series BB Preferred Stock.

1.24 "***Registrable Securities***" means (i) the Common Stock issuable or issued upon conversion of the Preferred Stock; and (ii) any Common Stock issued as (or issuable upon the conversion or exercise of any warrant, right, or other security that is issued as) a dividend or other distribution with respect to, or in exchange for or in replacement of, the shares referenced in clause (i) above; excluding in all cases, however, any Registrable Securities sold by a Person in a transaction in which the applicable rights under this Agreement are not assigned pursuant to Section 6.1, and excluding for purposes of Section 2 any shares for which registration rights have terminated pursuant to Section 2.13 of this Agreement.

1.25 "***Registrable Securities then outstanding***" means the number of shares determined by adding the number of shares of outstanding Common Stock that are Registrable Securities and the number of shares of Common Stock issuable (directly or indirectly) pursuant to then exercisable and/or convertible securities that are Registrable Securities.

1.26 "***Restricted Securities***" means the securities of the Company required to be notated with the legend set forth in Section 2.12(b) hereof.

1.27 "***SEC***" means the Securities and Exchange Commission.

1.28 "***SEC Rule 144***" means Rule 144 promulgated by the SEC under the Securities Act.

1.29 "***SEC Rule 145***" means Rule 145 promulgated by the SEC under the Securities Act.

1.30 "***Securities Act***" means the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder.

1.31 "***Selling Expenses***" means all underwriting discounts, selling commissions, and stock transfer taxes applicable to the sale of Registrable Securities, and fees and disbursements of counsel for any Holder, except for the fees and disbursements of the Selling Holder Counsel borne and paid by the Company as provided in Section 2.6.

1.32 "***Series AA Preferred Stock***" means shares of the Company's Series AA Preferred Stock, par value $0.0001 per share.

1.33 "***Series BB Preferred Stock***" means shares of the Company's Series BB Preferred Stock, par value $0.0001 per share.

1.34 "***Specified Investors***" means Cambrian BioPharma, Inc. ("***Cambrian***"), Apeiron Investment Group ("***Apeiron***"), H&S Ventures, LLC ("***H&S***"), Catalio Nexus Fund II, LP ("***Catalio***") and Pura Vida Investments, LLC ("***Pura Vida***"), in each case together with their respective Affiliates, along with any other Investor determined by majority vote of the Board to be a Specified Investor as defined in this Agreement.

2. Registration Rights. The Company covenants and agrees as follows:

2.1 Demand Registration.

(a) Form S-1 Demand. If at any time after the earlier of (i) five (5) years after the date of this Agreement or (ii) 180 days after the effective date of the registration statement for an IPO resulting in proceeds to the Company of at least $50 million, the Company receives a request from Holders of at least two-thirds of the Registrable Securities then outstanding that the Company file a Form S-1 registration statement covering the registration of Registrable Securities, then the Company shall (x) within 10 days after the date such request is given, give notice thereof (the "***Demand Notice***") to all Holders other than the Initiating Holders; and (y) as soon as practicable, and in any event within 60 days after the date such request is given by the Initiating Holders, file a Form S-1 registration statement under the Securities Act covering all Registrable Securities that the Initiating Holders requested to be registered and any additional Registrable Securities requested to be included in such registration by any other Holders, as specified by notice given by each such Holder to the Company within 20 days of the date the Demand Notice is given, and in each case, subject to the limitations of Sections 2.1(c) and 2.3.

(b) Form S-3 Demand. If at any time when it is eligible to use a Form S-3 registration statement, the Company receives a request from Holders of at least 30% of the Registrable Securities then outstanding that the Company file a Form S-3 registration statement with respect to outstanding Registrable Securities of such Holders having an anticipated aggregate offering price, net of Selling Expenses, of at least $5 million, then the Company shall (i) within 10 days after the date such request is given, give a Demand Notice to all Holders other than the Initiating Holders; and (ii) as soon as practicable, and in any event within 45 days after the date such request is given by the Initiating Holders, file a Form S-3 registration statement under the Securities Act covering all Registrable Securities requested to be included in such registration by any other Holders, as specified by notice given by each such Holder to the Company within 20 days of the date the Demand Notice is given, and in each case, subject to the limitations of Sections 2.1(c) and 2.3.

(c) Notwithstanding the foregoing obligations, if the Company furnishes to Holders requesting a registration pursuant to this Section 2.1 a certificate signed by the Company's chief executive officer stating that in the good faith judgment of the Board of Directors it would be materially detrimental to the Company and its stockholders for such registration statement to either become effective or remain effective for as long as such registration statement otherwise would be required to remain effective, because it would be materially detrimental to the Company and its stockholders for such registration statement to be filed and it is therefore necessary to defer the filing of such registration statement, then the Company shall have the right to defer taking action with respect to such filing, and any time periods with respect to filing or effectiveness thereof shall be tolled correspondingly, for a period of not more than 120 days after the request of the Initiating Holders is given; *provided, however*, that the Company may not invoke this right more than once in any 12 month period; and provided further that the Company shall not register any securities for its own account or that of any other stockholder during such 120 day period other than an Excluded Registration.

(d) The Company shall not be obligated to effect, or to take any action to effect, any registration pursuant to Section 2.1(a) (i) during the period that is 60 days before the Company's good faith estimate of the date of filing of, and ending on a date that is 180 days after the effective date of, a Company-initiated registration, *provided* that the Company is actively employing in good faith commercially reasonable efforts to cause such registration statement to become effective; (ii) after the Company has effected one registration pursuant to Section 2.1(a); or (iii) if the Initiating Holders propose to dispose of shares of Registrable Securities that may be immediately registered on Form S-3 pursuant to a request made pursuant to Section 2.1(b). The Company shall not be obligated to effect, or to take any action to effect, any registration pursuant to Section 2.1(b) (i) during the period that is 30 days before the Company's good faith estimate of the date of filing of, and ending on a date that is 90 days after the effective date of, a Company-initiated registration, *provided* that the Company is actively employing in good faith commercially reasonable efforts to cause such registration statement to become effective; or (ii) if the Company has effected two registrations pursuant to Section 2.1(b) within the 12 month period immediately preceding the date of such request. A registration shall not be counted as "effected" for purposes of this Section 2.1(d) until such time as the applicable registration statement has been declared effective by the SEC, unless the Initiating Holders withdraw their request for such registration, elect not to pay the registration expenses therefor, and forfeit their right to one demand registration statement pursuant to Section 2.6, in which case such withdrawn registration statement shall be counted as "effected" for purposes of this Section 2.1(d); *provided*, that if such withdrawal is during a period the Company has deferred taking action pursuant to Section 2.1(c), then the Initiating Holders may withdraw their request for registration and such registration will not be counted as "effected" for purposes of this Section 2.1(d).

2.2 Company Registration. If the Company proposes to register (including, for this purpose, a registration effected by the Company for stockholders other than the Holders) any of its securities under the Securities Act in connection with the public offering of such securities solely for cash (other than in an Excluded Registration), the Company shall, at such time, promptly give each Holder notice of such registration. Upon the request of each Holder given within 20 days after such notice is given by the Company, the Company shall, subject to the provisions of Section 2.3, cause to be registered all of the Registrable Securities that each such Holder has requested to be included in such registration. The Company shall have the right to terminate or withdraw any registration initiated by it under this Section 2.2 before the effective date of such registration, whether or not any Holder has elected to include Registrable Securities in such registration. The expenses (other than Selling Expenses) of such withdrawn registration shall be borne by the Company in accordance with Section 2.6.

2.3 Underwriting Requirements.

(a) If, pursuant to Section 2.1, the Initiating Holders intend to distribute the Registrable Securities covered by their request by means of an underwriting, they shall so advise the Company as a part of their request made pursuant to Section 2.1, and the Company shall include such information in the Demand Notice. The underwriter(s) will be selected by the Company and shall be reasonably acceptable to a majority in interest of the Initiating Holders. In such event, the right of any Holder to include such Holder's Registrable Securities in such registration shall be conditioned upon such Holder's participation in such underwriting and the inclusion of such Holder's Registrable Securities in the underwriting to the extent provided herein. All Holders proposing to distribute their securities through such underwriting shall (together with the Company as provided in Section 2.4(e)) enter into an underwriting agreement in customary form with the underwriter(s) selected for such underwriting. Notwithstanding any other provision of this Section 2.3, if the managing underwriter(s) advise(s) the Initiating Holders in writing that marketing factors require a limitation on the number of shares to be underwritten, then the Initiating Holders shall so advise all Holders of Registrable Securities that otherwise would be underwritten pursuant hereto, and the number of Registrable Securities that may be included in the underwriting shall be allocated among such Holders of Registrable Securities, including the Initiating Holders, in proportion (as nearly as practicable) to the number of Registrable Securities owned by each Holder or in such other proportion as shall mutually be agreed to by all such selling Holders; *provided*, *however*, that the number of Registrable Securities held by the Holders to be included in such underwriting shall not be reduced unless all other securities are first entirely excluded from the underwriting. To facilitate the allocation of shares in accordance with the above provisions, the Company or the underwriters may round the number of shares allocated to any Holder to the nearest 100 shares.

(b) In connection with any offering involving an underwriting of shares of the Company's capital stock pursuant to Section 2.2, the Company shall not be required to include any of the Holders' Registrable Securities in such underwriting unless the Holders accept the terms of the underwriting as agreed upon between the Company and its underwriters, and then only in such quantity as the underwriters in their sole discretion determine will not jeopardize the success of the offering by the Company. If the total number of securities, including Registrable Securities, requested by stockholders to be included in such offering exceeds the number of securities to be sold (other than by the Company) that the underwriters in their reasonable discretion determine is compatible with the success of the offering, then the Company shall be required to include in the offering only that number of such securities, including Registrable Securities, which the underwriters and the Company in their sole discretion determine will not jeopardize the success of the offering. If the underwriters determine that less than all of the Registrable Securities requested to be registered can be included in such offering, then the Registrable Securities that are included in such offering shall be allocated among the selling Holders in proportion (as nearly as practicable to) the number of Registrable Securities owned by each selling Holder or in such other proportions as shall mutually be agreed to by all such selling Holders. To facilitate the allocation of shares in accordance with the above provisions, the Company or the underwriters may round the number of shares allocated to any Holder to the nearest 100 shares. Notwithstanding the foregoing, in no event shall (i) the number of Registrable Securities included in the offering be reduced unless all other securities (other than securities to be sold by the Company) are first entirely excluded from the offering, or (ii) the number of Registrable Securities included in the offering be reduced below 20% of the total number of securities included in such offering, unless such offering is the IPO, in which case the selling Holders may be excluded further if the underwriters make the determination described above and no other stockholder's securities are included in such offering. For purposes of the provision in this Section 2.3(b) concerning apportionment, for any selling Holder that is a partnership, limited liability company, or corporation, the partners, members, retired partners, retired members, stockholders, and Affiliates of such Holder, or the estates and Immediate Family Members of any such partners, retired partners, members, and retired members and any trusts for the benefit of any of the foregoing Persons, shall be deemed to be a single "selling Holder," and any pro rata reduction with respect to such "selling Holder" shall be based upon the aggregate number of Registrable Securities owned by all Persons included in such "selling Holder," as defined in this sentence.

(c) For purposes of Section 2.1, a registration shall not be counted as "effected" if, as a result of an exercise of the underwriter's cutback provisions in Section 2.3(a), fewer than 50% of the total number of Registrable Securities that Holders have requested to be included in such registration statement are actually included.

2.4 Obligations of the Company. Whenever required under this Section 2 to effect the registration of any Registrable Securities, the Company shall, as expeditiously as reasonably possible:

(a) prepare and file with the SEC a registration statement with respect to such Registrable Securities and use its commercially reasonable efforts to cause such registration statement to become effective and, upon the request of the Holders of a majority of the Registrable Securities registered thereunder, keep such registration statement effective for a period of up to 120 days or, if earlier, until the distribution contemplated in the registration statement has been completed; *provided*, *however*, that (i) such 120 day period shall be extended for a period of time equal to the period the Holder refrains, at the request of an underwriter of Common Stock (or other securities) of the Company, from selling any securities included in such registration, and (ii) in the case of any registration of Registrable Securities on Form S-3 that are intended to be offered on a continuous or delayed basis, subject to compliance with applicable SEC rules, such 120 day period shall be extended for up to 180 days, if necessary, to keep the registration statement effective until all such Registrable Securities are sold;

(b) prepare and file with the SEC such amendments and supplements to such registration statement, and the prospectus used in connection with such registration statement, as may be necessary to comply with the Securities Act in order to enable the disposition of all securities covered by such registration statement;

(c) furnish to the selling Holders such numbers of copies of a prospectus, including a preliminary prospectus, as required by the Securities Act, and such other documents as the Holders may reasonably request in order to facilitate their disposition of their Registrable Securities;

(d) use its commercially reasonable efforts to register and qualify the securities covered by such registration statement under such other securities or blue-sky laws of such jurisdictions as shall be reasonably requested by the selling Holders; *provided* that the Company shall not be required to qualify to do business or to file a general consent to service of process in any such states or jurisdictions, unless the Company is already subject to service in such jurisdiction and except as may be required by the Securities Act;

(e) in the event of any underwritten public offering, enter into and perform its obligations under an underwriting agreement, in usual and customary form, with the underwriter(s) of such offering;

(f) use its commercially reasonable efforts to cause all such Registrable Securities covered by such registration statement to be listed on a national securities exchange or trading system and each securities exchange and trading system (if any) on which similar securities issued by the Company are then listed;

(g) provide a transfer agent and registrar for all Registrable Securities registered pursuant to this Agreement and provide a CUSIP number for all such Registrable Securities, in each case not later than the effective date of such registration;

(h) promptly make available for inspection by the selling Holders, any managing underwriter(s) participating in any disposition pursuant to such registration statement, and any attorney or accountant or other agent retained by any such underwriter or selected by the selling Holders, all financial and other records, pertinent corporate documents, and properties of the Company, and cause the Company's officers, directors, employees, and independent accountants to supply all information reasonably requested by any such seller, underwriter, attorney, accountant, or agent, in each case, as necessary or advisable to verify the accuracy of the information in such registration statement and to conduct appropriate due diligence in connection therewith;

(i) notify each selling Holder, promptly after the Company receives notice thereof, of the time when such registration statement has been declared effective or a supplement to any prospectus forming a part of such registration statement has been filed; and

(j) after such registration statement becomes effective, notify each selling Holder of any request by the SEC that the Company amend or supplement such registration statement or prospectus.

In addition, the Company shall ensure that, at all times after any registration statement covering a public offering of securities of the Company under the Securities Act shall have become effective, its insider trading policy shall provide that the Company's directors may implement a trading program under Rule 10b5-1 of the Exchange Act.

2.5 Furnish Information. It shall be a condition precedent to the obligations of the Company to take any action pursuant to this Section 2 with respect to the Registrable Securities of any selling Holder that such Holder shall furnish to the Company such information regarding itself, the Registrable Securities held by it, and the intended method of disposition of such securities as is reasonably required to effect the registration of such Holder's Registrable Securities.

2.6 Expenses of Registration. All expenses (other than Selling Expenses) incurred in connection with registrations, filings, or qualifications pursuant to Section 2, including all registration, filing, and qualification fees; printers' and accounting fees; fees and disbursements of counsel for the Company; and the reasonable fees and disbursements, not to exceed $50,000, of one counsel for the selling Holders ("***Selling Holder Counsel***"), shall be borne and paid by the Company; *provided*, *however*, that the Company shall not be required to pay for any expenses of any registration proceeding begun pursuant to Section 2.1 if the registration request is subsequently withdrawn at the request of the Holders of a majority of the Registrable Securities to be registered (in which case all selling Holders shall bear such expenses pro rata based upon the number of Registrable Securities that were to be included in the withdrawn registration), unless the Holders of a majority of the Registrable Securities agree to forfeit their right to one registration pursuant to Sections 2.1(a) or 2.1(b), as the case may be then the Holders shall not be required to pay any of such expenses and shall not forfeit their right to one registration pursuant to Sections 2.1(a) or 2.1(b). All Selling Expenses relating to Registrable Securities registered pursuant to this Section 2 shall be borne and paid by the Holders pro rata on the basis of the number of Registrable Securities registered on their behalf.

2.7 Delay of Registration. No Holder shall have any right to obtain or seek an injunction restraining or otherwise delaying any registration pursuant to this Agreement as the result of any controversy that might arise with respect to the interpretation or implementation of this Section 2.

2.8 Indemnification. If any Registrable Securities are included in a registration statement under this Section 2:

(a) To the extent permitted by law, the Company will indemnify and hold harmless each selling Holder, and the partners, members, officers, directors, and stockholders of each such Holder; legal counsel and accountants for each such Holder; any underwriter (as defined in the Securities Act) for each such Holder; and each Person, if any, who controls such Holder or underwriter within the meaning of the Securities Act or the Exchange Act, against any Damages, and the Company will pay to each such Holder, underwriter, controlling Person, or other aforementioned Person any legal or other expenses reasonably incurred thereby in connection with investigating or defending any claim or proceeding from which Damages may result, as such expenses are incurred; *provided*, *however*, that the indemnity agreement contained in this Section 2.8(a) shall not apply to amounts paid in settlement of any such claim or proceeding if such settlement is effected without the consent of the Company, which consent shall not be unreasonably withheld, nor shall the Company be liable for any Damages to the extent that they arise out of or are based upon actions or omissions made in reliance upon and in conformity with written information furnished by or on behalf of any such Holder, underwriter, controlling Person, or other aforementioned Person expressly for use in connection with such registration.

(b) To the extent permitted by law, each selling Holder, severally and not jointly, will indemnify and hold harmless the Company, and each of its directors, each of its officers who has signed the registration statement, each Person (if any), who controls the Company within the meaning of the Securities Act, legal counsel and accountants for the Company, any underwriter (as defined in the Securities Act), any other Holder selling securities in such registration statement, and any controlling Person of any such underwriter or other Holder, against any Damages, in each case only to the extent that such Damages arise out of or are based upon actions or omissions made in reliance upon and in conformity with written information furnished by or on behalf of such selling Holder expressly for use in connection with such registration; and each such selling Holder will pay to the Company and each other aforementioned Person any legal or other expenses reasonably incurred thereby in connection with investigating or defending any claim or proceeding from which Damages may result, as such expenses are incurred; *provided*, *however*, that the indemnity agreement contained in this Section 2.8(b) shall not apply to amounts paid in settlement of any such claim or proceeding if such settlement is effected without the consent of the Holder, which consent shall not be unreasonably withheld; and *provided further* that in no event shall the aggregate amounts payable by any Holder by way of indemnity or contribution under Section 2.8(b) and 2.8(d) exceed the proceeds from the offering received by such Holder (net of any Selling Expenses paid by such Holder), except in the case of fraud or willful misconduct by such Holder.

(c) Promptly after receipt by an indemnified party under this Section 2.8 of notice of the commencement of any action (including any governmental action) for which a party may be entitled to indemnification hereunder, such indemnified party will, if a claim in respect thereof is to be made against any indemnifying party under this Section 2.8, give the indemnifying party notice of the commencement thereof. The indemnifying party shall have the right to participate in such action and, to the extent the indemnifying party so desires, participate jointly with any other indemnifying party to which notice has been given, and to assume the defense thereof with counsel mutually satisfactory to the parties; *provided*, *however*, that an indemnified party (together with all other indemnified parties that may be represented without conflict by one counsel) shall have the right to retain one separate counsel, with the fees and expenses to be paid by the indemnifying party, if representation of such indemnified party by the counsel retained by the indemnifying party would be inappropriate due to actual or potential differing interests between such indemnified party and any other party represented by such counsel in such action. The failure to give notice to the indemnifying party within a reasonable time of the commencement of any such action shall relieve such indemnifying party of any liability to the indemnified party under this Section 2.8, to the extent that such failure materially prejudices the indemnifying party's ability to defend such action. The failure to give notice to the indemnifying party will not relieve it of any liability that it may have to any indemnified party otherwise than under this Section 2.8.

(d) To provide for just and equitable contribution to joint liability under the Securities Act in any case in which either: (i) any party otherwise entitled to indemnification hereunder makes a claim for indemnification pursuant to this Section 2.8 but it is judicially determined (by the entry of a final judgment or decree by a court of competent jurisdiction and the expiration of time to appeal or the denial of the last right of appeal) that such indemnification may not be enforced in such case, notwithstanding the fact that this Section 2.8 provides for indemnification in such case, or (ii) contribution under the Securities Act may be required on the part of any party hereto for which indemnification is provided under this Section 2.8, then, and in each such case, such parties will contribute to the aggregate losses, claims, damages, liabilities, or expenses to which they may be subject (after contribution from others) in such proportion as is appropriate to reflect the relative fault of each of the indemnifying party and the indemnified party in connection with the statements, omissions, or other actions that resulted in such loss, claim, damage, liability, or expense, as well as to reflect any other relevant equitable considerations. The relative fault of the indemnifying party and of the indemnified party shall be determined by reference to, among other things, whether the untrue or allegedly untrue statement of a material fact, or the omission or alleged omission of a material fact, relates to information supplied by the indemnifying party or by the indemnified party and the parties' relative intent, knowledge, access to information, and opportunity to correct or prevent such statement or omission; *provided, however*, that, in any such case (x) no Holder will be required to contribute any amount in excess of the public offering price of all such Registrable Securities offered and sold by such Holder pursuant to such registration statement, and (y) no Person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) will be entitled to contribution from any Person who was not guilty of such fraudulent misrepresentation; and *provided further* that in no event shall a Holder's liability pursuant to this Section 2.8(d), when combined with the amounts paid or payable by such Holder pursuant to Section 2.8(b), exceed the proceeds from the offering received by such Holder (net of any Selling Expenses paid by such Holder), except in the case of willful misconduct or fraud by such Holder.

(e) Notwithstanding the foregoing, to the extent that the provisions on indemnification and contribution contained in the underwriting agreement entered into in connection with the underwritten public offering are in conflict with the foregoing provisions, the provisions in the underwriting agreement shall control.

(f) Unless otherwise superseded by an underwriting agreement entered into in connection with the underwritten public offering, the obligations of the Company and Holders under this Section 2.8 shall survive the completion of any offering of Registrable Securities in a registration under this Section 2, and otherwise shall survive the termination of this Agreement.

2.9 Reports Under Exchange Act. With a view to making available to the Holders the benefits of SEC Rule 144 and any other rule or regulation of the SEC that may at any time permit a Holder to sell securities of the Company to the public without registration or pursuant to a registration on Form S-3, the Company shall:

(a) make and keep available adequate current public information, as those terms are understood and defined in SEC Rule 144, at all times after the effective date of the registration statement filed by the Company for the IPO;

(b) use commercially reasonable efforts to file with the SEC in a timely manner all reports and other documents required of the Company under the Securities Act and the Exchange Act (at any time after the Company has become subject to such reporting requirements); and

(c) furnish to any Holder, so long as the Holder owns any Registrable Securities, forthwith upon request (i) to the extent accurate, a written statement by the Company that it has complied with the reporting requirements of SEC Rule 144 (at any time after 90 days after the effective date of the registration statement filed by the Company for the IPO), the Securities Act, and the Exchange Act (at any time after the Company has become subject to such reporting requirements), or that it qualifies as a registrant whose securities may be resold pursuant to Form S-3 (at any time after the Company so qualifies); (ii) a copy of the most recent annual or quarterly report of the Company and such other reports and documents so filed by the Company; and (iii) such other information as may be reasonably requested in availing any Holder of any rule or regulation of the SEC that permits the selling of any such securities without registration (at any time after the Company has become subject to the reporting requirements under the Exchange Act) or pursuant to Form S-3 (at any time after the Company so qualifies to use such form).

2.10 Limitations on Subsequent Registration Rights. From and after the date of this Agreement, the Company shall not, without the prior written consent of the Holders of a majority of the Registrable Securities then outstanding, enter into any agreement with any holder or prospective holder of any securities of the Company that would (i) provide to such holder or prospective holder the right to include securities in any registration on other than either a pro rata basis with respect to the Registrable Securities or on a subordinate basis after all Holders have had the opportunity to include in the registration and offering all shares of Registrable Securities that they wish to so include or (ii) allow such holder or prospective holder to include such securities in any registration unless, under the terms of such agreement, such holder or prospective holder may include such securities in any such registration only to the extent that the inclusion of such securities will not reduce the number of the Registrable Securities of the Holders that are included; *provided* that this limitation shall not apply to Registrable Securities acquired by any additional Investor that becomes a party to this Agreement in accordance with Section 6.9.

2.11 "*Market Stand-off*" Agreement. Each Holder hereby agrees that it will not, without the prior written consent of the managing underwriter, during the period commencing on the date of the final prospectus relating to the registration by the Company of shares of its Common Stock or any other equity securities under the Securities Act on a registration statement on Form S-1 or Form S-3, and ending on the date specified by the Company and the managing underwriter (such period not to exceed 180 days in the case of the IPO), (i) lend; offer; pledge; sell; contract to sell; sell any option or contract to purchase; purchase any option or contract to sell; grant any option, right, or warrant to purchase; or otherwise transfer or dispose of, directly or indirectly, any shares of Common Stock or any securities convertible into or exercisable or exchangeable (directly or indirectly) for Common Stock held immediately before the effective date of the registration statement for such offering or (ii) enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of such securities, whether any such transaction described in clause (i) or (ii) above is to be settled by delivery of Common Stock or other securities, in cash, or otherwise. The foregoing provisions of this Section 2.11 shall apply only to the IPO, shall not apply to the sale of any shares to an underwriter pursuant to an underwriting agreement, or the transfer of any shares to any trust for the direct or indirect benefit of the Holder or the immediate family of the Holder, *provided* that the trustee of the trust agrees to be bound in writing by the restrictions set forth herein, and *provided further* that any such transfer shall not involve a disposition for value, and shall be applicable to the Holders only if all officers and directors are subject to the same restrictions and the Company uses commercially reasonable efforts to obtain a similar agreement from all stockholders individually owning more than 1% of the Company's outstanding Common Stock (after giving effect to conversion into Common Stock of all outstanding Preferred Stock). The underwriters in connection with such registration are intended third-party beneficiaries of this Section 2.11 and shall have the right, power and authority to enforce the provisions hereof as though they were a party hereto. Each Holder further agrees to execute such agreements as may be reasonably requested by the underwriters in connection with such registration that are consistent with this Section 2.11 or that are necessary to give further effect thereto.

2.12 Restrictions on Transfer.

(a) The Preferred Stock and the Registrable Securities shall not be sold, pledged, or otherwise transferred, and the Company shall not recognize and shall issue stop-transfer instructions to its transfer agent with respect to any such sale, pledge, or transfer, except upon the conditions specified in this Agreement, which conditions are intended to ensure compliance with the provisions of the Securities Act. A transferring Holder will cause any proposed purchaser, pledgee, or transferee of the Preferred Stock and the Registrable Securities held by such Holder to agree to take and hold such securities subject to the provisions and upon the conditions specified in this Agreement.

(b) Each certificate, instrument, or book entry representing (i) the Preferred Stock, (ii) the Registrable Securities, and (iii) any other securities issued in respect of the securities referenced in clauses (i) and (ii), upon any stock split, stock dividend, recapitalization, merger, consolidation, or similar event, shall (unless otherwise permitted by the provisions of Section 2.12(c)) be notated with a legend substantially in the following form:

> THE SECURITIES REPRESENTED HEREBY HAVE BEEN ACQUIRED FOR INVESTMENT AND HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED. SUCH SHARES MAY NOT BE SOLD, PLEDGED, OR TRANSFERRED IN THE ABSENCE OF SUCH REGISTRATION OR A VALID EXEMPTION FROM THE REGISTRATION AND PROSPECTUS DELIVERY REQUIREMENTS OF SAID ACT. THE SECURITIES REPRESENTED HEREBY MAY BE TRANSFERRED ONLY IN ACCORDANCE WITH THE TERMS OF AN AGREEMENT BETWEEN THE COMPANY AND THE STOCKHOLDER, A COPY OF WHICH IS ON FILE WITH THE SECRETARY OF THE COMPANY.

The Holders consent to the Company making a notation in its records and giving instructions to any transfer agent of the Restricted Securities in order to implement the restrictions on transfer set forth in this Section 2.12.

(c) The holder of such Restricted Securities, by acceptance of ownership thereof, agrees to comply in all respects with the provisions of this Section 2. Before any proposed sale, pledge, or transfer of any Restricted Securities, unless there is in effect a registration statement under the Securities Act covering the proposed transaction, the Holder thereof shall give notice to the Company of such Holder's intention to effect such sale, pledge, or transfer. Each such notice shall describe the manner and circumstances of the proposed sale, pledge, or transfer in sufficient detail and, if reasonably requested by the Company, shall be accompanied at such Holder's expense by either (i) a written opinion of legal counsel who shall, and whose legal opinion shall, be reasonably satisfactory to the Company, addressed to the Company, to the effect that the proposed transaction may be effected without registration under the Securities Act; (ii) a "no action" letter from the SEC to the effect that the proposed sale, pledge, or transfer of such Restricted Securities without registration will not result in a recommendation by the staff of the SEC that action be taken with respect thereto; or (iii) any other evidence reasonably satisfactory to counsel to the Company to the effect that the proposed sale, pledge, or transfer of the Restricted Securities may be effected without registration under the Securities Act, whereupon the Holder of such Restricted Securities shall be entitled to sell, pledge, or transfer such Restricted Securities in accordance with the terms of the notice given by the Holder to the Company. The Company will not require such a legal opinion or "no action" letter (x) in any transaction in compliance with SEC Rule 144; or (y) in any transaction in which such Holder distributes Restricted Securities to an Affiliate of such Holder for no consideration; *provided* that each transferee agrees in writing to be subject to the terms of this Section 2.12. Each certificate, instrument, or book entry representing the Restricted Securities transferred as above provided shall be notated with, except if such transfer is made pursuant to SEC Rule 144, the appropriate restrictive legend

set forth in Section 2.12(b), except that such certificate instrument, or book entry shall not be notated with such restrictive legend if, in the opinion of counsel for such Holder and the Company, such legend is not required in order to establish compliance with any provisions of the Securities Act.

2.13 Termination of Registration Rights. The right of any Holder to request registration or inclusion of Registrable Securities in any registration pursuant to Sections 2.1 or 2.2 shall terminate upon the earliest to occur of:

(a) the closing of a Deemed Liquidation Event, as such term is defined in the Certificate of Incorporation; or

(b) such time after consummation of the IPO as Rule 144 or another similar exemption under the Securities Act is available for the sale of all of such Holder's shares without limitation during a three-month period without registration.

3. Information Rights.

3.1 Delivery of Financial Statements. The Company shall deliver to each Major Investor, *provided* that the Board of Directors has not reasonably determined that such Major Investor is a Competitor of the Company:

(a) as soon as practicable, but in any event within 90 days after the end of each fiscal year of the Company (which may be extended to up to 9 months from the end of the fiscal year of the Company upon approval of the Board of Directors, including the approval of the majority of the Preferred Directors) (i) a balance sheet as of the end of such year, (ii) statements of income and of cash flows for such year, and (iii) a statement of stockholders' equity as of the end of such year, all such financial statements audited and certified by independent public accountants of regionally recognized standing selected by the Company;

(b) as soon as practicable, but in any event within 45 days after the end of each quarter of each fiscal year of the Company, unaudited statements of income and cash flows for such fiscal quarter, and an unaudited balance sheet and a statement of stockholders' equity as of the end of such fiscal quarter, all prepared in accordance with GAAP (except that such financial statements may (i) be subject to normal year-end audit adjustments; and (ii) not contain all notes thereto that may be required in accordance with GAAP);

(c) as soon as practicable, but in any event within 45 days after the end of each of the first three (3) quarters of each fiscal year of the Company, a statement showing the number of shares of each class and series of capital stock and securities convertible into or exercisable for shares of capital stock outstanding at the end of the period, the Common Stock issuable upon conversion or exercise of any outstanding securities convertible or exercisable for Common Stock and the exchange ratio or exercise price applicable thereto, and the number of shares of issued stock options and stock options not yet issued but reserved for issuance, if any, all in sufficient detail as to permit the Major Investors to calculate their respective percentage equity ownership in the Company, and certified by the chief financial officer or chief executive officer of the Company as being true, complete, and correct;

(d) as soon as practicable, but in any event 30 days before the end of each fiscal year, a budget and business plan for the next fiscal year (collectively, the "***Budget***"), approved by the Board of Directors (including the majority of the Preferred Directors) prepared on a monthly basis, including balance sheets, income statements, and statements of cash flow for such months and, promptly after prepared, any other budgets or revised budgets prepared by the Company; and

(e) with respect to the financial statements called for in Section 3.1(b), an instrument executed by the chief financial officer and chief executive officer of the Company certifying that such financial statements were prepared in accordance with GAAP consistently applied with prior practice for earlier periods (except as otherwise set forth in Section 3.1(b)) and fairly present the financial condition of the Company and its results of operation for the periods specified therein.

If, for any period, the Company has any subsidiary whose accounts are consolidated with those of the Company, then in respect of such period the financial statements delivered pursuant to the foregoing sections shall be the consolidated and consolidating financial statements of the Company and all such consolidated subsidiaries.

Notwithstanding anything else in this Section 3.1 to the contrary, the Company may cease providing the information set forth in this Section 3.1 during the period starting with the date 60 days before the Company's good-faith estimate of the date of filing of a registration statement if it reasonably concludes it must do so to comply with the SEC rules applicable to such registration statement and related offering; *provided* that the Company's covenants under this Section 3.1 shall be reinstated at such time as the Company is no longer actively employing its commercially reasonable efforts to cause such registration statement to become effective.

3.2 Inspection. The Company shall permit each Major Investor, *provided* that the Board of Directors has not reasonably determined that such Major Investor is a Competitor of the Company, at such Major Investor's expense, to visit and inspect the Company's properties; examine its books of account and records; and discuss the Company's affairs, finances, and accounts with its officers, during normal business hours of the Company as may be reasonably requested by the Major Investor; *provided, however*, that the Company shall not be obligated pursuant to this Section 3.2 to provide access to any information that it reasonably and in good faith considers to be a trade secret or confidential information (unless covered by an enforceable confidentiality agreement, in form acceptable to the Company) or the disclosure of which would adversely affect the attorney-client privilege between the Company and its counsel.

3.3 Termination of Information. The covenants set forth in Section 3.1 and Section 3.2 shall terminate and be of no further force or effect (i) immediately before the consummation of the IPO, (ii) when the Company first becomes subject to the periodic reporting requirements of Section 12(g) or 15(d) of the Exchange Act, or (iii) upon the closing of a Deemed Liquidation Event, as such term is defined in the Certificate of Incorporation, whichever event occurs first.

3.4 Confidentiality. Each Investor agrees that such Investor will keep confidential and will not disclose, divulge, or use for any purpose (other than to monitor its investment in the Company) any confidential information obtained from the Company pursuant to the terms of this Agreement (including notice of the Company's intention to file a registration statement), unless such confidential information (a) is known or becomes known to the public in general (other than as a result of a breach of this Section 3.4 by such Investor), (b) is or has been independently developed or conceived by such Investor without use of the Company's confidential information, or (c) is or has been made known or disclosed to such Investor by a third party without a breach of any obligation of confidentiality such third party may have to the Company; *provided, however*, that an Investor may disclose confidential information (i) to its attorneys, accountants, consultants, and other professionals to the extent necessary to obtain their services in connection with monitoring its investment in the Company; (ii) to any prospective purchaser of any Registrable Securities from such Investor, if such prospective purchaser agrees to be bound by the provisions of this Section 3.4, *provided* that the Board of Directors has not reasonably determined that such prospective purchaser is a Competitor of the Company; (iii) to any Affiliate, partner, member, stockholder, or wholly owned subsidiary of such Investor in the ordinary course of business, *provided* that such Investor

informs such Person that such information is confidential and directs such Person to maintain the confidentiality of such information; or (iv) as may otherwise be required by law, regulation, rule, court order or subpoena, *provided* that such Investor promptly notifies the Company of such disclosure and takes reasonable steps to minimize the extent of any such required disclosure.

4. Rights to Future Stock Issuances.

4.1 Right of First Offer. Subject to the terms and conditions of this Section 4.1 and applicable securities laws, if the Company proposes to offer or sell any New Securities, the Company shall first offer such New Securities to each Investor. An Investor shall be entitled to apportion the right of first offer hereby granted to it in such proportions as it deems appropriate, among (i) itself, (ii) its Affiliates and (iii) its beneficial interest holders, such as limited partners, members or any other Person having "beneficial ownership," as such term is defined in Rule 13d-3 promulgated under the Exchange Act, of such Investor ("***Investor Beneficial Owners***"); *provided* that each such Affiliate or Investor Beneficial Owner (x) is not a Competitor or FOIA Party, unless such party's purchase of New Securities is otherwise consented to by the Board of Directors, (y) agrees to enter into this Agreement and each of the Voting Agreement and Right of First Refusal and Co-Sale Agreement of even date herewith among the Company, the Investors and the other parties named therein, as an "***Investor***" under each such agreement (*provided* that any Competitor or FOIA Party shall not be entitled to any rights as a Major Investor under Sections 3.1 and 3.2 or as an Investor under Section 4.1 hereof), and (z) agrees to purchase at least such number of New Securities as are allocable hereunder to the Investor holding the fewest number of Preferred Stock and any other Derivative Securities.

(a) The Company shall give notice (the "***Offer Notice***") to each Investor, stating (i) its bona fide intention to offer such New Securities, (ii) the number of such New Securities to be offered, and (iii) the price and terms, if any, upon which it proposes to offer such New Securities.

(b) By notification to the Company within 20 days after the Offer Notice is given, each Investor may elect to purchase or otherwise acquire, at the price and on the terms specified in the Offer Notice, up to that portion of such New Securities which equals the proportion that the Common Stock then held by such Investor (including all shares of Common Stock then issuable (directly or indirectly) upon conversion and/or exercise, as applicable, of the Preferred Stock and any other Derivative Securities then held by such Investor) bears to the total Common Stock of the Company then outstanding (assuming full conversion and/or exercise, as applicable, of all Preferred Stock and any other Derivative Securities then outstanding). At the expiration of such 20-day period, the Company shall promptly notify each Investor that elects to purchase or acquire all the shares available to it (each, a "***Fully Exercising Investor***") of any other Investor's failure to do likewise. During the 10 day period commencing after the Company has given such notice, each Fully Exercising Investor may, by giving notice to the Company, elect to purchase or acquire, in addition to the number of shares specified above, up to that portion of the New Securities for which Investors were entitled to subscribe but that were not subscribed for by the Investors which is equal to the proportion that the Common Stock issued and held, or issuable (directly or indirectly) upon conversion and/or exercise, as applicable, of Preferred Stock and any other Derivative Securities then held, by such Fully Exercising Investor bears to the Common Stock issued and held, or issuable (directly or indirectly) upon conversion and/or exercise, as applicable, of the Preferred Stock and any other Derivative Securities then held, by all Fully Exercising Investors who wish to purchase such unsubscribed shares. The closing of any sale pursuant to this Section 4.1(b) shall occur within the later of 90 days of the date that the Offer Notice is given and the date of initial sale of New Securities pursuant to Section 4.1(c).

(c) If all New Securities referred to in the Offer Notice are not elected to be purchased or acquired as provided in Section 4.1(b), the Company may, during the 90 day period following the expiration of the periods provided in Section 4.1(b), offer and sell the remaining unsubscribed portion of such New Securities to any Person or Persons at a price not less than, and upon terms no more favorable to the offeree than, those specified in the Offer Notice. If the Company does not enter into an agreement for the sale of the New Securities within such period, or if such agreement is not consummated within 30 days of the execution thereof, the right provided hereunder shall be deemed to be revived and such New Securities shall not be offered unless first reoffered to the Investors in accordance with this Section 4.1.

(d) The right of first offer in this Section 4.1 shall not be applicable to (i) Exempted Securities (as defined in the Certificate of Incorporation); (ii) shares of Common Stock issued in the IPO; and (iii) the issuance of shares of Series BB Preferred Stock to Additional Purchasers pursuant to Section 1.2(b) of the Purchase Agreement.

(e) Notwithstanding any provision hereof to the contrary, in lieu of complying with the provisions of this Section 4.1, the Company may elect to give notice to the Investors within 30 days after the issuance of New Securities. Such notice shall describe the type, price, and terms of the New Securities. Each Investor shall have 20 days from the date notice is given to elect to purchase up to the number of New Securities that would, if purchased by such Investor, maintain such Investor's percentage-ownership position, calculated as set forth in Section 4.1(b) before giving effect to the issuance of such New Securities.

4.2 Termination. The covenants set forth in Section 4.1 shall terminate and be of no further force or effect (i) immediately before the consummation of the IPO, (ii) when the Company first becomes subject to the periodic reporting requirements of Section 12(g) or 15(d) of the Exchange Act, or (iii) upon the closing of a Deemed Liquidation Event, as such term is defined in the Certificate of Incorporation, whichever event occurs first.

5. Additional Covenants.

5.1 Insurance. The Company shall maintain, from financially sound and reputable insurers Directors and Officers liability insurance in an amount and on terms and conditions satisfactory to the Board of Directors (including the majority of the Preferred Directors), and will use commercially reasonable efforts to cause such insurance policies to be maintained until such time as the Board of Directors determines that such insurance should be discontinued. The policy will not be cancelable by the Company without prior approval by the Board of Directors.

5.2 Employee Agreements. The Company will cause (i) each Person now or hereafter employed by it or by any subsidiary (or engaged by the Company or any subsidiary as a consultant/independent contractor) with access to confidential information and/or trade secrets to enter into a confidential information and invention assignment agreement; and (ii) each Key Employee to enter into a one year non-solicitation agreement, substantially in the form previously provided to the Board of Directors (including the Preferred Directors). In addition, the Company shall not amend, modify, terminate, waive, or otherwise alter, in whole or in part, any of the above referenced agreements or any restricted stock agreement between the Company and any employee, without the consent of at least two of the Preferred Directors.

5.3 Employee Stock. Unless otherwise approved by the Board of Directors, all future employees and consultants of the Company who purchase, receive options to purchase, or receive awards of shares of the Company's capital stock after the date hereof shall be required to execute restricted stock or option agreements, as applicable, providing for (i) vesting of shares over a four year period, with the first 25% of such shares vesting following 12 months of continued employment or service, and the remaining shares vesting in equal monthly installments over the following 36 months, and (ii) a market stand-off

provision substantially similar to that in Section 2.11. Without the prior approval by the Board of Directors, the Company shall not amend, modify, terminate, waive or otherwise alter, in whole or in part, any stock purchase, stock restriction or option agreement with any existing employee or service provider if such amendment would cause it to be inconsistent with this Section 5.3. In addition, unless otherwise approved by the Board of Directors, the Company shall retain (and not waive) a "right of first refusal" on employee transfers until the IPO and shall have the right to repurchase unvested shares at cost upon termination of employment of a holder of restricted stock.

5.4 Matters Requiring Investor Director Approval. So long as the holders of Preferred Stock are entitled to elect a Preferred Director, the Company hereby covenants and agrees with each of the Investors that it shall not, without approval of the Board of Directors, which approval must include the affirmative vote of a majority of the Preferred Directors:

(a) issue or obligate itself to issue any equity or debt securities other than pursuant to an equity incentive or similar plan approved by the Board of Directors;

(b) create any new shares in an existing or novel class of stock;

(c) incur, or obligate the Company to incur, any aggregate indebtedness in excess of $100,000 that is not already included in a budget approved by the Board of Directors, other than trade credit incurred in the ordinary course of business;

(d) make, or permit any subsidiary to make, any loan or advance to, or own any stock or other securities of, any subsidiary or other corporation, partnership, or other entity unless it is wholly owned by the Company;

(e) make, or permit any subsidiary to make, any loan or advance to any Person, including, without limitation, any employee or director of the Company or any subsidiary, except advances and similar expenditures in the ordinary course of business or under the terms of an employee stock or option plan approved by the Board of Directors;

(f) guarantee, directly or indirectly, or permit any subsidiary to guarantee, directly or indirectly, any indebtedness except for trade accounts of the Company or any subsidiary arising in the ordinary course of business;

(g) make any investment inconsistent with any investment policy approved by the Board of Directors;

(h) otherwise enter into or be a party to any transaction with any director, officer, or employee of the Company or any "associate" (as defined in Rule 12b-2 promulgated under the Exchange Act) of any such Person, except for transactions contemplated by this Agreement, the Purchase Agreement, or transactions made in the ordinary course of business and pursuant to reasonable requirements of the Company's business and upon fair and reasonable terms that are approved by a majority of the Board of Directors;

(i) hire or change the compensation of the C- and EVP-level executive officers, including approving any option grants or stock awards to executive officers;

(j) change the principal business of the Company, enter new lines of business, or exit the current line of business;

(k) sell, assign, license, pledge, or encumber material technology or intellectual property, other than licenses granted in the ordinary course of business; or

(l) enter into any corporate strategic relationship involving the payment, contribution, or assignment by the Company or to the Company of money or assets greater than $200,000.

5.5 Board Matters. Unless otherwise determined by the vote of a majority of the directors then in office, the Board of Directors shall meet at least quarterly in accordance with an agreed-upon schedule. The Company shall reimburse the directors for all reasonable out-of-pocket travel expenses incurred (consistent with the Company's travel policy) in connection with attending meetings of the Board of Directors. The Company shall cause to be established, within 180 days after such request, and will maintain, an audit and compensation committee, each of which shall consist solely of non-management directors. Each non-employee director shall be entitled in such person's discretion to be a member of any committee of the Board of Directors.

5.6 Successor Indemnification. If the Company or any of its successors or assignees consolidates with or merges into any other Person and is not the continuing or surviving corporation or entity of such consolidation or merger, then to the extent necessary, proper provision shall be made so that the successors and assignees of the Company assume the obligations of the Company with respect to indemnification of members of the Board of Directors as in effect immediately before such transaction, whether such obligations are contained in the Company's Bylaws, the Certificate of Incorporation, or elsewhere, as the case may be.

5.7 Indemnification Matters. The Company hereby acknowledges that one (1) or more of the directors nominated to serve on the Board of Directors by the Investors (each an "**Investor Director**") may have certain rights to indemnification, advancement of expenses and/or insurance provided by one or more of the Investors and certain of their Affiliates (collectively, the "**Investor Indemnitors**"). The Company hereby agrees (a) that it is the indemnitor of first resort (i.e., its obligations to any such Investor Director are primary and any obligation of the Investor Indemnitors to advance expenses or to provide indemnification for the same expenses or liabilities incurred by such Investor Director are secondary), (b) that it shall be required to advance the full amount of expenses incurred by such Investor Director and shall be liable for the full amount of all expenses, judgments, penalties, fines and amounts paid in settlement by or on behalf of any such Investor Director to the extent legally permitted and as required by the Company's Certificate of Incorporation or Bylaws of the Company (or any agreement between the Company and such Investor Director), without regard to any rights such Investor Director may have against the Investor Indemnitors, and, (c) that it irrevocably waives, relinquishes and releases the Investor Indemnitors from any and all claims against the Investor Indemnitors for contribution, subrogation or any other recovery of any kind in respect thereof. The Company further agrees that no advancement or payment by the Investor Indemnitors on behalf of any such Investor Director with respect to any claim for which such Investor Director has sought indemnification from the Company shall affect the foregoing and the Investor Indemnitors shall have a right of contribution and/or be subrogated to the extent of such advancement or payment to all of the rights of recovery of such Investor Director against the Company. The Investor Directors and the Investor Indemnitors are intended third party beneficiaries of this Section 5.9 and shall have the right, power and authority to enforce the provisions of this Section 5.9 as though they were a party to this Agreement.

5.8 Right to Conduct Activities. The Company hereby agrees and acknowledges that each of the Specified Investors is a professional investment organization, and as such reviews the business plans and related proprietary information of many enterprises, some of which may compete directly or indirectly with the Company's business (as currently conducted or as currently proposed to be conducted). The Company hereby agrees that, to the extent permitted under applicable law, each of the Specified

Investors shall not be liable to the Company for any claim arising out of, or based upon, (i) the investment by such Specified Investor in any entity competitive with the Company, or (ii) actions taken by any partner, officer, employee or other representative of such Specified Investor to assist any such competitive company, whether or not such action was taken as a member of the board of directors of such competitive company or otherwise, and whether or not such action has a detrimental effect on the Company; provided, however, that the foregoing shall not relieve (x) any of the Investors from liability associated with the unauthorized disclosure of the Company's confidential information obtained pursuant to this Agreement, or (y) any director or officer of the Company from any liability associated with his or her fiduciary duties to the Company.

5.9 Harassment Policy. The Company shall, within 120 days following the Initial Closing (as defined in the Purchase Agreement), adopt and thereafter maintain in effect (i) a Code of Conduct governing appropriate workplace behavior and (ii) an Anti-Harassment and Discrimination Policy prohibiting discrimination and harassment at the Company. Such policy shall be reviewed and approved by the Board of Directors.

5.10 Cybersecurity. The Company shall, within 180 days following the Initial Closing (as defined in the Purchase Agreement), (a) identify its sensitive data and information, and restrict access (through physical and electronic controls) to those individuals who have a need to access it and (b) implement cybersecurity solution(s) (the "**Cybersecurity Solutions**") designed to protect its technology and systems (including servers, laptops, desktops, cloud, containers, virtual environments and data centers) and all data contained in such systems. The Company shall use commercially reasonable efforts to ensure that the Cybersecurity Solutions (x) are up-to-date and include industry-standard protections (e.g., antivirus, endpoint detection and response and threat hunting), (y) to the extent determined necessary by the Company or its Board of Directors, are backed by a breach prevention warranty from the vendor certifying the effectiveness of such solutions, and (z) cause vendors to notify the Company of any security incidents posing a risk to the Company's information (regardless of whether information was actually compromised). The Company shall evaluate on a regular basis whether the Cybersecurity Solutions should be updated to ensure continued effectiveness and industry-standard protections. The Company shall also educate its employees about the proper use and storage of sensitive information, including regular training as determined reasonably necessary by the Company or its Board of Directors.

5.11 Termination of Covenants. The covenants set forth in this Section 5, except for Sections 5.5, 5.6, 5.7 and 5.8 shall terminate and be of no further force or effect (i) immediately before the consummation of the IPO, (ii) when the Company first becomes subject to the periodic reporting requirements of Section 12(g) or 15(d) of the Exchange Act, or (iii) upon a Deemed Liquidation Event, as such term is defined in the Certificate of Incorporation, whichever event occurs first.

6. Miscellaneous.

6.1 Successors and Assigns. The rights under this Agreement may be assigned (but only with all related obligations) by a Holder to a transferee of Registrable Securities that (i) is an Affiliate of a Holder; (ii) is a Holder's Immediate Family Member or trust for the benefit of an individual Holder or one or more of such Holder's Immediate Family Members; or (iii) after such transfer, holds at least 10,000,000 shares of Registrable Securities (subject to appropriate adjustment for stock splits, stock dividends, combinations, and other recapitalizations); provided, however, that (x) the Company is, within a reasonable time after such transfer, furnished with written notice of the name and address of such transferee and the Registrable Securities with respect to which such rights are being transferred; and (y) such transferee agrees in a written instrument delivered to the Company to be bound by and subject to the terms and conditions of this Agreement, including the provisions of Section 2.11. For the purposes of determining the number of shares of Registrable Securities held by a transferee, the holdings of a transferee

(1) that is an Affiliate or stockholder of a Holder; (2) who is a Holder's Immediate Family Member; or (3) that is a trust for the benefit of an individual Holder or such Holder's Immediate Family Member shall be aggregated together and with those of the transferring Holder; provided further that all transferees who would not qualify individually for assignment of rights shall, as a condition to the applicable transfer, establish a single attorney-in-fact for the purpose of exercising any rights, receiving notices, or taking any action under this Agreement. The terms and conditions of this Agreement inure to the benefit of and are binding upon the respective successors and permitted assignees of the parties. Nothing in this Agreement, express or implied, is intended to confer upon any party other than the parties hereto or their respective successors and permitted assignees any rights, remedies, obligations or liabilities under or by reason of this Agreement, except as expressly provided herein.

6.2 Governing Law. This Agreement shall be governed by the internal law of the State of Delaware, without regard to conflict of law principles that would result in the application of any law other than the law of the State of Delaware.

6.3 Counterparts. This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. Counterparts may be delivered via facsimile, electronic mail (including pdf or any electronic signature complying with the U.S. federal ESIGN Act of 2000, the Uniform Electronic Transactions Act or other applicable law, *e.g.*, www.docusign.com) or other transmission method and any counterpart so delivered shall be deemed to have been duly and validly delivered and be valid and effective for all purposes.

6.4 Titles and Subtitles. The titles and subtitles used in this Agreement are for convenience only and are not to be considered in construing or interpreting this Agreement.

6.5 Notices.

(a) All notices and other communications given or made pursuant to this Agreement shall be in writing and shall be deemed effectively given upon the earlier of actual receipt or (i) personal delivery to the party to be notified; (ii) when sent, if sent by electronic mail or facsimile during the recipient's normal business hours, and if not sent during normal business hours, then on the recipient's next business day; (iii) five days after having been sent by registered or certified mail, return receipt requested, postage prepaid; or (iv) one business day after the business day of deposit with a nationally recognized overnight courier, freight prepaid, specifying next-day delivery, with written verification of receipt. All communications shall be sent to the respective parties at their addresses as set forth on **Schedule A** hereto, or to the principal office of the Company and to the attention of the Chief Executive Officer, in the case of the Company, or to such email address, facsimile number, or address as subsequently modified by written notice given in accordance with this Section 6.5. If notice is given to the Company, it shall be sent to 620 Professional Drive, Gaithersburg, MD 20879, *Attention*: John Celebi; and a copy (which shall not constitute notice) shall also be sent to Cooley LLP, 3175 Hanover Street, Palo Alto, CA 94304-1130, *Attention*: Michael E. Tenta.

(b) Consent to Electronic Notice. Each Investor consents to the delivery of any stockholder notice pursuant to the Delaware General Corporation Law (the "***DGCL***"), as amended or superseded from time to time, by electronic transmission pursuant to Section 232 of the DGCL (or any successor thereto) at the electronic mail address or the facsimile number set forth below such Investor's name on the Schedules hereto, as updated from time to time by notice to the Company, or as on the books of the Company. To the extent that any notice given by means of electronic transmission is returned or undeliverable for any reason, the foregoing consent shall be deemed to have been revoked until a new or corrected electronic mail address has been provided, and such attempted electronic notice shall be ineffective and deemed to not have been given. Each Investor agrees to promptly notify the Company of any change in such stockholder's electronic mail address, and that failure to do so shall not affect the foregoing.

6.6 Amendments and Waivers. Any term of this Agreement may be amended, modified or terminated and the observance of any term of this Agreement may be waived (either generally or in a particular instance, and either retroactively or prospectively) only with the written consent of the Company, the holders of at least two-thirds of the Registrable Securities then outstanding; *provided* that the Company may in its sole discretion waive compliance with Section 2.12(c) (and the Company's failure to object promptly in writing after notification of a proposed assignment allegedly in violation of Section 2.12(c) shall be deemed to be a waiver); and *provided further* that any provision hereof may be waived by any waiving party on such party's own behalf, without the consent of any other party. Notwithstanding the foregoing, (a) this Agreement may not be amended, modified or terminated and the observance of any term hereof may not be waived with respect to any Investor without the written consent of such Investor, unless such amendment, modification, termination, or waiver applies to all Investors in the same fashion (it being agreed that a waiver of the provisions of Section 4 with respect to a particular transaction shall be deemed to apply to all Investors in the same fashion if such waiver does so by its terms, notwithstanding the fact that certain Investors may nonetheless, by agreement with the Company, purchase securities in such transaction) and (b) an amendment, modification, termination to or waiver of Sections 3.1 and 3.2, and any other section of this Agreement applicable to the Major Investors (including this clause (b) of this Section 6.6) shall require only the written consent of the Company and the holders of a majority of the Registrable Securities then outstanding and held by the Major Investors. Notwithstanding the foregoing, **Schedule A** hereto may be amended by the Company from time to time to add transferees of any Registrable Securities in compliance with the terms of this Agreement without the consent of the other parties; and **Schedule A** hereto may also be amended by the Company after the date of this Agreement without the consent of the other parties to add information regarding any additional Investor who becomes a party to this Agreement in accordance with Section 6.9. The Company shall give prompt notice of any amendment, modification or termination hereof or waiver hereunder to any party hereto that did not consent in writing to such amendment, modification, termination, or waiver. Any amendment, modification, termination, or waiver effected in accordance with this Section 6.6 shall be binding on all parties hereto, regardless of whether any such party has consented thereto. No waivers of or exceptions to any term, condition, or provision of this Agreement, in any one or more instances, shall be deemed to be or construed as a further or continuing waiver of any such term, condition, or provision.

6.7 Severability. In case any one or more of the provisions contained in this Agreement is for any reason held to be invalid, illegal or unenforceable in any respect, such invalidity, illegality, or unenforceability shall not affect any other provision of this Agreement, and such invalid, illegal, or unenforceable provision shall be reformed and construed so that it will be valid, legal, and enforceable to the maximum extent permitted by law.

6.8 Aggregation of Stock. All shares of Registrable Securities held or acquired by Affiliates shall be aggregated together for the purpose of determining the availability of any rights under this Agreement and such Affiliates may apportion such rights as among themselves in any manner they deem appropriate.

6.9 Additional Investors. Notwithstanding anything to the contrary contained herein, if the Company issues additional shares of the Company's Preferred Stock after the date hereof, whether pursuant to the Purchase Agreement or otherwise, any purchaser of such shares of Preferred Stock may become a party to this Agreement by executing and delivering an additional counterpart signature page to this Agreement, and thereafter shall be deemed an "Investor" for all purposes hereunder. No action or consent by the Investors shall be required for such joinder to this Agreement by such additional Investor, so long as such additional Investor has agreed in writing to be bound by all of the obligations as an "Investor" hereunder.

6.10 Entire Agreement. This Agreement (including any Schedules and Exhibits hereto) constitutes the full and entire understanding and agreement among the parties with respect to the subject matter hereof, and any other written or oral agreement relating to the subject matter hereof existing between the parties is expressly canceled.

6.11 Termination of Prior Agreement. Upon execution of this Agreement by the Company and the undersigned Investors, the Prior Agreement is hereby deemed amended and restated and superseded and replaced in its entirety by this Agreement, and shall be of no further force or effect.

6.12 Dispute Resolution. Any unresolved controversy or claim arising out of or relating to this Agreement, except as (i) otherwise provided in this Agreement, or (ii) any such controversies or claims arising out of either party's intellectual property rights for which a provisional remedy or equitable relief is sought, shall be submitted to arbitration by one arbitrator mutually agreed upon by the parties, and if no agreement can be reached within 30 days after names of potential arbitrators have been proposed by the American Arbitration Association (the "**AAA**"), then by one arbitrator having reasonable experience in corporate finance transactions of the type provided for in this Agreement and who is chosen by the AAA. The arbitration shall take place in Gaithersburg, Maryland, in accordance with the AAA rules then in effect, and judgment upon any award rendered in such arbitration will be binding and may be entered in any court having jurisdiction thereof. There shall be limited discovery prior to the arbitration hearing as follows: (a) exchange of witness lists and copies of documentary evidence and documents relating to or arising out of the issues to be arbitrated, (b) depositions of all party witnesses and (c) such other depositions as may be allowed by the arbitrators upon a showing of good cause. Depositions shall be conducted in accordance with the Maryland Code of Civil Procedure, the arbitrator shall be required to provide in writing to the parties the basis for the award or order of such arbitrator, and a court reporter shall record all hearings, with such record constituting the official transcript of such proceedings.

Each party will bear its own costs in respect of any disputes arising under this Agreement. The prevailing party shall be entitled to reasonable attorneys' fees, costs, and necessary disbursements in addition to any other relief to which such party may be entitled. Each of the parties to this Agreement consents to personal jurisdiction for any equitable action sought in the U.S. District Court for the District of Maryland or any court of the State of Maryland having subject matter jurisdiction.

6.13 Delays or Omissions. No delay or omission to exercise any right, power, or remedy accruing to any party under this Agreement, upon any breach or default of any other party under this Agreement, shall impair any such right, power, or remedy of such nonbreaching or nondefaulting party, nor shall it be construed to be a waiver of or acquiescence to any such breach or default, or to any similar breach or default thereafter occurring, nor shall any waiver of any single breach or default be deemed a waiver of any other breach or default theretofore or thereafter occurring. All remedies, whether under this Agreement or by law or otherwise afforded to any party, shall be cumulative and not alternative.

[Remainder of page intentionally left blank]

The parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

COMPANY:

SENSEI BIOTHERAPEUTICS, INC.

By: /s/ John Celebi
Name: John Celebi
Title: Chief Executive Officer

The parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

INVESTOR:

APEIRON INVESTMENT GROUP LTD.

By: /s/ Julien Hoefer
Name: Julien Hoefer
Title: Director

The parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

INVESTOR:

RICKS FAMILY TRUST

By: /s/ Thomas G. Ricks
Name: Thomas G. Ricks
Title: Trustee

The parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

INVESTOR:

CAMBRIAN BIOPHARMA, INC.

Signature: /s/ James Peyer
Name: James Peyer
Title *(if applicable)*: CEO
Address:

The parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

INVESTOR:

infinitas capital AG
(print name above, if an entity)

Signature: /s/ Robin Lauber
Name: Robin Lauber
Title *(if applicable)*: CEO
Address:

The parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

INVESTOR:

KORIFY CAPITAL AG
(print name above, if an entity)

Signature: /s/ Robin Lauber
Name: Robin Lauber
Title *(if applicable)*: CEO
Address:

The parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

INVESTOR:

_____
(print name above, if an entity)

Signature: /s/ Mehdi Hatamian
Name: Mehdi Hatamian
Title *(if applicable)*: _____
Address: _____

_____

The parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

INVESTOR:

LIVE REALLY LONG AND PROSPER, LLC
(print name above, if an entity)

Signature: /s/ Nathan Laurell
Name: Nathan Laurell
Title *(if applicable)*: Manager + Member
Address:

The parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

INVESTOR:

FUTURE VENTURES, LP

By: /s/ Maryanna Saenko
Name: Maryanna Saenko
Title: Managing Director

FUTURE VENTURES SIDE FUND, LP

By: /s/ Maryanna Saenko
Name: Maryanna Saenko
Title: Managing Director

The parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

INVESTOR:

COELI EUROPEAN OPPORTUNITY
(print name above, if an entity)

Signature: /s/ [ILLEGIBLE]
Name: [ILLEGIBLE]
Title *(if applicable)*: PM
Address:

The parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

INVESTOR:

H&S Ventures, LLC

By: _____
Name: _____
Title: _____

Cambrian BioPharma, Inc.

By: _____
Name: _____
Title: _____

Albert Büll Beteiligungs GmbH

By: /s/ Albert Büll
Name: Albert Büll
Title: Managing Director

The parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

INVESTOR:

Signed: /s/ Mark Lee Ford
Name: Mark Lee Ford

The parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

INVESTOR:

Signed: /s/ Terry Lem
Name: Terry Lem

The parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

INVESTOR:

H&S INVESTMENTS I, LP
By: H & S Ventures, LLC, its general partner

By: /s/ Michael Schulman
Name: Michael Schulman
Title: Manager

The parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

INVESTOR:

_____
(print name above, if an entity)

Signature: /s/ Jack Wands
Name: Jack Wands
Title *(if applicable)*: _____
Address: _____

_____

Signature Page to Amended and Restated Investors' Rights Agreement

The parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

INVESTOR:

_____
(print name above, if an entity)

Signature: /s/ Gilbert Lim
Name: Gilbert Lim
Title *(if applicable)*: _____
Address: _____

_____

The parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

INVESTOR:

_____

(print name above, if an entity)

Signature: /s/ Babak Arbabha

Name: Babak Arbabha

Title *(if applicable)*: _____

Address: _____

_____

The parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

INVESTOR:

_____
(print name above, if an entity)

Signature: /s/ Hamad T. AlAnjari
Name: Hamad T. AlAnjari
Title *(if applicable)*: _____
Address: _____

_____

The parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

INVESTOR:

_____
(print name above, if an entity)

Signature: /s/ Ramin Chirdel
Name: Ramin Chirdel
Title *(if applicable)*: _____
Address: _____

_____

The parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

INVESTOR:

_____
(print name above, if an entity)

Signature: /s/ Khaled Al-Otaibi
Name: Khaled Al-Otaibi
Title *(if applicable)*: _____
Address: _____

_____

Signature Page to Amended and Restated Investors' Rights Agreement

The parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

INVESTOR:

THE REVOCABLE LIVING TRUST UAD 02/03/2013 ARYA BEHZAD & MARYAM ESHGHIPOUR TTEES
(print name above, if an entity)

Signature: /s/ Arya Behzad
Name: Arya Behzad
Title *(if applicable)*: Trustee
Address:

The parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

INVESTOR:

_____
(print name above, if an entity)

Signature: /s/ Sasan Arbabha
Name: Sasan Arbabha
Title *(if applicable)*: _____
Address: _____

_____

The parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

INVESTOR:

_____
(print name above, if an entity)

Signature: /s/ Bijan Motamedi
Name: Bijan Motamedi
Title *(if applicable)*: _____
Address: _____

_____

The parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

INVESTOR:

_____
(print name above, if an entity)

Signature: /s/ Jonathan K. Kishi
Name: Jonathan K. Kishi
Title *(if applicable)*: _____
Address: _____

_____

The parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

INVESTOR:

Block.one Investments 1, an exempted company incorporated in the Cayman Islands (registered no. PA-326400) with limited liability whose registered office is at Maples Corporate Services Centre Limited, PO Box 309, Ugland House, Grand Cayman, KY1-1104

Signature: /s/ Andrew Bliss
Name: Andrew Bliss
Title *(if applicable)*: Director
Address:

The parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

INVESTOR:

_____
(print name above, if an entity)

Signature: /s/ Nari Persad
Name: Nari Persad
Title *(if applicable)*: _____
Address: _____

Signature Page to Amended and Restated Investors' Rights Agreement

The parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

INVESTOR:

_____

(print name above, if an entity)

Signature: /s/ Paul Thomas Wasilewski

Name: Paul Thomas Wasilewski

Title *(if applicable)*: _____

Address: _____

_____

The parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

INVESTOR:

CATALIO NEXUS FUND II, LP

By: Catalio Nexus GP II, LLC, its General Partner

Signature: /s/ R. Jacob Vogelstein

Name: R. Jacob Vogelstein

Title *(if applicable)*: Managing Member

Address:

The parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

INVESTOR:

WildeCo UG
(print name above, if an entity)

Signature: /s/ Lars Christian Wilde
Name: Lars Christian Wilde
Title *(if applicable)*: Managing Director
Address:

The parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

INVESTOR:

Moore Strategic Ventures, LLC
(print name above, if an entity)

Signature: /s/ Scott Dinnell
Name: Scott Dinnell
Title *(if applicable):* Controller
Address:

The parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

INVESTOR:

PURA VIDA MASTER FUND, LTD.
domiciled in the Cayman Islands

Signature: /s/ Efrem Kamen
Name: Efrem Kamen
Title *(if applicable):* Managing Member of Pura Vida Investments, LLC, in its capacity as Investment Manager
Address:

The parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

INVESTOR:

_____
(print name above, if an entity)

Signature: /s/ Shahraab Ahmad
Name: Shahraab Ahmad
Title *(if applicable)*: _____
Address: _____

_____

The parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

INVESTOR:

APEIRON SICAV LTD. – PRESIGHT CAPITAL FUND ONE

By: /s/ Heinz Daxl
Name: Heinz Daxl
Title: Director

By: /s/ Jefim Gewiet
Name: Jefim Gewiet
Title: Director

The parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

INVESTOR:

_____
(print name above, if an entity)

Signature: /s/ Emi Yoshizaki
Name: Emi Yoshizaki
Title *(if applicable)*: _____
Address: _____

_____

The parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

INVESTOR:

_____

(print name above, if an entity)

Signature: /s/ Shuji Yoshizaki

Name: Shuji Yoshizaki

Title *(if applicable)*: _____

Address: _____

_____

The parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

INVESTOR:

_____
(print name above, if an entity)

Signature: /s/ Rabya Gillani
Name: Rabya Gillani
Title *(if applicable)*: _____
Address: _____

_____

The parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

INVESTOR:

(print name above, if an entity)

Signature: /s/ Michael Harte
Name: Michael Harte
Title *(if applicable)*:
Address:

The parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

INVESTOR:

PRESIGHT SENSEI CO-INVEST FUND, L.P.

By: Presight Sensei Co-Invest Management, L.L.C.
Its: General Partner

By: /s/ Fabian Hansen
Name: Fabian Hansen
Title: Authorized Signatory

The parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

INVESTOR:

_____
(print name above, if an entity)

Signature: /s/ Noreen Valla
Name: Noreen Valla
Title *(if applicable)*: _____
Address: _____

_____

The parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

INVESTOR:

EFM Global Growth Master Fund
(print name above, if an entity)

Signature: /s/ Jeffrey Emmanuel
Name: Jeffrey Emmanuel
Title *(if applicable)*: Chairman & CIO
Address:

The parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

INVESTOR:

_____
(print name above, if an entity)

Signature: /s/ Shun Manabe
Name: Shun Manabe
Title *(if applicable)*: _____
Address: _____

_____

The parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

INVESTOR:

_____
(print name above, if an entity)

Signature: /s/ Kenro Tsutsumi
Name: Kenro Tsutsumi
Title *(if applicable)*: _____
Address: _____

_____

The parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

INVESTOR:

Signed: /s/ Shinichi Yokote
Name: Shinichi Yokote

The parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

INVESTOR:

Stephen Aftel Eisenberg Family Trust UAD 3/17/17
(print name above, if an entity)

Signature: /s/ Stephen Eisenberg
Name: Stephen Eisenberg
Title *(if applicable)*: Trustee
Address:

The parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

INVESTOR:

_____
(print name above, if an entity)

Signature: /s/ Saied Kazemi
Name: Saied Kazemi
Title *(if applicable)*: _____
Address: _____

_____

THIS WARRANT AND THE SECURITIES ISSUABLE UPON THE EXERCISE HEREOF HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "*ACT*"), OR UNDER THE SECURITIES LAWS OF ANY STATES IN THE UNITED STATES. THESE SECURITIES ARE SUBJECT TO RESTRICTIONS ON TRANSFERABILITY AND RESALE AND MAY NOT BE TRANSFERRED OR RESOLD EXCEPT AS PERMITTED UNDER THE ACT AND THE APPLICABLE STATE SECURITIES LAWS, PURSUANT TO REGISTRATION OR EXEMPTION THEREFROM. THE ISSUER OF THESE SECURITIES MAY REQUIRE AN OPINION OF COUNSEL IN FORM AND SUBSTANCE SATISFACTORY TO THE ISSUER TO THE EFFECT THAT ANY PROPOSED TRANSFER OR RESALE IS IN COMPLIANCE WITH THE ACT AND ANY APPLICABLE STATE SECURITIES LAWS.

SENSEI BIOTHERAPEUTICS, INC.

[AMENDED AND RESTATED] WARRANT TO PURCHASE COMMON STOCK

VOID AFTER

THIS CERTIFIES THAT, for value received, , or [its][his][her] assigns (the "***Holder***"), is entitled to subscribe for and purchase from **SENSEI BIOTHERAPEUTICS, INC.**, a Delaware corporation (the "***Company***"), the Exercise Shares at the Exercise Price (each subject to adjustment as provided herein). [This Warrant is issued pursuant to that certain Convertible Promissory Note issued by the Company to the Holder, dated as of the date hereof][(the "***Note***")]. [**This Amended and Restated Warrant amends and restates and supersedes in its entirety that certain Warrant to Purchase Common Stock dated as of April 1, 2019 (the "*Prior Warrant*") which was issued to Holder pursuant to that certain Convertible Promissory Note issued by the Company to the Holder, dated as April 1, 2019 (the "*Note*"). Upon acceptance of this Warrant by Holder, Holder hereby agrees that the Prior Warrant is terminated in its entirety.**]

1. DEFINITIONS. As used herein, the following terms shall have the following respective meanings:

(a) "***Exercise Price***" shall mean $ per Exercise Share.

(b) "***Exercise Period***" shall mean the period commencing on the date hereof and ending ten (10) years later, unless sooner terminated as provided below.

(c) "***Exercise Shares***" shall mean shares of the Company's Common Stock, subject to adjustment pursuant to the terms hereof, including but not limited to adjustments pursuant to Section 5 below, issuable upon exercise of this Warrant.

2. EXERCISE OF WARRANT.

2.1 Exercise. The rights represented by this Warrant may be exercised in whole or in part at any time during the Exercise Period, by delivery of the following to the Company at its address set forth in Section 11 (or at such other address as it may designate by notice in writing to the Holder):

(a) An executed Notice of Exercise in the form attached hereto as **EXHIBIT A**;

(b) Payment of the Exercise Price either (i) in cash or by check, (ii) by cancellation of indebtedness or (iii) pursuant to Section 2.2; and

(c) This Warrant.

2.2 Net Exercise. Notwithstanding any provisions herein to the contrary, if the fair market value of one Exercise Share is greater than the Exercise Price (at the date of calculation as set forth below), then, in lieu of exercising this Warrant as provided in Section 2.1, the Holder may, by surrender of this Warrant at the principal office of the Company together with the properly endorsed Notice of Exercise, elect to receive the number of Exercise Shares computed using the following formula:

$$X = \frac{Y(A-B)}{A}$$

Where X = the number of Exercise Shares to be issued to the Holder;

Y = the number of Exercise Shares purchasable under the Warrant or, if only a portion of the Warrant is being exercised, that portion of the Warrant being canceled (at the date of such calculation);

A = the fair market value of one Exercise Share (at the date of such calculation);

B = Exercise Price (as adjusted to the date of such calculation);

For purposes of the above calculation, the fair market value of one Exercise Share shall be determined by the Company's Board of Directors in good faith; provided, however, that in the event that this Warrant is exercised pursuant to this Section 2.2 in connection with the Company's initial public offering of its Common Stock, the fair market value per share shall be the per share offering price to the public of the Company's initial public offering.

2.3 Mechanics of Exercise. Upon the exercise of the rights represented by this Warrant, a certificate or certificates for the Exercise Shares so purchased, registered in the name of the Holder or persons affiliated with the Holder, if the Holder so designates, shall be issued and delivered to the Holder within a reasonable time after the rights represented by this Warrant shall have been so exercised. In the event that this Warrant is being exercised for less than all of the then-current number of Exercise Shares purchasable hereunder, then the Company shall, concurrently with the issuance by the Company of the number of Exercise Shares for which this Warrant is then being exercised, issue a new Warrant exercisable for the remaining number of Exercise Shares purchasable hereunder. The person in whose name any certificate or certificates for Exercise Shares are to be issued upon exercise of this Warrant shall be deemed to have become the holder of record of such shares on the date on which this Warrant was surrendered and payment of the Exercise Price was made, irrespective of the date of delivery of such certificate or certificates, except that, if the date of such surrender and payment is a date when the stock transfer books of the Company are closed, such person shall be deemed to have become the holder of such shares at the close of business on the next succeeding date on which the stock transfer books are open.

3. COVENANTS OF THE COMPANY. The Company covenants and agrees that all Exercise Shares that may be issued upon the exercise of the rights represented by this Warrant will, upon issuance, be validly issued and outstanding, fully paid and nonassessable, and free from all taxes, liens and charges with respect to the issuance thereof. The Company further covenants and agrees that the Company will at all times during the Exercise Period, have authorized and reserved a sufficient number of shares of the series of equity securities comprising the Exercise Shares to provide for the exercise of the rights represented by this Warrant. The issuance of the Exercise Shares will not be subject to any preemptive rights that have not been properly waived or complied with. If at any time during the Exercise Period the number of authorized but unissued shares of such series of the Company's equity securities shall not be sufficient to permit exercise of this Warrant, the Company will take such corporate action as may, in the opinion of its counsel, be necessary to increase its authorized but unissued shares of such series of the Company's equity securities to such number of shares as shall be sufficient for such purposes.

4. REPRESENTATIONS OF HOLDER.

4.1 Acquisition of Warrant for Personal Account. The Holder represents and warrants that it is acquiring the Warrant and the Exercise Shares solely for its account for investment and not with a view to or for sale or distribution of said Warrant or Exercise Shares or any part thereof. The Holder also represents that the entire legal and beneficial interests of the Warrant and Exercise Shares the Holder is acquiring is being acquired for, and will be held for, its account only.

4.2 Securities Are Not Registered.

(a) The Holder understands that the Warrant and the Exercise Shares have not been registered under the Securities Act of 1933, as amended (the "***Act***") on the basis that no distribution or public offering of the stock of the Company is to be effected. The Holder realizes that the basis for the exemption may not be present if, notwithstanding its representations, the Holder has a present intention of acquiring the securities for a fixed or determinable period in the future, selling (in connection with a distribution or otherwise), granting any participation in, or otherwise distributing the securities. The Holder has no such present intention.

(b) The Holder recognizes that the Warrant and the Exercise Shares must be held indefinitely unless they are subsequently registered under the Act or an exemption from such registration is available. The Holder recognizes that the Company has no obligation to register the Warrant or the Exercise Shares of the Company, or to comply with any exemption from such registration.

(c) The Holder is aware that neither the Warrant nor the Exercise Shares may be sold pursuant to Rule 144 adopted under the Act unless certain conditions are met. These conditions may include, among other things, the existence of a public market for the shares, the availability of certain current public information about the Company, the resale following the required holding period under Rule 144 and the number of shares being sold during any three month period not exceeding specified limitations. Holder is aware that the conditions for resale set forth in Rule 144 have not been satisfied and that the Company presently has no plans to satisfy these conditions in the foreseeable future.

4.3 Disposition of Warrant and Exercise Shares.

(a) The Holder further agrees not to make any disposition of all or any part of the Warrant or Exercise Shares in any event unless and until:

(i) The Company shall have received a letter secured by the Holder from the Securities and Exchange Commission stating that no action will be recommended to the Commission with respect to the proposed disposition;

(ii) There is then in effect a registration statement under the Act covering such proposed disposition and such disposition is made in accordance with said registration statement; or

(iii) The Holder shall have notified the Company of the proposed disposition and shall have furnished the Company with a detailed statement of the circumstances surrounding the proposed disposition, and if reasonably requested by the Company, the Holder shall have furnished the Company with an opinion of counsel, reasonably satisfactory to the Company, for the Holder to the effect that such disposition will not require registration of such Warrant or Exercise Shares under the Act or any applicable state securities laws. The Company agrees that it will not require an opinion of counsel with respect to transactions under Rule 144 of the Act except in unusual circumstances.

(b) The Holder understands and agrees that all certificates evidencing the shares to be issued to the Holder may bear the following legend:

THESE SECURITIES HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "***ACT***"). THEY MAY NOT BE SOLD, OFFERED FOR SALE, PLEDGED OR HYPOTHECATED IN THE ABSENCE OF AN EFFECTIVE REGISTRATION STATEMENT AS TO THE SECURITIES UNDER THE ACT OR AN OPINION OF COUNSEL SATISFACTORY TO THE COMPANY THAT SUCH REGISTRATION IS NOT REQUIRED.

4.4 Accredited Investor Status. The Holder is an "accredited investor" as defined in Regulation D promulgated under the Act.

5. ADJUSTMENT OF EXERCISE PRICE AND NUMBER OF EXERCISE SHARES.

5.1 Changes in Securities. In the event of changes in the class of equity securities of the Company comprising the Exercise Shares by reason of stock dividends, splits, recapitalizations, reclassifications, combinations or exchanges of such class of equity securities, then the number and class of Exercise Shares available under the Warrant in the aggregate and the Exercise Price shall be correspondingly adjusted to give the Holder of the Warrant, on exercise for the same aggregate Exercise Price, the total number, class, and kind of shares as the Holder would have owned had the Warrant been exercised prior to the event and had the Holder continued to hold such shares until after the event requiring adjustment. For purposes of this Section 5, the "***aggregate Exercise Price***" shall mean the aggregate Exercise Price payable in connection with the exercise in full of this Warrant. The form of this Warrant need not be changed because of any adjustment in the number of Exercise Shares subject to this Warrant.

6. FRACTIONAL SHARES. No fractional shares shall be issued upon the exercise of this Warrant as a consequence of any adjustment pursuant hereto. All Exercise Shares (including fractions) to be issued upon exercise of this Warrant shall be aggregated for purposes of determining whether the exercise would result in the issuance of any fractional share. If, after aggregation, the exercise would result in the issuance of a fractional share, the Company shall, in lieu of issuance of any fractional share, pay the Holder otherwise entitled to such fraction a sum in cash equal to the product resulting from multiplying the then current fair market value of one Exercise Share by such fraction.

7. MARKET STANDOFF. To the extent requested by the Company or an underwriter of securities of the Company, Holder and any permitted transferee thereof shall not, without the prior written consent of the managing underwriters in the IPO (as hereafter defined), offer, sell, make any short sale of, grant or sell any option for the purchase of, lend, pledge, otherwise transfer or dispose of (directly or indirectly), enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership (whether any such transaction is described above or is to be settled by delivery of Exercise Shares or other securities, in cash, or otherwise), any Exercise Shares or other shares of stock of the Company then owned by such Holder or any transferee thereof, or enter into an agreement to do any of the foregoing, for up to 180 days following the effective date of the registration statement of the initial public offering of the Company (the "***IPO***") filed under the Act. For purposes of this paragraph, "***Company***" includes any wholly owned subsidiary of the Company into which the Company merges or consolidates. The Company may place restrictive legends on the certificates representing the shares subject to this paragraph and may impose stop transfer instructions with respect to this Warrant and the Exercise Shares and such other shares of stock of Holder and any transferee thereof (and the shares or securities of every other person subject to the foregoing restriction) until the end of such period. Holder

and any transferee thereof shall enter into any agreement reasonably required by the underwriters to the IPO to implement the foregoing within any reasonable timeframe so requested. The underwriters for any IPO are intended third party beneficiaries of this paragraph and shall have the right, power and authority to enforce the provisions of this paragraph as though they were parties hereto.

8. NO STOCKHOLDER RIGHTS. This Warrant in and of itself shall not entitle the Holder to any voting rights or other rights as a stockholder of the Company.

9. TRANSFER OF WARRANT. Subject to applicable laws and the restriction on transfer set forth on the first page of this Warrant, this Warrant and all rights hereunder are transferable, by the Holder in person or by duly authorized attorney, upon delivery of this Warrant and the form of assignment attached hereto as **EXHIBIT B** to any transferee designated by Holder. The transferee shall sign an investment letter in form and substance reasonably satisfactory to the Company.

10. LOST, STOLEN, MUTILATED OR DESTROYED WARRANT. If this Warrant is lost, stolen, mutilated or destroyed, the Company may, on such terms as to indemnity or otherwise as it may reasonably impose (which shall, in the case of a mutilated Warrant, include the surrender thereof), issue a new Warrant of like denomination and tenor as the Warrant so lost, stolen, mutilated or destroyed. Any such new Warrant shall constitute an original contractual obligation of the Company, whether or not the allegedly lost, stolen, mutilated or destroyed Warrant shall be at any time enforceable by anyone.

11. NOTICES, ETC. [All notices required or permitted hereunder shall be in writing and shall be deemed effectively given: (a) upon personal delivery to the party to be notified, (b) when sent by electronic transmission or facsimile if sent during normal business hours of the recipient, if not, then on the next business day, (c) five (5) days after having been sent by registered or certified mail, return receipt requested, postage prepaid, or (d) one (1) day after deposit with a nationally recognized overnight courier, specifying next day delivery, with written verification of receipt. All communications shall be sent to the Company at 620 Professional Drive, Gaithersburg, Maryland 20879, Attn: Chief Executive Officer, and to Holder at , or at such other address as the Company or Holder may designate by ten (10) days advance written notice to the other parties hereto.][All notices required or permitted hereunder shall be in writing and shall be deemed effectively given in accordance with the provisions of Section 6(j) of the Note.]

12. SUCCESSOR AND ASSIGNS. This Warrant and the rights evidenced hereby shall be binding upon and shall inure to the benefit of the parties hereto and the successors of the Company and the successors and permitted assigns of the Holder. Such successors and/or permitted assigns of the Holder shall be deemed to be a Holder for all purposes hereunder.

13. NO THIRD-PARTY BENEFICIARIES. This Warrant is for the sole benefit of the Company and the Holder and their respective successors and, in the case of the Holder, permitted assigns and nothing herein, express or implied, is intended to or shall confer upon any other Person any legal or equitable right, benefit or remedy of any nature whatsoever, under or by reason of this Warrant.

14. HEADINGS. The headings in this Warrant are for reference only and shall not affect the interpretation of this Warrant.

15. AMENDMENT AND MODIFICATION; WAIVER. [Except as otherwise provided herein, this Warrant may be amended, modified or supplemented only by an agreement in writing signed by the Holder and the Company. No waiver by the Company or the Holder of any of the provisions hereof shall be effective unless explicitly set forth in writing and signed by the party so waiving. No waiver by any party shall operate or be construed as a waiver in respect of any failure, breach or default not expressly identified by such written waiver, whether of a similar or different character, and whether occurring before or after

that waiver. No failure to exercise, or delay in exercising, any rights, remedy, power or privilege arising from this Warrant shall operate or be construed as a waiver thereof; nor shall any single or partial exercise of any right, remedy, power or privilege hereunder preclude any other or further exercise thereof or the exercise of any other right, remedy, power or privilege.][Except as otherwise provided herein, this Warrant may be amended, modified or supplemented only by an agreement in writing signed by the Holder or the Majority Holders (as defined in the Note), on the one hand, and the Company, on the other hand. Upon the effectuation of such amendment, modification or supplement with the consent of the Majority Holders in conformance with this paragraph, such amendment, modification or supplement shall be effective as to, and binding against, the holders of all warrants issued pursuant to the Notes (as defined in the Note), and the Company shall promptly give written notice thereof to the Holder if the Holder has not previously consented to such amendment, modification or waiver in writing; provided that the failure to give such notice shall not affect the validity of such amendment, modification or waiver. No waiver by the Company, the Majority Holders, or the Holder of any of the provisions hereof shall be effective unless explicitly set forth in writing and signed by the party or parties so waiving. No waiver by any party shall operate or be construed as a waiver in respect of any failure, breach or default not expressly identified by such written waiver, whether of a similar or different character, and whether occurring before or after that waiver. No failure to exercise, or delay in exercising, any rights, remedy, power or privilege arising from this Warrant shall operate or be construed as a waiver thereof; nor shall any single or partial exercise of any right, remedy, power or privilege hereunder preclude any other or further exercise thereof or the exercise of any other right, remedy, power or privilege.]

16. SEVERABILITY. If any term or provision of this Warrant is invalid, illegal or unenforceable in any jurisdiction, such invalidity, illegality or unenforceability shall not affect any other term or provision of this Warrant or invalidate or render unenforceable such term or provision in any other jurisdiction.

17. ACCEPTANCE. Receipt of this Warrant by the Holder shall constitute acceptance of and agreement to all of the terms and conditions contained herein.

18. GOVERNING LAW. This Warrant and all rights, obligations and liabilities hereunder shall be governed by and construed under the laws of the State of Delaware as applied to agreements among Delaware residents, made and to be performed entirely within the State of Delaware without giving effect to conflicts of laws principles.

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, the Company has caused this Warrant to be executed by its duly authorized officer as of the date first written above.

SENSEI BIOTHERAPEUTICS, INC.

By: _____
Name: _____
Title: _____

[WARRANT TO PURCHASE COMMON STOCK]

EXHIBIT A

NOTICE OF EXERCISE

TO: SENSEI BIOTHERAPEUTICS, INC.

(1) ☐ The undersigned hereby elects to purchase _____ shares of Common Stock (the "***Exercise Shares***") of Sensei Biotherapeutics, Inc. (the "***Company***") pursuant to the terms of the attached Warrant, and tenders herewith payment of the exercise price in full, together with all applicable transfer taxes, if any.

☐ The undersigned hereby elects to purchase _____ shares of Common Stock (the "***Exercise Shares***") of Sensei Biotherapeutics, Inc. (the "***Company***") pursuant to the terms of the net exercise provisions set forth in Section 2.2 of the attached Warrant, and shall tender payment of all applicable transfer taxes, if any.

(2) Please issue a certificate or certificates representing said Exercise Shares in the name of the undersigned or in such other name as is specified below:

_____
(Name)

_____
(Address)

(3) The undersigned represents that (i) the aforesaid Exercise Shares are being acquired for the account of the undersigned for investment and not with a view to, or for resale in connection with, the distribution thereof and that the undersigned has no present intention of distributing or reselling such shares; (ii) the undersigned is aware of the Company's business affairs and financial condition and has acquired sufficient information about the Company to reach an informed and knowledgeable decision regarding its investment in the Company; (iii) the undersigned is experienced in making investments of this type and has such knowledge and background in financial and business matters that the undersigned is capable of evaluating the merits and risks of this investment and protecting the undersigned's own interests; (iv) the undersigned understands that Exercise Shares issuable upon exercise of this Warrant have not been registered under the Act by reason of a specific exemption from the registration provisions of the Act, which exemption depends upon, among other things, the bona fide nature of the investment intent as expressed herein, and, because such securities have not been registered under the Act, they must be held indefinitely unless subsequently registered under the Act or an exemption from such registration is available; (v) the undersigned is aware that the aforesaid Exercise Shares may not be sold pursuant to Rule 144 adopted under the Act unless certain conditions are met and until the undersigned has held the shares for the number of years prescribed by Rule 144, that the conditions for use of the Rule may include the availability of current information to the public about the Company and the Company has not made such information available and has no present plans to do so; and (vi) the undersigned agrees not to make any disposition of all or any part of the aforesaid shares of Exercise Shares unless and until there is then in effect a registration statement under the Act covering such proposed disposition and such disposition is made in accordance with said registration statement, or, if reasonably requested by the Company, the undersigned has provided the Company with an opinion of counsel satisfactory to the Company, stating that such registration is not required.

_____ _____
(Date) (Signature)

_____
(Print name)

EXHIBIT B

ASSIGNMENT FORM

(To assign the foregoing Warrant, execute this form and supply required information. Do not use this form to purchase shares.)

FOR VALUE RECEIVED, the foregoing Warrant and all rights evidenced thereby are hereby assigned to

Name: _____
(Please Print)

Address: _____
(Please Print)

Dated: _____, 20__

Holder's
Signature: _____

Holder's
Address: _____

NOTE: The signature to this Assignment Form must correspond with the name as it appears on the face of the Warrant, without alteration or enlargement or any change whatever. Officers of corporations and those acting in a fiduciary or other representative capacity should file proper evidence of authority to assign the foregoing Warrant.

THIS WARRANT AND THE SHARES ISSUABLE HEREUNDER HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, AND MAY NOT BE SOLD, PLEDGED OR OTHERWISE TRANSFERRED EXCEPT IN ACCORDANCE WITH APPLICABLE LAW.

WARRANT TO PURCHASE COMMON STOCK

Company:	SENSEI BIOTHERAPEUTICS, INC.
Number of Shares:	
Class of Stock:	Common Stock
Warrant Price:	$
Issue Date:	
Expiration Date:	

THIS WARRANT CERTIFIES THAT, for good and valuable consideration, the receipt of which is hereby acknowledged, **[HOLDER]** or its assignee or transferee ("***Holder***") is entitled to purchase the number of fully paid and nonassessable shares of the Company (the "***Shares***") at the Warrant Price all as set forth above and as adjusted pursuant to Article 2 of this warrant, subject to the provisions and upon the terms and conditions set forth in this warrant. This warrant is being issued to Holder in connection with the closing of an Equity Offering as defined in that certain Engagement Letter by and between the Company and Holder, dated as of September 17, 2018, as amended from time to time (the "***Engagement Letter***").

ARTICLE 1

EXERCISE

1.1 Method of Exercise. Holder may exercise this warrant by delivering this warrant and a duly executed Notice of Exercise in substantially the form attached as Appendix 1 to the principal office of the Company. Unless Holder is exercising the conversion right set forth in Section 1.2, Holder shall also deliver to the Company a check for the aggregate Warrant Price for the Shares being purchased.

1.2 Conversion Right. In lieu of exercising this warrant as specified in Section 1.1, Holder may from time to time convert this warrant, in whole or in part, into a number of Shares determined by dividing (a) the aggregate fair market value of the Shares or other securities otherwise issuable upon exercise of this warrant minus the aggregate Warrant Price of such Shares by (b) the fair market value of one Share. The fair market value of the Shares shall be determined pursuant to Section 1.3.

1.3 Fair Market Value. If the Shares are traded regularly in a public market, the fair market value of the Shares shall be the closing price of the Shares (or the closing price of the Company's stock into which the Shares are convertible) reported for the business day immediately before Holder delivers its Notice of Exercise to the Company. If the Shares are not regularly traded in a public market, the fair market value of the Shares shall be the greater of (a) the most recent valuation of the common stock of the Company performed in compliance with Section 409A of the U.S. Internal Revenue Code of 1986, as amended, or (b) the fair market value of the common stock as determined by the Board of Directors of the Company in its reasonable good faith judgment.

1.4 Delivery of Certificate and New Warrant. Promptly after Holder exercises or converts this warrant, the Company shall deliver to Holder certificates for the Shares acquired and, if this warrant has not been fully exercised or converted and has not expired, a new warrant representing the Shares not so acquired.

1.5 Replacement of Warrants. On receipt of evidence reasonably satisfactory to the Company of the loss, theft, destruction or mutilation of this warrant and, in the case of loss, theft or destruction, on delivery of an indemnity agreement reasonably satisfactory in form and amount to the Company or, in the case of mutilation, on surrender and cancellation of this warrant, the Company at its expense shall execute and deliver, in lieu of this warrant, a new warrant of like tenor.

1.6 Treatment of Warrant Upon Acquisition of the Company.

1.6.1 "***Acquisition.***" For the purpose of this warrant, "***Acquisition***" means (a) any sale, license, or other disposition of all or substantially all of the assets of the Company, or (b) any transaction where the holders of the Company's securities before the transaction beneficially own less than fifty percent (50%) of the outstanding voting securities of the surviving entity after the transaction.

1.6.2 Exercise Upon Acquisition. Upon the closing of any Acquisition in which the consideration to be received by the Company's stockholders consists solely of cash, Marketable Securities (as defined below), or a combination of both cash and Marketable Securities, this warrant shall be deemed to have been automatically converted pursuant to Section 1.2 simultaneously with the closing of the Acquisition, and thereafter Holder shall participate in the Acquisition on the same terms as other holders of the same class of securities of the Company. For purposes hereof, "***Marketable Securities***" means securities that are publicly traded and listed on a national exchange that can be publicly re-sold by the Holder in their entirety pursuant to Rule 144 or an effective registration statement under the Securities Act of 1933 (the "***Securities Act***").

1.6.3 Assumption of Warrant. Upon the closing of any Acquisition in which the consideration to be received by the Company's stockholders does not entirely consist of cash, Marketable Securities, or a combination of both cash and Marketable Securities, Holder shall have the option to (a) deem this Warrant to have been automatically converted pursuant to Section 1.2 simultaneously with the closing of the Acquisition and thereafter Holder shall participate in the Acquisition on the same terms as other holders of the same class of securities of the Company or (b) cause the successor entity to assume the obligations of this warrant, and this warrant shall thereafter be exercisable for the same securities and/or other property as would have been paid for the Shares issuable upon exercise of the unexercised portion of this warrant as if such Shares were outstanding on and as of the closing of such Acquisition, subject to further adjustment from time to time in accordance with the provisions of this warrant.

ARTICLE 2

ADJUSTMENTS TO THE SHARES

2.1 Stock Dividends, Splits, Etc. If the Company declares or pays a dividend on its common stock or subdivides the outstanding common stock into a greater amount of common stock, then upon exercise of this warrant, for each Share acquired, Holder shall receive, without cost to Holder, the total number and kind of securities to which Holder would have been entitled had Holder owned the Shares of record as of the date the dividend or subdivision occurred.

2.2 Reclassification, Exchange or Substitution. Upon any reclassification, exchange, substitution, or other event that results in a change of the number and/or class of the securities issuable upon exercise or conversion of this warrant, Holder shall be entitled to receive, upon exercise or conversion of this warrant, the number and kind of securities and property that Holder would have received for the Shares if this warrant had been exercised immediately before such reclassification, exchange, substitution, or other event. The Company or its successor shall promptly issue to Holder a new warrant for such new securities or other property. The new warrant shall provide for adjustments which shall be as nearly equivalent as may be practicable to the adjustments provided for in this Article 2 including, without limitation, adjustments to the Warrant Price and to the number of securities or property issuable upon exercise of the new warrant. The provisions of this Section 2.2 shall similarly apply to successive reclassifications, exchanges, substitutions, or other events.

2.3 Adjustments for Combinations, Etc. If the outstanding Shares are combined or consolidated, by reclassification or otherwise, into a lesser number of shares, the Warrant Price shall be proportionately increased. If the outstanding Shares are combined or consolidated, by reclassification or otherwise, into a greater number of shares, the Warrant Price shall be proportionately decreased.

2.4 Adjustments for Diluting Issuances. In the event of the issuance by the Company after the Issue Date of securities at a price per share less than the Warrant Price, then the number of shares of common stock issuable upon conversion of the Shares shall be adjusted in accordance with those provisions of the Company's Certificate of Incorporation that apply thereto as if Holder held the underlying Shares as of the date of such adjustment.

2.5 Reduction of Shares. In the event that certain Convertible Promissory Note issued by the Company, dated as of April 16, 2019, in the principal amount of $1,000,000, does not convert into shares of the Company's Series AA Preferred Stock, whether due to repayment or cancellation of such note or otherwise, the number of Shares that this warrant is exercisable for shall be reduced accordingly. In no event shall this warrant be exercisable for more thatn18,687,605 shares of Common Stock.

2.6 Certificate as to Adjustments. Upon each adjustment of the Warrant Price, the Company at its expense shall promptly compute such adjustment, and furnish Holder with a certificate of its Chief Financial Officer setting forth such adjustment and the facts upon which such adjustment is based. The Company shall, upon written request, furnish Holder a certificate setting forth the Warrant Price in effect upon the date thereof and the series of adjustments leading to such Warrant Price.

2.7 Fractional Shares. No fractional Shares shall be issuable upon exercise or conversion of the warrant and the Number of Shares to be issued shall be rounded down to the nearest whole Share. If a fractional share interest arises upon any exercise or conversion of the warrant, the Company shall eliminate such fractional share interest by paying Holder the amount computed by multiplying the fractional interest by the fair market value of a full Share.

ARTICLE 3

REPRESENTATIONS AND COVENANTS

3.1 Company Representations and Warranties. The Company hereby represents and warrants to the Holder as that all Shares which may be issued upon the exercise of the purchase right represented by this warrant, and all securities, if any, issuable upon conversion of the Shares, shall, upon issuance, be duly authorized, validly issued, fully paid and nonassessable, and free of any liens and encumbrances except for restrictions on transfer provided for herein or under applicable federal and state securities laws.

3.2 Notice of Certain Events. The Company shall provide Holder with not less than five (5) days prior written notice of, including a description of the material facts surrounding, any of the following events: (a) declaration of any dividend or distribution upon its common stock, whether in cash, property, stock, or other securities and whether or not a regular cash dividend; (b) effecting any reclassification or recapitalization of common stock; or (c) an Acquisition.

3.3 Reservation of Shares; No Impairment. The Company shall not, by amendment of its organizational documents or through reorganization, consolidation, merger, dissolution, issue or sale of securities, sale of assets or any other voluntary action, willfully avoid or seek to avoid the observance or performance of any of the terms of this Warrant, but will at all times in good faith assist in the carrying out of all such terms and in the taking of all such action as may be necessary or appropriate in order to protect the rights of Holder hereunder against wrongful impairment. Without limiting the generality of the foregoing, the Company shall take such action as may be necessary or appropriate in order that the Company may duly and validly issue fully paid and nonassessable shares of common stock upon the exercise of this Warrant, including by maintaining an adequate number of authorized but unissued shares of common stock while this Warrant remains outstanding.

3.4 Stockholder Agreements. Upon exercise of this Warrant (other than in connection with an Acquisition or after a public offering of the Shares), upon the request of the Company, Holder shall promptly become a party to the Rights Agreement and any other agreement executed by all of the Company's stockholders with respect to their ownership of the Shares.

3.5 Holder Investments Representations. With respect to the acquisition of this Warrant and any of the Shares issuable upon exercise of this Warrant, Holder hereby represents and warrants to, and agrees with, the Company as follows:

(a) Purchase Entirely for Own Account. This Warrant is issued to Holder in reliance upon Holder's representation to the Company that this Warrant and the Shares issuable upon exercise of this Warrant

will be acquired for investment for Holder's, or its affiliate's own account, not as a nominee or agent, and not with a view to the resale or distribution of any part thereof other than to an affiliate, and that Holder has no present intention of selling, granting any participation in, or otherwise distributing the same other than to an affiliate. By executing this Warrant, Holder further represents that Holder does not have any contract, undertaking, agreement or arrangement with any person, other than an affiliate, to sell, transfer or grant participations to such person or to any third person with respect to this Warrant or any of the Shares issuable upon exercise of this Warrant.

(b) Reliance upon Holder's Representations. Holder understands that this Warrant and the Shares issuable upon exercise of this Warrant are not registered under the Securities Act on the ground that the issuance of such securities is exempt from registration under the Securities Act, and that the Company's reliance on such exemption is predicated on Holder's representations set forth herein.

(c) Accredited Investor Status. Holder represents to the Company that Holder is an Accredited Investor (as defined in the Securities Act).

(d) Restricted Securities. Holder understands that this Warrant and the Shares issuable upon exercise of this Warrant are "restricted securities" under the federal securities laws inasmuch as they are being acquired from the Company in a transaction not involving a public offering and that under such federal securities laws and applicable regulations such securities may be resold without registration under the Securities Act only in certain limited circumstances.

ARTICLE 4

MISCELLANEOUS

4.1 Term: Exercise Upon Expiration. This warrant is exercisable in whole or in part, at any time and from time to time on or before the Expiration Date set forth above. If this warrant has not been exercised prior to the Expiration Date, this warrant shall be deemed to have been automatically exercised on the Expiration Date by "cashless" conversion pursuant to Section 1.2.

4.2 Legends. This warrant and the Shares (and the securities issuable, directly or indirectly, upon conversion of the Shares, if any) shall be imprinted with a legend in substantially the following form:

THIS SECURITY HAS NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, AND MAY NOT BE SOLD, PLEDGED OR OTHERWISE TRANSFERRED EXCEPT IN ACCORDANCE WITH APPLICABLE LAW.

4.3 Compliance with Securities Laws on Transfer. This warrant and the Shares issuable upon exercise of this warrant (and the securities issuable, directly or indirectly, upon conversion of the Shares, if any) may not be transferred or assigned in whole or in part without compliance with applicable federal and state securities laws by the transferor and the transferee. The Company shall not require Holder to provide an opinion of counsel if the transfer is to any affiliate of Holder or if there is no material question as to the availability of current information as referenced in Rule 144(c), Holder represents that it has complied with Rule 144 (d) and (e) in reasonable detail, the selling broker represents that it has complied with Rule 144(f), and the Company is provided with a copy of Holder's notice of proposed sale.

4.4 Transfer Procedure. Subject to the provisions of Section 4.3 and any restrictions on transfer that may be included in the Company's Bylaws or any Rights Agreements, Holder may transfer all or part of this warrant or the Shares issuable upon exercise of this warrant (or the securities issuable, directly or indirectly, upon conversion of the Shares, if any) by giving the Company notice of the portion of the warrant being transferred setting forth the name, address and taxpayer identification number of the transferee and surrendering this warrant to the Company for reissuance to the transferee(s) (and Holder, if applicable). No surrender or reissuance shall be required for a transfer to any affiliate of Holder.

4.5 Notices. All notices and other communications from the Company to the Holder, or vice versa, shall be deemed delivered and effective when given personally or mailed by first-class registered or certified mail, postage prepaid, at such address as may have been furnished to the Company or the Holder, as the case may be, in writing by the Company or such Holder from time to time.

4.6 Amendments. This warrant and any term hereof may be changed, waived, discharged or terminated only by an instrument in writing signed by the party against which enforcement of such change, waiver, discharge or termination is sought.

4.7 Attorneys' Fees. In the event of any dispute between the parties concerning the terms and provisions of this warrant, the party prevailing in such dispute shall be entitled to collect from the other party all costs incurred in such dispute, including reasonable attorneys' fees.

4.8 Governing Law. This warrant shall be governed by and construed in accordance with the laws of the State of Delaware, without giving effect to its principles regarding conflicts of law.

4.9 Holder Acknowledgment. Holder hereby acknowledges and agrees that this warrant and the Shares it is exercisable for are the only equity of the Company that Holder is entitled to pursuant to the terms of the Engagement Letter as of May 5, 2020.

[Signature Page Follows]

IN WITNESS WHEREOF, the undersigned has executed this Warrant to Purchase Stock as of the date set forth above.

SENSEI BIOTHERAPEUTICS, INC.

By: _____
Name: _____
Title: _____

The foregoing is acknowledged and agreed to by the undersigned as the "Holder" of this Warrant to Purchase Stock as of the date set forth above.

[HOLDER]

By: _____
Name: _____
Title: _____

APPENDIX 1

NOTICE OF EXERCISE

1. The undersigned hereby elects to purchase _____ shares of the common stock of **SENSEI BIOTHERAPEUTICS, INC.** pursuant to the terms of the attached warrant, and tenders herewith payment of the purchase price of such shares in full.

1. The undersigned hereby elects to convert the attached warrant into shares in the manner specified in the warrant. This conversion is exercised with respect to _____ of the shares covered by the warrant.

[Strike paragraph that does not apply.]

2. Please issue a certificate or certificates representing said shares in the name of the undersigned or in such other name as is specified below:

_____
(Holder's Name)

_____

_____
(Address)

3. The undersigned represents it is acquiring the shares solely for its own account and not as a nominee for any other party and not with a view toward the resale or distribution thereof except in compliance with applicable securities laws.

[HOLDER] or Registered Assignee

_____
(Signature)

_____
(Date)

Exhibit 4.4

THE SECURITIES EVIDENCED BY THIS CERTIFICATE HAVE BEEN TAKEN FOR INVESTMENT, HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, AND MAY NOT BE SOLD, TRANSFERRED, ASSIGNED, PLEDGED, HYPOTHECATED OR OTHERWISE DISPOSED OF IN THE ABSENCE OF SUCH REGISTRATION OR AN EXEMPTION THEREFROM UNDER SAID ACT.

CSW **("Issue Date")**

Number of Shares Issuable Upon Exercise:

RIGHT TO PURCHASE SHARES OF COMMON STOCK
OF
PPI HOLDINGS, INC.

PPI HOLDINGS, INC.

Common Stock Warrant

PPI Holdings, Inc., a Delaware corporation, hereby certifies that, for value received, (the "Holder") is entitled, subject to the terms set forth below, to purchase from the Company (as defined below) fully paid and nonassessable shares of Common Stock (as defined below).

As used herein, the terms set forth below have the following respective meanings:

(a) "**Company**" shall mean and include PPI Holdings, Inc. and any corporation that may succeed or assume the obligations of the Company hereunder.

(b) "**Common Stock**" shall mean the Company's common stock, $0.10 par value per share.

(c) "**Warrant**" shall mean this Warrant and any and all additional Warrants to be issued by the Company to the Holder or its assigns, as approved by the Company pursuant to the terms and conditions set forth in Section 1.3 hereof.

1. Exercise of Warrant.

1.1 Full Exercise. This Warrant may be exercised in full by the Holder hereof by surrender of this Warrant, with the form of subscription attached hereto, duly executed by such Holder, to the Company at its principal office, accompanied by payment, in cash or by certified or official bank check payable to the order of the Company, in the amount obtained by multiplying the number of shares of Common Stock for which this Warrant is exercisable by the Exercise Price.

1.2 Partial Exercise. This Warrant may be exercised in part by surrender of the Warrant in the manner and at the place provided in subsection 1.1 except that the amount payable by the Holder on such partial exercise shall be the amount obtained by multiplying (a) the number of shares of Common Stock designated by the Holder in the subscription attached hereto by (b) the Exercise Price. On any such partial exercise the Company, at its expense, will forthwith issue and deliver to or upon the order of the Holder hereof a new Warrant or Warrants of like tenor, in the name of the Holder hereof or as such Holder (upon payment by such Holder of any applicable transfer taxes) may request, calling in the aggregate on the face or faces thereof for the number of shares of Common Stock for which such Warrant or Warrants may still be exercised.

1.3 Exercise Price Number of Shares; Exercise Date.

(a) The exercise price per share ("Exercise Price") of each share of Common Stock subject to the provisions of this Warrant shall be $, subject to adjustment pursuant to Sections 3, 4 and 5 hereof.

(b) This Warrant shall be exercisable for a period of time commencing on the Issue Date and ending on .

(c) The aggregate number of shares of Common Stock that the Holder shall be entitled to purchase hereunder shall be , subject to adjustment pursuant to Sections 3, 4 and 5.

1.4 Right to Exercise Warrant for Stock Issuance.

(a) Notwithstanding any provisions herein to the contrary, in lieu of exercising this Warrant by paying the Exercise Price in the manner set forth in either subsection 1.1 or 1.2, prior to its expiration pursuant to subsection 1.3, the Holder may, by providing notice thereof to the Company along with the form of subscription attached hereto, elect to exercise the Warrant for a reduced number of shares of Common Stock determined in accordance with the following formula:

$$X = \frac{Y(A-B)}{A}$$

Where:

X = The number of shares of Common Stock to be issued to the Holder.

Y = The number of shares of Common Stock purchasable under this Warrant (at the date of such exercise).

A = The fair market value of one share of Common Stock (at the date of such exercise).

B = Exercise Price (as adjusted to the date of such exercise).

(b) For purposes of this subsection 1.4, the "fair market value" per share of Common Stock shall be determined in such reasonable manner as may be prescribed in good faith by the Company's Board of Directors except as follows:

(i) in the event the Warrant is being exercised at the time the Company is making a public offering of its Common Stock, the fair market value per share of Common Stock shall be the per share offering price to the public of the Common Stock;

(ii) in the event the Warrant is being exercised at the time the Common Stock is listed on a national securities exchange or admitted to unlisted trading privileges on any such exchange or listed for trading on the NASDAQ National Market System, the fair market value per share of Common Stock shall be the last reported sale price of Common Stock on SLLCI1 exchange or system on the last business day prior to the date of exercise of the Warrant (or if no such sale is made on such day, the average of the closing bid and ask prices for Common Stock for such day on such exchange or system); and

(iii) in the event the Warrant is being exercised at the time of the consummation of an acquisition, the fair market value per share of Common Stock shall be the consideration per share of Common Stock the Holders thereof are to receive in connection with such acquisition.

2. Delivery of Stock Certificates on Exercise. As soon as practicable after the exercise of this Warrant in full or in part, and in any event within fifteen (15) days thereafter, the Company, at its expense (including the payment by it of any applicable issue taxes), will cause to be issued in the name of and delivered to the Holder hereof, or as such Holder (upon payment by such Holder of any applicable transfer taxes) may direct, a certificate or certificates for the number of fully paid and nonassessable shares of Common Stock to which such Holder shall be entitled on such exercise, plus, in lieu of any fractional share to which such Holder would otherwise be entitled, cash equal to such fraction multiplied by the Exercise Price of one fill share, together with any other stock or other securities and property (including cash, where applicable) to which such Holder is entitled upon such exercise pursuant to Section 1. or otherwise.

3. Adjustment for Dividends in Other Stock, Property, Reclassification. In case at any time or from time to time, the Holders of Common Stock have received, or (on or after the record date fixed for the determination of shareholders eligible to receive) shall have become entitled to receive, without payment therefore,

(a) other or additional stock or other securities or property (other than cash) by way of dividend,

(b) any cash (excluding cash dividends payable solely out of earnings or earned surplus of the Company), or

(c) other or additional stock or other securities or property (including cash) by way of spin-off; split-up, reclassification, recapitalization, combination of shares or similar corporate rearrangement, other than additional shares of Common Stock issued as a stock dividend or in a stock-split (adjustments in respect of which are provided in Section 5 hereof), then and in

each such case the Holder of this Warrant, on the exercise hereof as provided in Section 1, shall be entitled to receive the amount of stock and other securities and property (including cash in the cases referred to in subdivisions (b) and (c) of this Section 3) that such Holder would hold on the date of such exercise as if on the date hereof he had been the Holder of record of the number of shares of Common Stock called for on the face of this Warrant and had thereafter, during the period from the date hereof to and including the date of such exercise, retained such shares and all such other or additional stock and other securities and property (including cash in the cases referred to in subdivisions (h) and (c) of this section 3) receivable by him as aforesaid during such period, giving effect to all adjustments called for during such period by Sections 4 and 5 hereof.

4. Adjustment for Reorganization, Consolidation, Merger.

4.1 General. In case at any time or from time to time, the Company shall (a) effect a reorganization, (b) consolidate with or merge into any other person, or (c) transfer all or substantially all of its properties or assets to any other person under any plan or arrangement contemplating the dissolution of the Company, then, in each such case, except as otherwise provided in Section 4.3 hereof; the Holder of this Warrant, on the exercise hereof as provided in Section 1 at any time after the consummation of such reorganization, consolidation or merger or the effective date of such dissolution, as the case may be, shall receive, in lieu of the Common Stock issuable on such exercise prior to such consummation or such effective date, the stock and other securities and property (including cash) to which such Holder would have been entitled upon such consummation or in connection with such dissolution, as the case may be, if such Holder had so exercised this Warrant, immediately prior thereto, all subject to further adjustment thereafter as provided in Sections 3 and 5 hereof.

4.2 Dissolution. Except as otherwise provided in Section 4.3 hereof, in the event of any dissolution of the Company following the transfer of all or substantially all of its properties or assets, the Company, prior to such dissolution, shall at its expense deliver or cause to be delivered the stock and other securities and property (including cash, where applicable) receivable by the Holder of the Warrant after the effective-date of such dissolution pursuant to this Section 4 to a ban or trust company, as trustee for the Holder of the Warrant.

4.3 Continuation of Terms. Except as otherwise hereinafter provided, upon any reorganization, consolidation, merger or transfer (and any dissolution following any transfer) referred to in this Section 4, this Warrant shall continue in full force and effect and the terms hereof shall be applicable to the shares of stock and other securities and property receivable on the exercise of this Warrant after the consummation of such reorganization, consolidation or merger or the effective date of dissolution following any such transfer, as the ease may be, and shall be binding upon the issuer of any such stock or other securities, including, in the case of any such transfer, the person acquiring all or substantially all of the properties or assets of the Company, regardless of whether such person shall have expressly assumed the terms of this Warrant; provided, however that if the Holders of Warrants exercisable into at least that number of shares of Common Stock that represents a majority in interest of the Common Stock issuable upon exercise of all the Warrants then issued and outstanding, agree in writing to waive the terms of this Section 4, on and as of the date of the consummation of such reorganization, consolidation or merger effective date of dissolution, as the case may he, the rights of the Holder of this Warrant and the obligations of the Company under this Section 4 shall terminate and the provisions of this Section 4 shall he of no further force and effect.

5. Adjustment for Extraordinary Events. In the event that the Company shall (i) issue additional shares of the Common Stock as a dividend or other distribution on outstanding Common Stock, (ii) subdivide its outstanding shares of Common Stock, or (iii) combine its outstanding shares of the Common Stock into a smaller number of shares of the Common Stock, then, in each such event, the Exercise Price shall, simultaneously with the happening of such event, be adjusted by multiplying the then current Exercise Price by a fraction, the numerator of which shall be the number of shares of Common Stock outstanding immediately prior to such event and the denominator of which shall be the number of shares of Common Stock outstanding immediately after such event, and the product so obtained shall thereafter be the Exercise Price then in effect.

The Exercise Price, as so adjusted, shall be readjusted in the same manner upon the happening of any successive event or events described herein in this Section 5. The Holder of this Warrant shall thereafter, on the exercise hereof as provided in Section 1, be entitled to receive that number of shares of Common Stock determined by multiplying the number of shares of Common Stock which would otherwise (but for the provisions of this Section 5) be issuable on such exercise by a fraction of which (i) the numerator is the Exercise Price which would otherwise (but for the provisions of this Section 5) be in effect, and (ii) the denominator is the Exercise Price in effect on the date of such exercise.

6. Certificate as to Adjustments. In each ease of any adjustment or readjustment in the shares of Common Stock issuable on the exercise of the Warrants, the Company at its expense will promptly cause its treasurer or chief financial officer to compute such adjustment in accordance with the terms of the Warrants and prepare a certificate setting forth such adjustment or readjustment and showing in detail the facts upon which such adjustment or readjustment is based, including a statement of (a) the consideration received or receivable by the Company for any additional shares of Common Stock issued or sold or deemed to have been issued or sold, (b) the number of shares of Common Stock outstanding or deemed to be outstanding, and (c) the Exercise Price and the number of shares of Common Stock to be received upon exercise of this Warrant, in effect immediately prior to such issue or sale and as adjusted and readjusted as provided in this Warrant. The Company will forthwith mail a copy of each such certificate to each Holder of a Warrant, and will, on the written request at any time of any Holder of a Warrant, furnish to such Holder a like certificate setting forth the Exercise Price at the time in effect and showing how it was calculated.

7. Notices of Record Data, etc. In the event of:

(a) any taking by the Company of a record of the Holders of any class of securities for the purpose of determining the Holders thereof who are entitled to receive any dividend or other distribution, or any right to subscribe for, purchase or otherwise acquire any shares of stock of any class or any other securities or property, or to receive any other right; or

(b) any capital reorganization of the Company, any reclassification or recapitalization of the capital stock of the Company or any transfer of all or substantially all the assets of the Company to or consolidation or merger of the Company with or into any other person,

or any voluntary or involuntary dissolution, liquidation or winding-up of the Company, then and in each such event the Company will mail or cause to be mailed to each Holder of a Warrant a notice specifying (i) the date on which any such record is to be taken for the purpose of such dividend, distribution or right, and stating the amount and character of such dividend, distribution or right, (ii) the date on which any such reorganization, reclassification, recapitalization, transfer, consolidation, merger, dissolution, liquidation or winding-up is to take place, and the time, if any is to be fixed, as of which the Holders of record of Common Stock (or other securities) shall be entitled to exchange their shares of Common Stock (or other securities) for securities or other property deliverable on such reorganization, reclassification, recapitalization, transfer, consolidation, merger, dissolution, liquidation or winding-up, and (iii) the amount and character of any stock or other securities, or rights or options with respect thereto, proposed to be issued or granted, the date of such proposed issue or grant and the persons or class of persons to whom such proposed issue or grant is to be offered or made. Such notice shall be mailed at least 20 days prior to the date specified in such notice on which any such action is to be taken.

8. Amendment. The terms of this Warrant may be amended, modified or waived only with the written consent of the Company and the Holders of Warrants representing at least a majority of the number of shares of Common Stock then issuable upon the exercise of the Warrants. No such amendment, modification or waiver shall be effective as to this Warrant unless the terms of such amendment, modification or waiver shall apply with the same force and effect to all of the other Warrants then outstanding.

9. Reservation of Stock Issuable on Exercise of Warrant. The Company will at all times reserve and keep available, solely for issuance and delivery on the exercise of the Warrant, all shares of Common Stock from time to time issuable on the exercise of the Warrant.

10. Exchange of Warrants. On surrender for exchange of any Warrant, properly endorsed, to the Company, the Company at its expense will issue and deliver to or on the order of the Holder thereof a new Warrant or Warrants of like tenor, in the name of such Holder or as such Holder (on payment by such Holder of any applicable transfer taxes) may direct, calling in the aggregate on the face or faces thereof for the number of shares of Common Stock called for on the face or faces of the Warrant or Warrants so surrendered.

11. Replacement of Warrants. On receipt of evidence reasonably satisfactory to the Company of the loss, theft, destruction or mutilation of any Warrant and, in the case of any such loss, theft or destruction of any Warrant, on delivery of an indemnity agreement or security reasonably satisfactory in form and amount to the Company or, in the case of any such mutilation, on surrender and cancellation of such Warrant, the Company at its expense will execute and deliver, in lieu thereof, a new Warrant of like tenor.

12. Warrant Agent. The Company may, by written notice to each Holder of a Warrant, appoint an agent for the purpose of issuing Common Stock (or other securities) on the exercise of the Warrant pursuant to Section 1, exchanging Warrants pursuant to Section 10, and replacing Warrants pursuant to Section 11, or any of the foregoing, and thereafter any such issuance, exchange or replacement, as the case may be, shall be made at such office by such agent.

13. Negotiability, etc. This Warrant is issued upon the following terms, to all of which each Holder or owner hereof by the taking hereof consents and agrees:

(a) any person in possession of this Warrant properly endorsed, and for which consent of the Company is evidenced in writing, is authorized to represent himself as absolute owner hereof and is empowered to transfer absolute title hereto by endorsement and delivery hereof to a bona tide purchaser hereof for value; each prior taker or owner waives and renounces all of his equities or rights in this Warrant in favor of each such bona tide purchaser, and each such bona fide purchaser shall acquire absolute title hereto and to all rights represented hereby; and

(b) until this Warrant is transferred on the books of the Company, the Company may treat the registered Holder hereof as the absolute owner hereof for all purposes, notwithstanding any notice to the contrary.

14. Notices, etc. All notices and other communications from the Company to the Holder of this Warrant shall be mailed by first class registered or certified mail, postage prepaid, at such address as may have been furnished to the Company in writing by such Holder or, until any such Holder furnishes to the Company an address, then to at the address of, the last Holder of this Warrant who has so furnished an address to the Company.

15. Governing Law. This Warrant shall be governed by, and construed in accordance with, the laws of the State of Delaware.

16. Market Standoff.

(a) The Holder, if requested by the Company and an underwriter of Common Stock or other securities of the Company, shall agree not to sell or otherwise transfer or dispose of any shares of Common Stock acquired by it by way of exercise of this Warrant or any other securities of the Company held by such Holder for a specified period of time required by the managing underwriter (not to exceed 180 days) following the effective date of a registration statement; provided that such agreement shall apply only to (i) the Company's first underwritten public offering and (ii) any registration statements covering shares of Common Stock of the Company sold on its behalf to the public in an underwritten public offering within twelve (12) months from the effective date of the Company's first underwritten public offering.

(b) The agreements described in subsection (a) above shall be in writing in a form reasonably satisfactory to the Company and the underwriter. The Company may impose stop-transfer instructions with respect to the shares of Common Stock held by the Holder or other securities subject to the foregoing restriction until the end of the stand-off period.

17. Miscellaneous. The headings in this Warrant are for purposes of reference only, and shall not limit or otherwise affect any of the terms hereof. This Warrant is being executed as an instrument under seal. The invalidity or unenforceability of any provision hereof shall in no way affect the validity or enforceability of any other provision.

18. Expiration. The right to exercise this Warrant shall expire at 11:59 P.M., Eastern Time, on pursuant to the terms and conditions of Section 1.3 hereof.

[19. Surrender for Exchange of Warrant. Holder agrees that the certain Common Stock Warrant originally issued by Panacea Pharmaceuticals, Inc., a Maryland corporation ("Panacea"), dated (the "Original Warrant"), is hereby surrendered and terminated. Concurrent with such surrender of the Original Warrant and in accordance with Section 10 thereof, the Original Warrant is hereby converted solely into the right to receive this Warrant such that Holder shall have the right to purchase the same number of shares of Company Common Stock on the same terms and conditions and at the same price per share as those shares of common stock of Panacea as set forth in the Original Warrant.

Holder agrees that this Warrant satisfies the obligations of the Company pursuant to Section 10 of the Original Warrant, that this Warrant replaces in its entirety the Original Warrant, and that the Original Warrant is null, void, and of no further force or effect. Holder has reviewed this Warrant in its entirety, has had an opportunity to obtain the advice of counsel prior to executing this Warrant, and fully understands all provisions hereof. Holder hereby agrees to accept as binding, conclusive, and final all decisions or interpretations of the Company upon any questions arising under this Warrant.]

PPI HOLDINGS, INC.

By: _____

Name: _____

Title: _____

FORM OF SUBSCRIPTION

(To be signed only upon exercise of Warrant)

To: PPI Holdings, Inc.

The undersigned, the Holder of the within Warrant, hereby irrevocably elects to exercise this Warrant for, and to purchase thereunder, _____ shares of Common Stock of PPI Holdings, Inc. and herewith makes payment of $_____ therefore, and requests that the certificates for such shares be issued in the name of, and delivered to:

_____

whose address is:

_____

_____

_____ _____

(Phone) (Email)

Dated: _____

(Signature must conform to name on face of the Warrant)

_____

(Printed Name)

_____

(Address)

FORM OF ASSIGNMENT

(To be signed only on transfer of Warrant)

For value received, the undersigned hereby sells, assigns, and transfers unto _____ the right represented by the within Warrant to purchase _____ shares of Common Stock of PPI Holdings, Inc. to which the within Warrant relates, and appoints _____ attorney to transfer such right on the books of PPI Holdings, Inc. with full power of substitution in the premises.

The Holder of this Warrant and any purchaser, assignee or transferee of such Holder acknowledges that no sale, assignment or transfer of this Warrant will be valid without the express written approval of the Company.

Dated: _____

_____
(Signature must conform to name on face of the Warrant)

_____
(Printed Name)

_____
(Address)

Signed in the presence of:

_____
(Signature)

_____
(Printed Name)

Cooley

Michael E. Tenta
T: +1 650 843 5636
mtenta@cooley.com

EXHIBIT 5.1

February 1, 2021

Sensei Biotherapeutics, Inc.
1405 Research Blvd, Suite 125
Rockville, MD 20850

Ladies and Gentlemen:

You have requested our opinion, as counsel to Sensei Biotherapeutics, Inc., a Delaware corporation (the "***Company***"), in connection with the filing by the Company of a Registration Statement (No. 333-252138) on Form S-1 (the "***Registration Statement***") with the Securities and Exchange Commission, including a related prospectus included in the Registration Statement (the "***Prospectus***"), covering an underwritten public offering of up to 6,767,750 shares (the "***Shares***") of the Company's common stock, par value $0.0001, including up to 882,750 Shares that may be sold pursuant to the exercise of an option to purchase additional shares.

In connection with this opinion, we have (i) examined and relied upon (a) the Registration Statement and the Prospectus, (b) the Company's Third Amended and Restated Certificate of Incorporation and Bylaws, each as currently in effect, (c) the Company's Amended and Restated Certificate of Incorporation, filed as Exhibit 3.1 to the Registration Statement, and the Company's Amended and Restated Bylaws, filed as Exhibit 3.4 to the Registration Statement, each of which is to be in effect immediately following the closing of the offering contemplated by the Registration Statement and (d) originals or copies certified to our satisfaction of such records, documents, certificates, memoranda and other instruments as in our judgment are necessary or appropriate to enable us to render the opinion expressed below and (ii) assumed that the Shares to be sold to the underwriters by the Company will be sold at a price established by the Board of Directors of the Company or a duly authorized committee thereof.

We have assumed the genuineness of all signatures, the authenticity of all documents submitted to us as originals, the conformity to originals of all documents submitted to us as copies, the accuracy, completeness and authenticity of certificates of public officials and the due authorization, execution and delivery of all documents by all person other than the Company where authorization, execution and delivery are prerequisites to the effectiveness thereof. As to certain factual matters, we have relied upon a certificate of an officer of the Company and have not independently verified such matters.

Our opinion is expressed only with respect to the General Corporation Law of the State of Delaware. We express no opinion as to whether the laws of any particular jurisdiction are applicable to the subject matter hereof. We are not rendering any opinion as to compliance with any federal or state law, rule or regulation relating to securities, or to the sale or issuance thereof.

On the basis of the foregoing, and in reliance thereon, we are of the opinion that the Shares, when sold and issued against payment therefor as described in the Registration Statement and the Prospectus, will be validly issued, fully paid and non-assessable.

We consent to the reference to our firm under the caption "Legal Matters" in the Prospectus included in the Registration Statement and to the filing of this opinion as an exhibit to the Registration Statement.

Sincerely,

Cooley LLP

By: /s/ Michael E. Tenta
Michael E. Tenta

SENSEI BIOTHERAPEUTICS, INC.
2021 EQUITY INCENTIVE PLAN

ADOPTED BY THE BOARD OF DIRECTORS: JANUARY 27, 2021
APPROVED BY THE STOCKHOLDERS: JANUARY 28, 2021

TABLE OF CONTENTS

1. GENERAL.

(a) Successor to and Continuation of Prior Plan. The Plan is the successor to and continuation of the Prior Plan. As of the Effective Date, (i) no additional awards may be granted under the Prior Plan; (ii) the Prior Plan's Available Reserve plus any Returning Shares will become available for issuance pursuant to Awards granted under this Plan; and (iii) all outstanding awards granted under the Prior Plan will remain subject to the terms of the Prior Plan (except to the extent such outstanding awards result in Returning Shares that become available for issuance pursuant to Awards granted under this Plan). All Awards granted under this Plan will be subject to the terms of this Plan.

(b) Plan Purpose. The Company, by means of the Plan, seeks to secure and retain the services of Employees, Directors and Consultants, to provide incentives for such persons to exert maximum efforts for the success of the Company and any Affiliate and to provide a means by which such persons may be given an opportunity to benefit from increases in value of the Common Stock through the granting of Awards.

(c) Available Awards. The Plan provides for the grant of the following Awards: (i) Incentive Stock Options; (ii) Nonstatutory Stock Options; (iii) SARs; (iv) Restricted Stock Awards; (v) RSU Awards; (vi) Performance Awards; and (vii) Other Awards.

(d) Adoption Date; Effective Date. The Plan will come into existence on the Adoption Date, but no Award may be granted prior to the Effective Date.

2. SHARES SUBJECT TO THE PLAN.

(a) Share Reserve. Subject to adjustment in accordance with Section 2(c) and any adjustments as necessary to implement any Capitalization Adjustments, the aggregate number of shares of Common Stock that may be issued pursuant to Awards will not exceed the sum of: (i) 2,469,935 new shares, plus (ii) the Prior Plan's Available Reserve; plus, (iii) the number of Returning Shares, if any, as such shares become available from time to time. In addition, subject to any adjustments as necessary to implement any Capitalization Adjustments, such aggregate number of shares of Common Stock will automatically increase on January 1 of each year for a period of ten years commencing on January 1, 2022 and ending on (and including) January 1, 2031, in an amount equal to four percent (4%) of the total number of shares of Common Stock outstanding on December 31 of the preceding year; provided, however that the Board may act prior to January 1st of a given year to provide that the increase for such year will be a lesser number of shares of Common Stock.

(b) Aggregate Incentive Stock Option Limit. Notwithstanding anything to the contrary in Section 2(a) and subject to any adjustments as necessary to implement any Capitalization Adjustments, the aggregate maximum number of shares of Common Stock that may be issued pursuant to the exercise of Incentive Stock Options is 10,000,000 shares.

(c) Share Reserve Operation.

(i) Limit Applies to Common Stock Issued Pursuant to Awards. For clarity, the Share Reserve is a limit on the number of shares of Common Stock that may be issued pursuant to Awards and does not limit the granting of Awards, except that the Company will keep available at all times the number of shares of Common Stock reasonably required to satisfy its obligations to issue shares pursuant to such Awards. Shares may be issued in connection with a merger or acquisition as permitted by, as applicable, Nasdaq Listing Rule 5635(c), NYSE Listed Company Manual Section 303A.08, NYSE American Company Guide Section 711 or other applicable rule, and such issuance will not reduce the number of shares available for issuance under the Plan.

(ii) Actions that Do Not Constitute Issuance of Common Stock and Do Not Reduce Share Reserve. The following actions do not result in an issuance of shares under the Plan and accordingly do not reduce the number of shares subject to the Share Reserve and available for issuance under the Plan: (1) the expiration or termination of any portion of an Award without the shares covered by such portion of the Award having been issued; (2) the settlement of any portion of an Award in cash (*i.e.*, the Participant receives cash rather than Common Stock); (3) the withholding of shares that would otherwise be issued by the Company to satisfy the exercise, strike or purchase price of an Award; or (4) the withholding of shares that would otherwise be issued by the Company to satisfy a tax withholding obligation in connection with an Award.

(iii) Reversion of Previously Issued Shares of Common Stock to Share Reserve. The following shares of Common Stock previously issued pursuant to an Award and accordingly initially deducted from the Share Reserve will be added back to the Share Reserve and again become available for issuance under the Plan: (1) any shares that are forfeited back to or repurchased by the Company because of a failure to meet a contingency or condition required for the vesting of such shares; (2) any shares that are reacquired by the Company to satisfy the exercise, strike or purchase price of an Award; and (3) any shares that are reacquired by the Company to satisfy a tax withholding obligation in connection with an Award.

3. ELIGIBILITY AND LIMITATIONS.

(a) Eligible Award Recipients. Subject to the terms of the Plan, Employees, Directors and Consultants are eligible to receive Awards.

(b) Specific Award Limitations.

(i) Limitations on Incentive Stock Option Recipients. Incentive Stock Options may be granted only to Employees of the Company or a "parent corporation" or "subsidiary corporation" thereof (as such terms are defined in Sections 424(e) and (f) of the Code).

(ii) Incentive Stock Option $100,000 Limitation. To the extent that the aggregate Fair Market Value (determined at the time of grant) of Common Stock with respect to which Incentive Stock Options are exercisable for the first time by any Optionholder during any calendar year (under all plans of the Company and any Affiliates) exceeds $100,000 (or such other limit established in the Code) or otherwise does not comply with the rules governing Incentive Stock Options, the Options or portions thereof that exceed such limit (according to the order in which they were granted) or otherwise do not comply with such rules will be treated as Nonstatutory Stock Options, notwithstanding any contrary provision of the applicable Option Agreement(s).

(iii) Limitations on Incentive Stock Options Granted to Ten Percent Stockholders. A Ten Percent Stockholder may not be granted an Incentive Stock Option unless (i) the exercise price of such Option is at least 110% of the Fair Market Value on the date of grant of such Option and (ii) the Option is not exercisable after the expiration of five years from the date of grant of such Option.

(iv) Limitations on Nonstatutory Stock Options and SARs. Nonstatutory Stock Options and SARs may not be granted to Employees, Directors and Consultants who are providing Continuous Service only to any "parent" of the Company (as such term is defined in Rule 405) unless the stock underlying such Awards is treated as "service recipient stock" under Section 409A because the Awards are granted pursuant to a corporate transaction (such as a spin off transaction) or unless such Awards otherwise comply with the distribution requirements of Section 409A.

(c) Aggregate Incentive Stock Option Limit. The aggregate maximum number of shares of Common Stock that may be issued pursuant to the exercise of Incentive Stock Options is the number of shares specified in Section 2(b).

(d) Non-Employee Director Compensation Limit. The aggregate value of all compensation granted or paid, as applicable, to any individual for service as a Non-Employee Director with respect to any calendar year, including Awards granted and cash fees paid by the Company to such Non-Employee Director, will not exceed (i) $750,000 in total value or (ii) in the event such Non-Employee Director is first appointed or elected to the Board during such calendar year, $1,000,000 in total value, in each case calculating the value of any equity awards based on the grant date fair value of such equity awards for financial reporting purposes. The limitations in this Section 3(d) shall apply commencing with the first calendar year that begins following the Effective Date.

4. OPTIONS AND STOCK APPRECIATION RIGHTS.

Each Option and SAR will have such terms and conditions as determined by the Board. Each Option will be designated in writing as an Incentive Stock Option or Nonstatutory Stock Option at the time of grant; provided, however, that if an Option is not so designated, then such Option will be a Nonstatutory Stock Option, and the shares purchased upon exercise of each type of Option will be separately accounted for. Each SAR will be denominated in shares of Common Stock equivalents. The terms and conditions of separate Options and SARs need not be identical; provided, however, that each Option Agreement and SAR Agreement will conform (through incorporation of provisions hereof by reference in the Award Agreement or otherwise) to the substance of each of the following provisions:

(a) Term. Subject to Section 3(b) regarding Ten Percent Stockholders, no Option or SAR will be exercisable after the expiration of ten years from the date of grant of such Award or such shorter period specified in the Award Agreement.

(b) Exercise or Strike Price. Subject to Section 3(b) regarding Ten Percent Stockholders, the exercise or strike price of each Option or SAR will not be less than 100% of the Fair Market Value on the date of grant of such Award. Notwithstanding the foregoing, an Option or SAR may be granted with an exercise or strike price lower than 100% of the Fair Market Value on the date of grant of such Award if such Award is granted pursuant to an assumption of or substitution for another option or stock appreciation right pursuant to a Corporate Transaction and in a manner consistent with the provisions of Sections 409A and, if applicable, 424(a) of the Code.

(c) Exercise Procedure and Payment of Exercise Price for Options. In order to exercise an Option, the Participant must provide notice of exercise to the Plan Administrator in accordance with the procedures specified in the Option Agreement or otherwise provided by the Company. The Board has the authority to grant Options that do not permit all of the following methods of payment (or otherwise restrict the ability to use certain methods) and to grant Options that require the consent of the Company to utilize a particular method of payment. The exercise price of an Option may be paid, to the extent permitted by Applicable Law and as determined by the Board, by one or more of the following methods of payment to the extent set forth in the Option Agreement:

(i) by cash or check, bank draft or money order payable to the Company;

(ii) pursuant to a "cashless exercise" program developed under Regulation T as promulgated by the Federal Reserve Board that, prior to the issuance of the Common Stock subject to the Option, results in either the receipt of cash (or check) by the Company or the receipt of irrevocable instructions to pay the exercise price to the Company from the sales proceeds;

(iii) by delivery to the Company (either by actual delivery or attestation) of shares of Common Stock that are already owned by the Participant free and clear of any liens, claims, encumbrances or security interests, with a Fair Market Value on the date of exercise that does not exceed the exercise price, provided that (1) at the time of exercise the Common Stock is publicly traded, (2) any remaining balance of the exercise price not satisfied by such delivery is paid by the Participant in cash or other permitted form of payment, (3) such delivery would not violate any Applicable Law or agreement restricting the redemption of the Common Stock, (4) any certificated shares are endorsed or accompanied by an executed assignment separate from certificate, and (5) such shares have been held by the Participant for any minimum period necessary to avoid adverse accounting treatment as a result of such delivery;

(iv) if the Option is a Nonstatutory Stock Option, by a "net exercise" arrangement pursuant to which the Company will reduce the number of shares of Common Stock issuable upon exercise by the largest whole number of shares with a Fair Market Value on the date of exercise that does not exceed the exercise price, provided that (1) such shares used to pay the exercise price will not be exercisable thereafter and (2) any remaining balance of the exercise price not satisfied by such net exercise is paid by the Participant in cash or other permitted form of payment; or

(v) in any other form of consideration that may be acceptable to the Board and permissible under Applicable Law.

(d) Exercise Procedure and Payment of Appreciation Distribution for SARs. In order to exercise any SAR, the Participant must provide notice of exercise to the Plan Administrator in accordance with the SAR Agreement. The appreciation distribution payable to a Participant upon the exercise of a SAR will not be greater than an amount equal to the excess of (i) the aggregate Fair Market Value on the date of exercise of a number of shares of Common Stock equal to the number of Common Stock equivalents that are vested and being exercised under such SAR, over (ii) the strike price of such SAR. Such appreciation distribution may be paid to the Participant in the form of Common Stock or cash (or any combination of Common Stock and cash) or in any other form of payment, as determined by the Board and specified in the SAR Agreement.

(e) Transferability. Options and SARs may not be transferred to third party financial institutions for value. The Board may impose such additional limitations on the transferability of an Option or SAR as it determines. In the absence of any such determination by the Board, the following restrictions on the transferability of Options and SARs will apply, provided that except as explicitly provided herein, neither an Option nor a SAR may be transferred for consideration and *provided, further*, that if an Option is an Incentive Stock Option, such Option may be deemed to be a Nonstatutory Stock Option as a result of such transfer:

(i) Restrictions on Transfer. An Option or SAR will not be transferable, except by will or by the laws of descent and distribution, and will be exercisable during the lifetime of the Participant only by the Participant; provided, however, that the Board may permit transfer of an Option or SAR in a manner that is not prohibited by applicable tax and securities laws upon the Participant's request, including to a trust if the Participant is considered to be the sole beneficial owner of such trust (as determined under Section 671 of the Code and applicable state law) while such Option or SAR is held in such trust, provided that the Participant and the trustee enter into a transfer and other agreements required by the Company.

(ii) Domestic Relations Orders. Notwithstanding the foregoing, subject to the execution of transfer documentation in a format acceptable to the Company and subject to the approval of the Board or a duly authorized Officer, an Option or SAR may be transferred pursuant to a domestic relations order.

(f) Vesting. The Board may impose such restrictions on or conditions to the vesting and/or exercisability of an Option or SAR as determined by the Board. Except as otherwise provided in the Award Agreement or other written agreement between a Participant and the Company or an Affiliate, vesting of Options and SARs will cease upon termination of the Participant's Continuous Service.

(g) Termination of Continuous Service for Cause. Except as explicitly otherwise provided in the Award Agreement or other written agreement between a Participant and the Company or an Affiliate, if a Participant's Continuous Service is terminated for Cause, the Participant's Options and SARs will terminate and be forfeited immediately upon such

termination of Continuous Service, and the Participant will be prohibited from exercising any portion (including any vested portion) of such Awards on and after the date of such termination of Continuous Service and the Participant will have no further right, title or interest in such forfeited Award, the shares of Common Stock subject to the forfeited Award, or any consideration in respect of the forfeited Award.

(h) Post-Termination Exercise Period Following Termination of Continuous Service for Reasons Other than Cause. Subject to Section 4(i), if a Participant's Continuous Service terminates for any reason other than for Cause, the Participant may exercise his or her Option or SAR to the extent vested, but only within the following period of time or, if applicable, such other period of time provided in the Award Agreement or other written agreement between a Participant and the Company or an Affiliate; provided, however, that in no event may such Award be exercised after the expiration of its maximum term (as set forth in Section 4(a)):

(i) three months following the date of such termination if such termination is a termination without Cause (other than any termination due to the Participant's Disability or death);

(ii) 12 months following the date of such termination if such termination is due to the Participant's Disability;

(iii) 18 months following the date of such termination if such termination is due to the Participant's death; or

(iv) 18 months following the date of the Participant's death if such death occurs following the date of such termination but during the period such Award is otherwise exercisable (as provided in (i) or (ii) above).

Following the date of such termination, to the extent the Participant does not exercise such Award within the applicable Post-Termination Exercise Period (or, if earlier, prior to the expiration of the maximum term of such Award), such unexercised portion of the Award will terminate, and the Participant will have no further right, title or interest in the terminated Award, the shares of Common Stock subject to the terminated Award, or any consideration in respect of the terminated Award.

(i) Restrictions on Exercise; Extension of Exercisability. A Participant may not exercise an Option or SAR at any time that the issuance of shares of Common Stock upon such exercise would violate Applicable Law. Except as otherwise provided in the Award Agreement or other written agreement between a Participant and the Company or an Affiliate, if a Participant's Continuous Service terminates for any reason other than for Cause and, at any time during the last thirty days of the applicable Post-Termination Exercise Period: (i) the exercise of the Participant's Option or SAR would be prohibited solely because the issuance of shares of Common Stock upon such exercise would violate Applicable Law, or (ii) the immediate sale of any shares of Common Stock issued upon such exercise would violate the Company's Trading Policy, then the applicable Post-Termination Exercise Period will be extended to the last day of the calendar month that commences following the date the Award would otherwise expire, with an additional extension of the exercise period to the last day of the next calendar month to apply

if any of the foregoing restrictions apply at any time during such extended exercise period, generally without limitation as to the maximum permitted number of extensions); provided, however, that in no event may such Award be exercised after the expiration of its maximum term (as set forth in Section 4(a)).

(j) Non-Exempt Employees. No Option or SAR, whether or not vested, granted to an Employee who is a non-exempt employee for purposes of the Fair Labor Standards Act of 1938, as amended, will be first exercisable for any shares of Common Stock until at least six months following the date of grant of such Award. Notwithstanding the foregoing, in accordance with the provisions of the Worker Economic Opportunity Act, any vested portion of such Award may be exercised earlier than six months following the date of grant of such Award in the event of (i) such Participant's death or Disability, (ii) a Corporate Transaction in which such Award is not assumed, continued or substituted, (iii) a Change in Control, or (iv) such Participant's retirement (as such term may be defined in the Award Agreement or another applicable agreement or, in the absence of any such definition, in accordance with the Company's then current employment policies and guidelines). This Section 4(j) is intended to operate so that any income derived by a non-exempt employee in connection with the exercise or vesting of an Option or SAR will be exempt from his or her regular rate of pay.

(k) Whole Shares. Options and SARs may be exercised only with respect to whole shares of Common Stock or their equivalents.

5. AWARDS OTHER THAN OPTIONS AND STOCK APPRECIATION RIGHTS.

(a) Restricted Stock Awards and RSU Awards. Each Restricted Stock Award and RSU Award will have such terms and conditions as determined by the Board; provided, however, that each Restricted Stock Award Agreement and RSU Award Agreement will conform (through incorporation of the provisions hereof by reference in the Award Agreement or otherwise) to the substance of each of the following provisions:

(i) Form of Award.

(1) RSAs: To the extent consistent with the Company's Bylaws, at the Board's election, shares of Common Stock subject to a Restricted Stock Award may be (i) held in book entry form subject to the Company's instructions until such shares become vested or any other restrictions lapse, or (ii) evidenced by a certificate, which certificate will be held in such form and manner as determined by the Board. Unless otherwise determined by the Board, a Participant will have voting and other rights as a stockholder of the Company with respect to any shares subject to a Restricted Stock Award.

(2) RSUs: A RSU Award represents a Participant's right to be issued on a future date the number of shares of Common Stock that is equal to the number of restricted stock units subject to the RSU Award. As a holder of a RSU Award, a Participant is an unsecured creditor of the Company with respect to the Company's unfunded obligation, if any, to issue shares of Common Stock in settlement of such Award and nothing contained in the Plan or any RSU Agreement, and no action taken pursuant to its provisions, will create or be construed to create a trust of any kind or a fiduciary relationship between a Participant and the Company or an Affiliate or any other person. A Participant will not have voting or any other rights as a stockholder of the Company with respect to any RSU Award (unless and until shares are actually issued in settlement of a vested RSU Award).

(ii) Consideration.

(1) RSA: A Restricted Stock Award may be granted in consideration for (A) cash or check, bank draft or money order payable to the Company, (B) past services to the Company or an Affiliate, or (C) any other form of consideration (including future services) as the Board may determine and permissible under Applicable Law.

(2) RSU: Unless otherwise determined by the Board at the time of grant, a RSU Award will be granted in consideration for the Participant's services to the Company or an Affiliate, such that the Participant will not be required to make any payment to the Company (other than such services) with respect to the grant or vesting of the RSU Award, or the issuance of any shares of Common Stock pursuant to the RSU Award. If, at the time of grant, the Board determines that any consideration must be paid by the Participant (in a form other than the Participant's services to the Company or an Affiliate) upon the issuance of any shares of Common Stock in settlement of the RSU Award, such consideration may be paid in any form of consideration as the Board may determine and permissible under Applicable Law.

(iii) Vesting. The Board may impose such restrictions on or conditions to the vesting of a Restricted Stock Award or RSU Award as determined by the Board. Except as otherwise provided in the Award Agreement or other written agreement between a Participant and the Company or an Affiliate, vesting of Restricted Stock Awards and RSU Awards will cease upon termination of the Participant's Continuous Service.

(iv) Termination of Continuous Service. Except as otherwise provided in the Award Agreement or other written agreement between a Participant and the Company or an Affiliate, if a Participant's Continuous Service terminates for any reason, (i) the Company may receive through a forfeiture condition or a repurchase right any or all of the shares of Common Stock held by the Participant under his or her Restricted Stock Award that have not vested as of the date of such termination as set forth in the Restricted Stock Award Agreement and (ii) any portion of his or her RSU Award that has not vested will be forfeited upon such termination and the Participant will have no further right, title or interest in the RSU Award, the shares of Common Stock issuable pursuant to the RSU Award, or any consideration in respect of the RSU Award.

(v) Dividends and Dividend Equivalents. Dividends or dividend equivalents may be paid or credited, as applicable, with respect to any shares of Common Stock subject to a Restricted Stock Award or RSU Award, as determined by the Board and specified in the Award Agreement).

(vi) Settlement of RSU Awards. A RSU Award may be settled by the issuance of shares of Common Stock or cash (or any combination thereof) or in any other form of payment, as determined by the Board and specified in the RSU Award Agreement. At the time of grant, the Board may determine to impose such restrictions or conditions that delay such delivery to a date following the vesting of the RSU Award.

(b) Performance Awards. With respect to any Performance Award, the length of any Performance Period, the Performance Goals to be achieved during the Performance Period, the other terms and conditions of such Award, and the measure of whether and to what degree such Performance Goals have been attained will be determined by the Board.

(c) Other Awards. Other forms of Awards valued in whole or in part by reference to, or otherwise based on, Common Stock, including the appreciation in value thereof (e.g., options or stock rights with an exercise price or strike price less than 100% of the Fair Market Value at the time of grant) may be granted either alone or in addition to Awards provided for under Section 4 and the preceding provisions of this Section 5. Subject to the provisions of the Plan, the Board will have sole and complete discretion to determine the persons to whom and the time or times at which such Other Awards will be granted, the number of shares of Common Stock (or the cash equivalent thereof) to be granted pursuant to such Other Awards and all other terms and conditions of such Other Awards.

6. ADJUSTMENTS UPON CHANGES IN COMMON STOCK; OTHER CORPORATE EVENTS.

(a) Capitalization Adjustments. In the event of a Capitalization Adjustment, the Board shall appropriately and proportionately adjust: (i) the class(es) and maximum number of shares of Common Stock subject to the Plan and the maximum number of shares by which the Share Reserve may annually increase pursuant to Section 2(a); (ii) the class(es) and maximum number of shares that may be issued pursuant to the exercise of Incentive Stock Options pursuant to Section 2(a); and (iii) the class(es) and number of securities and exercise price, strike price or purchase price of Common Stock subject to outstanding Awards. The Board shall make such adjustments, and its determination shall be final, binding and conclusive. Notwithstanding the foregoing, no fractional shares or rights for fractional shares of Common Stock shall be created in order to implement any Capitalization Adjustment. The Board shall determine an appropriate equivalent benefit, if any, for any fractional shares or rights to fractional shares that might be created by the adjustments referred to in the preceding provisions of this Section.

(b) Dissolution or Liquidation. Except as otherwise provided in the Award Agreement, in the event of a dissolution or liquidation of the Company, all outstanding Awards (other than Awards consisting of vested and outstanding shares of Common Stock not subject to a forfeiture condition or the Company's right of repurchase) will terminate immediately prior to the completion of such dissolution or liquidation, and the shares of Common Stock subject to the Company's repurchase rights or subject to a forfeiture condition may be repurchased or reacquired by the Company notwithstanding the fact that the holder of such Award is providing Continuous Service, provided, however, that the Board may determine to cause some or all Awards to become fully vested, exercisable and/or no longer subject to repurchase or forfeiture (to the extent such Awards have not previously expired or terminated) before the dissolution or liquidation is completed but contingent on its completion.

(c) Corporate Transaction. The following provisions will apply to Awards in the event of a Corporate Transaction unless otherwise provided in the instrument evidencing the Award or any other written agreement between the Company or any Affiliate and the Participant or unless otherwise expressly provided by the Board at the time of grant of an Award.

(i) Awards May Be Assumed. In the event of a Corporate Transaction, any surviving corporation or acquiring corporation (or the surviving or acquiring corporation's parent company) may assume or continue any or all Awards outstanding under the Plan or may substitute similar awards for Awards outstanding under the Plan (including but not limited to, awards to acquire the same consideration paid to the stockholders of the Company pursuant to the Corporate Transaction), and any reacquisition or repurchase rights held by the Company in respect of Common Stock issued pursuant to Awards may be assigned by the Company to the successor of the Company (or the successor's parent company, if any), in connection with such Corporate Transaction. A surviving corporation or acquiring corporation (or its parent) may choose to assume or continue only a portion of an Award or substitute a similar award for only a portion of an Award, or may choose to assume or continue the Awards held by some, but not all Participants. The terms of any assumption, continuation or substitution will be set by the Board.

(ii) Awards Held by Current Participants. In the event of a Corporate Transaction in which the surviving corporation or acquiring corporation (or its parent company) does not assume or continue such outstanding Awards or substitute similar awards for such outstanding Awards, then with respect to Awards that have not been assumed, continued or substituted and that are held by Participants whose Continuous Service has not terminated prior to the effective time of the Corporate Transaction (referred to as the "***Current Participants***"), the vesting of such Awards (and, with respect to Options and Stock Appreciation Rights, the time when such Awards may be exercised) will be accelerated in full to a date prior to the effective time of such Corporate Transaction (contingent upon the effectiveness of the Corporate Transaction) as the Board determines (or, if the Board does not determine such a date, to the date that is five (5) days prior to the effective time of the Corporate Transaction), and such Awards will terminate if not exercised (if applicable) at or prior to the effective time of the Corporate Transaction, and any reacquisition or repurchase rights held by the Company with respect to such Awards will lapse (contingent upon the effectiveness of the Corporate Transaction). With respect to the vesting of Performance Awards that will accelerate upon the occurrence of a Corporate Transaction pursuant to this subsection (ii) and that have multiple vesting levels depending on the level of performance, unless otherwise provided in the Award Agreement or unless otherwise provided by the Board, the vesting of such Performance Awards will accelerate at 100% of the target level upon the occurrence of the Corporate Transaction. With respect to the vesting of Awards that will accelerate upon the occurrence of a Corporate Transaction pursuant to this subsection (ii) and are settled in the form of a cash payment, such cash payment will be made no later than 30 days following the occurrence of the Corporate Transaction.

(iii) Awards Held by Persons other than Current Participants. In the event of a Corporate Transaction in which the surviving corporation or acquiring corporation (or its parent company) does not assume or continue such outstanding Awards or substitute similar awards for such outstanding Awards, then with respect to Awards that have not been assumed, continued or substituted and that are held by persons other than Current Participants, such Awards will terminate if not exercised (if applicable) prior to the occurrence of the Corporate Transaction; provided, however, that any reacquisition or repurchase rights held by the Company with respect to such Awards will not terminate and may continue to be exercised notwithstanding the Corporate Transaction.

(iv) Payment for Awards in Lieu of Exercise. Notwithstanding the foregoing, in the event an Award will terminate if not exercised prior to the effective time of a Corporate Transaction, the Board may provide, in its sole discretion, that the holder of such Award may not exercise such Award but will receive a payment, in such form as may be determined by the Board, equal in value, at the effective time, to the excess, if any, of (1) the value of the property the Participant would have received upon the exercise of the Award (including, at the discretion of the Board, any unvested portion of such Award), over (2) any exercise price payable by such holder in connection with such exercise.

(d) Appointment of Stockholder Representative. As a condition to the receipt of an Award under this Plan, a Participant will be deemed to have agreed that the Award will be subject to the terms of any agreement governing a Corporate Transaction involving the Company, including, without limitation, a provision for the appointment of a stockholder representative that is authorized to act on the Participant's behalf with respect to any escrow, indemnities and any contingent consideration.

(e) No Restriction on Right to Undertake Transactions. The grant of any Award under the Plan and the issuance of shares pursuant to any Award does not affect or restrict in any way the right or power of the Company or the stockholders of the Company to make or authorize any adjustment, recapitalization, reorganization or other change in the Company's capital structure or its business, any merger or consolidation of the Company, any issue of stock or of options, rights or options to purchase stock or of bonds, debentures, preferred or prior preference stocks whose rights are superior to or affect the Common Stock or the rights thereof or which are convertible into or exchangeable for Common Stock, or the dissolution or liquidation of the Company, or any sale or transfer of all or any part of its assets or business, or any other corporate act or proceeding, whether of a similar character or otherwise.

7. ADMINISTRATION.

(a) Administration by Board. The Board will administer the Plan unless and until the Board delegates administration of the Plan to a Committee or Committees, as provided in subsection (c) below.

(b) Powers of Board. The Board will have the power, subject to, and within the limitations of, the express provisions of the Plan:

(i) To determine from time to time (1) which of the persons eligible under the Plan will be granted Awards; (2) when and how each Award will be granted; (3) what type or combination of types of Award will be granted; (4) the provisions of each Award granted (which need not be identical), including the time or times when a person will be permitted to receive an issuance of Common Stock or other payment pursuant to an Award; (5) the number of shares of Common Stock or cash equivalent with respect to which an Award will be granted to each such person; (6) the Fair Market Value applicable to an Award; and (7) the terms of any Performance Award that is not valued in whole or in part by reference to, or otherwise based on, the Common Stock, including the amount of cash payment or other property that may be earned and the timing of payment.

(ii) To construe and interpret the Plan and Awards granted under it, and to establish, amend and revoke rules and regulations for its administration. The Board, in the exercise of this power, may correct any defect, omission or inconsistency in the Plan or in any Award Agreement, in a manner and to the extent it deems necessary or expedient to make the Plan or Award fully effective.

(iii) To settle all controversies regarding the Plan and Awards granted under it.

(iv) To accelerate the time at which an Award may first be exercised or the time during which an Award or any part thereof will vest, notwithstanding the provisions in the Award Agreement stating the time at which it may first be exercised or the time during which it will vest.

(v) To prohibit the exercise of any Option, SAR or other exercisable Award during a period of up to 30 days prior to the consummation of any pending stock dividend, stock split, combination or exchange of shares, merger, consolidation or other distribution (other than normal cash dividends) of Company assets to stockholders, or any other change affecting the shares of Common Stock or the share price of the Common Stock including any Corporate Transaction, for reasons of administrative convenience.

(vi) To suspend or terminate the Plan at any time. Suspension or termination of the Plan will not Materially Impair rights and obligations under any Award granted while the Plan is in effect except with the written consent of the affected Participant.

(vii) To amend the Plan in any respect the Board deems necessary or advisable; provided, however, that stockholder approval will be required for any amendment to the extent required by Applicable Law. Except as provided above, rights under any Award granted before amendment of the Plan will not be Materially Impaired by any amendment of the Plan unless (1) the Company requests the consent of the affected Participant, and (2) such Participant consents in writing.

(viii) To submit any amendment to the Plan for stockholder approval.

(ix) To approve forms of Award Agreements for use under the Plan and to amend the terms of any one or more Awards, including, but not limited to, amendments to provide terms more favorable to the Participant than previously provided in the Award Agreement, subject to any specified limits in the Plan that are not subject to Board discretion; *provided however*, that, a Participant's rights under any Award will not be Materially Impaired by any such amendment unless (1) the Company requests the consent of the affected Participant, and (2) such Participant consents in writing.

(x) Generally, to exercise such powers and to perform such acts as the Board deems necessary or expedient to promote the best interests of the Company and that are not in conflict with the provisions of the Plan or Awards.

(xi) To adopt such procedures and sub-plans as are necessary or appropriate to permit and facilitate participation in the Plan by, or take advantage of specific tax treatment for Awards granted to, Employees, Directors or Consultants who are foreign nationals or employed outside the United States (provided that Board approval will not be necessary for immaterial modifications to the Plan or any Award Agreement to ensure or facilitate compliance with the laws of the relevant foreign jurisdiction).

(xii) To effect, at any time and from time to time, subject to the consent of any Participant whose Award is Materially Impaired by such action, (1) the reduction of the exercise price (or strike price) of any outstanding Option or SAR; (2) the cancellation of any outstanding Option or SAR and the grant in substitution therefor of (A) a new Option, SAR, Restricted Stock Award, RSU Award or Other Award, under the Plan or another equity plan of the Company, covering the same or a different number of shares of Common Stock, (B) cash and/or (C) other valuable consideration (as determined by the Board); or (3) any other action that is treated as a repricing under generally accepted accounting principles.

(c) Delegation to Committee.

(i) General. The Board may delegate some or all of the administration of the Plan to a Committee or Committees. If administration of the Plan is delegated to a Committee, the Committee will have, in connection with the administration of the Plan, the powers theretofore possessed by the Board that have been delegated to the Committee, including the power to delegate to another Committee or a subcommittee of the Committee any of the administrative powers the Committee is authorized to exercise (and references in this Plan to the Board will thereafter be to the Committee or subcommittee), subject, however, to such resolutions, not inconsistent with the provisions of the Plan, as may be adopted from time to time by the Board. Each Committee may retain the authority to concurrently administer the Plan with Committee or subcommittee to which it has delegated its authority hereunder and may, at any time, revest in such Committee some or all of the powers previously delegated. The Board may retain the authority to concurrently administer the Plan with any Committee and may, at any time, revest in the Board some or all of the powers previously delegated.

(ii) Rule 16b-3 Compliance. To the extent an Award is intended to qualify for the exemption from Section 16(b) of the Exchange Act that is available under Rule 16b-3 of the Exchange Act, the Award will be granted by the Board or a Committee that consists solely of two or more Non-Employee Directors, as determined under Rule 16b-3(b)(3) of the Exchange Act and thereafter any action establishing or modifying the terms of the Award will be approved by the Board or a Committee meeting such requirements to the extent necessary for such exemption to remain available.

(d) Effect of Board's Decision. All determinations, interpretations and constructions made by the Board or any Committee in good faith will not be subject to review by any person and will be final, binding and conclusive on all persons.

(e) Delegation to an Officer. The Board or any Committee may delegate to one or more Officers the authority to do one or both of the following (i) designate Employees who are not Officers to be recipients of Options and SARs (and, to the extent permitted by Applicable Law, other types of Awards) and, to the extent permitted by Applicable Law, the terms thereof, and (ii) determine the number of shares of Common Stock to be subject to such Awards granted to such Employees; provided, however, that the resolutions or charter adopted by the Board or any Committee evidencing such delegation will specify the total number of shares of Common Stock that may be subject to the Awards granted by such Officer and that such Officer may not grant an Award to himself or herself. Any such Awards will be granted on the applicable form of Award Agreement most recently approved for use by the Board or the Committee, unless otherwise provided in the resolutions approving the delegation authority. Notwithstanding anything to the contrary herein, neither the Board nor any Committee may delegate to an Officer who is acting solely in the capacity of an Officer (and not also as a Director) the authority to determine the Fair Market Value.

8. TAX WITHHOLDING

(a) Withholding Authorization. As a condition to acceptance of any Award under the Plan, a Participant authorizes withholding from payroll and any other amounts payable to such Participant, and otherwise agree to make adequate provision for (including), any sums required to satisfy any U.S. federal, state, local and/or foreign tax or social insurance contribution withholding obligations of the Company or an Affiliate, if any, which arise in connection with the exercise, vesting or settlement of such Award, as applicable. Accordingly, a Participant may not be able to exercise an Award even though the Award is vested, and the Company shall have no obligation to issue shares of Common Stock subject to an Award, unless and until such obligations are satisfied.

(b) Satisfaction of Withholding Obligation. To the extent permitted by the terms of an Award Agreement, the Company may, in its sole discretion, satisfy any U.S. federal, state, local and/or foreign tax or social insurance withholding obligation relating to an Award by any of the following means or by a combination of such means: (i) causing the Participant to tender a cash payment; (ii) withholding shares of Common Stock from the shares of Common Stock issued or otherwise issuable to the Participant in connection with the Award; (iii) withholding cash from an Award settled in cash; (iv) withholding payment from any amounts otherwise payable to the Participant; (v) by allowing a Participant to effectuate a “cashless exercise” pursuant to a program developed under Regulation T as promulgated by the Federal Reserve Board; or (vi) by such other method as may be set forth in the Award Agreement.

(c) No Obligation to Notify or Minimize Taxes; No Liability to Claims. Except as required by Applicable Law the Company has no duty or obligation to any Participant to advise such holder as to the time or manner of exercising such Award. Furthermore, the Company has no duty or obligation to warn or otherwise advise such holder of a pending termination or expiration of an Award or a possible period in which the Award may not be exercised. The Company has no duty or obligation to minimize the tax consequences of an Award to the holder of such Award and will not be liable to any holder of an Award for any adverse tax consequences to such holder in connection with an Award. As a condition to accepting an Award under the Plan, each Participant (i) agrees to not make any claim against the Company, or any of its Officers, Directors, Employees or Affiliates related to tax liabilities arising from such Award or other Company compensation and (ii) acknowledges that such Participant was advised to consult with his or her own personal tax, financial and other legal advisors regarding the tax

consequences of the Award and has either done so or knowingly and voluntarily declined to do so. Additionally, each Participant acknowledges any Option or SAR granted under the Plan is exempt from Section 409A only if the exercise or strike price is at least equal to the "fair market value" of the Common Stock on the date of grant as determined by the Internal Revenue Service and there is no other impermissible deferral of compensation associated with the Award. Additionally, as a condition to accepting an Option or SAR granted under the Plan, each Participant agrees not make any claim against the Company, or any of its Officers, Directors, Employees or Affiliates in the event that the Internal Revenue Service asserts that such exercise price or strike price is less than the "fair market value" of the Common Stock on the date of grant as subsequently determined by the Internal Revenue Service.

(d) Withholding Indemnification. As a condition to accepting an Award under the Plan, in the event that the amount of the Company's and/or its Affiliate's withholding obligation in connection with such Award was greater than the amount actually withheld by the Company and/or its Affiliates, each Participant agrees to indemnify and hold the Company and/or its Affiliates harmless from any failure by the Company and/or its Affiliates to withhold the proper amount.

9. MISCELLANEOUS.

(a) Source of Shares. The stock issuable under the Plan will be shares of authorized but unissued or reacquired Common Stock, including shares repurchased by the Company on the open market or otherwise.

(b) Use of Proceeds from Sales of Common Stock. Proceeds from the sale of shares of Common Stock pursuant to Awards will constitute general funds of the Company.

(c) Corporate Action Constituting Grant of Awards. Corporate action constituting a grant by the Company of an Award to any Participant will be deemed completed as of the date of such corporate action, unless otherwise determined by the Board, regardless of when the instrument, certificate, or letter evidencing the Award is communicated to, or actually received or accepted by, the Participant. In the event that the corporate records (e.g., Board consents, resolutions or minutes) documenting the corporate action approving the grant contain terms (e.g., exercise price, vesting schedule or number of shares) that are inconsistent with those in the Award Agreement or related grant documents as a result of a clerical error in the Award Agreement or related grant documents, the corporate records will control and the Participant will have no legally binding right to the incorrect term in the Award Agreement or related grant documents.

(d) Stockholder Rights. No Participant will be deemed to be the holder of, or to have any of the rights of a holder with respect to, any shares of Common Stock subject to such Award unless and until (i) such Participant has satisfied all requirements for exercise of the Award pursuant to its terms, if applicable, and (ii) the issuance of the Common Stock subject to such Award is reflected in the records of the Company.

(e) No Employment or Other Service Rights. Nothing in the Plan, any Award Agreement or any other instrument executed thereunder or in connection with any Award granted pursuant thereto will confer upon any Participant any right to continue to serve the Company or an Affiliate in the capacity in effect at the time the Award was granted or affect the right of the Company or an Affiliate to terminate at will and without regard to any future vesting opportunity that a Participant may have with respect to any Award (i) the employment of an Employee with or without notice and with or without cause, (ii) the service of a Consultant pursuant to the terms of such Consultant's agreement with the Company or an Affiliate, or (iii) the service of a Director pursuant to the Bylaws of the Company or an Affiliate, and any applicable provisions of the corporate law of the state or foreign jurisdiction in which the Company or the Affiliate is incorporated, as the case may be. Further, nothing in the Plan, any Award Agreement or any other instrument executed thereunder or in connection with any Award will constitute any promise or commitment by the Company or an Affiliate regarding the fact or nature of future positions, future work assignments, future compensation or any other term or condition of employment or service or confer any right or benefit under the Award or the Plan unless such right or benefit has specifically accrued under the terms of the Award Agreement and/or Plan.

(f) Change in Time Commitment. In the event a Participant's regular level of time commitment in the performance of his or her services for the Company and any Affiliates is reduced (for example, and without limitation, if the Participant is an Employee of the Company and the Employee has a change in status from a full-time Employee to a part-time Employee or takes an extended leave of absence) after the date of grant of any Award to the Participant, the Board may determine, to the extent permitted by Applicable Law, to (i) make a corresponding reduction in the number of shares or cash amount subject to any portion of such Award that is scheduled to vest or become payable after the date of such change in time commitment, and (ii) in lieu of or in combination with such a reduction, extend the vesting or payment schedule applicable to such Award. In the event of any such reduction, the Participant will have no right with respect to any portion of the Award that is so reduced or extended.

(g) Execution of Additional Documents. As a condition to accepting an Award under the Plan, the Participant agrees to execute any additional documents or instruments necessary or desirable, as determined in the Plan Administrator's sole discretion, to carry out the purposes or intent of the Award, or facilitate compliance with securities and/or other regulatory requirements, in each case at the Plan Administrator's request.

(h) Electronic Delivery and Participation. Any reference herein or in an Award Agreement to a "written" agreement or document will include any agreement or document delivered electronically, filed publicly at www.sec.gov (or any successor website thereto) or posted on the Company's intranet (or other shared electronic medium controlled by the Company to which the Participant has access). By accepting any Award the Participant consents to receive documents by electronic delivery and to participate in the Plan through any on-line electronic system established and maintained by the Plan Administrator or another third party selected by the Plan Administrator. The form of delivery of any Common Stock (e.g., a stock certificate or electronic entry evidencing such shares) shall be determined by the Company.

(i) Clawback/Recovery. All Awards granted under the Plan will be subject to recoupment in accordance with any clawback policy that the Company is required to adopt pursuant to the listing standards of any national securities exchange or association on which the Company's securities are listed or as is otherwise required by the Dodd-Frank Wall Street Reform and Consumer Protection Act or other Applicable Law and any clawback policy that the Company otherwise adopts, to the extent applicable and permissible under Applicable Law. In addition, the Board may impose such other clawback, recovery or recoupment provisions in an Award Agreement as the Board determines necessary or appropriate, including but not limited to a reacquisition right in respect of previously acquired shares of Common Stock or other cash or property upon the occurrence of Cause. No recovery of compensation under such a clawback policy will be an event giving rise to a Participant's right to voluntary terminate employment upon a "resignation for good reason," or for a "constructive termination" or any similar term under any plan of or agreement with the Company.

(j) Securities Law Compliance. A Participant will not be issued any shares in respect of an Award unless either (i) the shares are registered under the Securities Act; or (ii) the Company has determined that such issuance would be exempt from the registration requirements of the Securities Act. Each Award also must comply with other Applicable Law governing the Award, and a Participant will not receive such shares if the Company determines that such receipt would not be in material compliance with Applicable Law.

(k) Transfer or Assignment of Awards; Issued Shares. Except as expressly provided in the Plan or the form of Award Agreement, Awards granted under the Plan may not be transferred or assigned by the Participant. After the vested shares subject to an Award have been issued, or in the case of Restricted Stock and similar awards, after the issued shares have vested, the holder of such shares is free to assign, hypothecate, donate, encumber or otherwise dispose of any interest in such shares provided that any such actions are in compliance with the provisions herein, the terms of the Trading Policy and Applicable Law.

(l) Effect on Other Employee Benefit Plans. The value of any Award granted under the Plan, as determined upon grant, vesting or settlement, shall not be included as compensation, earnings, salaries, or other similar terms used when calculating any Participant's benefits under any employee benefit plan sponsored by the Company or any Affiliate, except as such plan otherwise expressly provides. The Company expressly reserves its rights to amend, modify, or terminate any of the Company's or any Affiliate's employee benefit plans.

(m) Deferrals. To the extent permitted by Applicable Law, the Board, in its sole discretion, may determine that the delivery of Common Stock or the payment of cash, upon the exercise, vesting or settlement of all or a portion of any Award may be deferred and may also establish programs and procedures for deferral elections to be made by Participants. Deferrals by will be made in accordance with the requirements of Section 409A.

(n) Section 409A. Unless otherwise expressly provided for in an Award Agreement, the Plan and Award Agreements will be interpreted to the greatest extent possible in a manner that makes the Plan and the Awards granted hereunder exempt from Section 409A, and, to the extent not so exempt, in compliance with the requirements of Section 409A. If the Board determines that any Award granted hereunder is not exempt from and is therefore subject to Section 409A, the Award Agreement evidencing such Award will incorporate the terms and conditions necessary to avoid the consequences specified in Section 409A(a)(1) of the Code, and to the extent an Award Agreement is silent on terms necessary for compliance, such terms are

hereby incorporated by reference into the Award Agreement. Notwithstanding anything to the contrary in this Plan (and unless the Award Agreement specifically provides otherwise), if the shares of Common Stock are publicly traded, and if a Participant holding an Award that constitutes "deferred compensation" under Section 409A is a "specified employee" for purposes of Section 409A, no distribution or payment of any amount that is due because of a "separation from service" (as defined in Section 409A without regard to alternative definitions thereunder) will be issued or paid before the date that is six months and one day following the date of such Participant's "separation from service" or, if earlier, the date of the Participant's death, unless such distribution or payment can be made in a manner that complies with Section 409A, and any amounts so deferred will be paid in a lump sum on the day after such six month period elapses, with the balance paid thereafter on the original schedule.

(o) CHOICE OF LAW. This Plan and any controversy arising out of or relating to this Plan shall be governed by, and construed in accordance with, the internal laws of the State of Delaware, without regard to conflict of law principles that would result in any application of any law other than the law of the State of Delaware.

10. COVENANTS OF THE COMPANY.

(a) Compliance with Law. The Company will seek to obtain from each regulatory commission or agency, as may be deemed to be necessary, having jurisdiction over the Plan such authority as may be required to grant Awards and to issue and sell shares of Common Stock upon exercise or vesting of the Awards; provided, however, that this undertaking will not require the Company to register under the Securities Act the Plan, any Award or any Common Stock issued or issuable pursuant to any such Award. If, after reasonable efforts and at a reasonable cost, the Company is unable to obtain from any such regulatory commission or agency the authority that counsel for the Company deems necessary or advisable for the lawful issuance and sale of Common Stock under the Plan, the Company will be relieved from any liability for failure to issue and sell Common Stock upon exercise or vesting of such Awards unless and until such authority is obtained. A Participant is not eligible for the grant of an Award or the subsequent issuance of Common Stock pursuant to the Award if such grant or issuance would be in violation of any Applicable Law.

11. ADDITIONAL RULES FOR AWARDS SUBJECT TO SECTION 409A.

(a) Application. Unless the provisions of this Section of the Plan are expressly superseded by the provisions in the form of Award Agreement, the provisions of this Section shall apply and shall supersede anything to the contrary set forth in the Award Agreement for a Non-Exempt Award.

(b) Non-Exempt Awards Subject to Non-Exempt Severance Arrangements. To the extent a Non-Exempt Award is subject to Section 409A due to application of a Non-Exempt Severance Arrangement, the following provisions of this subsection (b) apply.

(i) If the Non-Exempt Award vests in the ordinary course during the Participant's Continuous Service in accordance with the vesting schedule set forth in the Award Agreement, and does not accelerate vesting under the terms of a Non-Exempt Severance Arrangement, in no event will the shares be issued in respect of such Non-Exempt Award any later than the later of: (i) December 31st of the calendar year that includes the applicable vesting date, or (ii) the 60th day that follows the applicable vesting date.

(ii) If vesting of the Non-Exempt Award accelerates under the terms of a Non-Exempt Severance Arrangement in connection with the Participant's Separation from Service, and such vesting acceleration provisions were in effect as of the date of grant of the Non-Exempt Award and, therefore, are part of the terms of such Non-Exempt Award as of the date of grant, then the shares will be earlier issued in settlement of such Non-Exempt Award upon the Participant's Separation from Service in accordance with the terms of the Non-Exempt Severance Arrangement, but in no event later than the 60th day that follows the date of the Participant's Separation from Service. However, if at the time the shares would otherwise be issued the Participant is subject to the distribution limitations contained in Section 409A applicable to "specified employees," as defined in Section 409A(a)(2)(B)(i) of the Code, such shares shall not be issued before the date that is six months following the date of such Participant's Separation from Service, or, if earlier, the date of the Participant's death that occurs within such six month period.

(iii) If vesting of a Non-Exempt Award accelerates under the terms of a Non-Exempt Severance Arrangement in connection with a Participant's Separation from Service, and such vesting acceleration provisions were not in effect as of the date of grant of the Non-Exempt Award and, therefore, are not a part of the terms of such Non-Exempt Award on the date of grant, then such acceleration of vesting of the Non-Exempt Award shall not accelerate the issuance date of the shares, but the shares shall instead be issued on the same schedule as set forth in the Grant Notice as if they had vested in the ordinary course during the Participant's Continuous Service, notwithstanding the vesting acceleration of the Non-Exempt Award. Such issuance schedule is intended to satisfy the requirements of payment on a specified date or pursuant to a fixed schedule, as provided under Treasury Regulations Section 1.409A-3(a)(4).

(c) Treatment of Non-Exempt Awards Upon a Corporate Transaction for Employees and Consultants. The provisions of this subsection (c) shall apply and shall supersede anything to the contrary set forth in the Plan with respect to the permitted treatment of any Non-Exempt Award in connection with a Corporate Transaction if the Participant was either an Employee or Consultant upon the applicable date of grant of the Non-Exempt Award.

(i) Vested Non-Exempt Awards. The following provisions shall apply to any Vested Non-Exempt Award in connection with a Corporate Transaction:

(1) If the Corporate Transaction is also a Section 409A Change in Control then the Acquiring Entity may not assume, continue or substitute the Vested Non-Exempt Award. Upon the Section 409A Change in Control the settlement of the Vested Non-Exempt Award will automatically be accelerated and the shares will be immediately issued in respect of the Vested Non-Exempt Award. Alternatively, the Company may instead provide that the Participant will receive a cash settlement equal to the Fair Market Value of the shares that would otherwise be issued to the Participant upon the Section 409A Change in Control.

(2) If the Corporate Transaction is not also a Section 409A Change in Control, then the Acquiring Entity must either assume, continue or substitute each Vested Non-Exempt Award. The shares to be issued in respect of the Vested Non-Exempt Award shall be issued to the Participant by the Acquiring Entity on the same schedule that the shares would have been issued to the Participant if the Corporate Transaction had not occurred. In the Acquiring Entity's discretion, in lieu of an issuance of shares, the Acquiring Entity may instead substitute a cash payment on each applicable issuance date, equal to the Fair Market Value of the shares that would otherwise be issued to the Participant on such issuance dates, with the determination of the Fair Market Value of the shares made on the date of the Corporate Transaction.

(ii) Unvested Non-Exempt Awards. The following provisions shall apply to any Unvested Non-Exempt Award unless otherwise determined by the Board pursuant to subsection (e) of this Section.

(1) In the event of a Corporate Transaction, the Acquiring Entity shall assume, continue or substitute any Unvested Non-Exempt Award. Unless otherwise determined by the Board, any Unvested Non-Exempt Award will remain subject to the same vesting and forfeiture restrictions that were applicable to the Award prior to the Corporate Transaction. The shares to be issued in respect of any Unvested Non-Exempt Award shall be issued to the Participant by the Acquiring Entity on the same schedule that the shares would have been issued to the Participant if the Corporate Transaction had not occurred. In the Acquiring Entity's discretion, in lieu of an issuance of shares, the Acquiring Entity may instead substitute a cash payment on each applicable issuance date, equal to the Fair Market Value of the shares that would otherwise be issued to the Participant on such issuance dates, with the determination of Fair Market Value of the shares made on the date of the Corporate Transaction.

(2) If the Acquiring Entity will not assume, substitute or continue any Unvested Non-Exempt Award in connection with a Corporate Transaction, then such Award shall automatically terminate and be forfeited upon the Corporate Transaction with no consideration payable to any Participant in respect of such forfeited Unvested Non-Exempt Award. Notwithstanding the foregoing, to the extent permitted and in compliance with the requirements of Section 409A, the Board may in its discretion determine to elect to accelerate the vesting and settlement of the Unvested Non-Exempt Award upon the Corporate Transaction, or instead substitute a cash payment equal to the Fair Market Value of such shares that would otherwise be issued to the Participant, as further provided in subsection (e)(ii) below. In the absence of such discretionary election by the Board, any Unvested Non-Exempt Award shall be forfeited without payment of any consideration to the affected Participants if the Acquiring Entity will not assume, substitute or continue the Unvested Non-Exempt Awards in connection with the Corporate Transaction.

(3) The foregoing treatment shall apply with respect to all Unvested Non-Exempt Awards upon any Corporate Transaction, and regardless of whether or not such Corporate Transaction is also a Section 409A Change in Control.

(d) Treatment of Non-Exempt Awards Upon a Corporate Transaction for Non-Employee Directors. The following provisions of this subsection (d) shall apply and shall supersede anything to the contrary that may be set forth in the Plan with respect to the permitted treatment of a Non-Exempt Director Award in connection with a Corporate Transaction.

(i) If the Corporate Transaction is also a Section 409A Change in Control then the Acquiring Entity may not assume, continue or substitute the Non-Exempt Director Award. Upon the Section 409A Change in Control the vesting and settlement of any Non-Exempt Director Award will automatically be accelerated and the shares will be immediately issued to the Participant in respect of the Non-Exempt Director Award. Alternatively, the Company may provide that the Participant will instead receive a cash settlement equal to the Fair Market Value of the shares that would otherwise be issued to the Participant upon the Section 409A Change in Control pursuant to the preceding provision.

(ii) If the Corporate Transaction is not also a Section 409A Change in Control, then the Acquiring Entity must either assume, continue or substitute the Non-Exempt Director Award. Unless otherwise determined by the Board, the Non-Exempt Director Award will remain subject to the same vesting and forfeiture restrictions that were applicable to the Award prior to the Corporate Transaction. The shares to be issued in respect of the Non-Exempt Director Award shall be issued to the Participant by the Acquiring Entity on the same schedule that the shares would have been issued to the Participant if the Corporate Transaction had not occurred. In the Acquiring Entity's discretion, in lieu of an issuance of shares, the Acquiring Entity may instead substitute a cash payment on each applicable issuance date, equal to the Fair Market Value of the shares that would otherwise be issued to the Participant on such issuance dates, with the determination of Fair Market Value made on the date of the Corporate Transaction.

(e) If the RSU Award is a Non-Exempt Award, then the provisions in this Section 11(e) shall apply and supersede anything to the contrary that may be set forth in the Plan or the Award Agreement with respect to the permitted treatment of such Non-Exempt Award:

(i) Any exercise by the Board of discretion to accelerate the vesting of a Non-Exempt Award shall not result in any acceleration of the scheduled issuance dates for the shares in respect of the Non-Exempt Award unless earlier issuance of the shares upon the applicable vesting dates would be in compliance with the requirements of Section 409A.

(ii) The Company explicitly reserves the right to earlier settle any Non-Exempt Award to the extent permitted and in compliance with the requirements of Section 409A, including pursuant to any of the exemptions available in Treasury Regulations Section 1.409A-3(j)(4)(ix).

(iii) To the extent the terms of any Non-Exempt Award provide that it will be settled upon a Change in Control or Corporate Transaction, to the extent it is required for compliance with the requirements of Section 409A, the Change in Control or Corporate Transaction event triggering settlement must also constitute a Section 409A Change in Control. To the extent the terms of a Non-Exempt Award provides that it will be settled upon a termination of employment or termination of Continuous Service, to the extent it is required for compliance with the requirements of Section 409A, the termination event triggering settlement must also constitute a Separation From Service. However, if at the time the shares would

otherwise be issued to a Participant in connection with a "separation from service" such Participant is subject to the distribution limitations contained in Section 409A applicable to "specified employees," as defined in Section 409A(a)(2)(B)(i) of the Code, such shares shall not be issued before the date that is six months following the date of the Participant's Separation From Service, or, if earlier, the date of the Participant's death that occurs within such six month period.

(iv) The provisions in this subsection (e) for delivery of the shares in respect of the settlement of a RSU Award that is a Non-Exempt Award are intended to comply with the requirements of Section 409A so that the delivery of the shares to the Participant in respect of such Non-Exempt Award will not trigger the additional tax imposed under Section 409A, and any ambiguities herein will be so interpreted.

12. SEVERABILITY.

If all or any part of the Plan or any Award Agreement is declared by any court or governmental authority to be unlawful or invalid, such unlawfulness or invalidity shall not invalidate any portion of the Plan or such Award Agreement not declared to be unlawful or invalid. Any Section of the Plan or any Award Agreement (or part of such a Section) so declared to be unlawful or invalid shall, if possible, be construed in a manner which will give effect to the terms of such Section or part of a Section to the fullest extent possible while remaining lawful and valid.

13. TERMINATION OF THE PLAN.

The Board may suspend or terminate the Plan at any time. No Incentive Stock Options may be granted after the tenth anniversary of the earlier of: (i) the Adoption Date, or (ii) the date the Plan is approved by the Company's stockholders. No Awards may be granted under the Plan while the Plan is suspended or after it is terminated.

14. DEFINITIONS.

As used in the Plan, the following definitions apply to the capitalized terms indicated below:

(a) "***Acquiring Entity***" means the surviving or acquiring corporation (or its parent company) in connection with a Corporate Transaction.

(b) "***Adoption Date***" means the date the Plan is first approved by the Board or Compensation Committee.

(c) "***Affiliate***" means, at the time of determination, any "parent" or "subsidiary" of the Company as such terms are defined in Rule 405 promulgated under the Securities Act. The Board may determine the time or times at which "parent" or "subsidiary" status is determined within the foregoing definition.

(d) "***Applicable Law***" means shall mean any applicable securities, federal, state, foreign, material local or municipal or other law, statute, constitution, principle of common law, resolution, ordinance, code, edict, decree, rule, listing rule, regulation, judicial decision, ruling or requirement issued, enacted, adopted, promulgated, implemented or otherwise put into effect by or under the authority of any Governmental Body (including under the authority of any applicable self-regulating organization such as the Nasdaq Stock Market, New York Stock Exchange, or the Financial Industry Regulatory Authority).

(e) "***Award***" means any right to receive Common Stock, cash or other property granted under the Plan (including an Incentive Stock Option, a Nonstatutory Stock Option, a Restricted Stock Award, a RSU Award, a SAR, a Performance Award or any Other Award).

(f) "***Award Agreement***" means a written agreement between the Company and a Participant evidencing the terms and conditions of an Award. The Award Agreement generally consists of the Grant Notice and the agreement containing the written summary of the general terms and conditions applicable to the Award and which is provided to a Participant along with the Grant Notice.

(g) "***Board***" means the Board of Directors of the Company (or its designee). Any decision or determination made by the Board shall be a decision or determination that is made in the sole discretion of the Board (or its designee), and such decision or determination shall be final and binding on all Participants.

(h) "***Capitalization Adjustment***" means any change that is made in, or other events that occur with respect to, the Common Stock subject to the Plan or subject to any Award after the Effective Date without the receipt of consideration by the Company through merger, consolidation, reorganization, recapitalization, reincorporation, stock dividend, dividend in property other than cash, large nonrecurring cash dividend, stock split, reverse stock split, liquidating dividend, combination of shares, exchange of shares, change in corporate structure or any similar equity restructuring transaction, as that term is used in Statement of Financial Accounting Standards Board Accounting Standards Codification Topic 718 (or any successor thereto). Notwithstanding the foregoing, the conversion of any convertible securities of the Company will not be treated as a Capitalization Adjustment.

(i) "***Cause***" has the meaning ascribed to such term in any written agreement between the Participant and the Company defining such term and, in the absence of such agreement, such term means, with respect to a Participant, the occurrence of any of the following events: (i) such Participant's commission of any felony or any crime involving fraud, dishonesty or moral turpitude under the laws of the United States or any state thereof; (ii) such Participant's attempted commission of, or participation in, a fraud or act of dishonesty against the Company; (iii) such Participant's intentional, material violation of any contract or agreement between the Participant and the Company or of any statutory duty owed to the Company; (iv) such Participant's unauthorized use or disclosure of the Company's confidential information or trade secrets; or (v) such Participant's gross or willful misconduct. The determination that a termination of the Participant's Continuous Service is either for Cause or without Cause will be made by the Board with respect to Participants who are executive officers of the Company and by the Company's Chief Executive Officer with respect to Participants who are not executive officers of the Company. Any determination by the Company that the Continuous Service of a Participant was terminated with or without Cause for the purposes of outstanding Awards held by such Participant will have no effect upon any determination of the rights or obligations of the Company or such Participant for any other purpose.

(j) "***Change in Control***" or "***Change of Control***" means the occurrence, in a single transaction or in a series of related transactions, of any one or more of the following events; provided, however, to the extent necessary to avoid adverse personal income tax consequences to the Participant in connection with an Award, also constitutes a Section 409A Change in Control:

(i) any Exchange Act Person becomes the Owner, directly or indirectly, of securities of the Company representing more than 50% of the combined voting power of the Company's then outstanding securities other than by virtue of a merger, consolidation or similar transaction. Notwithstanding the foregoing, a Change in Control shall not be deemed to occur (A) on account of the acquisition of securities of the Company directly from the Company, (B) on account of the acquisition of securities of the Company by an investor, any affiliate thereof or any other Exchange Act Person that acquires the Company's securities in a transaction or series of related transactions the primary purpose of which is to obtain financing for the Company through the issuance of equity securities, or (C) solely because the level of Ownership held by any Exchange Act Person (the "*Subject Person*") exceeds the designated percentage threshold of the outstanding voting securities as a result of a repurchase or other acquisition of voting securities by the Company reducing the number of shares outstanding, provided that if a Change in Control would occur (but for the operation of this sentence) as a result of the acquisition of voting securities by the Company, and after such share acquisition, the Subject Person becomes the Owner of any additional voting securities that, assuming the repurchase or other acquisition had not occurred, increases the percentage of the then outstanding voting securities Owned by the Subject Person over the designated percentage threshold, then a Change in Control shall be deemed to occur;

(ii) there is consummated a merger, consolidation or similar transaction involving (directly or indirectly) the Company and, immediately after the consummation of such merger, consolidation or similar transaction, the stockholders of the Company immediately prior thereto do not Own, directly or indirectly, either (A) outstanding voting securities representing more than 50% of the combined outstanding voting power of the surviving Entity in such merger, consolidation or similar transaction or (B) more than 50% of the combined outstanding voting power of the parent of the surviving Entity in such merger, consolidation or similar transaction, in each case in substantially the same proportions as their Ownership of the outstanding voting securities of the Company immediately prior to such transaction;

(iii) there is consummated a sale, lease, exclusive license or other disposition of all or substantially all of the consolidated assets of the Company and its Subsidiaries, other than a sale, lease, license or other disposition of all or substantially all of the consolidated assets of the Company and its Subsidiaries to an Entity, more than 50% of the combined voting power of the voting securities of which are Owned by stockholders of the Company in substantially the same proportions as their Ownership of the outstanding voting securities of the Company immediately prior to such sale, lease, license or other disposition; or

(iv) individuals who, on the date the Plan is adopted by the Board, are members of the Board (the "***Incumbent Board***") cease for any reason to constitute at least a majority of the members of the Board; provided, however, that if the appointment or election (or nomination for election) of any new Board member was approved or recommended by a majority vote of the members of the Incumbent Board then still in office, such new member shall, for purposes of this Plan, be considered as a member of the Incumbent Board.

Notwithstanding the foregoing or any other provision of this Plan, (A) the term Change in Control shall not include a sale of assets, merger or other transaction effected exclusively for the purpose of changing the domicile of the Company, and (B) the definition of Change in Control (or any analogous term) in an individual written agreement between the Company or any Affiliate and the Participant shall supersede the foregoing definition with respect to Awards subject to such agreement; provided, however, that if no definition of Change in Control or any analogous term is set forth in such an individual written agreement, the foregoing definition shall apply.

(k) "***Code***" means the Internal Revenue Code of 1986, as amended, including any applicable regulations and guidance thereunder.

(l) "***Committee***" means the Compensation Committee and any other committee of Directors to whom authority has been delegated by the Board or Compensation Committee in accordance with the Plan.

(m) "***Common Stock***" means the common stock of the Company.

(n) "***Company***" means Sensei Biotherapeutics, Inc., a Delaware corporation.

(o) "***Compensation Committee***" means the Compensation Committee of the Board.

(p) "***Consultant***" means any person, including an advisor, who is (i) engaged by the Company or an Affiliate to render consulting or advisory services and is compensated for such services, or (ii) serving as a member of the board of directors of an Affiliate and is compensated

for such services. However, service solely as a Director, or payment of a fee for such service, will not cause a Director to be considered a "Consultant" for purposes of the Plan. Notwithstanding the foregoing, a person is treated as a Consultant under this Plan only if a Form S-8 Registration Statement under the Securities Act is available to register either the offer or the sale of the Company's securities to such person.

(q) "***Continuous Service***" means that the Participant's service with the Company or an Affiliate, whether as an Employee, Director or Consultant, is not interrupted or terminated. A change in the capacity in which the Participant renders service to the Company or an Affiliate as an Employee, Director or Consultant or a change in the Entity for which the Participant renders such service, provided that there is no interruption or termination of the Participant's service with the Company or an Affiliate, will not terminate a Participant's Continuous Service; provided, however, that if the Entity for which a Participant is rendering services ceases to qualify as an Affiliate, as determined by the Board, such Participant's Continuous Service will be considered to have terminated on the date such Entity ceases to qualify as an Affiliate. For example, a change in status from an Employee of the Company to a Consultant of an Affiliate or to a Director will not constitute an interruption of Continuous Service. To the extent permitted by law, the Board or the chief executive officer of the Company, in that party's sole discretion, may determine whether Continuous Service will be considered interrupted in the case of (i) any leave of absence approved by the Board or chief executive officer, including sick leave, military leave or any other personal leave, or (ii) transfers between the Company, an Affiliate, or their successors. Notwithstanding the foregoing, a leave of absence will be treated as Continuous Service for purposes of vesting in an Award only to such extent as may be provided in the Company's leave of absence policy, in the written terms of any leave of absence agreement or policy applicable to the Participant, or as otherwise required by law. In addition, to the extent required for exemption from or compliance with Section 409A, the determination of whether there has been a termination of Continuous Service will be made, and such term will be construed, in a manner that is consistent with the definition of "separation from service" as defined under Treasury Regulation Section 1.409A-1(h) (without regard to any alternative definition thereunder).

(r) "***Corporate Transaction***" means the consummation, in a single transaction or in a series of related transactions, of any one or more of the following events:

(i) a sale or other disposition of all or substantially all, as determined by the Board, of the consolidated assets of the Company and its Subsidiaries;

(ii) a sale or other disposition of at least 50% of the outstanding securities of the Company;

(iii) a merger, consolidation or similar transaction following which the Company is not the surviving corporation; or

(iv) a merger, consolidation or similar transaction following which the Company is the surviving corporation but the shares of Common Stock outstanding immediately preceding the merger, consolidation or similar transaction are converted or exchanged by virtue of the merger, consolidation or similar transaction into other property, whether in the form of securities, cash or otherwise.

(s) "***Director***" means a member of the Board.

(t) "***determine***" ***or*** "***determined***" means as determined by the Board or the Committee (or its designee) in its sole discretion.

(u) "***Disability***" means, with respect to a Participant, such Participant is unable to engage in any substantial gainful activity by reason of any medically determinable physical or mental impairment which can be expected to result in death or which has lasted or can be expected to last for a continuous period of not less than 12 months, as provided in Section 22(e)(3) of the Code, and will be determined by the Board on the basis of such medical evidence as the Board deems warranted under the circumstances.

(v) "***Effective Date***" means immediately prior to the IPO Date, provided this Plan is approved by the Company's stockholders prior to the IPO Date.

(w) "***Employee***" means any person employed by the Company or an Affiliate. However, service solely as a Director, or payment of a fee for such services, will not cause a Director to be considered an "Employee" for purposes of the Plan.

(x) "***Employer***" means the Company or the Affiliate of the Company that employs the Participant.

(y) "***Entity***" means a corporation, partnership, limited liability company or other entity.

(z) "***Exchange Act***" means the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder.

(aa) "***Exchange Act Person***" means any natural person, Entity or "group" (within the meaning of Section 13(d) or 14(d) of the Exchange Act), except that "Exchange Act Person" will not include (i) the Company or any Subsidiary of the Company, (ii) any employee benefit plan of the Company or any Subsidiary of the Company or any trustee or other fiduciary holding securities under an employee benefit plan of the Company or any Subsidiary of the Company, (iii) an underwriter temporarily holding securities pursuant to a registered public offering of such securities, (iv) an Entity Owned, directly or indirectly, by the stockholders of the Company in substantially the same proportions as their Ownership of stock of the Company; or (v) any natural person, Entity or "group" (within the meaning of Section 13(d) or 14(d) of the Exchange Act) that, as of the Effective Date, is the Owner, directly or indirectly, of securities of the Company representing more than 50% of the combined voting power of the Company's then outstanding securities.

(bb) "***Fair Market Value***" means, as of any date, unless otherwise determined by the Board, the value of the Common Stock (as determined on a per share or aggregate basis, as applicable) determined as follows:

(i) If the Common Stock is listed on any established stock exchange or traded on any established market, the Fair Market Value will be the closing sales price for such stock as quoted on such exchange or market (or the exchange or market with the greatest volume of trading in the Common Stock) on the date of determination, as reported in a source the Board deems reliable.

(ii) If there is no closing sales price for the Common Stock on the date of determination, then the Fair Market Value will be the closing selling price on the last preceding date for which such quotation exists.

(iii) In the absence of such markets for the Common Stock, or if otherwise determined by the Board, the Fair Market Value will be determined by the Board in good faith and in a manner that complies with Sections 409A and 422 of the Code.

(cc) "***Governmental Body***" means any: (a) nation, state, commonwealth, province, territory, county, municipality, district or other jurisdiction of any nature; (b) federal, state, local, municipal, foreign or other government; (c) governmental or regulatory body, or quasi-governmental body of any nature (including any governmental division, department, administrative agency or bureau, commission, authority, instrumentality, official, ministry, fund, foundation, center, organization, unit, body or Entity and any court or other tribunal, and for the avoidance of doubt, any Tax authority) or other body exercising similar powers or authority; or (d) self-regulatory organization (including the Nasdaq Stock Market, New York Stock Exchange, and the Financial Industry Regulatory Authority).

(dd) "***Grant Notice***" means the notice provided to a Participant that he or she has been granted an Award under the Plan and which includes the name of the Participant, the type of Award, the date of grant of the Award, number of shares of Common Stock subject to the Award or potential cash payment right, (if any), the vesting schedule for the Award (if any) and other key terms applicable to the Award.

(ee) "***Incentive Stock Option***" means an option granted pursuant to Section 4 of the Plan that is intended to be, and qualifies as, an "incentive stock option" within the meaning of Section 422 of the Code.

(ff) "***IPO Date***" means the date of the underwriting agreement between the Company and the underwriter(s) managing the initial public offering of the Common Stock, pursuant to which the Common Stock is priced for the initial public offering.

(gg) "***Materially Impair***" means any amendment to the terms of the Award that materially adversely affects the Participant's rights under the Award. A Participant's rights under an Award will not be deemed to have been Materially Impaired by any such amendment if the Board, in its sole discretion, determines that the amendment, taken as a whole, does not materially impair the Participant's rights. For example, the following types of amendments to the terms of an Award do not Materially Impair the Participant's rights under the Award: (i) imposition of reasonable restrictions on the minimum number of shares subject to an Option that may be exercised; (ii) to maintain the qualified status of the Award as an Incentive Stock Option under Section 422 of the Code; (iii) to change the terms of an Incentive Stock Option in a

manner that disqualifies, impairs or otherwise affects the qualified status of the Award as an Incentive Stock Option under Section 422 of the Code; (iv) to clarify the manner of exemption from, or to bring the Award into compliance with or qualify it for an exemption from, Section 409A; or (v) to comply with other Applicable Laws.

(hh) "***Non-Employee Director***" means a Director who either (i) is not a current employee or officer of the Company or an Affiliate, does not receive compensation, either directly or indirectly, from the Company or an Affiliate for services rendered as a consultant or in any capacity other than as a Director (except for an amount as to which disclosure would not be required under Item 404(a) of Regulation S-K promulgated pursuant to the Securities Act ("***Regulation S-K***")), does not possess an interest in any other transaction for which disclosure would be required under Item 404(a) of Regulation S-K, and is not engaged in a business relationship for which disclosure would be required pursuant to Item 404(b) of Regulation S-K; or (ii) is otherwise considered a "non-employee director" for purposes of Rule 16b-3.

(ii) "***Non-Exempt Award***" means any Award that is subject to, and not exempt from, Section 409A, including as the result of (i) a deferral of the issuance of the shares subject to the Award which is elected by the Participant or imposed by the Company, (ii) the terms of any Non-Exempt Severance Agreement.

(jj) "***Non-Exempt Director Award***" means a Non-Exempt Award granted to a Participant who was a Director but not an Employee on the applicable grant date.

(kk) "***Non-Exempt Severance Arrangement***" means a severance arrangement or other agreement between the Participant and the Company that provides for acceleration of vesting of an Award and issuance of the shares in respect of such Award upon the Participant's termination of employment or separation from service (as such term is defined in Section 409A(a)(2)(A)(i) of the Code (and without regard to any alternative definition thereunder) ("***Separation from Service***") and such severance benefit does not satisfy the requirements for an exemption from application of Section 409A provided under Treasury Regulations Section 1.409A-1(b)(4), 1.409A-1(b)(9) or otherwise.

(ll) "***Nonstatutory Stock Option***" means any option granted pursuant to Section 4 of the Plan that does not qualify as an Incentive Stock Option.

(mm) "***Officer***" means a person who is an officer of the Company within the meaning of Section 16 of the Exchange Act.

(nn) "***Option***" means an Incentive Stock Option or a Nonstatutory Stock Option to purchase shares of Common Stock granted pursuant to the Plan.

(oo) "***Option Agreement***" means a written agreement between the Company and the Optionholder evidencing the terms and conditions of the Option grant. The Option Agreement includes the Grant Notice for the Option and the agreement containing the written summary of the general terms and conditions applicable to the Option and which is provided to a Participant along with the Grant Notice. Each Option Agreement will be subject to the terms and conditions of the Plan.

(pp) "***Optionholder***" means a person to whom an Option is granted pursuant to the Plan or, if applicable, such other person who holds an outstanding Option.

(qq) "***Other Award***" means an award based in whole or in part by reference to the Common Stock which is granted pursuant to the terms and conditions of Section 5(c).

(rr) "***Other Award Agreement***" means a written agreement between the Company and a holder of an Other Award evidencing the terms and conditions of an Other Award grant. Each Other Award Agreement will be subject to the terms and conditions of the Plan.

(ss) "***Own,***" "***Owned,***" "***Owner,***" "***Ownership***" means that a person or Entity will be deemed to "Own," to have "Owned," to be the "Owner" of, or to have acquired "Ownership" of securities if such person or Entity, directly or indirectly, through any contract, arrangement, understanding, relationship or otherwise, has or shares voting power, which includes the power to vote or to direct the voting, with respect to such securities.

(tt) "***Participant***" means an Employee, Director or Consultant to whom an Award is granted pursuant to the Plan or, if applicable, such other person who holds an outstanding Award.

(uu) "***Performance Award***" means an Award that may vest or may be exercised or a cash award that may vest or become earned and paid contingent upon the attainment during a Performance Period of certain Performance Goals and which is granted under the terms and conditions of Section 5(b) pursuant to such terms as are approved by the Board. In addition, to the extent permitted by Applicable Law and set forth in the applicable Award Agreement, the Board may determine that cash or other property may be used in payment of Performance Awards. Performance Awards that are settled in cash or other property are not required to be valued in whole or in part by reference to, or otherwise based on, the Common Stock.

(vv) "***Performance Criteria***" means the one or more criteria that the Board will select for purposes of establishing the Performance Goals for a Performance Period. The Performance Criteria that will be used to establish such Performance Goals may be based on any measure of performance selected by the Board.

(ww) "***Performance Goals***" means, for a Performance Period, the one or more goals established by the Board for the Performance Period based upon the Performance Criteria. Performance Goals may be based on a Company-wide basis, with respect to one or more business units, divisions, Affiliates, or business segments, and in either absolute terms or relative to the performance of one or more comparable companies or the performance of one or more relevant indices. Unless specified otherwise by the Board (i) in the Award Agreement at the time the Award is granted or (ii) in such other document setting forth the Performance Goals at the time the Performance Goals are established, the Board will appropriately make adjustments in the method of calculating the attainment of Performance Goals for a Performance Period as follows: (1) to exclude restructuring and/or other nonrecurring charges; (2) to exclude exchange rate effects; (3) to exclude the effects of changes to generally accepted accounting principles; (4) to exclude the effects of any statutory adjustments to corporate tax rates; (5) to exclude the effects of items that are "unusual" in nature or occur "infrequently" as determined under

generally accepted accounting principles; (6) to exclude the dilutive effects of acquisitions or joint ventures; (7) to assume that any business divested by the Company achieved performance objectives at targeted levels during the balance of a Performance Period following such divestiture; (8) to exclude the effect of any change in the outstanding shares of common stock of the Company by reason of any stock dividend or split, stock repurchase, reorganization, recapitalization, merger, consolidation, spin-off, combination or exchange of shares or other similar corporate change, or any distributions to common stockholders other than regular cash dividends; (9) to exclude the effects of stock based compensation and the award of bonuses under the Company's bonus plans; (10) to exclude costs incurred in connection with potential acquisitions or divestitures that are required to expense under generally accepted accounting principles; and (11) to exclude the goodwill and intangible asset impairment charges that are required to be recorded under generally accepted accounting principles. In addition, the Board retains the discretion to reduce or eliminate the compensation or economic benefit due upon attainment of Performance Goals and to define the manner of calculating the Performance Criteria it selects to use for such Performance Period. Partial achievement of the specified criteria may result in the payment or vesting corresponding to the degree of achievement as specified in the Award Agreement or the written terms of a Performance Cash Award.

(xx) "***Performance Period***" means the period of time selected by the Board over which the attainment of one or more Performance Goals will be measured for the purpose of determining a Participant's right to vesting or exercise of an Award. Performance Periods may be of varying and overlapping duration, at the sole discretion of the Board.

(yy) "***Plan***" means this Sensei Biotherapeutics, Inc. 2021 Equity Incentive Plan, as amended from time to time.

(zz) "***Plan Administrator***" means the person, persons, and/or third-party administrator designated by the Company to administer the day to day operations of the Plan and the Company's other equity incentive programs.

(aaa) "***Post-Termination Exercise Period***" means the period following termination of a Participant's Continuous Service within which an Option or SAR is exercisable, as specified in Section 4(h).

(bbb) "***Prior Plan's Available Reserve***" means the number of shares available for the grant of new awards under the Prior Plan as of the Effective Date.

(ccc) "***Prior Plan***" means the PPI Holdings, Inc. 2018 Stock Incentive Plan.

(ddd) "***Prospectus***" means the document containing the Plan information specified in Section 10(a) of the Securities Act.

(eee) "***Restricted Stock Award***" or "***RSA***" means an Award of shares of Common Stock which is granted pursuant to the terms and conditions of Section 5(a).

(fff) "***Restricted Stock Award Agreement***" means a written agreement between the Company and a holder of a Restricted Stock Award evidencing the terms and conditions of a Restricted Stock Award grant. The Restricted Stock Award Agreement includes the Grant Notice for the Restricted Stock Award and the agreement containing the written summary of the general terms and conditions applicable to the Restricted Stock Award and which is provided to a Participant along with the Grant Notice. Each Restricted Stock Award Agreement will be subject to the terms and conditions of the Plan.

(ggg) "***Returning Shares***" means shares subject to outstanding stock awards granted under the Prior Plan and that following the Effective Date: (A) are not issued because such stock award or any portion thereof expires or otherwise terminates without all of the shares covered by such stock award having been issued; (B) are not issued because such stock award or any portion thereof is settled in cash; (C) are forfeited back to or repurchased by the Company because of the failure to meet a contingency or condition required for the vesting of such shares; (D) are withheld or reacquired to satisfy the exercise, strike or purchase price; or (E) are withheld or reacquired to satisfy a tax withholding obligation.

(hhh) "***RSU Award***" or "***RSU***" means an Award of restricted stock units representing the right to receive an issuance of shares of Common Stock which is granted pursuant to the terms and conditions of Section 5(a).

(iii) "***RSU Award Agreement***" means a written agreement between the Company and a holder of a RSU Award evidencing the terms and conditions of a RSU Award grant. The RSU Award Agreement includes the Grant Notice for the RSU Award and the agreement containing the written summary of the general terms and conditions applicable to the RSU Award and which is provided to a Participant along with the Grant Notice. Each RSU Award Agreement will be subject to the terms and conditions of the Plan.

(jjj) "***Rule 16b-3***" means Rule 16b-3 promulgated under the Exchange Act or any successor to Rule 16b-3, as in effect from time to time.

(kkk) "***Rule 405***" means Rule 405 promulgated under the Securities Act.

(lll) "***Section 409A***" means Section 409A of the Code and the regulations and other guidance thereunder.

(mmm) "***Section 409A Change in Control***" means a change in the ownership or effective control of the Company, or in the ownership of a substantial portion of the Company's assets, as provided in Section 409A(a)(2)(A)(v) of the Code and Treasury Regulations Section 1.409A-3(i)(5) (without regard to any alternative definition thereunder).

(nnn) "***Securities Act***" means the Securities Act of 1933, as amended.

(ooo) "***Share Reserve***" means the number of shares available for issuance under the Plan as set forth in Section 2(a).

(ppp) "***Stock Appreciation Right***" or "***SAR***" means a right to receive the appreciation on Common Stock that is granted pursuant to the terms and conditions of Section 4.

(qqq) "***SAR Agreement***" means a written agreement between the Company and a holder of a SAR evidencing the terms and conditions of a SAR grant. The SAR Agreement includes the Grant Notice for the SAR and the agreement containing the written summary of the general terms and conditions applicable to the SAR and which is provided to a Participant along with the Grant Notice. Each SAR Agreement will be subject to the terms and conditions of the Plan.

(rrr) "***Subsidiary***" means, with respect to the Company, (i) any corporation of which more than 50% of the outstanding capital stock having ordinary voting power to elect a majority of the board of directors of such corporation (irrespective of whether, at the time, stock of any other class or classes of such corporation will have or might have voting power by reason of the happening of any contingency) is at the time, directly or indirectly, Owned by the Company, and (ii) any partnership, limited liability company or other entity in which the Company has a direct or indirect interest (whether in the form of voting or participation in profits or capital contribution) of more than 50%.

(sss) "***Ten Percent Stockholder***" means a person who Owns (or is deemed to Own pursuant to Section 424(d) of the Code) stock possessing more than 10% of the total combined voting power of all classes of stock of the Company or any Affiliate.

(ttt) "***Trading Policy***" means the Company's policy permitting certain individuals to sell Company shares only during certain "window" periods and/or otherwise restricts the ability of certain individuals to transfer or encumber Company shares, as in effect from time to time.

(uuu) "***Unvested Non-Exempt Award***" means the portion of any Non-Exempt Award that had not vested in accordance with its terms upon or prior to the date of any Corporate Transaction.

(vvv) "***Vested Non-Exempt Award***" means the portion of any Non-Exempt Award that had vested in accordance with its terms upon or prior to the date of a Corporate Transaction.

SENSEI BIOTHERAPEUTICS, INC.
STOCK OPTION GRANT NOTICE
(2021 EQUITY INCENTIVE PLAN)

Sensei Biotherapeutics, Inc. (the "***Company***"), pursuant to its 2021 Equity Incentive Plan (the "***Plan***"), has granted to you ("***Optionholder")*** an option to purchase the number of shares of the Common Stock set forth below (the "***Option***"). Your Option is subject to all of the terms and conditions as set forth herein and in the Plan, and the Stock Option Agreement and the Notice of Exercise, all of which are attached hereto and incorporated herein in their entirety. Capitalized terms not explicitly defined herein but defined in the Plan or the Stock Option Agreement shall have the meanings set forth in the Plan or the Stock Option Agreement, as applicable.

Optionholder:	_____
Date of Grant:	_____
Vesting Commencement Date:	_____
Number of Shares of Common Stock Subject to Option:	_____
Exercise Price (Per Share):	_____
Total Exercise Price:	_____
Expiration Date:	_____

Type of Grant:	**[**Incentive Stock Option] OR [Nonstatutory Stock Option]
Exercise and Vesting Schedule:	Subject to the Optionholder's Continuous Service through each applicable vesting date, the Option will vest as follows:

Optionholder Acknowledgements: By your signature below or by electronic acceptance or authentication in a form authorized by the Company, you understand and agree that:

- The Option is governed by this Stock Option Grant Notice, and the provisions of the Plan and the Stock Option Agreement and the Notice of Exercise, all of which are made a part of this document. Unless otherwise provided in the Plan, this Grant Notice and the Stock Option Agreement (together, the "***Option Agreement***") may not be modified, amended or revised except in a writing signed by you and a duly authorized officer of the Company.
- [If the Option is an Incentive Stock Option, it (plus other outstanding Incentive Stock Options granted to you) cannot be first *exercisable* for more than $100,000 in value (measured by exercise price) in any calendar year. Any excess over $100,000 is a Nonstatutory Stock Option.]
- You consent to receive this Grant Notice, the Stock Option Agreement, the Plan, the Prospectus and any other Plan-related documents by electronic delivery and to participate in the Plan through an on-line or electronic system established and maintained by the Company or another third party designated by the Company.
- You have read and are familiar with the provisions of the Plan, the Stock Option Agreement, the Notice of Exercise and the Prospectus. In the event of any conflict between the provisions in this Grant Notice, the Option Agreement, the Notice of Exercise, or the Prospectus and the terms of the Plan, the terms of the Plan shall control.

- The Option Agreement sets forth the entire understanding between you and the Company regarding the acquisition of Common Stock and supersedes all prior oral and written agreements, promises and/or representations on that subject with the exception of other equity awards previously granted to you and any written employment agreement, offer letter, severance agreement, written severance plan or policy, or other written agreement between the Company and you in each case that specifies the terms that should govern this Option.
- Counterparts may be delivered via facsimile, electronic mail (including pdf or any electronic signature complying with the U.S. federal ESIGN Act of 2000, Uniform Electronic Transactions Act or other applicable law) or other transmission method and any counterpart so delivered will be deemed to have been duly and validly delivered and be valid and effective for all purposes.

SENSEI BIOTHERAPEUTICS, INC.

By: _____
Signature

Title: _____

Date: _____

OPTIONHOLDER:

_____
Signature

Date: _____

ATTACHMENTS: Stock Option Agreement, 2021 Equity Incentive Plan, Notice of Exercise

ATTACHMENT I

STOCK OPTION AGREEMENT

SENSEI BIOTHERAPEUTICS, INC.
2021 EQUITY INCENTIVE PLAN

STOCK OPTION AGREEMENT

As reflected by your Stock Option Grant Notice ("***Grant Notice***"), Sensei Biotherapeutics, Inc. (the "***Company***") has granted you an option under its 2021 Equity Incentive Plan (the "***Plan***") to purchase a number of shares of Common Stock at the exercise price indicated in your Grant Notice (the "***Option***"). Capitalized terms not explicitly defined in this Agreement but defined in the Grant Notice or the Plan shall have the meanings set forth in the Grant Notice or Plan, as applicable. The terms of your Option as specified in the Grant Notice and this Stock Option Agreement constitute your Option Agreement.

The general terms and conditions applicable to your Option are as follows:

1. GOVERNING PLAN DOCUMENT. Your Option is subject to all the provisions of the Plan, including but not limited to the provisions in:

a. Section 6 regarding the impact of a Capitalization Adjustment, dissolution, liquidation, or Corporate Transaction on your Option;

b. Section 9(e) regarding the Company's retained rights to terminate your Continuous Service notwithstanding the grant of the Option; and

c. Section 8(c) regarding the tax consequences of your Option.

Your Option is further subject to all interpretations, amendments, rules and regulations, which may from time to time be promulgated and adopted pursuant to the Plan. In the event of any conflict between the Option Agreement and the provisions of the Plan, the provisions of the Plan shall control.

2. EXERCISE.

a. You may generally exercise the vested portion of your Option for whole shares of Common Stock at any time during its term by delivery of payment of the exercise price and applicable withholding taxes and other required documentation to the Plan Administrator in accordance with the exercise procedures established by the Plan Administrator, which may include an electronic submission. Please review Sections 4(i), 4(j) and 7(b)(v) of the Plan, which may restrict or prohibit your ability to exercise your Option during certain periods.

b. To the extent permitted by Applicable Law, you may pay your Option exercise price as follows:

1) cash, check, bank draft or money order;

2) subject to Company and/or Committee consent at the time of exercise, pursuant to a "cashless exercise" program as further described in Section 4(c)(ii) of the Plan if at the time of exercise the Common Stock is publicly traded;

3) subject to Company and/or Committee consent at the time of exercise, by delivery of previously owned shares of Common Stock as further described in Section 4(c)(iii) of the Plan; or

4) subject to Company and/or Committee consent at the time of exercise, if the Option is a Nonstatutory Stock Option, by a "net exercise" arrangement as further described in Section 4(c)(iv) of the Plan.

c. By accepting your Option, you agree that you will not sell, dispose of, transfer, make any short sale of, grant any option for the purchase of, or enter into any hedging or similar transaction with the same economic effect as a sale with respect to any shares of Common Stock or other securities of the Company held by you, for a period of one hundred eighty (180) days following the effective date of a registration statement of the Company filed under the Securities Act or such longer period as the underwriters or the Company will request to facilitate compliance with FINRA Rule 2241 or any successor or similar rules or regulation (the "***Lock-Up Period***"); *provided, however*, that nothing contained in this section will prevent the exercise of a repurchase option, if any, in favor of the Company during the Lock-Up Period. You further agree to execute and deliver such other agreements as may be reasonably requested by the Company or the underwriters that are consistent with the foregoing or that are necessary to give further effect thereto. In order to enforce the foregoing covenant, the Company may impose stop-transfer instructions with respect to your shares of Common Stock until the end of such period. You also agree that any transferee of any shares of Common Stock (or other securities) of the Company held by you will be bound by this Section 2(c). The underwriters of the Company's stock are intended third party beneficiaries of this Section 2(c) and will have the right, power and authority to enforce the provisions hereof as though they were a party hereto.

3. TERM. You may not exercise your Option before the commencement of its term or after its term expires. The term of your Option commences on the Date of Grant and expires upon the earliest of the following:

a. immediately upon the termination of your Continuous Service for Cause;

b. three months after the termination of your Continuous Service for any reason other than Cause, Disability or death;

c. 12 months after the termination of your Continuous Service due to your Disability;

d. 18 months after your death if you die during your Continuous Service;

e. immediately upon a Corporate Transaction if the Board has determined that the Option will terminate in connection with a Corporate Transaction,

f. the Expiration Date indicated in your Grant Notice; or

g. the day before the 10th anniversary of the Date of Grant.

Notwithstanding the foregoing, if you die during the period provided in Section 3(b) or 3(c) above, the term of your Option shall not expire until the earlier of (i) 18 months after your death, (ii) upon any termination of the Option in connection with a Corporate Transaction, (iii) the Expiration Date indicated in your Grant Notice, or (iv) the day before the tenth anniversary of the Date of Grant. Additionally, the Post-Termination Exercise Period of your Option may be extended as provided in Section 4(i) of the Plan.

To obtain the federal income tax advantages associated with an Incentive Stock Option, the Code requires that at all times beginning on the date of grant of your Option and ending on the day three months before the date of your Option's exercise, you must be an employee of the Company or an Affiliate, except in the event of your death or Disability. If the Company provides for the extended exercisability of your Option under certain circumstances for your benefit, your Option will not necessarily be treated as an Incentive Stock Option if you exercise your Option more than three months after the date your employment terminates.

4. WITHHOLDING OBLIGATIONS. As further provided in Section 8 of the Plan: (a) you may not exercise your Option unless the applicable tax withholding obligations are satisfied, and (b) at the time you exercise your Option, in whole or in part, or at any time thereafter as requested by the Company, you hereby authorize withholding from payroll and any other amounts payable to you, and otherwise agree to make adequate provision for (including by means of a "cashless exercise" pursuant to a program developed under Regulation T as promulgated by the Federal Reserve Board to the extent permitted by the Company), any sums required to satisfy the federal, state, local and foreign tax withholding obligations, if any, which arise in connection with the exercise of your Option in accordance with the withholding procedures established by the Company. Accordingly, you may not be able to exercise your Option even though the Option is vested, and the Company shall have no obligation to issue shares of Common Stock subject to your Option, unless and until such obligations are satisfied. In the event that the amount of the Company's withholding obligation in connection with your Option was greater than the amount actually withheld by the Company, you agree to indemnify and hold the Company harmless from any failure by the Company to withhold the proper amount.

5. INCENTIVE STOCK OPTION DISPOSITION REQUIREMENT. If your Option is an Incentive Stock Option, you must notify the Company in writing within 15 days after the date of any disposition of any of the shares of the Common Stock issued upon exercise of your Option that occurs within two years after the date of your Option grant or within one year after such shares of Common Stock are transferred upon exercise of your Option.

6. TRANSFERABILITY. Except as otherwise provided in Section 4(e) of the Plan, your Option is not transferable, except by will or by the applicable laws of descent and distribution, and is exercisable during your life only by you.

7. CORPORATE TRANSACTION. Your Option is subject to the terms of any agreement governing a Corporate Transaction involving the Company, including, without limitation, a provision for the appointment of a stockholder representative that is authorized to act on your behalf with respect to any escrow, indemnities and any contingent consideration.

8. NO LIABILITY FOR TAXES. As a condition to accepting the Option, you hereby (a) agree to not make any claim against the Company, or any of its Officers, Directors, Employees or Affiliates related to tax liabilities arising from the Option or other Company compensation and (b) acknowledge that you were advised to consult with your own personal tax, financial and other legal advisors regarding the tax consequences of the Option and have either done so or knowingly and voluntarily declined to do so. Additionally, you acknowledge that the Option is exempt from Section 409A only if the exercise price is at least equal to the "fair market value" of the Common Stock on the date of grant as determined by the Internal Revenue Service and there is no other impermissible deferral of compensation associated with the Option. Additionally, as a condition to accepting the Option, you agree not make any claim against the Company, or any of its Officers, Directors, Employees or Affiliates in the event that the Internal Revenue Service asserts that such exercise is less than the "fair market value" of the Common Stock on the date of grant as subsequently determined by the Internal Revenue Service.

9. SEVERABILITY. If any part of this Option Agreement or the Plan is declared by any court or governmental authority to be unlawful or invalid, such unlawfulness or invalidity will not invalidate any portion of this Option Agreement or the Plan not declared to be unlawful or invalid. Any Section of this Option Agreement (or part of such a Section) so declared to be unlawful or invalid will, if possible, be construed in a manner which will give effect to the terms of such Section or part of a Section to the fullest extent possible while remaining lawful and valid

10. OTHER DOCUMENTS. You hereby acknowledge receipt of or the right to receive a document providing the information required by Rule 428(b)(1) promulgated under the Securities Act, which includes the Prospectus. In addition, you acknowledge receipt of the Company's Trading Policy.

11. QUESTIONS. If you have questions regarding these or any other terms and conditions applicable to your Option, including a summary of the applicable federal income tax consequences please see the Prospectus.

*** * * ***

ATTACHMENT II

2021 EQUITY INCENTIVE PLAN

ATTACHMENT III

NOTICE OF EXERCISE

SENSEI BIOTHERAPEUTICS, INC.

(2021 EQUITY INCENTIVE PLAN)

NOTICE OF EXERCISE

SENSEI BIOTHERAPEUTICS, INC.
1405 RESEARCH BLVD, SUITE 125
ROCKVILLE, MD 20850

Date of Exercise: _____

This constitutes notice to Sensei Biotherapeutics, Inc. (the "***Company***") that I elect to purchase the below number of shares of Common Stock of the Company (the "***Shares***") by exercising my Option for the price set forth below. Capitalized terms not explicitly defined in this Notice of Exercise but defined in the Grant Notice, Option Agreement or 2021 Equity Incentive Plan (the "***Plan***") shall have the meanings set forth in the Grant Notice, Option Agreement or Plan, as applicable. Use of certain payment methods is subject to Company and/or Committee consent and certain additional requirements set forth in the Option Agreement and the Plan.

Type of option (check one):	Incentive ☐	Nonstatutory ☐
Date of Grant:	_____	
Number of Shares as to which Option is exercised:	_____	
Certificates to be issued in name of:	_____	
Total exercise price:	$_____	
Cash, check, bank draft or money order delivered herewith:	$_____	
Value of _____ Shares delivered herewith:	$_____	
Regulation T Program (cashless exercise)	$_____	
Value of _____ Shares pursuant to net exercise:	$_____	

By this exercise, I agree (i) to provide such additional documents as you may require pursuant to the terms of the Plan, (ii) to satisfy the tax withholding obligations, if any, relating to the exercise of this Option as set forth in the Option Agreement, and (iii) if this exercise relates to an incentive stock option, to notify you in writing within 15 days after the date of any disposition of any of the Shares issued upon exercise of this Option that occurs within two years after the Date of Grant or within one year after such Shares are issued upon exercise of this Option.

I further agree that, if required by the Company (or a representative of the underwriters) in connection with the first underwritten registration of the offering of any securities of the Company under the Securities Act, I will not sell, dispose of, transfer, make any short sale of, grant any option for the purchase of, or enter into any hedging or similar transaction with the same economic effect as a sale with respect to any shares of Common Stock or other securities of the Company for a period of one hundred eighty (180) days following the effective date of a registration statement of the Company filed under the Securities Act (or such longer period as the underwriters or the Company shall request to facilitate compliance with FINRA Rule 2241 or any successor or similar rule or regulation) (the "***Lock-Up Period***"). I further agree to execute and deliver such other agreements as may be reasonably requested by the Company or the underwriters that are consistent with the foregoing or that are necessary to give further effect thereto. In order to enforce the foregoing covenant, the Company may impose stop-transfer instructions with respect to securities subject to the foregoing restrictions until the end of such period.

Very truly yours,

_____

SENSEI BIOTHERAPEUTICS, INC.
STOCK OPTION GRANT NOTICE
(2021 EQUITY INCENTIVE PLAN)

Sensei Biotherapeutics, Inc. (the "***Company***"), pursuant to its 2021 Equity Incentive Plan (the "***Plan***"), has granted to you ("***Optionholder***") an option to purchase the number of shares of the Common Stock set forth below (the "***Option***"). Your Option is subject to all of the terms and conditions as set forth herein and in the Plan, and the Stock Option Agreement and the Notice of Exercise, all of which are attached hereto and incorporated herein in their entirety. Capitalized terms not explicitly defined herein but defined in the Plan or the Stock Option Agreement shall have the meanings set forth in the Plan or the Stock Option Agreement, as applicable.

Optionholder:	_____
Date of Grant:	_____
Number of Shares of Common Stock Subject to Option:	_____
Exercise Price (Per Share):	_____
Total Exercise Price:	_____
Expiration Date:	_____

Type of Grant: Nonstatutory Stock Option

Exercise and Vesting Schedule: Subject to the Optionholder's Continuous Service through each applicable vesting date, the Option will vest as follows, subject to the potential vesting acceleration described in Section 2 of the Stock Option Agreement:

[*IPO Grant & Initial Grant*][The shares subject to the Option shall vest and become exercisable in a series of thirty-six (36) successive equal monthly installments measured from the Date of Grant.]

[*Annual Grant*][The shares subject to the Option shall vest and become exercisable in a series of twelve (12) successive equal monthly installments measured from the Date of Grant; provided, that the Option shall become vested and exercisable on the date of the next annual meeting of the stockholders of the Company if such meeting occurs prior to the first anniversary of the Date of Grant.]

Optionholder Acknowledgements: By your signature below or by electronic acceptance or authentication in a form authorized by the Company, you understand and agree that:

- The Option is governed by this Stock Option Grant Notice, and the provisions of the Plan and the Stock Option Agreement and the Notice of Exercise, all of which are made a part of this document. Unless otherwise provided in the Plan, this Grant Notice and the Stock Option Agreement (together, the "***Option Agreement***") may not be modified, amended or revised except in a writing signed by you and a duly authorized officer of the Company.
- You consent to receive this Grant Notice, the Stock Option Agreement, the Plan, the Prospectus and any other Plan-related documents by electronic delivery and to participate in the Plan through an on-line or electronic system established and maintained by the Company or another third party designated by the Company.

- You have read and are familiar with the provisions of the Plan, the Stock Option Agreement, the Notice of Exercise and the Prospectus. In the event of any conflict between the provisions in this Grant Notice, the Option Agreement, the Notice of Exercise, or the Prospectus and the terms of the Plan, the terms of the Plan shall control.
- The Option Agreement sets forth the entire understanding between you and the Company regarding the acquisition of Common Stock and supersedes all prior oral and written agreements, promises and/or representations on that subject with the exception of other equity awards previously granted to you and any written employment agreement, offer letter, severance agreement, written severance plan or policy, or other written agreement between the Company and you in each case that specifies the terms that should govern this Option.
- Counterparts may be delivered via facsimile, electronic mail (including pdf or any electronic signature complying with the U.S. federal ESIGN Act of 2000, Uniform Electronic Transactions Act or other applicable law) or other transmission method and any counterpart so delivered will be deemed to have been duly and validly delivered and be valid and effective for all purposes.

SENSEI BIOTHERAPEUTICS, INC.

By: _____
Signature

Title: _____

Date: _____

OPTIONHOLDER:

_____
Signature

Date: _____

ATTACHMENTS: Stock Option Agreement, 2021 Equity Incentive Plan, Notice of Exercise

ATTACHMENT I

STOCK OPTION AGREEMENT

SENSEI BIOTHERAPEUTICS, INC.
2021 EQUITY INCENTIVE PLAN

STOCK OPTION AGREEMENT

As reflected by your Stock Option Grant Notice ("***Grant Notice***"), Sensei Biotherapeutics, Inc. (the "***Company***") has granted you an option under its 2021 Equity Incentive Plan (the "***Plan***") to purchase a number of shares of Common Stock at the exercise price indicated in your Grant Notice (the "***Option***"). Capitalized terms not explicitly defined in this Agreement but defined in the Grant Notice or the Plan shall have the meanings set forth in the Grant Notice or Plan, as applicable. The terms of your Option as specified in the Grant Notice and this Stock Option Agreement constitute your Option Agreement.

The general terms and conditions applicable to your Option are as follows:

12. GOVERNING PLAN DOCUMENT. Your Option is subject to all the provisions of the Plan, including but not limited to the provisions in:

a. Section 6 regarding the impact of a Capitalization Adjustment, dissolution, liquidation, or Corporate Transaction on your Option;

b. Section 9(e) regarding the Company's retained rights to terminate your Continuous Service notwithstanding the grant of the Option; and

c. Section 8(c) regarding the tax consequences of your Option.

Your Option is further subject to all interpretations, amendments, rules and regulations, which may from time to time be promulgated and adopted pursuant to the Plan. In the event of any conflict between the Option Agreement and the provisions of the Plan, the provisions of the Plan shall control.

13. VESTING.

a. Your Option will vest as provided in your Grant Notice, subject to the provisions contained herein and the terms of the Plan. Vesting will cease upon the termination of your Continuous Service. Notwithstanding the foregoing, if a Change in Control occurs and your Continuous Service has not terminated as of immediately prior to such Change in Control, then the vesting and exercisability of your Option will be accelerated in full upon such Change in Control.

b. If any payment or benefit you would receive from the Company or otherwise in connection with a Change in Control or other similar transaction (a "***280G Payment***") would (i) constitute a "parachute payment" within the meaning of Section 280G of the Code, and (ii) but for this sentence, be subject to the excise tax imposed by Section 4999 of the Code (the "***Excise Tax***"), then any such 280G Payment (a "***Payment***") shall be equal to the Reduced Amount. The "***Reduced Amount***" shall be either (x) the largest portion of the Payment that would result in no portion of the Payment (after reduction) being subject to the Excise Tax

or (y) the largest portion, up to and including the total, of the Payment, whichever amount (i.e., the amount determined by clause (x) or by clause (y)), after taking into account all applicable federal, state and local employment taxes, income taxes, and the Excise Tax (all computed at the highest applicable marginal rate), results in your receipt, on an after-tax basis, of the greater economic benefit notwithstanding that all or some portion of the Payment may be subject to the Excise Tax. If a reduction in a Payment is required pursuant to the preceding sentence and the Reduced Amount is determined pursuant to clause (x) of the preceding sentence, the reduction shall occur in the manner (the "***Reduction Method***") that results in the greatest economic benefit for you. If more than one method of reduction will result in the same economic benefit, the items so reduced will be reduced pro rata (the "***Pro Rata Reduction Method***").

Notwithstanding the foregoing, if the Reduction Method or the Pro Rata Reduction Method would result in any portion of the Payment being subject to taxes pursuant to Section 409A of the Code that would not otherwise be subject to taxes pursuant to Section 409A of the Code, then the Reduction Method and/or the Pro Rata Reduction Method, as the case may be, shall be modified so as to avoid the imposition of taxes pursuant to Section 409A of the Code as follows: (A) as a first priority, the modification shall preserve to the greatest extent possible, the greatest economic benefit for you as determined on an after-tax basis; (B) as a second priority, Payments that are contingent on future events (e.g., being terminated without cause), shall be reduced (or eliminated) before Payments that are not contingent on future events; and (C) as a third priority, Payments that are "deferred compensation" within the meaning of Section 409A of the Code shall be reduced (or eliminated) before Payments that are not deferred compensation within the meaning of Section 409A of the Code.

Unless you and the Company agree on an alternative accounting firm, the accounting firm engaged by the Company for general tax compliance purposes as of the day prior to the effective date of the change of control transaction triggering the Payment shall perform the foregoing calculations. If the accounting firm so engaged by the Company is serving as accountant or auditor for the individual, entity or group effecting the change of control transaction, the Company shall appoint a nationally recognized accounting firm to make the determinations required hereunder. The Company shall bear all expenses with respect to the determinations by such accounting firm required to be made hereunder. The Company shall use commercially reasonable efforts to cause the accounting firm engaged to make the determinations hereunder to provide its calculations, together with detailed supporting documentation, to you and the Company within fifteen (15) calendar days after the date on which your right to a 280G Payment becomes reasonably likely to occur (if requested at that time by you or the Company) or such other time as requested by you or the Company.

If you receive a Payment for which the Reduced Amount was determined pursuant to clause (x) of the first paragraph of this Section 2(b) and the Internal Revenue Service determines thereafter that some portion of the Payment is subject to the Excise Tax, you shall promptly return to the Company a sufficient amount of the Payment (after reduction pursuant to clause (x) of the first paragraph of this Section 2(b) so that no portion of the remaining Payment is subject to the Excise Tax. For the avoidance of doubt, if the Reduced Amount was determined pursuant to clause (y) in the first paragraph of this Section 2(b), you shall have no obligation to return any portion of the Payment pursuant to the preceding sentence.

14. EXERCISE.

a. You may generally exercise the vested portion of your Option for whole shares of Common Stock at any time during its term by delivery of payment of the exercise price and applicable withholding taxes and other required documentation to the Plan Administrator in accordance with the exercise procedures established by the Plan Administrator, which may include an electronic submission. Please review Sections 4(i), 4(j) and 7(b)(v) of the Plan, which may restrict or prohibit your ability to exercise your Option during certain periods.

b. To the extent permitted by Applicable Law, you may pay your Option exercise price as follows:

1) cash, check, bank draft or money order;

2) subject to Company and/or Committee consent at the time of exercise, pursuant to a "cashless exercise" program as further described in Section 4(c)(ii) of the Plan if at the time of exercise the Common Stock is publicly traded;

3) subject to Company and/or Committee consent at the time of exercise, by delivery of previously owned shares of Common Stock as further described in Section 4(c)(iii) of the Plan; or

4) subject to Company and/or Committee consent at the time of exercise, if the Option is a Nonstatutory Stock Option, by a "net exercise" arrangement as further described in Section 4(c)(iv) of the Plan.

15. TERM. You may not exercise your Option before the commencement of its term or after its term expires. The term of your Option commences on the Date of Grant and expires upon the earliest of the following:

a. immediately upon the termination of your Continuous Service for Cause;

b. three months after the termination of your Continuous Service for any reason other than Cause, Disability or death;

c. 12 months after the termination of your Continuous Service due to your Disability;

d. 18 months after your death if you die during your Continuous Service;

e. immediately upon a Corporate Transaction if the Board has determined that the Option will terminate in connection with a Corporate Transaction,

f. the Expiration Date indicated in your Grant Notice; or

g. the day before the 10th anniversary of the Date of Grant.

Notwithstanding the foregoing, if you die during the period provided in Section 4(b) or 4(c) above, the term of your Option shall not expire until the earlier of (i) eighteen months after your death, (ii) upon any termination of the Option in connection with a Corporate Transaction, (iii) the Expiration Date indicated in your Grant Notice, or (iv) the day before the tenth anniversary of the Date of Grant. Additionally, the Post-Termination Exercise Period of your Option may be extended as provided in Section 4(i) of the Plan.

16. WITHHOLDING OBLIGATIONS. As further provided in Section 8 of the Plan: (a) you may not exercise your Option unless the applicable tax withholding obligations are satisfied, and (b) at the time you exercise your Option, in whole or in part, or at any time thereafter as requested by the Company, you hereby authorize withholding from payroll and any other amounts payable to you, and otherwise agree to make adequate provision for (including by means of a "cashless exercise" pursuant to a program developed under Regulation T as promulgated by the Federal Reserve Board to the extent permitted by the Company), any sums required to satisfy the federal, state, local and foreign tax withholding obligations, if any, which arise in connection with the exercise of your Option in accordance with the withholding procedures established by the Company. Accordingly, you may not be able to exercise your Option even though the Option is vested, and the Company shall have no obligation to issue shares of Common Stock subject to your Option, unless and until such obligations are satisfied. In the event that the amount of the Company's withholding obligation in connection with your Option was greater than the amount actually withheld by the Company, you agree to indemnify and hold the Company harmless from any failure by the Company to withhold the proper amount.

17. TRANSFERABILITY. Except as otherwise provided in Section 4(e) of the Plan, your Option is not transferable, except by will or by the applicable laws of descent and distribution, and is exercisable during your life only by you.

18. CORPORATE TRANSACTION. Your Option is subject to the terms of any agreement governing a Corporate Transaction involving the Company, including, without limitation, a provision for the appointment of a stockholder representative that is authorized to act on your behalf with respect to any escrow, indemnities and any contingent consideration.

19. NO LIABILITY FOR TAXES. As a condition to accepting the Option, you hereby (a) agree to not make any claim against the Company, or any of its Officers, Directors, Employees or Affiliates related to tax liabilities arising from the Option or other Company compensation and (b) acknowledge that you were advised to consult with your own personal tax, financial and other legal advisors regarding the tax consequences of the Option and have either done so or knowingly and voluntarily declined to do so. Additionally, you acknowledge that the Option is exempt from Section 409A only if the exercise price is at least equal to the "fair market value" of the Common Stock on the date of grant as determined by the Internal Revenue Service and there is no other impermissible deferral of compensation associated with the Option. Additionally, as a condition to accepting the Option, you agree not make any claim against the Company, or any of its Officers, Directors, Employees or Affiliates in the event that the Internal Revenue Service asserts that such exercise is less than the "fair market value" of the Common Stock on the date of grant as subsequently determined by the Internal Revenue Service.

20. SEVERABILITY. If any part of this Option Agreement or the Plan is declared by any court or governmental authority to be unlawful or invalid, such unlawfulness or invalidity will not invalidate any portion of this Option Agreement or the Plan not declared to be unlawful or invalid. Any Section of this Option Agreement (or part of such a Section) so declared to be unlawful or invalid will, if possible, be construed in a manner which will give effect to the terms of such Section or part of a Section to the fullest extent possible while remaining lawful and valid

21. OTHER DOCUMENTS. You hereby acknowledge receipt of or the right to receive a document providing the information required by Rule 428(b)(1) promulgated under the Securities Act, which includes the Prospectus. In addition, you acknowledge receipt of the Company's Trading Policy.

22. QUESTIONS. If you have questions regarding these or any other terms and conditions applicable to your Option, including a summary of the applicable federal income tax consequences please see the Prospectus.

*** * * ***

ATTACHMENT II

2021 EQUITY INCENTIVE PLAN

ATTACHMENT III

NOTICE OF EXERCISE

SENSEI BIOTHERAPEUTICS, INC.

(2021 EQUITY INCENTIVE PLAN)

NOTICE OF EXERCISE

SENSEI BIOTHERAPEUTICS, INC.
1405 RESEARCH BLVD, SUITE 125
ROCKVILLE, MD 20850

Date of Exercise: _____

This constitutes notice to Sensei Biotherapeutics, Inc. (the "***Company***") that I elect to purchase the below number of shares of Common Stock of the Company (the "***Shares***") by exercising my Option for the price set forth below. Capitalized terms not explicitly defined in this Notice of Exercise but defined in the Grant Notice, Option Agreement or 2021 Equity Incentive Plan (the "***Plan***") shall have the meanings set forth in the Grant Notice, Option Agreement or Plan, as applicable. Use of certain payment methods is subject to Company and/or Committee consent and certain additional requirements set forth in the Option Agreement and the Plan.

Type of option:	Nonstatutory
Date of Grant:	_____
Number of Shares as to which Option is exercised:	_____
Certificates to be issued in name of:	_____
Total exercise price:	$_____
Cash, check, bank draft or money order delivered herewith:	$_____
Value of _____ Shares delivered herewith:	$_____
Regulation T Program (cashless exercise):	$_____
Value of _____ Shares pursuant to net exercise:	$_____

By this exercise, I agree (i) to provide such additional documents as you may require pursuant to the terms of the Plan and (ii) to satisfy the tax withholding obligations, if any, relating to the exercise of this Option as set forth in the Option Agreement.

Very truly yours,

_____

SENSEI BIOTHERAPEUTICS, INC.

2021 EMPLOYEE STOCK PURCHASE PLAN

ADOPTED BY THE BOARD OF DIRECTORS: JANUARY 27, 2021
APPROVED BY THE STOCKHOLDERS: JANUARY 28, 2021

1. GENERAL; PURPOSE.

(a) The Plan provides a means by which Eligible Employees of the Company and certain designated Related Corporations may be given an opportunity to purchase shares of Common Stock. The Plan permits the Company to grant a series of Purchase Rights to Eligible Employees under an Employee Stock Purchase Plan.

(b) The Company, by means of the Plan, seeks to retain the services of such Employees, to secure and retain the services of new Employees and to provide incentives for such persons to exert maximum efforts for the success of the Company and its Related Corporations.

2. ADMINISTRATION.

(a) The Board will administer the Plan unless and until the Board delegates administration of the Plan to a Committee or Committees, as provided in Section 2(c).

(b) The Board will have the power, subject to, and within the limitations of, the express provisions of the Plan:

(i) To determine how and when Purchase Rights will be granted and the provisions of each Offering (which need not be identical).

(ii) To designate from time to time which Related Corporations of the Company will be eligible to participate in the Plan.

(iii) To construe and interpret the Plan and Purchase Rights, and to establish, amend and revoke rules and regulations for its administration. The Board, in the exercise of this power, may correct any defect, omission or inconsistency in the Plan, in a manner and to the extent it deems necessary or expedient to make the Plan fully effective.

(iv) To settle all controversies regarding the Plan and Purchase Rights granted under the Plan.

(v) To suspend or terminate the Plan at any time as provided in Section 12.

(vi) To amend the Plan at any time as provided in Section 12.

(vii) Generally, to exercise such powers and to perform such acts as it deems necessary or expedient to promote the best interests of the Company and its Related Corporations and to carry out the intent that the Plan be treated as an Employee Stock Purchase Plan.

(viii) To adopt such procedures and sub-plans as are necessary or appropriate to permit participation in the Plan by Employees who are foreign nationals or employed outside the United States.

(c) The Board may delegate some or all of the administration of the Plan to a Committee or Committees. If administration is delegated to a Committee, the Committee will have, in connection with the administration of the Plan, the powers theretofore possessed by the Board that have been delegated to the Committee, including the power to delegate to a subcommittee any of the administrative powers the Committee is authorized to exercise (and references to the Board in this Plan and in any applicable Offering Document will thereafter be to the Committee or subcommittee), subject, however, to such resolutions, not inconsistent with the provisions of the Plan, as may be adopted from time to time by the Board. The Board may retain the authority to concurrently administer the Plan with the Committee and may, at any time, revest in the Board some or all of the powers previously delegated. Whether or not the Board has delegated administration of the Plan to a Committee, the Board will have the final power to determine all questions of policy and expediency that may arise in the administration of the Plan.

(d) All determinations, interpretations and constructions made by the Board in good faith will not be subject to review by any person and will be final, binding and conclusive on all persons.

3. SHARES OF COMMON STOCK SUBJECT TO THE PLAN.

(a) Subject to the provisions of Section 11(a) relating to Capitalization Adjustments, the maximum number of shares of Common Stock that may be issued under the Plan will not exceed 333,333 shares of Common Stock (the "***Share Reserve***"), plus the number of shares of Common Stock that are automatically added on January 1st of each year for a period of up to ten years, commencing on January 1, 2022 and ending on (and including) January 1, 2031, in an amount equal to one percent (1.0%) of the total number of shares of Common Stock outstanding on December 31st of the preceding calendar year (the "***Evergreen Measurement Date***"). Notwithstanding the foregoing, the (i) number of shares added to the Share Reserve pursuant to the preceding sentence shall be reduced automatically to the extent necessary to avoid causing the Share Reserve to exceed a number of shares equal to one percent (1.0%) of the shares of Common Stock outstanding on the applicable Evergreen Measurement Date and (ii) the Board may act prior to the first day of any calendar year to provide that there will be no January 1st increase in the share reserve for such calendar year or that the increase in the share reserve for such calendar year will be a lesser number of shares of Common Stock than would otherwise occur pursuant to the preceding sentence.

(b) If any Purchase Right granted under the Plan terminates without having been exercised in full, the shares of Common Stock not purchased under such Purchase Right will again become available for issuance under the Plan.

(c) The stock purchasable under the Plan will be shares of authorized but unissued or reacquired Common Stock, including shares repurchased by the Company on the open market.

4. GRANT OF PURCHASE RIGHTS; OFFERING.

(a) The Board may from time to time grant or provide for the grant of Purchase Rights to Eligible Employees under an Offering (consisting of one or more Purchase Periods) on an Offering Date or Offering Dates selected by the Board. Each Offering will be in such form and will contain such terms and conditions as the Board will deem appropriate, and will comply with the requirement of Section 423(b)(5) of the Code that all Employees granted Purchase Rights will have the same rights and privileges. The terms and conditions of an Offering shall be incorporated by reference into the Plan and treated as part of the Plan. The provisions of separate Offerings need not be identical, but each Offering will include (through incorporation of the provisions of this Plan by reference in the document comprising the Offering or otherwise) the period during which the Offering will be effective, which period will not exceed 27 months beginning with the Offering Date, and the substance of the provisions contained in Sections 5 through 8, inclusive.

(b) If a Participant has more than one Purchase Right outstanding under the Plan, unless he or she otherwise indicates in forms delivered to the Company: (i) each form will apply to all of his or her Purchase Rights under the Plan, and (ii) a Purchase Right with a lower exercise price (or an earlier-granted Purchase Right, if different Purchase Rights have identical exercise prices) will be exercised to the fullest possible extent before a Purchase Right with a higher exercise price (or a later-granted Purchase Right if different Purchase Rights have identical exercise prices) will be exercised.

(c) The Board will have the discretion to structure an Offering so that if the Fair Market Value of a share of Common Stock on the first Trading Day of a new Purchase Period within that Offering is less than or equal to the Fair Market Value of a share of Common Stock on the Offering Date for that Offering, then (i) that Offering will terminate immediately as of that first Trading Day, and (ii) the Participants in such terminated Offering will be automatically enrolled in a new Offering beginning on the first Trading Day of such new Purchase Period.

5. ELIGIBILITY.

(a) Purchase Rights may be granted only to Employees of the Company or, as the Board may designate in accordance with Section 2(b), to Employees of a Related Corporation. Except as provided in Section 5(b), an Employee will not be eligible to be granted Purchase Rights unless, on the Offering Date, the Employee has been in the employ of the Company or the Related Corporation, as the case may be, for such continuous period preceding such Offering Date as the Board may require, but in no event will the required period of continuous employment be equal to or greater than two years. In addition, the Board may provide that no Employee will be eligible to be granted Purchase Rights under the Plan unless, on the Offering Date, such Employee's customary employment with the Company or the Related Corporation is more than 20 hours per week and more than five months per calendar year or such other criteria as the Board may determine consistent with Section 423 of the Code.

(b) The Board may provide that each person who, during the course of an Offering, first becomes an Eligible Employee will, on a date or dates specified in the Offering which coincides with the day on which such person becomes an Eligible Employee or which occurs thereafter, receive a Purchase Right under that Offering, which Purchase Right will thereafter be deemed to be a part of that Offering. Such Purchase Right will have the same characteristics as any Purchase Rights originally granted under that Offering, as described herein, except that:

(i) the date on which such Purchase Right is granted will be the "Offering Date" of such Purchase Right for all purposes, including determination of the exercise price of such Purchase Right;

(ii) the period of the Offering with respect to such Purchase Right will begin on its Offering Date and end coincident with the end of such Offering; and

(iii) the Board may provide that if such person first becomes an Eligible Employee within a specified period of time before the end of the Offering, he or she will not receive any Purchase Right under that Offering.

(c) No Employee will be eligible for the grant of any Purchase Rights if, immediately after any such Purchase Rights are granted, such Employee owns stock possessing five percent or more of the total combined voting power or value of all classes of stock of the Company or of any Related Corporation. For purposes of this Section 5(c), the rules of Section 424(d) of the Code will apply in determining the stock ownership of any Employee, and stock which such Employee may purchase under all outstanding Purchase Rights and options will be treated as stock owned by such Employee.

(d) As specified by Section 423(b)(8) of the Code, an Eligible Employee may be granted Purchase Rights only if such Purchase Rights, together with any other rights granted under all Employee Stock Purchase Plans of the Company and any Related Corporations, do not permit such Eligible Employee's rights to purchase stock of the Company or any Related Corporation to accrue at a rate which, when aggregated, exceeds $25,000 of Fair Market Value of such stock (determined at the time such rights are granted, and which, with respect to the Plan, will be determined as of their respective Offering Dates) for each calendar year in which such rights are outstanding at any time.

(e) Officers of the Company and any designated Related Corporation, if they are otherwise Eligible Employees, will be eligible to participate in Offerings under the Plan. Notwithstanding the foregoing, the Board may provide in an Offering that Employees who are highly compensated Employees within the meaning of Section 423(b)(4)(D) of the Code will not be eligible to participate.

6. PURCHASE RIGHTS; PURCHASE PRICE.

(a) On each Offering Date, each Eligible Employee, pursuant to an Offering made under the Plan, will be granted a Purchase Right to purchase up to that number of shares of Common Stock purchasable either with a percentage or with a maximum dollar amount, as designated by the Board, but in either case not exceeding 15% of such Employee's earnings (as defined by the Board in each Offering) during the period that begins on the Offering Date (or such later date as the Board determines for a particular Offering) and ends on the date stated in the Offering, which date will be no later than the end of the Offering.

(b) The Board will establish one or more Purchase Dates during an Offering on which Purchase Rights granted for that Offering will be exercised and shares of Common Stock will be purchased in accordance with such Offering.

(c) In connection with each Offering made under the Plan, the Board may specify (i) a maximum number of shares of Common Stock that may be purchased by any Participant on any Purchase Date during such Offering, (ii) a maximum aggregate number of shares of Common Stock that may be purchased by all Participants pursuant to such Offering and/or (iii) a maximum aggregate number of shares of Common Stock that may be purchased by all Participants on any Purchase Date under the Offering. If the aggregate purchase of shares of Common Stock issuable upon exercise of Purchase Rights granted under the Offering would exceed any such maximum aggregate number, then, in the absence of any Board action otherwise, a pro rata (based on each Participant's accumulated Contributions) allocation of the shares of Common Stock available will be made in as nearly a uniform manner as will be practicable and equitable.

(d) The purchase price of shares of Common Stock acquired pursuant to Purchase Rights will be not less than the lesser of:

(i) an amount equal to 85% of the Fair Market Value of the shares of Common Stock on the Offering Date; or

(ii) an amount equal to 85% of the Fair Market Value of the shares of Common Stock on the applicable Purchase Date.

7. PARTICIPATION; WITHDRAWAL; TERMINATION.

(a) An Eligible Employee may elect to participate in an Offering and authorize payroll deductions as the means of making Contributions by completing and delivering to the Company, within the time specified in the Offering, an enrollment form provided by the Company. The enrollment form will specify the amount of Contributions not to exceed the maximum amount specified by the Board. Each Participant's Contributions will be credited to a bookkeeping account for such Participant under the Plan and will be deposited with the general funds of the Company except where applicable law requires that Contributions be deposited with a third party. If permitted in the Offering, a Participant may begin such Contributions with the first practicable payroll occurring on or after the Offering Date (or, in the case of a payroll date that occurs after the end of the prior Offering but before the Offering Date of the next new Offering, Contributions from such payroll will be included in the new Offering). If permitted in the Offering, a Participant may thereafter reduce (including to zero) or increase his or her Contributions. If specifically provided in the Offering, in addition to or instead of making Contributions by payroll deductions, a Participant may make Contributions through the payment by cash or check prior to a Purchase Date.

(b) During an Offering, a Participant may cease making Contributions and withdraw from the Offering by delivering to the Company a withdrawal form provided by the Company. The Company may impose a deadline before a Purchase Date for withdrawing. Upon such withdrawal, such Participant's Purchase Right in that Offering will immediately terminate and the Company will distribute as soon as practicable to such Participant all of his or her accumulated but unused Contributions and such Participant's Purchase Right in that Offering shall thereupon terminate. A Participant's withdrawal from that Offering will have no effect upon his or her eligibility to participate in any other Offerings under the Plan, but such Participant will be required to deliver a new enrollment form to participate in subsequent Offerings.

(c) Unless otherwise required by applicable law, Purchase Rights granted pursuant to any Offering under the Plan will terminate immediately if the Participant either (i) is no longer an Employee for any reason or for no reason (subject to any post-employment participation period required by law) or (ii) is otherwise no longer eligible to participate. The Company will distribute to such individual as soon as practicable all of his or her accumulated but unused Contributions.

(d) During a Participant's lifetime, Purchase Rights will be exercisable only by such Participant. Purchase Rights are not transferable by a Participant, except by will, by the laws of descent and distribution, or, if permitted by the Company, by a beneficiary designation as described in Section 10.

(e) Unless otherwise specified in the Offering or required by applicable law, the Company will have no obligation to pay interest on Contributions.

8. EXERCISE OF PURCHASE RIGHTS.

(a) On each Purchase Date, each Participant's accumulated Contributions will be applied to the purchase of shares of Common Stock, up to the maximum number of shares of Common Stock permitted by the Plan and the applicable Offering, at the purchase price specified in the Offering. No fractional shares will be issued unless specifically provided for in the Offering.

(b) Unless otherwise provided in the Offering, if any amount of accumulated Contributions remains in a Participant's account after the purchase of shares of Common Stock and such remaining amount is less than the amount required to purchase one share of Common Stock on the final Purchase Date of an Offering, then such remaining amount will be held in such Participant's account for the

purchase of shares of Common Stock under the next Offering under the Plan, unless such Participant withdraws from or is not eligible to participate in such next Offering, in which case such amount will be distributed to such Participant after the final Purchase Date without interest (unless the payment of interest is otherwise required by applicable law). If the amount of Contributions remaining in a Participant's account after the purchase of shares of Common Stock is at least equal to the amount required to purchase one (1) whole share of Common Stock on the final Purchase Date of an Offering, then such remaining amount will be distributed in full to such Participant after the final Purchase Date of such Offering without interest.

(c) No Purchase Rights may be exercised to any extent unless the shares of Common Stock to be issued upon such exercise under the Plan are covered by an effective registration statement pursuant to the Securities Act and the Plan is in material compliance with all applicable federal, state, foreign and other securities and other laws applicable to the Plan. If on a Purchase Date the shares of Common Stock are not so registered or the Plan is not in such compliance, no Purchase Rights will be exercised on such Purchase Date, and the Purchase Date will be delayed until the shares of Common Stock are subject to such an effective registration statement and the Plan is in material compliance, except that the Purchase Date will in no event be more than 6 months from the Offering Date. If, on the Purchase Date, as delayed to the maximum extent permissible, the shares of Common Stock are not registered and the Plan is not in material compliance with all applicable laws, no Purchase Rights will be exercised and all accumulated but unused Contributions will be distributed to the Participants without interest.

9. COVENANTS OF THE COMPANY.

The Company will seek to obtain from each U.S. federal or state, foreign or other regulatory commission or agency having jurisdiction over the Plan such authority as may be required to grant Purchase Rights and issue and sell shares of Common Stock thereunder unless the Company determines, in its sole discretion, that doing so would cause the Company to incur costs that are unreasonable. If, after commercially reasonable efforts, the Company is unable to obtain the authority that counsel for the Company deems necessary for the grant of Purchase Rights or the lawful issuance and sale of Common Stock under the Plan, and at a commercially reasonable cost, the Company will be relieved from any liability for failure to grant Purchase Rights and/or to issue and sell Common Stock upon exercise of such Purchase Rights.

10. DESIGNATION OF BENEFICIARY.

(a) The Company may, but is not obligated to, permit a Participant to submit a form designating a beneficiary who will receive any shares of Common Stock and/or Contributions from the Participant's account under the Plan if the Participant dies before such shares and/or Contributions are delivered to the Participant. The Company may, but is not obligated to, permit the Participant to change such designation of beneficiary. Any such designation and/or change must be on a form approved by the Company.

(b) If a Participant dies, and in the absence of a valid beneficiary designation, the Company will deliver any shares of Common Stock and/or Contributions to the executor or administrator of the estate of the Participant. If no executor or administrator has been appointed (to the knowledge of the Company), the Company, in its sole discretion, may deliver such shares of Common Stock and/or Contributions without interest (unless the payment of interest is otherwise required by applicable law) to the Participant's spouse, dependents or relatives, or if no spouse, dependent or relative is known to the Company, then to such other person as the Company may designate.

11. ADJUSTMENTS UPON CHANGES IN COMMON STOCK; CORPORATE TRANSACTIONS.

(a) In the event of a Capitalization Adjustment, the Board will appropriately and proportionately adjust: (i) the class(es) and maximum number of securities subject to the Plan pursuant to Section 3(a), (ii) the class(es) and maximum number of securities by which the share reserve is to increase automatically each year pursuant to Section 3(a), (iii) the class(es) and number of securities subject to, and the purchase price applicable to outstanding Offerings and Purchase Rights, and (iv) the class(es) and number of securities that are the subject of the purchase limits under each ongoing Offering. The Board will make these adjustments, and its determination will be final, binding and conclusive.

(b) In the event of a Corporate Transaction, then: (i) any surviving corporation or acquiring corporation (or the surviving or acquiring corporation's parent company) may assume or continue outstanding Purchase Rights or may substitute similar rights (including a right to acquire the same consideration paid to the stockholders in the Corporate Transaction) for outstanding Purchase Rights, or (ii) if any surviving or acquiring corporation (or its parent company) does not assume or continue such Purchase Rights or does not substitute similar rights for such Purchase Rights, then the Participants' accumulated Contributions will be used to purchase shares of Common Stock within ten business days prior to the Corporate Transaction under the outstanding Purchase Rights, and the Purchase Rights will terminate immediately after such purchase.

12. AMENDMENT, TERMINATION OR SUSPENSION OF THE PLAN.

(a) The Board may amend the Plan at any time in any respect the Board deems necessary or advisable. However, except as provided in Section 11(a) relating to Capitalization Adjustments, stockholder approval will be required for any amendment of the Plan for which stockholder approval is required by applicable law or listing requirements.

(b) The Board may suspend or terminate the Plan at any time. No Purchase Rights may be granted under the Plan while the Plan is suspended or after it is terminated.

(c) Any benefits, privileges, entitlements and obligations under any outstanding Purchase Rights granted before an amendment, suspension or termination of the Plan will not be materially impaired by any such amendment, suspension or termination except (i) with the consent of the person to whom such Purchase Rights were granted, (ii) as necessary to comply with any laws, listing requirements, or governmental regulations (including, without limitation, the provisions of Section 423 of the Code and the regulations and other interpretive guidance issued thereunder relating to Employee Stock Purchase Plans) including without limitation any such regulations or other guidance that may be issued or amended after the date the Plan is adopted by the Board, or (iii) as necessary to obtain or maintain favorable tax, listing, or regulatory treatment. To be clear, the Board may amend outstanding Purchase Rights without a Participant's consent if such amendment is necessary to ensure that the Purchase Right and/or the Plan complies with the requirements of Section 423 of the Code.

Notwithstanding anything in the Plan or any Offering Document to the contrary, the Board will be entitled to: (i) establish the exchange ratio applicable to amounts withheld in a currency other than U.S. dollars; (ii) permit Contributions in excess of the amount designated by a Participant in order to adjust for mistakes in the Company's processing of properly completed Contribution elections; (iii) establish reasonable waiting and adjustment periods and/or accounting and crediting procedures to ensure that amounts applied toward the purchase of Common Stock for each Participant properly correspond with amounts withheld from the Participant's Contributions; (iv) amend any outstanding Purchase Rights or clarify any ambiguities regarding the terms of any Offering to enable the Purchase Rights to qualify under and/or comply with Section 423 of the Code; and (v) establish other limitations or procedures as the Board determines in its sole discretion advisable that are consistent with the Plan. The actions of the Board pursuant to this paragraph will not be considered to alter or impair any Purchase Rights granted under an Offering as they are part of the initial terms of each Offering and the Purchase Rights granted under each Offering.

13. EFFECTIVE DATE OF PLAN.

The Plan will become effective immediately prior to and contingent upon the IPO Date. No Purchase Rights will be exercised unless and until the Plan has been approved by the stockholders of the Company, which approval must be within 12 months before or after the date the Plan is adopted (or if required under Section 12(a) above, materially amended) by the Board.

14. MISCELLANEOUS PROVISIONS.

(a) Proceeds from the sale of shares of Common Stock pursuant to Purchase Rights will constitute general funds of the Company.

(b) A Participant will not be deemed to be the holder of, or to have any of the rights of a holder with respect to, shares of Common Stock subject to Purchase Rights unless and until the Participant's shares of Common Stock acquired upon exercise of Purchase Rights are recorded in the books of the Company (or its transfer agent).

(c) The Plan and Offering do not constitute an employment contract. Nothing in the Plan or in the Offering will in any way alter the at will nature of a Participant's employment or be deemed to create in any way whatsoever any obligation on the part of any Participant to continue in the employ of the Company or a Related Corporation, or on the part of the Company or a Related Corporation to continue the employment of a Participant.

(d) The provisions of the Plan will be governed by the laws of the State of Delaware without resort to that state's conflict of laws rules.

15. DEFINITIONS.

As used in the Plan, the following definitions will apply to the capitalized terms indicated below:

(a) "***Board***" means the Board of Directors of the Company.

(b) "***Capital Stock***" means each and every class of common stock of the Company, regardless of the number of votes per share.

(c) "***Capitalization Adjustment***" means any change that is made in, or other events that occur with respect to, the Common Stock subject to the Plan or subject to any Purchase Right after the date the Plan is adopted by the Board without the receipt of consideration by the Company through merger, consolidation, reorganization, recapitalization, reincorporation, stock dividend, dividend in property other than cash, large nonrecurring cash dividend, stock split, liquidating dividend, combination of shares, exchange of shares, change in corporate structure or other similar equity restructuring transaction, as that term is used in Financial Accounting Standards Board Accounting Standards Codification Topic 718 (or any successor thereto). Notwithstanding the foregoing, the conversion of any convertible securities of the Company will not be treated as a Capitalization Adjustment.

(d) "***Code***" means the Internal Revenue Code of 1986, as amended, including any applicable regulations and guidance thereunder.

(e) "***Committee***" means a committee of one or more members of the Board to whom authority has been delegated by the Board in accordance with Section 2(c).

(f) "***Common Stock***" means, as of the IPO Date, the common stock of the Company.

(g) "***Company***" means Sensei Biotherapeutics, Inc., a Delaware corporation.

(h) ***"Contributions***" means the payroll deductions and other additional payments specifically provided for in the Offering that a Participant contributes to fund the exercise of a Purchase Right. A Participant may make additional payments into his or her account if specifically provided for in the Offering, and then only if the Participant has not already had the maximum permitted amount withheld during the Offering through payroll deductions.

(i) "***Corporate Transaction***" means the consummation, in a single transaction or in a series of related transactions, of any one or more of the following events:

(i) a sale or other disposition of all or substantially all, as determined by the Board in its sole discretion, of the consolidated assets of the Company and its subsidiaries;

(ii) a sale or other disposition of more than 50% of the outstanding securities of the Company;

(iii) a merger, consolidation or similar transaction following which the Company is not the surviving corporation; or

(iv) a merger, consolidation or similar transaction following which the Company is the surviving corporation but the shares of Common Stock outstanding immediately preceding the merger, consolidation or similar transaction are converted or exchanged by virtue of the merger, consolidation or similar transaction into other property, whether in the form of securities, cash or otherwise.

(j) "***Director***" means a member of the Board.

(k) "***Eligible Employee***" means an Employee who meets the requirements set forth in the document(s) governing the Offering for eligibility to participate in the Offering, provided that such Employee also meets the requirements for eligibility to participate set forth in the Plan.

(l) "***Employee***" means any person, including an Officer or Director, who is "employed" for purposes of Section 423(b)(4) of the Code by the Company or a Related Corporation. However, service solely as a Director, or payment of a fee for such services, will not cause a Director to be considered an "Employee" for purposes of the Plan.

(m) "***Employee Stock Purchase Plan***" means a plan that grants Purchase Rights intended to be options issued under an "employee stock purchase plan," as that term is defined in Section 423(b) of the Code.

(n) "***Exchange Act***" means the Securities Exchange Act of 1934, as amended and the rules and regulations promulgated thereunder.

(o) "***Fair Market Value***" means, as of any date, the value of the Common Stock determined as follows:

(i) If the Common Stock is listed on any established stock exchange or traded on any established market, the Fair Market Value of a share of Common Stock will be, unless otherwise determined by the Board, the **closing sales price** for such stock as quoted on such exchange or market (or the exchange or market with the greatest volume of trading in the Common Stock) **on the date of determination**, as reported in such source as the Board deems reliable. Unless otherwise provided by the Board, if there is no closing sales price for the Common Stock on the date of determination, then the Fair Market Value will be the closing sales price on the last preceding date for which such quotation exists.

(ii) In the absence of such markets for the Common Stock, the Fair Market Value will be determined by the Board in good faith in compliance with applicable laws and in a manner that complies with Sections 409A of the Code.

(iii) Notwithstanding the foregoing, for any Offering that commences on the IPO Date, the Fair Market Value of the shares of Common Stock on the Offering Date will be the price per share at which shares are first sold to the public in the Company's initial public offering as specified in the final prospectus for that initial public offering.

(p) "***IPO Date***" means the date of the underwriting agreement between the Company and the underwriter(s) managing the initial public offering of the Common Stock, pursuant to which the Common Stock is priced for the initial public offering.

(q) "***Offering***" means the grant to Eligible Employees of Purchase Rights, with the exercise of those Purchase Rights automatically occurring at the end of one or more Purchase Periods. The terms and conditions of an Offering will generally be set forth in the "***Offering Document***" approved by the Board for that Offering.

(r) "***Offering Date***" means a date selected by the Board for an Offering to commence.

(s) "***Officer***" means a person who is an officer of the Company or a Related Corporation within the meaning of Section 16 of the Exchange Act.

(t) "***Participant***" means an Eligible Employee who holds an outstanding Purchase Right.

(u) "***Plan***" means this Sensei Biotherpaeutics, Inc. 2021 Employee Stock Purchase Plan, as amended from time to time.

(v) "***Purchase Date***" means one or more dates during an Offering selected by the Board on which Purchase Rights will be exercised and on which purchases of shares of Common Stock will be carried out in accordance with such Offering.

(w) "***Purchase Period***" means a period of time specified within an Offering, generally beginning on the Offering Date or on the first Trading Day following a Purchase Date, and ending on a Purchase Date. An Offering may consist of one or more Purchase Periods.

(x) "***Purchase Right***" means an option to purchase shares of Common Stock granted pursuant to the Plan.

(y) "***Related Corporation***" means any "parent corporation" or "subsidiary corporation" of the Company whether now or subsequently established, as those terms are defined in Sections 424(e) and (f), respectively, of the Code.

(z) "***Securities Act***" means the Securities Act of 1933, as amended.

(aa) "***Trading Day***" means any day on which the exchange(s) or market(s) on which shares of Common Stock are listed, including but not limited to the NYSE, Nasdaq Global Select Market, the Nasdaq Global Market, the Nasdaq Capital Market or any successors thereto, is open for trading.

Exhibit 10.12

SECOND AMENDED AND RESTATED EMPLOYMENT AGREEMENT

This **SECOND AMENDED AND RESTATED EMPLOYMENT AGREEMENT** (the "***Agreement***"), is entered into effective as of, and contingent upon, the closing of the Company's initial public offering (the "***Effective Date***"), by and between Sensei Biotherapeutics, Inc. (the "***Company***") and John Celebi (the "***Executive***"). This Agreement amends, restates, and supersedes in its entirety the Amended and Restated Employment Agreement between the Company and the Executive that was effective January 1, 2021 (the "***Prior Agreement***").

The Company desires to continue to employ Executive, in the capacity of full-time President and Chief Executive Officer pursuant to the terms of this Agreement and, in connection therewith, to compensate Executive for Executive's personal services to the Company; and

Executive wishes to continue to be employed by the Company and provide personal services to the Company in return for certain compensation.

Accordingly, in consideration of the mutual promises and covenants contained herein, the parties agree to the following:

1. EMPLOYMENT BY THE COMPANY.

1.1 At-Will Employment. Executive shall continue to be employed by the Company on an "at-will" basis, meaning either the Company or Executive may terminate Executive's employment at any time, with or without cause or advanced notice. Any contrary representations that may have been made to Executive shall be superseded by this Agreement. This Agreement shall constitute the full and complete agreement between Executive and the Company on the "at-will" nature of Executive's employment with the Company, which may be changed only in an express written agreement signed by Executive and a duly authorized officer of the Company. Executive's rights to any compensation following a termination shall be only as set forth in Section 6.

1.2 Position. Subject to the terms set forth herein, the Company agrees to continue to employ Executive in the position of President and Chief Executive Officer, and Executive hereby accepts such continued employment. During the term of Executive's employment with the Company, Executive will devote Executive's best efforts and substantially all of Executive's business time and attention to the business of the Company.

1.3 Duties. Executive will report to the Board of Directors of the Company (the "***Board***") performing such duties as are normally associated with Executive's then-current position and such duties as are assigned to Executive from time to time, subject to the oversight and direction of the Board. In general, and without limitation, Executive will be the principal executive officer and operational executive of the Company. Executive shall perform Executive's duties under this Agreement principally out of the Company's office in the Boston, Massachusetts area or such other location as assigned. In addition, Executive shall make such business trips to such places as may be necessary or advisable for the efficient operations of the Company.

1.4 Company Policies and Benefits. The employment relationship between the parties shall also continue to be subject to the Company's personnel policies and procedures as they may be interpreted, adopted, revised or deleted from time to time in the Company's sole discretion. Executive will be eligible to participate on the same basis as similarly-situated employees in the Company's benefit plans in effect from time to time during Executive's employment. All matters of eligibility for coverage or benefits under any benefit plan shall be determined in accordance with the provisions of such plan. The Company reserves the right to change, alter, or terminate any benefit plan in its sole discretion. Notwithstanding the foregoing, in the event that the terms of this Agreement differ from or are in conflict with the Company's general employment policies or practices, this Agreement shall control.

1.5 Insurance. While this Agreement is in effect, for actions within the scope of Executive's employment, the Company will include Executive as an insured at a level comparable to similarly-situated employees at the Company in its Directors and Officers Liability insurance policy in effect from time to time.

2. COMPENSATION.

2.1 Salary. Executive shall continue to receive for Executive's services to be rendered hereunder an initial annualized base salary of $500,000, subject to review and adjustment from time to time by the Company in its sole discretion ("***Base Salary***"). The Base Salary is payable subject to standard federal and state payroll withholding requirements in accordance with the Company's standard payroll practices.

2.2 Annual Bonus. Executive shall be eligible to receive an annual performance bonus of up to 55% (the "***Target Percentage***") of Executive's then-current Base Salary ("***Annual Bonus***"). The Annual Bonus will be based upon the Company's assessment of Executive's performance, the Company's attainment of targeted goals as set by the Board in its sole discretion, overall economic conditions and forecasts, and related financial factors, all as determined by the Company in its sole discretion. The Annual Bonus, if any, will be subject to applicable payroll deductions and withholdings. Following the close of each calendar year, the Company will determine whether Executive has earned the Annual Bonus, and the amount of any Annual Bonus (which can be less than the Target Percentage), based on the set criteria. No amount of the Annual Bonus is guaranteed, and Executive must be an employee in good standing on the Annual Bonus payment date to be eligible to receive an Annual Bonus; no partial or prorated bonuses will be provided. Executive's eligibility for an Annual Bonus is subject to change in the discretion of the Board (or any authorized committee thereof).

2.3 Future Equity Awards. Executive remains eligible to be considered for future equity awards as may be determined by the Board or a committee of the Board in its discretion in accordance with the terms of any applicable equity plan or arrangement that may be in effect from time to time.

2.4 Expense Reimbursement.

(a) General Reimbursement. The Company will reimburse Executive for all reasonable, documented business expenses incurred in connection with Executive's services hereunder, in accordance with the Company's business expense reimbursement policies and procedures as may be in effect from time to time.

(b) Travel and Lodging Expenses. While this Agreement is in effect and so long as Executive's primary residence is in Connecticut, the Company will reimburse Executive for reasonable lodging in the Boston, Massachusetts area, as well as related reasonable travel expenses from Executive's home in Connecticut to the Boston, Massachusetts area, in a combined maximum gross amount of $4,000.00 per month (less any required withholding and/or deductions required by applicable law) ("***Travel and Lodging Expenses***"). The Company shall reimburse such Travel and Lodging Expenses within thirty (30) days of receipt of an invoice or other documentation that complies with Company policies, provided that Executive submits such receipts and other documentation within sixty (60) days following the date such Travel and Lodging Expenses are incurred.

(c) Section 409A. For the avoidance of doubt, to the extent that any reimbursements payable to Executive are subject to the provisions of Section 409A (as defined below): (i) any such reimbursements will be paid no later than December 31 of the year following the year in which the expense was incurred, (ii) the amount of expenses reimbursed in one year will not affect the amount eligible for reimbursement in any subsequent year, and (iii) the right to reimbursement under this Agreement will not be subject to liquidation or exchange for another benefit.

3. CONFIDENTIAL INFORMATION, INVENTIONS, NON-SOLICITATION, AND NON-COMPETITION OBLIGATIONS. As a condition of employment and in consideration of the benefits that Executive is eligible to receive under this Agreement, Executive agrees to sign and abide by the Employee Confidential Information and Inventions Assignment Agreement (the "***Confidential Information Agreement***") attached hereto as **Exhibit A**. The Confidential Information Agreement may be amended by the parties from time to time without regard to this Agreement. The Confidential Information Agreement contains provisions that are intended by the parties to survive and do survive termination or expiration of this Agreement.

4. OUTSIDE ACTIVITIES. Except with the prior written consent of the Board, Executive will not, while employed by the Company, undertake or engage in any other employment, occupation or business enterprise that would interfere with Executive's responsibilities and the performance of Executive's duties hereunder except for (i) reasonable time devoted to volunteer services for or on behalf of such religious, educational, non-profit and/or other charitable organization as Executive may wish to serve; (ii) reasonable time devoted to activities in the non-profit and business communities consistent with Executive's duties; (iii) Executive's participation in professional and academic activities; and (iv) such other activities as may be specifically approved by the Board. This restriction shall not, however, preclude Executive from managing personal investments or owning less than one percent (1%) of the total outstanding shares of a publicly-traded company.

5. NO CONFLICT WITH EXISTING OBLIGATIONS. Executive represents that Executive's continued performance of all the terms of this Agreement and as an employee of the Company do not and will not breach any agreement or obligation of any kind made prior to Executive's employment by the Company, including agreements or obligations Executive may have with prior employers or entities for which Executive has provided services. Executive has not entered into, and Executive agrees that Executive will not enter into, any agreement or obligation, either written or oral, in conflict herewith.

6. TERMINATION OF EMPLOYMENT. The parties acknowledge that Executive's employment relationship with the Company continues to be at-will. Either Executive or the Company may terminate the employment relationship at any time, with or without Cause. The provisions in this Section govern the amount of compensation, if any, to be provided to Executive upon termination of employment and do not alter this at-will status.

6.1 Termination by the Company Without Cause or Resignation by Executive for Good Reason (not in Connection with a Change in Control).

(a) The Company shall have the right to terminate Executive's employment with the Company pursuant to this Section 6.1 at any time without "Cause" (as defined in Section 6.3(a) below) by giving notice as described in Section 6.7 of this Agreement. A termination pursuant to Section 6.5 or 6.6 below is not a termination without "Cause" for purposes of receiving the Non-CIC Severance Benefits described in (and as defined in) this Section 6.1 or the CIC Severance Benefits described in (and as defined in) Section 6.2.

(b) If the Company terminates Executive's employment at any time without Cause or Executive terminates Executive's employment with the Company for "Good Reason" (as defined in Section 6.1(g) below), in either case, at any time except during the Change in Control Measurement Period (both "Change in Control" and "Change in Control Measurement Period" as defined in Section 6.2 below), then Executive shall be entitled to receive the Accrued Obligations (defined in 6.1(d) below). If such termination without Cause or for Good Reason not occurring during the Change in Control Measurement Period constitutes a "separation from service" (as defined under Treasury Regulation Section 1.409A-1(h), without regard to any alternative definition thereunder, a "***Separation from Service***"), and Executive complies with the obligations in Section 6.1(c) below, Executive shall also be eligible to receive the following "***Non-CIC Severance Benefits***:"

(i) The Company will pay Executive an amount equal to Executive's then current Base Salary for twelve (12) months, less all applicable withholdings and deductions, paid in equal installments beginning on the Company's first regularly scheduled payroll date following the Release Effective Date (as defined in Section 6.1(c) below), with the remaining installments occurring on the Company's regularly scheduled payroll dates thereafter; and

(ii) Provided Executive or Executive's covered dependents, as the case may be, timely elects continued coverage under COBRA, or state continuation coverage (as applicable), under the Company's group health plans following such termination, the Company will pay the portion of the COBRA, or state continuation coverage, premiums which is equal to the cost of the coverage that the Company was paying as of the date of termination, to continue Executive's (and Executive's covered dependents, as applicable) health insurance coverage in effect on the termination date until the earliest of: (1) twelve (12) months following the termination date; (2) the date when Executive becomes eligible for substantially equivalent

health insurance coverage in connection with new employment or self-employment; or (3) the date Executive ceases to be eligible for COBRA or state law continuation coverage for any reason, including plan termination (such period from the termination date through the earlier of (1)-(3), (the "***Non-CIC COBRA Payment Period***")). Notwithstanding the foregoing, if at any time the Company determines that its payment of COBRA, or state continuation coverage, premiums on Executive's behalf would result in a violation of applicable law (including, but not limited to, the 2010 Patient Protection and Affordable Care Act, as amended by the 2010 Health Care and Education Reconciliation Act), then in lieu of paying such premiums pursuant to this Section, the Company shall pay Executive on the last day of each remaining month of the Non-CIC COBRA Payment Period, a fully taxable cash payment equal to the COBRA or state continuation coverage premium for such month, subject to applicable tax withholding, for the remainder of the Non-CIC COBRA Payment Period. Nothing in this Agreement shall deprive Executive of Executive's rights under COBRA or ERISA for benefits under plans and policies arising under Executive's employment by the Company.

(c) Executive will be paid all of the Accrued Obligations on the Company's first payroll date after Executive's date of termination from employment or earlier if required by law. Executive shall receive the Non-CIC Severance Benefits pursuant to Section 6.1(b) or the CIC Severance Benefits pursuant to Section 6.2(a) of this Agreement if: (i) by the sixtieth (60th) day following the date of Executive's Separation from Service, Executive has signed and delivered to the Company a separation agreement containing an effective, general release of claims in favor of the Company and its affiliates and representatives, in the form presented by the Company (the "***Release***"), which will include a non-competition clause, which cannot be revoked in whole or part by such date (the date that the Release can no longer be revoked is referred to as the "***Release Effective Date***"); and (ii) if Executive holds any other positions with the Company or any Affiliate, including a position on the Board, Executive resigns such position(s) to be effective no later than the date of Executive's termination date (or such other date as requested by the Board); (iii) Executive returns all Company property; (iv) Executive complies with all post-termination obligations under this Agreement and the Confidential Information Agreement; and (v) Executive complies with the terms of the Release, including without limitation any non-disparagement and confidentiality provisions contained in the Release.

(d) For purposes of this Agreement, "***Accrued Obligations***" are (i) Executive's accrued but unpaid salary and accrued but unused vacation days, each through the date of termination, (ii) any unreimbursed business expenses incurred by Executive payable in accordance with the Company's standard expense reimbursement policies, and (iii) benefits owed to Executive under any qualified retirement plan or health and welfare benefit plan in which Executive was a participant in accordance with applicable law and the provisions of such plan.

(e) The Non-CIC Severance Benefits provided to Executive pursuant to this Section 6.1 are in lieu of, and not in addition to, any benefits to which Executive may otherwise be entitled under any Company severance plan, policy, program, or prior agreement with the Company. For avoidance of doubt, Executive shall not be eligible for both CIC Severance Benefits and Non-CIC Severance Benefits.

(f) Any damages caused by the termination of Executive's employment without Cause not in connection with a Change in Control would be difficult to ascertain; therefore, the Non-CIC Severance Benefits for which Executive is eligible pursuant to Section 6.1(b) above in exchange for the Release is agreed to by the parties as liquidated damages, to serve as full compensation, and not a penalty.

(g) For purposes of this Agreement, "***Good Reason***" shall mean the occurrence of any of the following events without Executive's consent: (i) a material reduction in Executive's Base Salary of at least 10%; (ii) a material reduction in Executive's duties, authority and responsibilities relative to Executive's duties, authority, and responsibilities in effect immediately prior to such reduction; (iii) the relocation of Executive's principal place of employment, without Executive's consent, in a manner that lengthens Executive's one-way commute distance by fifty (50) or more miles from Executive's then-current principal place of employment immediately prior to such relocation; or (iv) any material breach of this Agreement by the Company; *provided, however,* that, any such termination by Executive shall only be deemed for Good Reason pursuant to this definition if: (1) Executive gives the Company written notice of Executive's intent to terminate for Good Reason within thirty (30) days following the first occurrence of the condition(s) that Executive believes constitute(s) Good Reason, which notice shall describe such condition(s); (2) the Company fails to remedy such condition(s) within thirty (30) days following receipt of the written notice (the "***Cure Period***"); (3) the Company has not, prior to receiving such notice from Executive, already informed Executive that Executive's employment with the Company is being terminated; and (4) Executive voluntarily terminates Executive's employment within thirty (30) days following the end of the Cure Period. For the avoidance of doubt, Executive consented to the relocation of Executive's principal place of employment from Gaithersburg, Maryland to the Boston, Massachusetts area and such relocation does not constitute Good Reason.

6.2 <u>Termination by the Company without Cause or Resignation by Executive for Good Reason (in connection with a Change in Control)</u>.

(a) In the event that Executive's employment is terminated without Cause or Executive resigns for Good Reason within twelve (12) months following the effective date of a Change in Control ("***Change in Control Measurement Period***") of the Company, then Executive shall be entitled to the Accrued Obligations and, subject to Executive's full compliance with Section 6.1(c) above, including but not limited to the Release requirement and Executive's continued compliance with obligations to the Company under Executive's Confidential Information Agreement, then Executive will be eligible for the following "***CIC Severance Benefits***:"

(i) The Company will pay Executive an amount equal to Executive's then current Base Salary for eighteen (18) months, less all applicable withholdings and deductions, paid in equal installments beginning on the Company's first regularly scheduled payroll date following the Release Effective Date, with the remaining installments occurring on the Company's regularly scheduled payroll dates thereafter;

(ii) Provided Executive or Executive's covered dependents, as the case may be, timely elects continued coverage under COBRA, or state continuation coverage (as applicable), under the Company's group health plans following such termination, the Company will pay the portion of the COBRA, or state continuation coverage, premiums which is equal to the cost of the coverage that the Company was paying as of the date of termination, to continue Executive's (and Executive's covered dependents, as applicable) health insurance coverage in effect on the termination date until the earliest of: (1) eighteen (18) months following the termination date; (2) the date when Executive becomes eligible for substantially equivalent health insurance coverage in connection with new employment or self-employment; or (3) the date Executive ceases to be eligible for COBRA or state law continuation coverage for any reason, including plan termination (such period from the termination date through the earlier of (1)-(3), (the "***CIC COBRA Payment Period***")). Notwithstanding the foregoing, if at any time the Company determines that its payment of COBRA, or state continuation coverage, premiums on Executive's behalf would result in a violation of applicable law (including, but not limited to, the 2010 Patient Protection and Affordable Care Act, as amended by the 2010 Health Care and Education Reconciliation Act), then in lieu of paying such premiums pursuant to this Section, the Company shall pay Executive on the last day of each remaining month of the CIC COBRA Payment Period, a fully taxable cash payment equal to the COBRA or state continuation coverage premium for such month, subject to applicable tax withholding, for the remainder of the CIC COBRA Payment Period. Nothing in this Agreement shall deprive Executive of Executive's rights under COBRA or ERISA for benefits under plans and policies arising under Executive's employment by the Company;

(iii) The Company will make a lump sum cash payment to Executive in an amount equal to one and a half (1.5) times the Target Percentage for the year in which the termination occurs, subject to standard deductions and withholdings, which will be paid in a lump sum on the sixtieth (60th) day following Executive's date of Separation from Service; and

(iv) Effective as of Executive's termination date, the vesting and exercisability of all outstanding equity awards held by Executive immediately prior to the termination date (if any) shall be accelerated in full.

(b) For purposes of this Agreement, a "***Change in Control***" shall have the meaning set forth in the Company's 2018 Stock Incentive Plan.

(c) The CIC Severance Benefits provided to Executive pursuant to this Section 6.2 are in lieu of, and not in addition to, any benefits to which Executive may otherwise be entitled under any Company severance plan, policy or program.

(d) Any damages caused by the termination of Executive's employment without Cause during the Change in Control Measurement Period would be difficult to ascertain; therefore, the CIC Severance Benefits for which Executive is eligible pursuant to Section 6.2(a) above in exchange for the Release are agreed to by the parties as liquidated damages, to serve as full compensation, and not a penalty.

6.3 Termination by the Company for Cause.

Subject to Section 6.3(b) below, the Company shall have the right to terminate Executive's employment with the Company at any time for Cause by giving notice as described in Section 6.7 of this Agreement.

(a) "***Cause***" for termination shall mean that the Company has determined in its sole discretion that Executive has engaged in any of the following: (i) a material breach of any covenant or condition under this Agreement or any other agreement between the parties; (ii) any act constituting dishonesty, fraud, immoral or disreputable conduct; (iii) any conduct which constitutes a felony under applicable law; (iv) material violation of any Company policy or any act of misconduct; (v) refusal to follow or implement a clear and reasonable directive of the Company; (vi) negligence or incompetence in the performance of Executive's duties after the expiration of ten (10) days without cure after written notice of such failure; or (vii) breach of fiduciary duty.

(b) In the event Executive's employment is terminated at any time for Cause, Executive will not receive the Non-CIC Severance Benefits, the CIC Severance Benefits, or any other severance compensation or benefit, except that, consistent with the Company's standard payroll policies, the Company shall provide to Executive the Accrued Obligations.

6.4 Resignation by Executive (other than for Good Reason).

(a) Executive may resign for any reason from Executive's employment with the Company at any time by giving notice as described in Section 6.7.

(b) In the event Executive resigns from Executive's employment with the Company (other than for Good Reason), Executive will not receive the Non-CIC Severance Benefits, the CIC Severance Benefits, or any other severance compensation or benefit, except that, consistent with the Company's standard payroll policies, the Company shall provide to Executive the Accrued Obligations.

6.5 Termination by Virtue of Death or Disability of Executive.

(a) In the event of Executive's death while employed pursuant to this Agreement, all obligations of the parties hereunder shall terminate immediately, and the Company shall, pursuant to the Company's standard payroll policies, provide to Executive's legal representatives Executive's Accrued Obligations, but neither Executive nor Executive's legal representatives will be eligible for the Non-CIC Severance Benefits, the CIC Severance Benefits, or any other severance compensation or benefit.

(b) Subject to applicable state and federal law, the Company shall at all times have the right, upon written notice to the Executive, to terminate this Agreement based on Executive's Disability (as defined below). Termination by the Company of Executive's employment based on "***Disability***" shall mean termination because Executive is unable due to a physical or mental condition to perform the essential functions of Executive's position with or without reasonable accommodation for six (6) months in the aggregate during any twelve (12)

month period or based on the written certification by two licensed physicians of the likely continuation of such condition for such period. This definition shall be interpreted and applied consistent with the Americans with Disabilities Act, the Family and Medical Leave Act, and other applicable law. In the event Executive's employment is terminated based on Executive's Disability, Executive will not receive the Non-CIC Severance Benefits, the CIC Severance Benefits, or any other severance compensation or benefit, except that, pursuant to the Company's standard payroll policies, the Company shall provide to Executive the Accrued Obligations.

6.6 Termination Due to Discontinuance of Business. Anything in this Agreement to the contrary notwithstanding, in the event the Company's business is discontinued because rendered impracticable by substantial financial losses, lack of funding, legal decisions, administrative rulings, declaration of war, dissolution, national or local economic depression or crisis or any reasons beyond the control of the Company, then this Agreement shall terminate as of the day the Company determines to cease operation with the same force and effect as if such day of the month were originally set as the termination date hereof. In the event this Agreement is terminated pursuant to this Section 6.6, Executive will not receive the Non-CIC Severance Benefits, the CIC Severance Benefits, or any other severance compensation or benefit, except that, pursuant to the Company's standard payroll policies, the Company shall provide to Executive the Accrued Obligations.

6.7 Notice; Effective Date of Termination.

(a) Termination of Executive's employment (the "***Separation Date***") pursuant to this Agreement shall be effective on the earliest of:

(i) immediately after the Company gives notice to Executive of Executive's termination, with or without Cause, unless pursuant to Section 6.3(b)(vi) in which case ten (10) days after notice if not cured, or unless the Company specifies a later date, in which case, termination shall be effective as of such later date;

(ii) immediately upon Executive's death;

(iii) immediately after the Company gives written notice to Executive of Executive's termination on account of Executive's Disability, unless the Company specifies a later Separation Date, in which case, termination shall be effective as of such later Separation Date, *provided* that Executive has not returned to the full-time performance of Executive's duties prior to such date;

(iv) except as addressed by Section 6.7(a)(v), forty-five (45) days (or such shorter period agreed to by the Board and Executive in writing) after Executive gives written notice to the Company of Executive's resignation for any reason, *provided* that the Company may set a Separation Date at any time between the date of notice and the date of resignation, in which case Executive's resignation shall be effective as of such other date. Executive will receive compensation through any required notice period; or

(v) for a termination for Good Reason, immediately upon Executive's full satisfaction of the requirements of Section 6.1(g).

(b) In the event notice of a termination under subsection (a)(i) is given orally, at the other party's request, the party giving notice must provide written confirmation of such notice within five (5) business days of the request in compliance with the requirement of Section 7.1 below. In the event of a termination for Cause, written confirmation shall specify the subsection(s) of the definition of Cause relied on to support the decision to terminate.

6.8 Cooperation With Company After Termination of Employment. Following termination of Executive's employment for any reason, Executive shall reasonably cooperate with the Company in all matters relating to the winding up of Executive's pending work including, but not limited to, any litigation in which the Company is involved, and the orderly transfer of any such pending work to such other employees as may be designated by the Company.

6.9 Effect of Termination. Executive agrees that should Executive's employment be terminated for any reason, Executive shall be deemed to have resigned from any and all positions with the Company and its subsidiaries.

6.10 Application of Section 409A.

(a) It is intended that all of the compensation payable under this Agreement, to the greatest extent possible, either complies with the requirements of Section 409A of the Internal Revenue Code of 1986, as amended (the "***Code***") and the regulations and other guidance thereunder and any state law of similar effect (collectively, "***Section 409A***") or satisfies one or more of the exemptions from the application of Section 409A, and this Agreement will be construed in a manner consistent with such intention, incorporating by reference all required definitions and payment terms.

(b) No severance payments will be made under this Agreement unless Executive's termination of employment constitutes a Separation from Service. For purposes of Section 409A (including, without limitation, for purposes of Treasury Regulations Section 1.409A-2(b)(2)(iii)), Executive's right to receive any installment payments under this Agreement (whether severance payments or otherwise) shall be treated as a right to receive a series of separate payments and, accordingly, each installment payment hereunder shall at all times be considered a separate and distinct payment.

(c) To the extent that any severance payments are deferred compensation under Section 409A, and are not otherwise exempt from the application of Section 409A, then, to the extent required to comply with Section 409A, if the period during which Executive may consider and sign the Release spans two calendar years, the severance payments will not begin until the second calendar year. If the Company determines that the severance benefits provided under this Agreement constitutes "deferred compensation" under Section 409A and if Executive is a "specified employee" of the Company, as such term is defined in Section 409A(a)(2)(B)(i) of the Code at the time of Executive's Separation from Service, then, solely to the extent necessary to avoid the incurrence of the adverse personal tax consequences under Section 409A, the timing of the severance will be delayed as follows: on the earlier to occur of (a) the date that is six months and one day after Executive's Separation from Service, and (b) the date of Executive's death, the Company will: (i) pay to Executive a lump sum amount equal to

the sum of the severance benefits that Executive would otherwise have received if the commencement of the payment of the severance benefits had not been delayed pursuant to this Section 6.10(c); and (ii) commence paying the balance of the severance benefits in accordance with the applicable payment schedule set forth in Sections 6.1 and 6.2. No interest shall be due on any amounts deferred pursuant to this Section 6.10(c).

(d) To the extent required to avoid accelerated taxation and/or tax penalties under Section 409A, amounts reimbursable to Executive under this Agreement shall be paid to Executive on or before the last day of the year following the year in which the expense was incurred and the amount of expenses eligible for reimbursement (and in-kind benefits provided to Executive) during any one year may not effect amounts reimbursable or provided in any subsequent year.

(e) Notwithstanding the foregoing, the Company makes no representations that the payments and benefits provided under this Agreement comply with Section 409A, and in no event shall the Company be liable for all or any portion of any taxes, penalties, interest, or other expenses that may be incurred by the Executive on account of non-compliance with Section 409A.

6.11 Excise Tax Adjustment.

(a) If any payment or benefit Executive will or may receive from the Company or otherwise (a "***280G Payment***") would (i) constitute a "parachute payment" within the meaning of Section 280G of the Code, and (ii) but for this Section, be subject to the excise tax imposed by Section 4999 of the Code (the "***Excise Tax***"), then any such 280G Payment provided pursuant to this Agreement (a "***Payment***") shall be equal to the Reduced Amount. The "***Reduced Amount***" shall be either (x) the largest portion of the Payment that would result in no portion of the Payment (after reduction) being subject to the Excise Tax, or (y) the largest portion, up to and including the total, of the Payment, whichever amount (i.e., the amount determined by clause (x) or by clause (y)), after taking into account all applicable federal, state, and local employment taxes, income taxes, and the Excise Tax (all computed at the highest applicable marginal rate), results in Executive's receipt, on an after-tax basis, of the greater economic benefit notwithstanding that all or some portion of the Payment may be subject to the Excise Tax. If a reduction in a Payment is required pursuant to the preceding sentence and the Reduced Amount is determined pursuant to clause (x) of the preceding sentence, the reduction shall occur in the manner (the "***Reduction Method***") that results in the greatest economic benefit for Executive. If more than one method of reduction will result in the same economic benefit, the items so reduced will be reduced pro rata (the "***Pro Rata Reduction Method***").

(b) Notwithstanding any provision of this Section 6.11 to the contrary, if the Reduction Method or the Pro Rata Reduction Method would result in any portion of the Payment being subject to taxes pursuant to Section 409A that would not otherwise be subject to taxes pursuant to Section 409A, then the Reduction Method and/or the Pro Rata Reduction Method, as the case may be, shall be modified so as to avoid the imposition of taxes pursuant to Section 409A as follows: (A) as a first priority, the modification shall preserve to the greatest extent possible, the greatest economic benefit for Executive as determined on an after-tax basis; (B) as a second priority, Payments that are contingent on future events (*e.g.*, being terminated

without Cause), shall be reduced (or eliminated) before Payments that are not contingent on future events; and (C) as a third priority, Payments that are "deferred compensation" within the meaning of Section 409A shall be reduced (or eliminated) before Payments that are not deferred compensation within the meaning of Section 409A.

(c) Unless Executive and the Company agree on an alternative accounting firm or law firm, the accounting firm engaged by the Company for general tax compliance purposes as of the day prior to the effective date of the Change in Control transaction shall perform the foregoing calculations. If the accounting firm so engaged by the Company is serving as accountant or auditor for the individual, entity, or group effecting the Change in Control transaction, the Company shall appoint a nationally-recognized accounting or law firm to make the determinations required by this Section 6.11. The Company shall bear all expenses with respect to the determinations by such accounting or law firm required to be made hereunder. The Company shall use commercially reasonable efforts to cause the accounting or law firm engaged to make the determinations hereunder to provide its calculations, together with detailed supporting documentation, to Executive and the Company within fifteen (15) calendar days after the date on which Executive's right to a 280G Payment becomes reasonably likely to occur (if requested at that time by Executive or the Company) or such other time as requested by Executive or the Company.

(d) If Executive receives a Payment for which the Reduced Amount was determined pursuant to clause (x) of Section 6.11(a) and the Internal Revenue Service determines thereafter that some portion of the Payment is subject to the Excise Tax, Executive agrees to promptly return to the Company a sufficient amount of the Payment (after reduction pursuant to clause (x) of Section 6.11(a)) so that no portion of the remaining Payment is subject to the Excise Tax. For the avoidance of doubt, if the Reduced Amount was determined pursuant to clause (y) of Section 6.11(a), Executive shall have no obligation to return any portion of the Payment pursuant to the preceding sentence.

7. GENERAL PROVISIONS.

7.1 Notices. Any notices required hereunder to be in writing shall be deemed effectively given: (a) upon personal delivery to the party to be notified, (b) when sent by electronic mail, telex or confirmed facsimile if sent during normal business hours of the recipient, and if not, then on the next business day, (c) five (5) days after having been sent by registered or certified mail, return receipt requested, postage prepaid, or (d) one (1) day after deposit with a nationally-recognized overnight courier, specifying next-day delivery, with written verification of receipt. All communications shall be sent to the Company at its primary office location and to Executive at Executive's address as listed on the Company payroll or Executive's Company-provided email address, or at such other address as the Company or Executive may designate by ten (10) days' advance written notice to the other.

7.2 Severability. Whenever possible, each provision of this Agreement will be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Agreement is held to be invalid, illegal or unenforceable in any respect under any applicable law or rule in any jurisdiction, such invalidity, illegality or unenforceability will not affect any other provision or any other jurisdiction, but this Agreement will be reformed, construed and enforced in such jurisdiction as if such invalid, illegal or unenforceable provisions had never been contained herein.

7.3 Waiver. If either party should waive any breach of any provisions of this Agreement, Executive or it shall not thereby be deemed to have waived any preceding or succeeding breach of the same or any other provision of this Agreement.

7.4 Complete Agreement. This Agreement constitutes the entire agreement between Executive and the Company with regard to the subject matter hereof. This Agreement is the complete, final, and exclusive embodiment of their agreement with regard to this subject matter and supersedes any prior oral discussions or written communications and agreements, including the Prior Agreement. This Agreement is entered into without reliance on any promise or representation other than those expressly contained herein, and it cannot be modified or amended except in writing signed by Executive and an authorized officer of the Company. The parties have entered into or are entering into a separate Confidential Information Agreement in connection herewith and have or may enter into separate agreements related to equity awards. These separate agreements govern other aspects of the relationship between the parties, have or may have provisions that survive termination of Executive's employment under this Agreement, may be amended or superseded by the parties without regard to this Agreement and are enforceable according to their terms without regard to the enforcement provision of this Agreement.

7.5 Counterparts. This Agreement may be executed in separate counterparts, any one of which need not contain signatures of more than one party, but all of which taken together will constitute one and the same agreement.

7.6 Headings. The headings of the sections hereof are inserted for convenience only and shall not be deemed to constitute a part hereof nor to affect the meaning thereof.

7.7 Successors and Assigns. The Company shall assign this Agreement and its rights and obligations hereunder in whole, but not in part, to any Company or other entity with or into which the Company may hereafter merge or consolidate or to which the Company may transfer all or substantially all of its assets, if in any such case said Company or other entity shall by operation of law or expressly in writing assume all obligations of the Company hereunder as fully as if it had been originally made a party hereto, but may not otherwise assign this Agreement or its rights and obligations hereunder. Executive may not assign or transfer this Agreement or any rights or obligations hereunder, other than to Executive's estate upon Executive's death.

7.8 Choice of Law. All questions concerning the construction, validity and interpretation of this Agreement will be governed by the law of the Commonwealth of Massachusetts.

7.9 Resolution of Disputes. To ensure the timely and economical resolution of disputes that may arise in connection with Executive's employment with the Company, Executive and the Company agree that any and all disputes, claims, or causes of action arising from or relating to the enforcement, breach, performance, negotiation, execution, or interpretation of this Agreement, Confidential Information Agreement, or Executive's employment, or the termination of Executive's employment, including but not limited to all statutory claims, will be resolved pursuant to the Federal Arbitration Act, 9 U.S.C. §1-16, and to the fullest extent permitted by law, by final, binding and confidential arbitration by a single arbitrator conducted in ***Boston, Massachusetts*** by Judicial Arbitration and Mediation Services Inc. ("***JAMS***") under the then applicable JAMS rules (at the following web address: https://www.jamsadr.com/rules-employment-arbitration/); provided, however, this arbitration provision shall not apply to sexual harassment claims to the extent prohibited by applicable law. A hard copy of the rules will be provided to Executive upon request. **By agreeing to this arbitration procedure, both Executive and the Company waive the right to resolve any such dispute through a trial by jury or judge or administrative proceeding**. In addition, all claims, disputes, or causes of action under this Section, whether by Executive or the Company, must be brought in an individual capacity, and shall not be brought as a plaintiff (or claimant) or class member in any purported class or representative proceeding, nor joined or consolidated with the claims of any other person or entity. The arbitrator may not consolidate the claims of more than one person or entity, and may not preside over any form of representative or class proceeding. To the extent that the preceding sentences regarding class claims or proceedings are found to violate applicable law or are otherwise found unenforceable, any claim(s) alleged or brought on behalf of a class shall proceed in a court of law rather than by arbitration. The Company acknowledges that Executive will have the right to be represented by legal counsel at any arbitration proceeding. Questions of whether a claim is subject to arbitration under this Agreement shall be decided by the arbitrator. Likewise, procedural questions which grow out of the dispute and bear on the final disposition are also matters for the arbitrator. The arbitrator shall: (a) have the authority to compel adequate discovery for the resolution of the dispute and to award such relief as would otherwise be permitted by law; (b) issue a written arbitration decision, to include the arbitrator's essential findings and conclusions and a statement of the award; and (c) be authorized to award any or all remedies that Executive or the Company would be entitled to seek in a court of law. Executive and the Company shall equally share all JAMS' arbitration fees. Except as modified in the Confidential Information Agreement, each party is responsible for its own attorneys' fees. Nothing in this Agreement is intended to prevent either Executive or the Company from obtaining injunctive relief in a court to prevent irreparable harm pending the conclusion of any such arbitration. Any awards or orders in such arbitrations may be entered and enforced as judgments in the federal and state courts of any competent jurisdiction. To the extent applicable law prohibits mandatory arbitration of sexual harassment claims, in the event Executive intends to bring multiple claims, including a sexual harassment claim, the sexual harassment claim may be publicly-filed with a court, while any other claims will remain subject to mandatory arbitration.

IN WITNESS WHEREOF, the parties have executed this Second Amended and Restated Employment Agreement on the day and year first written above.

SENSEI BIOTHERAPEUTICS, INC.

By: /s/ Bob Holmen
Name: Bob Holmen
Title: Director

Executive:

/s/ John Celebi
John Celebi

Exhibit 10.13

SECOND AMENDED AND RESTATED EMPLOYMENT AGREEMENT

This **SECOND AMENDED AND RESTATED EMPLOYMENT AGREEMENT** (the "***Agreement***"), is entered into effective as of, and contingent upon, the closing of the Company's initial public offering (the "***Effective Date***"), by and between Sensei Biotherapeutics, Inc. (the "***Company***") and Marie-Louise Fjallskog, MD, PhD (the "***Executive***"). This Agreement amends, restates, and supersedes in its entirety the Amended and Restated Employment Agreement between the Company and the Executive that was effective December 4, 2020 (the "***Prior Agreement***").

The Company desires to continue to employ Executive, in the capacity of full-time Chief Medical Officer pursuant to the terms of this Agreement and, in connection therewith, to compensate Executive for Executive's personal services to the Company; and

Executive wishes to continue to be employed by the Company and provide personal services to the Company in return for certain compensation.

Accordingly, in consideration of the mutual promises and covenants contained herein, the parties agree to the following:

1. EMPLOYMENT BY THE COMPANY.

1.1 At-Will Employment. Executive shall continue to be employed by the Company on an "at-will" basis, meaning either the Company or Executive may terminate Executive's employment at any time, with or without cause or advanced notice. Any contrary representations that may have been made to Executive shall be superseded by this Agreement. This Agreement shall constitute the full and complete agreement between Executive and the Company on the "at-will" nature of Executive's employment with the Company, which may be changed only in an express written agreement signed by Executive and a duly authorized officer of the Company. Executive's rights to any compensation following a termination shall be only as set forth in Section 6.

1.2 Position. Subject to the terms set forth herein, the Company agrees to continue to employ Executive in the position of Chief Medical Officer, and Executive hereby accepts such continued employment. During the term of Executive's employment with the Company, Executive will devote Executive's best efforts and substantially all of Executive's business time and attention to the business of the Company.

1.3 Duties. Executive will report to the President and Chief Executive Officer performing such duties as are normally associated with Executive's then-current position and such duties as are assigned to Executive from time to time, subject to the oversight and direction of the President and Chief Executive Officer. In general, and without limitation, Executive will: direct the development of clinical strategies and plans to integrate programs into the standard practice of oncology/hematology, orchestrate and manage clinical aspects of regulatory strategies and interactions with health authorities, oversee the analysis and interpretation of clinical trial data and the reporting of clinical trial results, lead interactions with academic thought leaders,

investigators, cooperative groups, and other clinical stakeholders, provide clinical support and work with other members of the management team to develop and communicate the overall corporate strategy, represent the Company and its programs to external audiences as needed, including the investment, medical and regulatory communities, as well as pharmaceutical or biotechnology industry collaborators/partners. Executive shall perform Executive's duties under this Agreement principally out of the Company's research lab in the Boston, Massachusetts area or such other location as assigned. In addition, Executive shall make such business trips to such places as may be necessary or advisable for the efficient operations of the Company.

1.4 Company Policies and Benefits. The employment relationship between the parties shall also continue to be subject to the Company's personnel policies and procedures as they may be interpreted, adopted, revised or deleted from time to time in the Company's sole discretion. Executive will be eligible to participate on the same basis as similarly-situated employees in the Company's benefit plans in effect from time to time during Executive's employment. All matters of eligibility for coverage or benefits under any benefit plan shall be determined in accordance with the provisions of such plan. The Company reserves the right to change, alter, or terminate any benefit plan in its sole discretion. Notwithstanding the foregoing, in the event that the terms of this Agreement differ from or are in conflict with the Company's general employment policies or practices, this Agreement shall control.

1.5 Insurance. While this Agreement is in effect, for actions within the scope of Executive's employment, the Company will include Executive as an insured at a level comparable to similarly-situated employees at the Company in its Directors and Officers Liability insurance policy in effect from time to time.

2. COMPENSATION.

2.1 Salary. Executive shall continue to receive for Executive's services to be rendered hereunder an initial annualized base salary of $420,000, subject to review and adjustment from time to time by the Company in its sole discretion ("***Base Salary***"). The Base Salary is payable subject to standard federal and state payroll withholding requirements in accordance with the Company's standard payroll practices.

2.2 Annual Bonus. Executive shall be eligible to receive an annual performance bonus of up to 40% (the "***Target Percentage***") of Executive's then-current Base Salary ("***Annual Bonus***"). The Annual Bonus will be based upon the Company's assessment of Executive's performance, the Company's attainment of targeted goals as set by the Company's Board of Directors (the "***Board***") in its sole discretion, overall economic conditions and forecasts, and related financial factors, all as determined by the Company in its sole discretion. The Annual Bonus, if any, will be subject to applicable payroll deductions and withholdings. Following the close of each calendar year, the Company will determine whether Executive has earned the Annual Bonus, and the amount of any Annual Bonus (which can be less than the Target Percentage), based on the set criteria. No amount of the Annual Bonus is guaranteed, and Executive must be an employee in good standing on the Annual Bonus payment date to be eligible to receive an Annual Bonus; no partial or prorated bonuses will be provided. Executive's eligibility for an Annual Bonus is subject to change in the discretion of the Board (or any authorized committee thereof).

2.3 Future Equity Awards. Executive remains eligible to be considered for future equity awards as may be determined by the Board or a committee of the Board in its discretion in accordance with the terms of any applicable equity plan or arrangement that may be in effect from time to time.

2.4 Expense Reimbursement.

(a) General Reimbursement. The Company will reimburse Executive for all reasonable, documented business expenses incurred in connection with Executive's services hereunder, in accordance with the Company's business expense reimbursement policies and procedures as may be in effect from time to time.

(b) Professional Expenses. The Company agrees to reimburse Executive for reasonable expenses incurred in connection with Executive's professional duties, including (i) expenses pertaining to the maintenance of Executive's one (1) active state medical license; (ii) expenses of Executive's attendance at continued medical education programs required to maintain licensure; and (iii) dues payable to the following critical professional societies: SITC, ASCO, AACR, and College of American Pathologists ((i) through (iii) collectively, "***Professional Expenses***"). The Company shall reimburse such Professional Expenses within thirty (30) days of receipt of an invoice or other documentation that complies with Company policies, provided that Executive submits such receipts and other documentation within sixty (60) days following the date each such Professional Expense is incurred.

(c) Section 409A. For the avoidance of doubt, to the extent that any reimbursements payable to Executive are subject to the provisions of Section 409A (as defined below): (i) any such reimbursements will be paid no later than December 31 of the year following the year in which the expense was incurred, (ii) the amount of expenses reimbursed in one year will not affect the amount eligible for reimbursement in any subsequent year, and (iii) the right to reimbursement under this Agreement will not be subject to liquidation or exchange for another benefit.

3. CONFIDENTIAL INFORMATION, INVENTIONS, NON-SOLICITATION, AND NON-COMPETITION OBLIGATIONS. As a condition of employment and in consideration of the benefits that Executive is eligible to receive under this Agreement, Executive agrees to sign and abide by the Employee Confidential Information and Inventions Assignment Agreement (the "***Confidential Information Agreement***") attached hereto as **Exhibit A**. The Confidential Information Agreement may be amended by the parties from time to time without regard to this Agreement. The Confidential Information Agreement contains provisions that are intended by the parties to survive and do survive termination or expiration of this Agreement.

4. OUTSIDE ACTIVITIES. Except with the prior written consent of the Board, Executive will not, while employed by the Company, undertake or engage in any other employment, occupation or business enterprise that would interfere with Executive's responsibilities and the performance of Executive's duties hereunder except for (i) reasonable time devoted to volunteer services for or on behalf of such religious, educational, non-profit and/or other charitable organization as Executive may wish to serve; (ii) reasonable time devoted to activities in the non-profit and business communities consistent with Executive's duties;

(iii) Executive's participation in professional and academic activities; and (iv) such other activities as may be specifically approved by the Board. This restriction shall not, however, preclude Executive from managing personal investments or owning less than one percent (1%) of the total outstanding shares of a publicly-traded company.

5. NO CONFLICT WITH EXISTING OBLIGATIONS. Executive represents that Executive's continued performance of all the terms of this Agreement and as an employee of the Company do not and will not breach any agreement or obligation of any kind made prior to Executive's employment by the Company, including agreements or obligations Executive may have with prior employers or entities for which Executive has provided services. Executive has not entered into, and Executive agrees that Executive will not enter into, any agreement or obligation, either written or oral, in conflict herewith.

6. TERMINATION OF EMPLOYMENT. The parties acknowledge that Executive's employment relationship with the Company continues to be at-will. Either Executive or the Company may terminate the employment relationship at any time, with or without Cause. The provisions in this Section govern the amount of compensation, if any, to be provided to Executive upon termination of employment and do not alter this at-will status.

6.1 Termination by the Company Without Cause or Resignation by Executive for Good Reason (not in Connection with a Change in Control).

(a) The Company shall have the right to terminate Executive's employment with the Company pursuant to this Section 6.1 at any time without "Cause" (as defined in Section 6.3(a) below) by giving notice as described in Section 6.7 of this Agreement. A termination pursuant to Section 6.5 or 6.6 below is not a termination without "Cause" for purposes of receiving the Non-CIC Severance Benefits described in (and as defined in) this Section 6.1 or the CIC Severance Benefits described in (and as defined in) Section 6.2.

(b) If the Company terminates Executive's employment at any time without Cause or Executive terminates Executive's employment with the Company for "Good Reason" (as defined in Section 6.1(g) below), in either case, at any time except during the Change in Control Measurement Period (both "Change in Control" and "Change in Control Measurement Period" as defined in Section 6.2 below), then Executive shall be entitled to receive the Accrued Obligations (defined in 6.1(d) below). If such termination without Cause or for Good Reason not occurring during the Change in Control Measurement Period constitutes a "separation from service" (as defined under Treasury Regulation Section 1.409A-1(h), without regard to any alternative definition thereunder, a "***Separation from Service***"), and Executive complies with the obligations in Section 6.1(c) below, Executive shall also be eligible to receive the following "***Non-CIC Severance Benefits***:"

(i) The Company will pay Executive an amount equal to Executive's then current Base Salary for nine (9) months, less all applicable withholdings and deductions, paid in equal installments beginning on the Company's first regularly scheduled payroll date following the Release Effective Date (as defined in Section 6.1(c) below), with the remaining installments occurring on the Company's regularly scheduled payroll dates thereafter; and

(ii) Provided Executive or Executive's covered dependents, as the case may be, timely elects continued coverage under COBRA, or state continuation coverage (as applicable), under the Company's group health plans following such termination, the Company will pay the portion of the COBRA, or state continuation coverage, premiums which is equal to the cost of the coverage that the Company was paying as of the date of termination, to continue Executive's (and Executive's covered dependents, as applicable) health insurance coverage in effect on the termination date until the earliest of: (1) nine (9) months following the termination date; (2) the date when Executive becomes eligible for substantially equivalent health insurance coverage in connection with new employment or self-employment; or (3) the date Executive ceases to be eligible for COBRA or state law continuation coverage for any reason, including plan termination (such period from the termination date through the earlier of (1)-(3), (the "***Non-CIC COBRA Payment Period***")). Notwithstanding the foregoing, if at any time the Company determines that its payment of COBRA, or state continuation coverage, premiums on Executive's behalf would result in a violation of applicable law (including, but not limited to, the 2010 Patient Protection and Affordable Care Act, as amended by the 2010 Health Care and Education Reconciliation Act), then in lieu of paying such premiums pursuant to this Section, the Company shall pay Executive on the last day of each remaining month of the Non-CIC COBRA Payment Period, a fully taxable cash payment equal to the COBRA or state continuation coverage premium for such month, subject to applicable tax withholding, for the remainder of the Non-CIC COBRA Payment Period. Nothing in this Agreement shall deprive Executive of Executive's rights under COBRA or ERISA for benefits under plans and policies arising under Executive's employment by the Company.

(c) Executive will be paid all of the Accrued Obligations on the Company's first payroll date after Executive's date of termination from employment or earlier if required by law. Executive shall receive the Non-CIC Severance Benefits pursuant to Section 6.1(b) or the CIC Severance Benefits pursuant to Section 6.2(a) of this Agreement if: (i) by the sixtieth (60th) day following the date of Executive's Separation from Service, Executive has signed and delivered to the Company a separation agreement containing an effective, general release of claims in favor of the Company and its affiliates and representatives, in the form presented by the Company (the "***Release***"), which will include a non-competition clause, which cannot be revoked in whole or part by such date (the date that the Release can no longer be revoked is referred to as the "***Release Effective Date***"); and (ii) if Executive holds any other positions with the Company or any Affiliate, including a position on the Board, Executive resigns such position(s) to be effective no later than the date of Executive's termination date (or such other date as requested by the Board); (iii) Executive returns all Company property; (iv) Executive complies with all post-termination obligations under this Agreement and the Confidential Information Agreement; and (v) Executive complies with the terms of the Release, including without limitation any non-disparagement and confidentiality provisions contained in the Release.

(d) For purposes of this Agreement, "***Accrued Obligations***" are (i) Executive's accrued but unpaid salary and accrued but unused vacation days, each through the date of termination, (ii) any unreimbursed business expenses incurred by Executive payable in accordance with the Company's standard expense reimbursement policies, and (iii) benefits owed to Executive under any qualified retirement plan or health and welfare benefit plan in which Executive was a participant in accordance with applicable law and the provisions of such plan.

(e) The Non-CIC Severance Benefits provided to Executive pursuant to this Section 6.1 are in lieu of, and not in addition to, any benefits to which Executive may otherwise be entitled under any Company severance plan, policy, program, or prior agreement with the Company. For avoidance of doubt, Executive shall not be eligible for both CIC Severance Benefits and Non-CIC Severance Benefits.

(f) Any damages caused by the termination of Executive's employment without Cause not in connection with a Change in Control would be difficult to ascertain; therefore, the Non-CIC Severance Benefits for which Executive is eligible pursuant to Section 6.1(b) above in exchange for the Release is agreed to by the parties as liquidated damages, to serve as full compensation, and not a penalty.

(g) For purposes of this Agreement, "***Good Reason***" shall mean the occurrence of any of the following events without Executive's consent: (i) a material reduction in Executive's Base Salary of at least 10%; (ii) a material reduction in Executive's duties, authority and responsibilities relative to Executive's duties, authority, and responsibilities in effect immediately prior to such reduction; (iii) the relocation of Executive's principal place of employment, without Executive's consent, in a manner that lengthens Executive's one-way commute distance by fifty (50) or more miles from Executive's then-current principal place of employment immediately prior to such relocation; or (iv) any material breach of this Agreement by the Company; *provided*, *however*, that, any such termination by Executive shall only be deemed for Good Reason pursuant to this definition if: (1) Executive gives the Company written notice of Executive's intent to terminate for Good Reason within thirty (30) days following the first occurrence of the condition(s) that Executive believes constitute(s) Good Reason, which notice shall describe such condition(s); (2) the Company fails to remedy such condition(s) within thirty (30) days following receipt of the written notice (the "***Cure Period***"); (3) the Company has not, prior to receiving such notice from Executive, already informed Executive that Executive's employment with the Company is being terminated; and (4) Executive voluntarily terminates Executive's employment within thirty (30) days following the end of the Cure Period.

6.2 <u>Termination by the Company without Cause or Resignation by Executive for Good Reason (in connection with a Change in Control)</u>.

(a) In the event that Executive's employment is terminated without Cause or Executive resigns for Good Reason within twelve (12) months following the effective date of a Change in Control ("***Change in Control Measurement Period***") of the Company, then Executive shall be entitled to the Accrued Obligations and, subject to Executive's full compliance with Section 6.1(c) above, including but not limited to the Release requirement and Executive's continued compliance with obligations to the Company under Executive's Confidential Information Agreement, then Executive will be eligible for the following "***CIC Severance Benefits***:"

(i) The Company will pay Executive an amount equal to Executive's then current Base Salary for twelve (12) months, less all applicable withholdings and deductions, paid in equal installments beginning on the Company's first regularly scheduled payroll date following the Release Effective Date, with the remaining installments occurring on the Company's regularly scheduled payroll dates thereafter;

(ii) Provided Executive or Executive's covered dependents, as the case may be, timely elects continued coverage under COBRA, or state continuation coverage (as applicable), under the Company's group health plans following such termination, the Company will pay the portion of the COBRA, or state continuation coverage, premiums which is equal to the cost of the coverage that the Company was paying as of the date of termination, to continue Executive's (and Executive's covered dependents, as applicable) health insurance coverage in effect on the termination date until the earliest of: (1) twelve (12) months following the termination date; (2) the date when Executive becomes eligible for substantially equivalent health insurance coverage in connection with new employment or self-employment; or (3) the date Executive ceases to be eligible for COBRA or state law continuation coverage for any reason, including plan termination (such period from the termination date through the earlier of (1)-(3), (the "***CIC COBRA Payment Period***")). Notwithstanding the foregoing, if at any time the Company determines that its payment of COBRA, or state continuation coverage, premiums on Executive's behalf would result in a violation of applicable law (including, but not limited to, the 2010 Patient Protection and Affordable Care Act, as amended by the 2010 Health Care and Education Reconciliation Act), then in lieu of paying such premiums pursuant to this Section, the Company shall pay Executive on the last day of each remaining month of the CIC COBRA Payment Period, a fully taxable cash payment equal to the COBRA or state continuation coverage premium for such month, subject to applicable tax withholding, for the remainder of the CIC COBRA Payment Period. Nothing in this Agreement shall deprive Executive of Executive's rights under COBRA or ERISA for benefits under plans and policies arising under Executive's employment by the Company;

(iii) The Company will make a lump sum cash payment to Executive in an amount equal to one (1) times the Target Percentage for the year in which the termination occurs, subject to standard deductions and withholdings, which will be paid in a lump sum on the sixtieth (60th) day following Executive's date of Separation from Service; and

(iv) Effective as of Executive's termination date, the vesting and exercisability of all outstanding equity awards held by Executive immediately prior to the termination date (if any) shall be accelerated in full.

(b) For purposes of this Agreement, a "***Change in Control***" shall have the meaning set forth in the Company's 2018 Stock Incentive Plan.

(c) The CIC Severance Benefits provided to Executive pursuant to this Section 6.2 are in lieu of, and not in addition to, any benefits to which Executive may otherwise be entitled under any Company severance plan, policy or program.

(d) Any damages caused by the termination of Executive's employment without Cause during the Change in Control Measurement Period would be difficult to ascertain; therefore, the CIC Severance Benefits for which Executive is eligible pursuant to Section 6.2(a) above in exchange for the Release are agreed to by the parties as liquidated damages, to serve as full compensation, and not a penalty.

6.3 Termination by the Company for Cause.

Subject to Section 6.3(b) below, the Company shall have the right to terminate Executive's employment with the Company at any time for Cause by giving notice as described in Section 6.7 of this Agreement.

(a) "***Cause***" for termination shall mean that the Company has determined in its sole discretion that Executive has engaged in any of the following: (i) a material breach of any covenant or condition under this Agreement or any other agreement between the parties; (ii) any act constituting dishonesty, fraud, immoral or disreputable conduct; (iii) any conduct which constitutes a felony under applicable law; (iv) material violation of any Company policy or any act of misconduct; (v) refusal to follow or implement a clear and reasonable directive of the Company; (vi) negligence or incompetence in the performance of Executive's duties after the expiration of ten (10) days without cure after written notice of such failure; or (vii) breach of fiduciary duty.

(b) In the event Executive's employment is terminated at any time for Cause, Executive will not receive the Non-CIC Severance Benefits, the CIC Severance Benefits, or any other severance compensation or benefit, except that, consistent with the Company's standard payroll policies, the Company shall provide to Executive the Accrued Obligations.

6.4 Resignation by Executive (other than for Good Reason).

(a) Executive may resign for any reason from Executive's employment with the Company at any time by giving notice as described in Section 6.7.

(b) In the event Executive resigns from Executive's employment with the Company (other than for Good Reason), Executive will not receive the Non-CIC Severance Benefits, the CIC Severance Benefits, or any other severance compensation or benefit, except that, consistent with the Company's standard payroll policies, the Company shall provide to Executive the Accrued Obligations.

6.5 Termination by Virtue of Death or Disability of Executive.

(a) In the event of Executive's death while employed pursuant to this Agreement, all obligations of the parties hereunder shall terminate immediately, and the Company shall, pursuant to the Company's standard payroll policies, provide to Executive's legal representatives Executive's Accrued Obligations, but neither Executive nor Executive's legal representatives will be eligible for the Non-CIC Severance Benefits, the CIC Severance Benefits, or any other severance compensation or benefit.

(b) Subject to applicable state and federal law, the Company shall at all times have the right, upon written notice to the Executive, to terminate this Agreement based on Executive's Disability (as defined below). Termination by the Company of Executive's employment based on "***Disability***" shall mean termination because Executive is unable due to a

physical or mental condition to perform the essential functions of Executive's position with or without reasonable accommodation for six (6) months in the aggregate during any twelve (12) month period or based on the written certification by two licensed physicians of the likely continuation of such condition for such period. This definition shall be interpreted and applied consistent with the Americans with Disabilities Act, the Family and Medical Leave Act, and other applicable law. In the event Executive's employment is terminated based on Executive's Disability, Executive will not receive the Non-CIC Severance Benefits, the CIC Severance Benefits, or any other severance compensation or benefit, except that, pursuant to the Company's standard payroll policies, the Company shall provide to Executive the Accrued Obligations.

6.6 Termination Due to Discontinuance of Business. Anything in this Agreement to the contrary notwithstanding, in the event the Company's business is discontinued because rendered impracticable by substantial financial losses, lack of funding, legal decisions, administrative rulings, declaration of war, dissolution, national or local economic depression or crisis or any reasons beyond the control of the Company, then this Agreement shall terminate as of the day the Company determines to cease operation with the same force and effect as if such day of the month were originally set as the termination date hereof. In the event this Agreement is terminated pursuant to this Section 6.6, Executive will not receive the Non-CIC Severance Benefits, the CIC Severance Benefits, or any other severance compensation or benefit, except that, pursuant to the Company's standard payroll policies, the Company shall provide to Executive the Accrued Obligations.

6.7 Notice; Effective Date of Termination.

(a) Termination of Executive's employment (the "***Separation Date***") pursuant to this Agreement shall be effective on the earliest of:

(i) immediately after the Company gives notice to Executive of Executive's termination, with or without Cause, unless pursuant to Section 6.3(b)(vi) in which case ten (10) days after notice if not cured, or unless the Company specifies a later date, in which case, termination shall be effective as of such later date;

(ii) immediately upon Executive's death;

(iii) immediately after the Company gives written notice to Executive of Executive's termination on account of Executive's Disability, unless the Company specifies a later Separation Date, in which case, termination shall be effective as of such later Separation Date, *provided* that Executive has not returned to the full-time performance of Executive's duties prior to such date;

(iv) except as addressed by Section 6.7(a)(v), forty-five (45) days (or such shorter period agreed to by the President and Chief Executive Officer and Executive in writing) after Executive gives written notice to the Company of Executive's resignation for any reason, *provided* that the Company may set a Separation Date at any time between the date of notice and the date of resignation, in which case Executive's resignation shall be effective as of such other date. Executive will receive compensation through any required notice period; or

(v) for a termination for Good Reason, immediately upon Executive's full satisfaction of the requirements of Section 6.1(g).

(b) In the event notice of a termination under subsection (a)(i) is given orally, at the other party's request, the party giving notice must provide written confirmation of such notice within five (5) business days of the request in compliance with the requirement of Section 7.1 below. In the event of a termination for Cause, written confirmation shall specify the subsection(s) of the definition of Cause relied on to support the decision to terminate.

6.8 Cooperation With Company After Termination of Employment. Following termination of Executive's employment for any reason, Executive shall reasonably cooperate with the Company in all matters relating to the winding up of Executive's pending work including, but not limited to, any litigation in which the Company is involved, and the orderly transfer of any such pending work to such other employees as may be designated by the Company.

6.9 Effect of Termination. Executive agrees that should Executive's employment be terminated for any reason, Executive shall be deemed to have resigned from any and all positions with the Company and its subsidiaries.

6.10 Application of Section 409A.

(a) It is intended that all of the compensation payable under this Agreement, to the greatest extent possible, either complies with the requirements of Section 409A of the Internal Revenue Code of 1986, as amended (the "***Code***") and the regulations and other guidance thereunder and any state law of similar effect (collectively, "***Section 409A***") or satisfies one or more of the exemptions from the application of Section 409A, and this Agreement will be construed in a manner consistent with such intention, incorporating by reference all required definitions and payment terms.

(b) No severance payments will be made under this Agreement unless Executive's termination of employment constitutes a Separation from Service. For purposes of Section 409A (including, without limitation, for purposes of Treasury Regulations Section 1.409A-2(b)(2)(iii)), Executive's right to receive any installment payments under this Agreement (whether severance payments or otherwise) shall be treated as a right to receive a series of separate payments and, accordingly, each installment payment hereunder shall at all times be considered a separate and distinct payment.

(c) To the extent that any severance payments are deferred compensation under Section 409A, and are not otherwise exempt from the application of Section 409A, then, to the extent required to comply with Section 409A, if the period during which Executive may consider and sign the Release spans two calendar years, the severance payments will not begin until the second calendar year. If the Company determines that the severance benefits provided under this Agreement constitutes "deferred compensation" under Section 409A and if Executive is a "specified employee" of the Company, as such term is defined in Section 409A(a)(2)(B)(i) of the Code at the time of Executive's Separation from Service, then, solely to the extent necessary to avoid the incurrence of the adverse personal tax consequences under

Section 409A, the timing of the severance will be delayed as follows: on the earlier to occur of (a) the date that is six months and one day after Executive's Separation from Service, and (b) the date of Executive's death, the Company will: (i) pay to Executive a lump sum amount equal to the sum of the severance benefits that Executive would otherwise have received if the commencement of the payment of the severance benefits had not been delayed pursuant to this Section 6.10(c); and (ii) commence paying the balance of the severance benefits in accordance with the applicable payment schedule set forth in Sections 6.1 and 6.2. No interest shall be due on any amounts deferred pursuant to this Section 6.10(c).

(d) To the extent required to avoid accelerated taxation and/or tax penalties under Section 409A, amounts reimbursable to Executive under this Agreement shall be paid to Executive on or before the last day of the year following the year in which the expense was incurred and the amount of expenses eligible for reimbursement (and in-kind benefits provided to Executive) during any one year may not effect amounts reimbursable or provided in any subsequent year.

(e) Notwithstanding the foregoing, the Company makes no representations that the payments and benefits provided under this Agreement comply with Section 409A, and in no event shall the Company be liable for all or any portion of any taxes, penalties, interest, or other expenses that may be incurred by the Executive on account of non-compliance with Section 409A.

6.11 Excise Tax Adjustment.

(a) If any payment or benefit Executive will or may receive from the Company or otherwise (a "***280G Payment***") would (i) constitute a "parachute payment" within the meaning of Section 280G of the Code, and (ii) but for this Section, be subject to the excise tax imposed by Section 4999 of the Code (the "***Excise Tax***"), then any such 280G Payment provided pursuant to this Agreement (a "***Payment***") shall be equal to the Reduced Amount. The "***Reduced Amount***" shall be either (x) the largest portion of the Payment that would result in no portion of the Payment (after reduction) being subject to the Excise Tax, or (y) the largest portion, up to and including the total, of the Payment, whichever amount (i.e., the amount determined by clause (x) or by clause (y)), after taking into account all applicable federal, state, and local employment taxes, income taxes, and the Excise Tax (all computed at the highest applicable marginal rate), results in Executive's receipt, on an after-tax basis, of the greater economic benefit notwithstanding that all or some portion of the Payment may be subject to the Excise Tax. If a reduction in a Payment is required pursuant to the preceding sentence and the Reduced Amount is determined pursuant to clause (x) of the preceding sentence, the reduction shall occur in the manner (the "***Reduction Method***") that results in the greatest economic benefit for Executive. If more than one method of reduction will result in the same economic benefit, the items so reduced will be reduced pro rata (the "***Pro Rata Reduction Method***").

(b) Notwithstanding any provision of this Section 6.11 to the contrary, if the Reduction Method or the Pro Rata Reduction Method would result in any portion of the Payment being subject to taxes pursuant to Section 409A that would not otherwise be subject to taxes pursuant to Section 409A, then the Reduction Method and/or the Pro Rata Reduction Method, as the case may be, shall be modified so as to avoid the imposition of taxes pursuant to

Section 409A as follows: (A) as a first priority, the modification shall preserve to the greatest extent possible, the greatest economic benefit for Executive as determined on an after-tax basis; (B) as a second priority, Payments that are contingent on future events (*e.g.*, being terminated without Cause), shall be reduced (or eliminated) before Payments that are not contingent on future events; and (C) as a third priority, Payments that are "deferred compensation" within the meaning of Section 409A shall be reduced (or eliminated) before Payments that are not deferred compensation within the meaning of Section 409A.

(c) Unless Executive and the Company agree on an alternative accounting firm or law firm, the accounting firm engaged by the Company for general tax compliance purposes as of the day prior to the effective date of the Change in Control transaction shall perform the foregoing calculations. If the accounting firm so engaged by the Company is serving as accountant or auditor for the individual, entity, or group effecting the Change in Control transaction, the Company shall appoint a nationally-recognized accounting or law firm to make the determinations required by this Section 6.11. The Company shall bear all expenses with respect to the determinations by such accounting or law firm required to be made hereunder. The Company shall use commercially reasonable efforts to cause the accounting or law firm engaged to make the determinations hereunder to provide its calculations, together with detailed supporting documentation, to Executive and the Company within fifteen (15) calendar days after the date on which Executive's right to a 280G Payment becomes reasonably likely to occur (if requested at that time by Executive or the Company) or such other time as requested by Executive or the Company.

(d) If Executive receives a Payment for which the Reduced Amount was determined pursuant to clause (x) of Section 6.11(a) and the Internal Revenue Service determines thereafter that some portion of the Payment is subject to the Excise Tax, Executive agrees to promptly return to the Company a sufficient amount of the Payment (after reduction pursuant to clause (x) of Section 6.11(a)) so that no portion of the remaining Payment is subject to the Excise Tax. For the avoidance of doubt, if the Reduced Amount was determined pursuant to clause (y) of Section 6.11(a), Executive shall have no obligation to return any portion of the Payment pursuant to the preceding sentence.

7. GENERAL PROVISIONS.

7.1 Notices. Any notices required hereunder to be in writing shall be deemed effectively given: (a) upon personal delivery to the party to be notified, (b) when sent by electronic mail, telex or confirmed facsimile if sent during normal business hours of the recipient, and if not, then on the next business day, (c) five (5) days after having been sent by registered or certified mail, return receipt requested, postage prepaid, or (d) one (1) day after deposit with a nationally-recognized overnight courier, specifying next-day delivery, with written verification of receipt. All communications shall be sent to the Company at its primary office location and to Executive at Executive's address as listed on the Company payroll or Executive's Company-provided email address, or at such other address as the Company or Executive may designate by ten (10) days' advance written notice to the other.

7.2 Severability. Whenever possible, each provision of this Agreement will be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Agreement is held to be invalid, illegal or unenforceable in any respect under any applicable law or rule in any jurisdiction, such invalidity, illegality or unenforceability will not affect any other provision or any other jurisdiction, but this Agreement will be reformed, construed and enforced in such jurisdiction as if such invalid, illegal or unenforceable provisions had never been contained herein.

7.3 Waiver. If either party should waive any breach of any provisions of this Agreement, Executive or it shall not thereby be deemed to have waived any preceding or succeeding breach of the same or any other provision of this Agreement.

7.4 Complete Agreement. This Agreement constitutes the entire agreement between Executive and the Company with regard to the subject matter hereof. This Agreement is the complete, final, and exclusive embodiment of their agreement with regard to this subject matter and supersedes any prior oral discussions or written communications and agreements, including the Prior Agreement. This Agreement is entered into without reliance on any promise or representation other than those expressly contained herein, and it cannot be modified or amended except in writing signed by Executive and an authorized officer of the Company. The parties have entered into or are entering into a separate Confidential Information Agreement in connection herewith and have or may enter into separate agreements related to equity awards. These separate agreements govern other aspects of the relationship between the parties, have or may have provisions that survive termination of Executive's employment under this Agreement, may be amended or superseded by the parties without regard to this Agreement and are enforceable according to their terms without regard to the enforcement provision of this Agreement.

7.5 Counterparts. This Agreement may be executed in separate counterparts, any one of which need not contain signatures of more than one party, but all of which taken together will constitute one and the same agreement.

7.6 Headings. The headings of the sections hereof are inserted for convenience only and shall not be deemed to constitute a part hereof nor to affect the meaning thereof.

7.7 Successors and Assigns. The Company shall assign this Agreement and its rights and obligations hereunder in whole, but not in part, to any Company or other entity with or into which the Company may hereafter merge or consolidate or to which the Company may transfer all or substantially all of its assets, if in any such case said Company or other entity shall by operation of law or expressly in writing assume all obligations of the Company hereunder as fully as if it had been originally made a party hereto, but may not otherwise assign this Agreement or its rights and obligations hereunder. Executive may not assign or transfer this Agreement or any rights or obligations hereunder, other than to Executive's estate upon Executive's death.

7.8 Choice of Law. All questions concerning the construction, validity and interpretation of this Agreement will be governed by the law of the Commonwealth of Massachusetts.

7.9 Resolution of Disputes. To ensure the timely and economical resolution of disputes that may arise in connection with Executive's employment with the Company, Executive and the Company agree that any and all disputes, claims, or causes of action arising from or relating to the enforcement, breach, performance, negotiation, execution, or interpretation of this Agreement, Confidential Information Agreement, or Executive's employment, or the termination of Executive's employment, including but not limited to all statutory claims, will be resolved pursuant to the Federal Arbitration Act, 9 U.S.C. §1-16, and to the fullest extent permitted by law, by final, binding and confidential arbitration by a single arbitrator conducted in ***Boston, Massachusetts*** by Judicial Arbitration and Mediation Services Inc. ("***JAMS***") under the then applicable JAMS rules (at the following web address: https://www.jamsadr.com/rules-employment-arbitration/); provided, however, this arbitration provision shall not apply to sexual harassment claims to the extent prohibited by applicable law. A hard copy of the rules will be provided to Executive upon request. **By agreeing to this arbitration procedure, both Executive and the Company waive the right to resolve any such dispute through a trial by jury or judge or administrative proceeding**. In addition, all claims, disputes, or causes of action under this Section, whether by Executive or the Company, must be brought in an individual capacity, and shall not be brought as a plaintiff (or claimant) or class member in any purported class or representative proceeding, nor joined or consolidated with the claims of any other person or entity. The arbitrator may not consolidate the claims of more than one person or entity, and may not preside over any form of representative or class proceeding. To the extent that the preceding sentences regarding class claims or proceedings are found to violate applicable law or are otherwise found unenforceable, any claim(s) alleged or brought on behalf of a class shall proceed in a court of law rather than by arbitration. The Company acknowledges that Executive will have the right to be represented by legal counsel at any arbitration proceeding. Questions of whether a claim is subject to arbitration under this Agreement shall be decided by the arbitrator. Likewise, procedural questions which grow out of the dispute and bear on the final disposition are also matters for the arbitrator. The arbitrator shall: (a) have the authority to compel adequate discovery for the resolution of the dispute and to award such relief as would otherwise be permitted by law; (b) issue a written arbitration decision, to include the arbitrator's essential findings and conclusions and a statement of the award; and (c) be authorized to award any or all remedies that Executive or the Company would be entitled to seek in a court of law. Executive and the Company shall equally share all JAMS' arbitration fees. Except as modified in the Confidential Information Agreement, each party is responsible for its own attorneys' fees. Nothing in this Agreement is intended to prevent either Executive or the Company from obtaining injunctive relief in a court to prevent irreparable harm pending the conclusion of any such arbitration. Any awards or orders in such arbitrations may be entered and enforced as judgments in the federal and state courts of any competent jurisdiction. To the extent applicable law prohibits mandatory arbitration of sexual harassment claims, in the event Executive intends to bring multiple claims, including a sexual harassment claim, the sexual harassment claim may be publicly-filed with a court, while any other claims will remain subject to mandatory arbitration.

IN WITNESS WHEREOF, the parties have executed this Second Amended and Restated Employment Agreement on the day and year first written above.

SENSEI BIOTHERAPEUTICS, INC.

By: /s/ John Celebi
Name: John Celebi
Title: CEO

Executive:

/s/ Marie-Louise Fjallskog
Marie-Louise Fjallskog, MD, PhD

Exhibit 10.14

SECOND AMENDED AND RESTATED EMPLOYMENT AGREEMENT

This **SECOND AMENDED AND RESTATED EMPLOYMENT AGREEMENT** (the "***Agreement***"), is entered into effective as of, and contingent upon, the closing of the Company's initial public offering (the "***Effective Date***"), by and between Sensei Biotherapeutics, Inc. (the "***Company***") and Robert Pierce, M.D. (the "***Executive***"). This Agreement amends, restates, and supersedes in its entirety the Amended and Restated Employment Agreement between the Company and the Executive (the "***Prior Agreement***").

The Company desires to continue to employ Executive, in the capacity of full-time Chief Scientific Officer pursuant to the terms of this Agreement and, in connection therewith, to compensate Executive for Executive's personal services to the Company; and

Executive wishes to continue to be employed by the Company and provide personal services to the Company in return for certain compensation.

Accordingly, in consideration of the mutual promises and covenants contained herein, the parties agree to the following:

1. EMPLOYMENT BY THE COMPANY.

1.1 At-Will Employment. Executive shall continue to be employed by the Company on an "at-will" basis, meaning either the Company or Executive may terminate Executive's employment at any time, with or without cause or advanced notice. Any contrary representations that may have been made to Executive shall be superseded by this Agreement. This Agreement shall constitute the full and complete agreement between Executive and the Company on the "at-will" nature of Executive's employment with the Company, which may be changed only in an express written agreement signed by Executive and a duly authorized officer of the Company. Executive's rights to any compensation following a termination shall be only as set forth in Section 6.

1.2 Position. Subject to the terms set forth herein, the Company agrees to continue to employ Executive in the position of Chief Scientific Officer, and Executive hereby accepts such continued employment. During the term of Executive's employment with the Company, Executive will devote Executive's best efforts and substantially all of Executive's business time and attention to the business of the Company.

1.3 Duties. Executive will report to the President and Chief Executive Officer performing such duties as are normally associated with Executive's then-current position and such duties as are assigned to Executive from time to time, subject to the oversight and direction of the President and Chief Executive Officer. In general, and without limitation, Executive will: oversee the scientific functions of the Company, develop new technologies and products in line with the Company's mission, coordinate research activities by actively recruiting and retaining scientific staff, and represent the science of the Company in scientific forums and shareholder events. Executive shall perform Executive's duties under this Agreement principally out of the Company's research lab in the Boston, Massachusetts area or such other location as assigned. In addition, Executive shall make such business trips to such places as may be necessary or advisable for the efficient operations of the Company.

1.4 Company Policies and Benefits. The employment relationship between the parties shall also continue to be subject to the Company's personnel policies and procedures as they may be interpreted, adopted, revised or deleted from time to time in the Company's sole discretion. Executive will be eligible to participate on the same basis as similarly-situated employees in the Company's benefit plans in effect from time to time during Executive's employment. All matters of eligibility for coverage or benefits under any benefit plan shall be determined in accordance with the provisions of such plan. The Company reserves the right to change, alter, or terminate any benefit plan in its sole discretion. Notwithstanding the foregoing, in the event that the terms of this Agreement differ from or are in conflict with the Company's general employment policies or practices, this Agreement shall control.

1.5 Insurance. While this Agreement is in effect, for actions within the scope of Executive's employment, the Company will include Executive as an insured at a level comparable to similarly-situated employees at the Company in its Directors and Officers Liability insurance policy in effect from time to time.

2. COMPENSATION.

2.1 Salary. Executive shall continue to receive for Executive's services to be rendered hereunder an initial annualized base salary of $420,000, subject to review and adjustment from time to time by the Company in its sole discretion ("***Base Salary***"). The Base Salary is payable subject to standard federal and state payroll withholding requirements in accordance with the Company's standard payroll practices.

2.2 Annual Bonus. Executive shall be eligible to receive an annual performance bonus of up to 40% (the "***Target Percentage***") of Executive's then-current Base Salary ("***Annual Bonus***"). The Annual Bonus will be based upon the Company's assessment of Executive's performance, the Company's attainment of targeted goals as set by the Company's Board of Directors (the "***Board***") in its sole discretion, overall economic conditions and forecasts, and related financial factors, all as determined by the Company in its sole discretion. The Annual Bonus, if any, will be subject to applicable payroll deductions and withholdings. Following the close of each calendar year, the Company will determine whether Executive has earned the Annual Bonus, and the amount of any Annual Bonus (which can be less than the Target Percentage), based on the set criteria. No amount of the Annual Bonus is guaranteed, and Executive must be an employee in good standing on the Annual Bonus payment date to be eligible to receive an Annual Bonus; no partial or prorated bonuses will be provided. Executive's eligibility for an Annual Bonus is subject to change in the discretion of the Board (or any authorized committee thereof).

2.3 Future Equity Awards. Executive remains eligible to be considered for future equity awards as may be determined by the Board or a committee of the Board in its discretion in accordance with the terms of any applicable equity plan or arrangement that may be in effect from time to time.

2.4 Expense Reimbursement.

(a) General Reimbursement. The Company will reimburse Executive for all reasonable, documented business expenses incurred in connection with Executive's services hereunder, in accordance with the Company's business expense reimbursement policies and procedures as may be in effect from time to time.

(b) Contingent Relocation Expenses. If Executive relocates Executive's primary residence to the Boston, Massachusetts area on or before December 31, 2021, then the Company will provide Executive with up to $25,000 (the "***Relocation Amount***") in connection with such relocation of Executive's principal residence. Acceptable uses of the Relocation Amount include (i) expenses related to moving household goods and personal effects including hiring professional movers or renting a moving vehicle and packing supplies; (ii) the cost paid for standard carrier insurance while in transit; (iii) mileage reimbursement at the federal mileage rate to drive Executive's personal vehicle(s) to the new location; (iv) travel costs, including airfare or other public transportation and lodging for Executive and Executive's immediate family members between Executive's old and new homes; and (v) offsetting Executive's closing costs for buying and/or selling a home (collectively "***Relocation Expenses***"). Appropriate supporting documentation (i.e., itemized receipts) of the Relocation Expenses must be submitted within sixty (60) days after the date that each such Relocation Expense is incurred and prior to reimbursement. Any Relocation Amount will be paid with respect to any Relocation Expense no later than thirty (30) days after the date Executive submits appropriate supporting documentation. The Company will withhold from any Relocation Amount any applicable income and employment tax withholdings, as determined in its reasonable, good faith judgment, and Executive will be responsible for paying any taxes on these reimbursements to the extent that they are taxable income under applicable tax law. If Executive resigns from the Company for any reason or if the Company terminates Executive's employment for Cause (as defined below) within eighteen (18) months following the Company's payment of any such portion of the Relocation Amount, Executive must repay to the Company the full Relocation Amount which was previously provided to Executive, on a pre-tax basis, and Executive will forfeit all rights to be paid any additional Relocation Amount not yet paid as of the date of termination.

(c) Contingent Down Payment. If Executive elects not to relocate Executive's primary residence to the Boston, Massachusetts area (and therefore has not received any portion of the Relocation Amount), but nonetheless purchases a residence in the Boston, Massachusetts area on or before December 31, 2021, then, subject to submission to the Company of appropriate supporting documentation, the Company will reimburse Executive for up to $25,000 of the down payment for such additional residence (the "***Partial Down Payment Reimbursement***"). Appropriate supporting documentation of the Partial Down Payment Reimbursement must be submitted within sixty (60) days after date Executive makes such down payment. Any Partial Down Payment Reimbursement will be paid no later than thirty (30) days after the date Executive submits appropriate supporting documentation. The Company will withhold from the Partial Down Payment Reimbursement any applicable income and employment tax withholdings, as determined in its reasonable, good faith judgment, and Executive will be responsible for paying any taxes on these reimbursements to the extent that they are taxable income under applicable tax law. If Executive resigns from the Company for any reason or if the Company terminates Executive's employment for Cause (as defined below)

within eighteen (18) months following the Company's payment of the Partial Down Payment Reimbursement, Executive must repay to the Company the Partial Down Payment Reimbursement which was previously provided to Executive, on a pre-tax basis. For the avoidance of doubt, Executive is not eligible to receive both the Relocation Amount and the Partial Down Payment Reimbursement and receipt of one will foreclose receipt of the other.

(d) Travel Expenses. While this Agreement is in effect and so long as Executive's primary residence remains in Washington State, the Company will reimburse Executive for reasonable travel expenses from Executive's home in Washington State to the Boston, Massachusetts and Gaithersburg, Maryland areas, in a combined maximum gross amount of $1,250.00 per month (less any required withholding and/or deductions required by applicable law) ("***Travel Expenses***"). The Company shall reimburse such Travel Expenses within thirty (30) days of receipt of an invoice or other documentation that complies with Company policies, provided that Executive submits such receipts and other documentation within sixty (60) days following the date such Travel Expenses are incurred.

(e) Housing Expenses. While this Agreement is in effect and until the earliest of (i) such date that Executive relocates Executive's primary residence to the Boston, Massachusetts area; (ii) such date that Executive purchases an additional residence in the Boston, Massachusetts area; or (iii) March 17, 2022; the Company will reimburse Executive for reasonable corporate housing in the Boston, Massachusetts area in a maximum gross amount of $2,000 per month, less deductions and withholdings required by applicable law, if any (the "***Housing Expenses***"). The Company shall reimburse such Housing Expenses within thirty (30) days of receipt of an invoice or other documentation that complies with Company policies, provided that Executive submits such receipts and other documentation within sixty (60) days following the date such Housing Expenses are incurred.

(f) Professional Expenses. The Company agrees to reimburse Executive for reasonable expenses incurred in connection with Executive's professional duties, including (i) expenses pertaining to the maintenance of Executive's one (1) active state medical license; (ii) expenses of Executive's attendance at continued medical education programs required to maintain licensure; and (iii) dues payable to the following critical professional societies: SITC, ASCO, AACR, and College of American Pathologists ((i) through (iii) collectively, "***Professional Expenses***"). The Company shall reimburse such Professional Expenses within thirty (30) days of receipt of an invoice or other documentation that complies with Company policies, provided that Executive submits such receipts and other documentation within sixty (60) days following the date each such Professional Expense is incurred.

(g) Section 409A. For the avoidance of doubt, to the extent that any reimbursements payable to Executive are subject to the provisions of Section 409A (as defined below): (i) any such reimbursements will be paid no later than December 31 of the year following the year in which the expense was incurred, (ii) the amount of expenses reimbursed in one year will not affect the amount eligible for reimbursement in any subsequent year, and (iii) the right to reimbursement under this Agreement will not be subject to liquidation or exchange for another benefit.

3. CONFIDENTIAL INFORMATION, INVENTIONS, NON-SOLICITATION, AND NON-COMPETITION OBLIGATIONS. As a condition of employment and in consideration of the benefits that Executive is eligible to receive under this Agreement, Executive agrees to sign and abide by the Employee Confidential Information and Inventions Assignment Agreement (the "***Confidential Information Agreement***") attached hereto as **Exhibit A**. The Confidential Information Agreement may be amended by the parties from time to time without regard to this Agreement. The Confidential Information Agreement contains provisions that are intended by the parties to survive and do survive termination or expiration of this Agreement.

4. OUTSIDE ACTIVITIES. Except with the prior written consent of the Board, Executive will not, while employed by the Company, undertake or engage in any other employment, occupation or business enterprise that would interfere with Executive's responsibilities and the performance of Executive's duties hereunder except for (i) reasonable time devoted to volunteer services for or on behalf of such religious, educational, non-profit and/or other charitable organization as Executive may wish to serve; (ii) reasonable time devoted to activities in the non-profit and business communities consistent with Executive's duties; (iii) Executive's participation in professional and academic activities; (iv) the Permitted Outside Activities, attached hereto as **Exhibit B**, *provided that* such activities do not interfere with Executive's full performance of duties under this Agreement and do not pose a conflict of interest in the determination of the President and Chief Executive Officer; and (v) such other activities as may be specifically approved by the Board. For the avoidance of doubt, with respect to (iv) of this Section 4, Executive may enter into engagements to serve on advisory boards or to provide consulting services after the Effective Date so long as Executive has first disclosed such proposed engagements to the President and Chief Executive Officer and obtained consent for such engagements. Executive agrees to terminate all existing outside activities that the President and Chief Executive Officer deem to pose an unresolvable conflict with the Company's interests. Likewise, Executive agrees to decline any engagements under (iv) of this Section 4 that the President and Chief Executive Officer deem to pose an unresolvable conflict with the Company's interests. This restriction shall not, however, preclude Executive from managing personal investments or owning less than one percent (1%) of the total outstanding shares of a publicly-traded company.

5. NO CONFLICT WITH EXISTING OBLIGATIONS. Executive represents that Executive's continued performance of all the terms of this Agreement and as an employee of the Company do not and will not breach any agreement or obligation of any kind made prior to Executive's employment by the Company, including agreements or obligations Executive may have with prior employers or entities for which Executive has provided services. Executive has not entered into, and Executive agrees that Executive will not enter into, any agreement or obligation, either written or oral, in conflict herewith.

6. TERMINATION OF EMPLOYMENT. The parties acknowledge that Executive's employment relationship with the Company continues to be at-will. Either Executive or the Company may terminate the employment relationship at any time, with or without Cause. The provisions in this Section govern the amount of compensation, if any, to be provided to Executive upon termination of employment and do not alter this at-will status.

6.1 Termination by the Company Without Cause or Resignation by Executive for Good Reason (not in Connection with a Change in Control).

(a) The Company shall have the right to terminate Executive's employment with the Company pursuant to this Section 6.1 at any time without "Cause" (as defined in Section 6.3(a) below) by giving notice as described in Section 6.7 of this Agreement. A termination pursuant to Section 6.5 or 6.6 below is not a termination without "Cause" for purposes of receiving the Non-CIC Severance Benefits described in (and as defined in) this Section 6.1 or the CIC Severance Benefits described in (and as defined in) Section 6.2.

(b) If the Company terminates Executive's employment at any time without Cause or Executive terminates Executive's employment with the Company for "Good Reason" (as defined in Section 6.1(g) below), in either case, at any time except during the Change in Control Measurement Period (both "Change in Control" and "Change in Control Measurement Period" as defined in Section 6.2 below), then Executive shall be entitled to receive the Accrued Obligations (defined in 6.1(d) below). If such termination without Cause or for Good Reason not occurring during the Change in Control Measurement Period constitutes a "separation from service" (as defined under Treasury Regulation Section 1.409A-1(h), without regard to any alternative definition thereunder, a "***Separation from Service***"), and Executive complies with the obligations in Section 6.1(c) below, Executive shall also be eligible to receive the following "***Non-CIC Severance Benefits***:"

(i) The Company will pay Executive an amount equal to Executive's then current Base Salary for nine (9) months, less all applicable withholdings and deductions, paid in equal installments beginning on the Company's first regularly scheduled payroll date following the Release Effective Date (as defined in Section 6.1(c) below), with the remaining installments occurring on the Company's regularly scheduled payroll dates thereafter; and

(ii) Provided Executive or Executive's covered dependents, as the case may be, timely elects continued coverage under COBRA, or state continuation coverage (as applicable), under the Company's group health plans following such termination, the Company will pay the portion of the COBRA, or state continuation coverage, premiums which is equal to the cost of the coverage that the Company was paying as of the date of termination, to continue Executive's (and Executive's covered dependents, as applicable) health insurance coverage in effect on the termination date until the earliest of: (1) nine (9) months following the termination date; (2) the date when Executive becomes eligible for substantially equivalent health insurance coverage in connection with new employment or self-employment; or (3) the date Executive ceases to be eligible for COBRA or state law continuation coverage for any reason, including plan termination (such period from the termination date through the earlier of (1)-(3), (the "***Non-CIC COBRA Payment Period***")). Notwithstanding the foregoing, if at any time the Company determines that its payment of COBRA, or state continuation coverage, premiums on Executive's behalf would result in a violation of applicable law (including, but not limited to, the 2010 Patient Protection and Affordable Care Act, as amended by the 2010 Health Care and Education Reconciliation Act), then in lieu of paying such premiums pursuant to this Section, the Company shall pay Executive on the last day of each remaining month of the Non-CIC COBRA Payment Period, a fully taxable cash payment equal to the COBRA or state continuation coverage premium for such month, subject to applicable tax withholding, for the remainder of the Non-CIC COBRA Payment Period. Nothing in this Agreement shall deprive Executive of Executive's rights under COBRA or ERISA for benefits under plans and policies arising under Executive's employment by the Company.

(c) Executive will be paid all of the Accrued Obligations on the Company's first payroll date after Executive's date of termination from employment or earlier if required by law. Executive shall receive the Non-CIC Severance Benefits pursuant to Section 6.1(b) or the CIC Severance Benefits pursuant to Section 6.2(a) of this Agreement if: (i) by the sixtieth (60th) day following the date of Executive's Separation from Service, Executive has signed and delivered to the Company a separation agreement containing an effective, general release of claims in favor of the Company and its affiliates and representatives, in the form presented by the Company (the "***Release***"), which will include a non-competition clause, which cannot be revoked in whole or part by such date (the date that the Release can no longer be revoked is referred to as the "***Release Effective Date***"); and (ii) if Executive holds any other positions with the Company or any Affiliate, including a position on the Board, Executive resigns such position(s) to be effective no later than the date of Executive's termination date (or such other date as requested by the Board); (iii) Executive returns all Company property; (iv) Executive complies with all post-termination obligations under this Agreement and the Confidential Information Agreement; and (v) Executive complies with the terms of the Release, including without limitation any non-disparagement and confidentiality provisions contained in the Release.

(d) For purposes of this Agreement, "***Accrued Obligations***" are (i) Executive's accrued but unpaid salary and accrued but unused vacation days, each through the date of termination, (ii) any unreimbursed business expenses incurred by Executive payable in accordance with the Company's standard expense reimbursement policies, and (iii) benefits owed to Executive under any qualified retirement plan or health and welfare benefit plan in which Executive was a participant in accordance with applicable law and the provisions of such plan.

(e) The Non-CIC Severance Benefits provided to Executive pursuant to this Section 6.1 are in lieu of, and not in addition to, any benefits to which Executive may otherwise be entitled under any Company severance plan, policy, program, or prior agreement with the Company. For avoidance of doubt, Executive shall not be eligible for both CIC Severance Benefits and Non-CIC Severance Benefits.

(f) Any damages caused by the termination of Executive's employment without Cause not in connection with a Change in Control would be difficult to ascertain; therefore, the Non-CIC Severance Benefits for which Executive is eligible pursuant to Section 6.1(b) above in exchange for the Release is agreed to by the parties as liquidated damages, to serve as full compensation, and not a penalty.

(g) For purposes of this Agreement, "***Good Reason***" shall mean the occurrence of any of the following events without Executive's consent: (i) a material reduction in Executive's Base Salary of at least 10%; (ii) a material reduction in Executive's duties, authority and responsibilities relative to Executive's duties, authority, and responsibilities in

effect immediately prior to such reduction; (iii) the relocation of Executive's principal place of employment, without Executive's consent, in a manner that lengthens Executive's one-way commute distance by fifty (50) or more miles from Executive's then-current principal place of employment immediately prior to such relocation, provided, however, that Executive's relocation to the Boston, Massachusetts area shall not constitute Good Reason; or (iv) any material breach of this Agreement by the Company; *provided, however,* that, any such termination by Executive shall only be deemed for Good Reason pursuant to this definition if: (1) Executive gives the Company written notice of Executive's intent to terminate for Good Reason within thirty (30) days following the first occurrence of the condition(s) that Executive believes constitute(s) Good Reason, which notice shall describe such condition(s); (2) the Company fails to remedy such condition(s) within thirty (30) days following receipt of the written notice (the "***Cure Period***"); (3) the Company has not, prior to receiving such notice from Executive, already informed Executive that Executive's employment with the Company is being terminated; and (4) Executive voluntarily terminates Executive's employment within thirty (30) days following the end of the Cure Period.

6.2 Termination by the Company without Cause or Resignation by Executive for Good Reason (in connection with a Change in Control).

(a) In the event that Executive's employment is terminated without Cause or Executive resigns for Good Reason within twelve (12) months following the effective date of a Change in Control ("***Change in Control Measurement Period***") of the Company, then Executive shall be entitled to the Accrued Obligations and, subject to Executive's full compliance with Section 6.1(c) above, including but not limited to the Release requirement and Executive's continued compliance with obligations to the Company under Executive's Confidential Information Agreement, then Executive will be eligible for the following "***CIC Severance Benefits***:"

(i) The Company will pay Executive an amount equal to Executive's then current Base Salary for twelve (12) months, less all applicable withholdings and deductions, paid in equal installments beginning on the Company's first regularly scheduled payroll date following the Release Effective Date, with the remaining installments occurring on the Company's regularly scheduled payroll dates thereafter;

(ii) Provided Executive or Executive's covered dependents, as the case may be, timely elects continued coverage under COBRA, or state continuation coverage (as applicable), under the Company's group health plans following such termination, the Company will pay the portion of the COBRA, or state continuation coverage, premiums which is equal to the cost of the coverage that the Company was paying as of the date of termination, to continue Executive's (and Executive's covered dependents, as applicable) health insurance coverage in effect on the termination date until the earliest of: (1) twelve (12) months following the termination date; (2) the date when Executive becomes eligible for substantially equivalent health insurance coverage in connection with new employment or self-employment; or (3) the date Executive ceases to be eligible for COBRA or state law continuation coverage for any reason, including plan termination (such period from the termination date through the earlier of (1)-(3), (the "***CIC COBRA Payment Period***")). Notwithstanding the foregoing, if at any time the Company determines that its payment of COBRA, or state continuation coverage, premiums

on Executive's behalf would result in a violation of applicable law (including, but not limited to, the 2010 Patient Protection and Affordable Care Act, as amended by the 2010 Health Care and Education Reconciliation Act), then in lieu of paying such premiums pursuant to this Section, the Company shall pay Executive on the last day of each remaining month of the CIC COBRA Payment Period, a fully taxable cash payment equal to the COBRA or state continuation coverage premium for such month, subject to applicable tax withholding, for the remainder of the CIC COBRA Payment Period. Nothing in this Agreement shall deprive Executive of Executive's rights under COBRA or ERISA for benefits under plans and policies arising under Executive's employment by the Company;

(iii) The Company will make a lump sum cash payment to Executive in an amount equal to one (1) times the Target Percentage for the year in which the termination occurs, subject to standard deductions and withholdings, which will be paid in a lump sum on the sixtieth (60th) day following Executive's date of Separation from Service; and

(iv) Effective as of Executive's termination date, the vesting and exercisability of all outstanding equity awards held by Executive immediately prior to the termination date (if any) shall be accelerated in full.

(b) For purposes of this Agreement, a "***Change in Control***" shall have the meaning set forth in the Company's 2018 Stock Incentive Plan.

(c) The CIC Severance Benefits provided to Executive pursuant to this Section 6.2 are in lieu of, and not in addition to, any benefits to which Executive may otherwise be entitled under any Company severance plan, policy or program.

(d) Any damages caused by the termination of Executive's employment without Cause during the Change in Control Measurement Period would be difficult to ascertain; therefore, the CIC Severance Benefits for which Executive is eligible pursuant to Section 6.2(a) above in exchange for the Release are agreed to by the parties as liquidated damages, to serve as full compensation, and not a penalty.

6.3 <u>Termination by the Company for Cause</u>.

Subject to Section 6.3(b) below, the Company shall have the right to terminate Executive's employment with the Company at any time for Cause by giving notice as described in Section 6.7 of this Agreement.

(a) "***Cause***" for termination shall mean that the Company has determined in its sole discretion that Executive has engaged in any of the following: (i) a material breach of any covenant or condition under this Agreement or any other agreement between the parties; (ii) any act constituting dishonesty, fraud, immoral or disreputable conduct; (iii) any conduct which constitutes a felony under applicable law; (iv) material violation of any Company policy or any act of misconduct; (v) refusal to follow or implement a clear and reasonable directive of the Company; (vi) negligence or incompetence in the performance of Executive's duties after the expiration of ten (10) days without cure after written notice of such failure; or (vii) breach of fiduciary duty.

(b) In the event Executive's employment is terminated at any time for Cause, Executive will not receive the Non-CIC Severance Benefits, the CIC Severance Benefits, or any other severance compensation or benefit, except that, consistent with the Company's standard payroll policies, the Company shall provide to Executive the Accrued Obligations.

6.4 Resignation by Executive (other than for Good Reason).

(a) Executive may resign for any reason from Executive's employment with the Company at any time by giving notice as described in Section 6.7.

(b) In the event Executive resigns from Executive's employment with the Company (other than for Good Reason), Executive will not receive the Non-CIC Severance Benefits, the CIC Severance Benefits, or any other severance compensation or benefit, except that, consistent with the Company's standard payroll policies, the Company shall provide to Executive the Accrued Obligations.

6.5 Termination by Virtue of Death or Disability of Executive.

(a) In the event of Executive's death while employed pursuant to this Agreement, all obligations of the parties hereunder shall terminate immediately, and the Company shall, pursuant to the Company's standard payroll policies, provide to Executive's legal representatives Executive's Accrued Obligations, but neither Executive nor Executive's legal representatives will be eligible for the Non-CIC Severance Benefits, the CIC Severance Benefits, or any other severance compensation or benefit.

(b) Subject to applicable state and federal law, the Company shall at all times have the right, upon written notice to the Executive, to terminate this Agreement based on Executive's Disability (as defined below). Termination by the Company of Executive's employment based on "***Disability***" shall mean termination because Executive is unable due to a physical or mental condition to perform the essential functions of Executive's position with or without reasonable accommodation for six (6) months in the aggregate during any twelve (12) month period or based on the written certification by two licensed physicians of the likely continuation of such condition for such period. This definition shall be interpreted and applied consistent with the Americans with Disabilities Act, the Family and Medical Leave Act, and other applicable law. In the event Executive's employment is terminated based on Executive's Disability, Executive will not receive the Non-CIC Severance Benefits, the CIC Severance Benefits, or any other severance compensation or benefit, except that, pursuant to the Company's standard payroll policies, the Company shall provide to Executive the Accrued Obligations.

6.6 Termination Due to Discontinuance of Business. Anything in this Agreement to the contrary notwithstanding, in the event the Company's business is discontinued because rendered impracticable by substantial financial losses, lack of funding, legal decisions, administrative rulings, declaration of war, dissolution, national or local economic depression or crisis or any reasons beyond the control of the Company, then this Agreement shall terminate as of the day the Company determines to cease operation with the same force and effect as if such day of the month were originally set as the termination date hereof. In the event this Agreement is terminated pursuant to this Section 6.6, Executive will not receive the Non-CIC Severance Benefits, the CIC Severance Benefits, or any other severance compensation or benefit, except that, pursuant to the Company's standard payroll policies, the Company shall provide to Executive the Accrued Obligations.

6.7 Notice; Effective Date of Termination.

(a) Termination of Executive's employment (the "***Separation Date***") pursuant to this Agreement shall be effective on the earliest of:

(i) immediately after the Company gives notice to Executive of Executive's termination, with or without Cause, unless pursuant to Section 6.3(b)(vi) in which case ten (10) days after notice if not cured, or unless the Company specifies a later date, in which case, termination shall be effective as of such later date;

(ii) immediately upon Executive's death;

(iii) immediately after the Company gives written notice to Executive of Executive's termination on account of Executive's Disability, unless the Company specifies a later Separation Date, in which case, termination shall be effective as of such later Separation Date, *provided* that Executive has not returned to the full-time performance of Executive's duties prior to such date;

(iv) except as addressed by Section 6.7(a)(v), forty-five (45) days (or such shorter period agreed to by the President and Chief Executive Officer and Executive in writing) after Executive gives written notice to the Company of Executive's resignation for any reason, *provided* that the Company may set a Separation Date at any time between the date of notice and the date of resignation, in which case Executive's resignation shall be effective as of such other date. Executive will receive compensation through any required notice period; or

(v) for a termination for Good Reason, immediately upon Executive's full satisfaction of the requirements of Section 6.1(g).

(b) In the event notice of a termination under subsection (a)(i) is given orally, at the other party's request, the party giving notice must provide written confirmation of such notice within five (5) business days of the request in compliance with the requirement of Section 7.1 below. In the event of a termination for Cause, written confirmation shall specify the subsection(s) of the definition of Cause relied on to support the decision to terminate.

6.8 Cooperation With Company After Termination of Employment. Following termination of Executive's employment for any reason, Executive shall reasonably cooperate with the Company in all matters relating to the winding up of Executive's pending work including, but not limited to, any litigation in which the Company is involved, and the orderly transfer of any such pending work to such other employees as may be designated by the Company.

6.9 Effect of Termination. Executive agrees that should Executive's employment be terminated for any reason, Executive shall be deemed to have resigned from any and all positions with the Company and its subsidiaries.

6.10 Application of Section 409A.

(a) It is intended that all of the compensation payable under this Agreement, to the greatest extent possible, either complies with the requirements of Section 409A of the Internal Revenue Code of 1986, as amended (the "***Code***") and the regulations and other guidance thereunder and any state law of similar effect (collectively, "***Section 409A***") or satisfies one or more of the exemptions from the application of Section 409A, and this Agreement will be construed in a manner consistent with such intention, incorporating by reference all required definitions and payment terms.

(b) No severance payments will be made under this Agreement unless Executive's termination of employment constitutes a Separation from Service. For purposes of Section 409A (including, without limitation, for purposes of Treasury Regulations Section 1.409A-2(b)(2)(iii)), Executive's right to receive any installment payments under this Agreement (whether severance payments or otherwise) shall be treated as a right to receive a series of separate payments and, accordingly, each installment payment hereunder shall at all times be considered a separate and distinct payment.

(c) To the extent that any severance payments are deferred compensation under Section 409A, and are not otherwise exempt from the application of Section 409A, then, to the extent required to comply with Section 409A, if the period during which Executive may consider and sign the Release spans two calendar years, the severance payments will not begin until the second calendar year. If the Company determines that the severance benefits provided under this Agreement constitutes "deferred compensation" under Section 409A and if Executive is a "specified employee" of the Company, as such term is defined in Section 409A(a)(2)(B)(i) of the Code at the time of Executive's Separation from Service, then, solely to the extent necessary to avoid the incurrence of the adverse personal tax consequences under Section 409A, the timing of the severance will be delayed as follows: on the earlier to occur of (a) the date that is six months and one day after Executive's Separation from Service, and (b) the date of Executive's death, the Company will: (i) pay to Executive a lump sum amount equal to the sum of the severance benefits that Executive would otherwise have received if the commencement of the payment of the severance benefits had not been delayed pursuant to this Section 6.10(c); and (ii) commence paying the balance of the severance benefits in accordance with the applicable payment schedule set forth in Sections 6.1 and 6.2. No interest shall be due on any amounts deferred pursuant to this Section 6.10(c).

(d) To the extent required to avoid accelerated taxation and/or tax penalties under Section 409A, amounts reimbursable to Executive under this Agreement shall be paid to Executive on or before the last day of the year following the year in which the expense was incurred and the amount of expenses eligible for reimbursement (and in-kind benefits provided to Executive) during any one year may not effect amounts reimbursable or provided in any subsequent year.

(e) Notwithstanding the foregoing, the Company makes no representations that the payments and benefits provided under this Agreement comply with Section 409A, and in no event shall the Company be liable for all or any portion of any taxes, penalties, interest, or other expenses that may be incurred by the Executive on account of non-compliance with Section 409A.

6.11 Excise Tax Adjustment.

(a) If any payment or benefit Executive will or may receive from the Company or otherwise (a "***280G Payment***") would (i) constitute a "parachute payment" within the meaning of Section 280G of the Code, and (ii) but for this Section, be subject to the excise tax imposed by Section 4999 of the Code (the "***Excise Tax***"), then any such 280G Payment provided pursuant to this Agreement (a "***Payment***") shall be equal to the Reduced Amount. The "***Reduced Amount***" shall be either (x) the largest portion of the Payment that would result in no portion of the Payment (after reduction) being subject to the Excise Tax, or (y) the largest portion, up to and including the total, of the Payment, whichever amount (i.e., the amount determined by clause (x) or by clause (y)), after taking into account all applicable federal, state, and local employment taxes, income taxes, and the Excise Tax (all computed at the highest applicable marginal rate), results in Executive's receipt, on an after-tax basis, of the greater economic benefit notwithstanding that all or some portion of the Payment may be subject to the Excise Tax. If a reduction in a Payment is required pursuant to the preceding sentence and the Reduced Amount is determined pursuant to clause (x) of the preceding sentence, the reduction shall occur in the manner (the "***Reduction Method***") that results in the greatest economic benefit for Executive. If more than one method of reduction will result in the same economic benefit, the items so reduced will be reduced pro rata (the "***Pro Rata Reduction Method***").

(b) Notwithstanding any provision of this Section 6.11 to the contrary, if the Reduction Method or the Pro Rata Reduction Method would result in any portion of the Payment being subject to taxes pursuant to Section 409A that would not otherwise be subject to taxes pursuant to Section 409A, then the Reduction Method and/or the Pro Rata Reduction Method, as the case may be, shall be modified so as to avoid the imposition of taxes pursuant to Section 409A as follows: (A) as a first priority, the modification shall preserve to the greatest extent possible, the greatest economic benefit for Executive as determined on an after-tax basis; (B) as a second priority, Payments that are contingent on future events (*e.g.*, being terminated without Cause), shall be reduced (or eliminated) before Payments that are not contingent on future events; and (C) as a third priority, Payments that are "deferred compensation" within the meaning of Section 409A shall be reduced (or eliminated) before Payments that are not deferred compensation within the meaning of Section 409A.

(c) Unless Executive and the Company agree on an alternative accounting firm or law firm, the accounting firm engaged by the Company for general tax compliance purposes as of the day prior to the effective date of the Change in Control transaction shall perform the foregoing calculations. If the accounting firm so engaged by the Company is serving as accountant or auditor for the individual, entity, or group effecting the Change in Control transaction, the Company shall appoint a nationally-recognized accounting or law firm to make the determinations required by this Section 6.11. The Company shall bear all expenses with respect to the determinations by such accounting or law firm required to be made hereunder.

The Company shall use commercially reasonable efforts to cause the accounting or law firm engaged to make the determinations hereunder to provide its calculations, together with detailed supporting documentation, to Executive and the Company within fifteen (15) calendar days after the date on which Executive's right to a 280G Payment becomes reasonably likely to occur (if requested at that time by Executive or the Company) or such other time as requested by Executive or the Company.

(d) If Executive receives a Payment for which the Reduced Amount was determined pursuant to clause (x) of Section 6.11(a) and the Internal Revenue Service determines thereafter that some portion of the Payment is subject to the Excise Tax, Executive agrees to promptly return to the Company a sufficient amount of the Payment (after reduction pursuant to clause (x) of Section 6.11(a)) so that no portion of the remaining Payment is subject to the Excise Tax. For the avoidance of doubt, if the Reduced Amount was determined pursuant to clause (y) of Section 6.11(a), Executive shall have no obligation to return any portion of the Payment pursuant to the preceding sentence.

7. GENERAL PROVISIONS.

7.1 Notices. Any notices required hereunder to be in writing shall be deemed effectively given: (a) upon personal delivery to the party to be notified, (b) when sent by electronic mail, telex or confirmed facsimile if sent during normal business hours of the recipient, and if not, then on the next business day, (c) five (5) days after having been sent by registered or certified mail, return receipt requested, postage prepaid, or (d) one (1) day after deposit with a nationally-recognized overnight courier, specifying next-day delivery, with written verification of receipt. All communications shall be sent to the Company at its primary office location and to Executive at Executive's address as listed on the Company payroll or Executive's Company-provided email address, or at such other address as the Company or Executive may designate by ten (10) days' advance written notice to the other.

7.2 Severability. Whenever possible, each provision of this Agreement will be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Agreement is held to be invalid, illegal or unenforceable in any respect under any applicable law or rule in any jurisdiction, such invalidity, illegality or unenforceability will not affect any other provision or any other jurisdiction, but this Agreement will be reformed, construed and enforced in such jurisdiction as if such invalid, illegal or unenforceable provisions had never been contained herein.

7.3 Waiver. If either party should waive any breach of any provisions of this Agreement, Executive or it shall not thereby be deemed to have waived any preceding or succeeding breach of the same or any other provision of this Agreement.

7.4 Complete Agreement. This Agreement constitutes the entire agreement between Executive and the Company with regard to the subject matter hereof. This Agreement is the complete, final, and exclusive embodiment of their agreement with regard to this subject matter and supersedes any prior oral discussions or written communications and agreements, including the Prior Agreement. This Agreement is entered into without reliance on any promise or representation other than those expressly contained herein, and it cannot be modified or

amended except in writing signed by Executive and an authorized officer of the Company. The parties have entered into or are entering into a separate Confidential Information Agreement in connection herewith and have or may enter into separate agreements related to equity awards. These separate agreements govern other aspects of the relationship between the parties, have or may have provisions that survive termination of Executive's employment under this Agreement, may be amended or superseded by the parties without regard to this Agreement and are enforceable according to their terms without regard to the enforcement provision of this Agreement.

7.5 Counterparts. This Agreement may be executed in separate counterparts, any one of which need not contain signatures of more than one party, but all of which taken together will constitute one and the same agreement.

7.6 Headings. The headings of the sections hereof are inserted for convenience only and shall not be deemed to constitute a part hereof nor to affect the meaning thereof.

7.7 Successors and Assigns. The Company shall assign this Agreement and its rights and obligations hereunder in whole, but not in part, to any Company or other entity with or into which the Company may hereafter merge or consolidate or to which the Company may transfer all or substantially all of its assets, if in any such case said Company or other entity shall by operation of law or expressly in writing assume all obligations of the Company hereunder as fully as if it had been originally made a party hereto, but may not otherwise assign this Agreement or its rights and obligations hereunder. Executive may not assign or transfer this Agreement or any rights or obligations hereunder, other than to Executive's estate upon Executive's death.

7.8 Choice of Law. All questions concerning the construction, validity and interpretation of this Agreement will be governed by the law of the Commonwealth of Massachusetts.

7.9 Resolution of Disputes. To ensure the timely and economical resolution of disputes that may arise in connection with Executive's employment with the Company, Executive and the Company agree that any and all disputes, claims, or causes of action arising from or relating to the enforcement, breach, performance, negotiation, execution, or interpretation of this Agreement, Confidential Information Agreement, or Executive's employment, or the termination of Executive's employment, including but not limited to all statutory claims, will be resolved pursuant to the Federal Arbitration Act, 9 U.S.C. §1-16, and to the fullest extent permitted by law, by final, binding and confidential arbitration by a single arbitrator conducted in ***Boston, Massachusetts*** by Judicial Arbitration and Mediation Services Inc. ("***JAMS***") under the then applicable JAMS rules (at the following web address: https://www.jamsadr.com/rules-employment-arbitration/); provided, however, this arbitration provision shall not apply to sexual harassment claims to the extent prohibited by applicable law. A hard copy of the rules will be provided to Executive upon request. **By agreeing to this arbitration procedure, both Executive and the Company waive the right to resolve any such dispute through a trial by jury or judge or administrative proceeding**. In addition, all claims, disputes, or causes of action under this Section, whether by Executive or the Company,

must be brought in an individual capacity, and shall not be brought as a plaintiff (or claimant) or class member in any purported class or representative proceeding, nor joined or consolidated with the claims of any other person or entity. The arbitrator may not consolidate the claims of more than one person or entity, and may not preside over any form of representative or class proceeding. To the extent that the preceding sentences regarding class claims or proceedings are found to violate applicable law or are otherwise found unenforceable, any claim(s) alleged or brought on behalf of a class shall proceed in a court of law rather than by arbitration. The Company acknowledges that Executive will have the right to be represented by legal counsel at any arbitration proceeding. Questions of whether a claim is subject to arbitration under this Agreement shall be decided by the arbitrator. Likewise, procedural questions which grow out of the dispute and bear on the final disposition are also matters for the arbitrator. The arbitrator shall: (a) have the authority to compel adequate discovery for the resolution of the dispute and to award such relief as would otherwise be permitted by law; (b) issue a written arbitration decision, to include the arbitrator's essential findings and conclusions and a statement of the award; and (c) be authorized to award any or all remedies that Executive or the Company would be entitled to seek in a court of law. Executive and the Company shall equally share all JAMS' arbitration fees. Except as modified in the Confidential Information Agreement, each party is responsible for its own attorneys' fees. Nothing in this Agreement is intended to prevent either Executive or the Company from obtaining injunctive relief in a court to prevent irreparable harm pending the conclusion of any such arbitration. Any awards or orders in such arbitrations may be entered and enforced as judgments in the federal and state courts of any competent jurisdiction. To the extent applicable law prohibits mandatory arbitration of sexual harassment claims, in the event Executive intends to bring multiple claims, including a sexual harassment claim, the sexual harassment claim may be publicly-filed with a court, while any other claims will remain subject to mandatory arbitration.

IN WITNESS WHEREOF, the parties have executed this Second Amended and Restated Employment Agreement on the day and year first written above.

SENSEI BIOTHERAPEUTICS, INC.

By: /s/ John Celebi
Name: John Celebi
Title: CEO

Executive:

/s/ Robert Pierce
Robert Pierce, M.D.

Exhibit 10.15

SECOND AMENDED AND RESTATED EMPLOYMENT AGREEMENT

This **SECOND AMENDED AND RESTATED EMPLOYMENT AGREEMENT** (the "***Agreement***"), is entered into effective as of, and contingent upon, the closing of the Company's initial public offering (the "***Effective Date***"), by and between Sensei Biotherapeutics, Inc. (the "***Company***") and Anupama Hoey (the "***Executive***"). This Agreement amends, restates, and supersedes in its entirety the Amended and Restated Employment Agreement between the Company and the Executive (the "***Prior Agreement***").

The Company desires to continue to employ Executive, in the capacity of full-time Chief Business Officer pursuant to the terms of this Agreement and, in connection therewith, to compensate Executive for Executive's personal services to the Company; and

Executive wishes to continue to be employed by the Company and provide personal services to the Company in return for certain compensation.

Accordingly, in consideration of the mutual promises and covenants contained herein, the parties agree to the following:

1. EMPLOYMENT BY THE COMPANY.

1.1 At-Will Employment. Executive shall continue to be employed by the Company on an "at-will" basis, meaning either the Company or Executive may terminate Executive's employment at any time, with or without cause or advanced notice. Any contrary representations that may have been made to Executive shall be superseded by this Agreement. This Agreement shall constitute the full and complete agreement between Executive and the Company on the "at-will" nature of Executive's employment with the Company, which may be changed only in an express written agreement signed by Executive and a duly authorized officer of the Company. Executive's rights to any compensation following a termination shall be only as set forth in Section 6.

1.2 Position. Subject to the terms set forth herein, the Company agrees to continue to employ Executive in the position of Chief Business Officer, and Executive hereby accepts such continued employment. During the term of Executive's employment with the Company, Executive will devote Executive's best efforts and substantially all of Executive's business time and attention to the business of the Company.

1.3 Duties. Executive will report to the President and Chief Executive Officer performing such duties as are normally associated with Executive's then-current position and such duties as are assigned to Executive from time to time, subject to the oversight and direction of the President and Chief Executive Officer. In general, and without limitation, Executive will lead all business and corporate development activities. Executive shall perform Executive's duties under this Agreement principally from a remote work location in the San Francisco Bay Area or such other location as assigned. In addition, Executive shall make such business trips to such places as may be necessary or advisable for the efficient operations of the Company.

1.4 Company Policies and Benefits. The employment relationship between the parties shall also continue to be subject to the Company's personnel policies and procedures as they may be interpreted, adopted, revised or deleted from time to time in the Company's sole discretion. Executive will be eligible to participate on the same basis as similarly-situated employees in the Company's benefit plans in effect from time to time during Executive's employment. All matters of eligibility for coverage or benefits under any benefit plan shall be determined in accordance with the provisions of such plan. The Company reserves the right to change, alter, or terminate any benefit plan in its sole discretion. Notwithstanding the foregoing, in the event that the terms of this Agreement differ from or are in conflict with the Company's general employment policies or practices, this Agreement shall control.

1.5 Insurance. While this Agreement is in effect, for actions within the scope of Executive's employment, the Company will include Executive as an insured at a level comparable to similarly-situated employees at the Company in its Directors and Officers Liability insurance policy in effect from time to time.

2. COMPENSATION.

2.1 Salary. Executive shall continue to receive for Executive's services to be rendered hereunder an initial annualized base salary of $365,000, subject to review and adjustment from time to time by the Company in its sole discretion ("***Base Salary***"). The Base Salary is payable subject to standard federal and state payroll withholding requirements in accordance with the Company's standard payroll practices.

2.2 Annual Bonus. Executive shall be eligible to receive an annual performance bonus of up to 40% (the "***Target Percentage***") of Executive's then-current Base Salary ("***Annual Bonus***"). The Annual Bonus will be based upon the Company's assessment of Executive's performance, the Company's attainment of targeted goals as set by the Company's Board of Directors (the "***Board***") in its sole discretion, overall economic conditions and forecasts, and related financial factors, all as determined by the Company in its sole discretion. The Annual Bonus, if any, will be subject to applicable payroll deductions and withholdings. Following the close of each calendar year, the Company will determine whether Executive has earned the Annual Bonus, and the amount of any Annual Bonus (which can be less than the Target Percentage), based on the set criteria. No amount of the Annual Bonus is guaranteed, and Executive must be an employee in good standing on the Annual Bonus payment date to be eligible to receive an Annual Bonus; no partial or prorated bonuses will be provided. Executive's eligibility for an Annual Bonus is subject to change in the discretion of the Board (or any authorized committee thereof).

2.3 Future Equity Awards. Executive remains eligible to be considered for future equity awards as may be determined by the Board or a committee of the Board in its discretion in accordance with the terms of any applicable equity plan or arrangement that may be in effect from time to time.

2.4 Expense Reimbursement.

(a) General Reimbursement. The Company will reimburse Executive for all reasonable, documented business expenses incurred in connection with Executive's services hereunder, in accordance with the Company's business expense reimbursement policies and procedures as may be in effect from time to time.

(b) Section 409A. For the avoidance of doubt, to the extent that any reimbursements payable to Executive are subject to the provisions of Section 409A (as defined below): (i) any such reimbursements will be paid no later than December 31 of the year following the year in which the expense was incurred, (ii) the amount of expenses reimbursed in one year will not affect the amount eligible for reimbursement in any subsequent year, and (iii) the right to reimbursement under this Agreement will not be subject to liquidation or exchange for another benefit.

3. CONFIDENTIAL INFORMATION, INVENTIONS, NON-SOLICITATION, AND NON-COMPETITION OBLIGATIONS. As a condition of employment and in consideration of the benefits that Executive is eligible to receive under this Agreement, Executive agrees to sign and abide by the Employee Confidential Information and Inventions Assignment Agreement (the "***Confidential Information Agreement***") attached hereto as **Exhibit A**. The Confidential Information Agreement may be amended by the parties from time to time without regard to this Agreement. The Confidential Information Agreement contains provisions that are intended by the parties to survive and do survive termination or expiration of this Agreement.

4. OUTSIDE ACTIVITIES. Except with the prior written consent of the Board, Executive will not, while employed by the Company, undertake or engage in any other employment, occupation or business enterprise that would interfere with Executive's responsibilities and the performance of Executive's duties hereunder except for (i) reasonable time devoted to volunteer services for or on behalf of such religious, educational, non-profit and/or other charitable organization as Executive may wish to serve; (ii) reasonable time devoted to activities in the non-profit and business communities consistent with Executive's duties; (iii) Executive's participation in professional and academic activities; and (iv) such other activities as may be specifically approved by the Board. This restriction shall not, however, preclude Executive from managing personal investments or owning less than one percent (1%) of the total outstanding shares of a publicly-traded company.

5. NO CONFLICT WITH EXISTING OBLIGATIONS. Executive represents that Executive's continued performance of all the terms of this Agreement and as an employee of the Company do not and will not breach any agreement or obligation of any kind made prior to Executive's employment by the Company, including agreements or obligations Executive may have with prior employers or entities for which Executive has provided services. Executive has not entered into, and Executive agrees that Executive will not enter into, any agreement or obligation, either written or oral, in conflict herewith.

6. TERMINATION OF EMPLOYMENT. The parties acknowledge that Executive's employment relationship with the Company continues to be at-will. Either Executive or the Company may terminate the employment relationship at any time, with or without Cause. The provisions in this Section govern the amount of compensation, if any, to be provided to Executive upon termination of employment and do not alter this at-will status.

6.1 Termination by the Company Without Cause or Resignation by Executive for Good Reason (not in Connection with a Change in Control).

(a) The Company shall have the right to terminate Executive's employment with the Company pursuant to this Section 6.1 at any time without "Cause" (as defined in Section 6.3(a) below) by giving notice as described in Section 6.7 of this Agreement. A termination pursuant to Section 6.5 or 6.6 below is not a termination without "Cause" for purposes of receiving the Non-CIC Severance Benefits described in (and as defined in) this Section 6.1 or the CIC Severance Benefits described in (and as defined in) Section 6.2.

(b) If the Company terminates Executive's employment at any time without Cause or Executive terminates Executive's employment with the Company for "Good Reason" (as defined in Section 6.1(g) below), in either case, at any time except during the Change in Control Measurement Period (both "Change in Control" and "Change in Control Measurement Period" as defined in Section 6.2 below), then Executive shall be entitled to receive the Accrued Obligations (defined in 6.1(d) below). If such termination without Cause or for Good Reason not occurring during the Change in Control Measurement Period constitutes a "separation from service" (as defined under Treasury Regulation Section 1.409A-1(h), without regard to any alternative definition thereunder, a "***Separation from Service***"), and Executive complies with the obligations in Section 6.1(c) below, Executive shall also be eligible to receive the following "***Non-CIC Severance Benefits***:"

(i) The Company will pay Executive an amount equal to Executive's then current Base Salary for nine (9) months, less all applicable withholdings and deductions, paid in equal installments beginning on the Company's first regularly scheduled payroll date following the Release Effective Date (as defined in Section 6.1(c) below), with the remaining installments occurring on the Company's regularly scheduled payroll dates thereafter; and

(ii) Provided Executive or Executive's covered dependents, as the case may be, timely elects continued coverage under COBRA, or state continuation coverage (as applicable), under the Company's group health plans following such termination, the Company will pay the portion of the COBRA, or state continuation coverage, premiums which is equal to the cost of the coverage that the Company was paying as of the date of termination, to continue Executive's (and Executive's covered dependents, as applicable) health insurance coverage in effect on the termination date until the earliest of: (1) nine (9) months following the termination date; (2) the date when Executive becomes eligible for substantially equivalent health insurance coverage in connection with new employment or self-employment; or (3) the date Executive ceases to be eligible for COBRA or state law continuation coverage for any reason, including plan termination (such period from the termination date through the earlier of (1)-(3), (the "***Non-CIC COBRA Payment Period***")). Notwithstanding the foregoing, if at any time the Company determines that its payment of COBRA, or state continuation coverage, premiums on Executive's behalf would result in a violation of applicable law (including, but not limited to, the 2010 Patient Protection and Affordable Care Act, as amended by the 2010 Health Care and Education Reconciliation Act), then in lieu of paying such premiums pursuant to this Section, the Company shall pay Executive on the last day of each remaining month of the Non-

CIC COBRA Payment Period, a fully taxable cash payment equal to the COBRA or state continuation coverage premium for such month, subject to applicable tax withholding, for the remainder of the Non-CIC COBRA Payment Period. Nothing in this Agreement shall deprive Executive of Executive's rights under COBRA or ERISA for benefits under plans and policies arising under Executive's employment by the Company.

(c) Executive will be paid all of the Accrued Obligations on the Company's first payroll date after Executive's date of termination from employment or earlier if required by law. Executive shall receive the Non-CIC Severance Benefits pursuant to Section 6.1(b) or the CIC Severance Benefits pursuant to Section 6.2(a) of this Agreement if: (i) by the sixtieth (60th) day following the date of Executive's Separation from Service, Executive has signed and delivered to the Company a separation agreement containing an effective, general release of claims in favor of the Company and its affiliates and representatives, in the form presented by the Company (the "***Release***"), which cannot be revoked in whole or part by such date (the date that the Release can no longer be revoked is referred to as the "***Release Effective Date***"); and (ii) if Executive holds any other positions with the Company or any Affiliate, including a position on the Board, Executive resigns such position(s) to be effective no later than the date of Executive's termination date (or such other date as requested by the Board); (iii) Executive returns all Company property; (iv) Executive complies with all post-termination obligations under this Agreement and the Confidential Information Agreement; and (v) Executive complies with the terms of the Release, including without limitation any non-disparagement and confidentiality provisions contained in the Release.

(d) For purposes of this Agreement, "***Accrued Obligations***" are (i) Executive's accrued but unpaid salary and accrued but unused vacation days, each through the date of termination, (ii) any unreimbursed business expenses incurred by Executive payable in accordance with the Company's standard expense reimbursement policies, and (iii) benefits owed to Executive under any qualified retirement plan or health and welfare benefit plan in which Executive was a participant in accordance with applicable law and the provisions of such plan.

(e) The Non-CIC Severance Benefits provided to Executive pursuant to this Section 6.1 are in lieu of, and not in addition to, any benefits to which Executive may otherwise be entitled under any Company severance plan, policy, program, or prior agreement with the Company. For avoidance of doubt, Executive shall not be eligible for both CIC Severance Benefits and Non-CIC Severance Benefits.

(f) Any damages caused by the termination of Executive's employment without Cause not in connection with a Change in Control would be difficult to ascertain; therefore, the Non-CIC Severance Benefits for which Executive is eligible pursuant to Section 6.1(b) above in exchange for the Release is agreed to by the parties as liquidated damages, to serve as full compensation, and not a penalty.

(g) For purposes of this Agreement, "***Good Reason***" shall mean the occurrence of any of the following events without Executive's consent: (i) a material reduction in Executive's Base Salary of at least 10%; (ii) a material reduction in Executive's duties, authority and responsibilities relative to Executive's duties, authority, and responsibilities in

effect immediately prior to such reduction; (iii) the relocation of Executive's principal place of employment, without Executive's consent, in a manner that lengthens Executive's one-way commute distance by fifty (50) or more miles from Executive's then-current principal place of employment immediately prior to such relocation; or (iv) any material breach of this Agreement by the Company; *provided, however,* that, any such termination by Executive shall only be deemed for Good Reason pursuant to this definition if: (1) Executive gives the Company written notice of Executive's intent to terminate for Good Reason within thirty (30) days following the first occurrence of the condition(s) that Executive believes constitute(s) Good Reason, which notice shall describe such condition(s); (2) the Company fails to remedy such condition(s) within thirty (30) days following receipt of the written notice (the "***Cure Period***"); (3) the Company has not, prior to receiving such notice from Executive, already informed Executive that Executive's employment with the Company is being terminated; and (4) Executive voluntarily terminates Executive's employment within thirty (30) days following the end of the Cure Period.

6.2 Termination by the Company without Cause or Resignation by Executive for Good Reason (in connection with a Change in Control).

(a) In the event that Executive's employment is terminated without Cause or Executive resigns for Good Reason within twelve (12) months following the effective date of a Change in Control ("***Change in Control Measurement Period***") of the Company, then Executive shall be entitled to the Accrued Obligations and, subject to Executive's full compliance with Section 6.1(c) above, including but not limited to the Release requirement and Executive's continued compliance with obligations to the Company under Executive's Confidential Information Agreement, then Executive will be eligible for the following "***CIC Severance Benefits***:"

(i) The Company will pay Executive an amount equal to Executive's then current Base Salary for twelve (12) months, less all applicable withholdings and deductions, paid in equal installments beginning on the Company's first regularly scheduled payroll date following the Release Effective Date, with the remaining installments occurring on the Company's regularly scheduled payroll dates thereafter;

(ii) Provided Executive or Executive's covered dependents, as the case may be, timely elects continued coverage under COBRA, or state continuation coverage (as applicable), under the Company's group health plans following such termination, the Company will pay the portion of the COBRA, or state continuation coverage, premiums which is equal to the cost of the coverage that the Company was paying as of the date of termination, to continue Executive's (and Executive's covered dependents, as applicable) health insurance coverage in effect on the termination date until the earliest of: (1) twelve (12) months following the termination date; (2) the date when Executive becomes eligible for substantially equivalent health insurance coverage in connection with new employment or self-employment; or (3) the date Executive ceases to be eligible for COBRA or state law continuation coverage for any reason, including plan termination (such period from the termination date through the earlier of (1)-(3), (the "***CIC COBRA Payment Period***")). Notwithstanding the foregoing, if at any time the Company determines that its payment of COBRA, or state continuation coverage, premiums on Executive's behalf would result in a violation of applicable law (including, but not limited to, the 2010 Patient Protection and Affordable Care Act, as amended by the 2010 Health Care and

Education Reconciliation Act), then in lieu of paying such premiums pursuant to this Section, the Company shall pay Executive on the last day of each remaining month of the CIC COBRA Payment Period, a fully taxable cash payment equal to the COBRA or state continuation coverage premium for such month, subject to applicable tax withholding, for the remainder of the CIC COBRA Payment Period. Nothing in this Agreement shall deprive Executive of Executive's rights under COBRA or ERISA for benefits under plans and policies arising under Executive's employment by the Company;

(iii) The Company will make a lump sum cash payment to Executive in an amount equal to one (1) times the Target Percentage for the year in which the termination occurs, subject to standard deductions and withholdings, which will be paid in a lump sum on the sixtieth (60th) day following Executive's date of Separation from Service; and

(iv) Effective as of Executive's termination date, the vesting and exercisability of all outstanding equity awards held by Executive immediately prior to the termination date (if any) shall be accelerated in full.

(b) For purposes of this Agreement, a "***Change in Control***" shall have the meaning set forth in the Company's 2018 Stock Incentive Plan.

(c) The CIC Severance Benefits provided to Executive pursuant to this Section 6.2 are in lieu of, and not in addition to, any benefits to which Executive may otherwise be entitled under any Company severance plan, policy or program.

(d) Any damages caused by the termination of Executive's employment without Cause during the Change in Control Measurement Period would be difficult to ascertain; therefore, the CIC Severance Benefits for which Executive is eligible pursuant to Section 6.2(a) above in exchange for the Release are agreed to by the parties as liquidated damages, to serve as full compensation, and not a penalty.

6.3 Termination by the Company for Cause.

Subject to Section 6.3(b) below, the Company shall have the right to terminate Executive's employment with the Company at any time for Cause by giving notice as described in Section 6.7 of this Agreement.

(a) "***Cause***" for termination shall mean that the Company has determined in its sole discretion that Executive has engaged in any of the following: (i) a material breach of any covenant or condition under this Agreement or any other agreement between the parties; (ii) any act constituting dishonesty, fraud, immoral or disreputable conduct; (iii) any conduct which constitutes a felony under applicable law; (iv) material violation of any Company policy or any act of misconduct; (v) refusal to follow or implement a clear and reasonable directive of the Company; (vi) negligence or incompetence in the performance of Executive's duties after the expiration of ten (10) days without cure after written notice of such failure; or (vii) breach of fiduciary duty.

(b) In the event Executive's employment is terminated at any time for Cause, Executive will not receive the Non-CIC Severance Benefits, the CIC Severance Benefits, or any other severance compensation or benefit, except that, consistent with the Company's standard payroll policies, the Company shall provide to Executive the Accrued Obligations.

6.4 Resignation by Executive (other than for Good Reason).

(a) Executive may resign for any reason from Executive's employment with the Company at any time by giving notice as described in Section 6.7.

(b) In the event Executive resigns from Executive's employment with the Company (other than for Good Reason), Executive will not receive the Non-CIC Severance Benefits, the CIC Severance Benefits, or any other severance compensation or benefit, except that, consistent with the Company's standard payroll policies, the Company shall provide to Executive the Accrued Obligations.

6.5 Termination by Virtue of Death or Disability of Executive.

(a) In the event of Executive's death while employed pursuant to this Agreement, all obligations of the parties hereunder shall terminate immediately, and the Company shall, pursuant to the Company's standard payroll policies, provide to Executive's legal representatives Executive's Accrued Obligations, but neither Executive nor Executive's legal representatives will be eligible for the Non-CIC Severance Benefits, the CIC Severance Benefits, or any other severance compensation or benefit.

(b) Subject to applicable state and federal law, the Company shall at all times have the right, upon written notice to the Executive, to terminate this Agreement based on Executive's Disability (as defined below). Termination by the Company of Executive's employment based on "***Disability***" shall mean termination because Executive is unable due to a physical or mental condition to perform the essential functions of Executive's position with or without reasonable accommodation for six (6) months in the aggregate during any twelve (12) month period or based on the written certification by two licensed physicians of the likely continuation of such condition for such period. This definition shall be interpreted and applied consistent with the Americans with Disabilities Act, the Family and Medical Leave Act, and other applicable law. In the event Executive's employment is terminated based on Executive's Disability, Executive will not receive the Non-CIC Severance Benefits, the CIC Severance Benefits, or any other severance compensation or benefit, except that, pursuant to the Company's standard payroll policies, the Company shall provide to Executive the Accrued Obligations.

6.6 Termination Due to Discontinuance of Business. Anything in this Agreement to the contrary notwithstanding, in the event the Company's business is discontinued because rendered impracticable by substantial financial losses, lack of funding, legal decisions, administrative rulings, declaration of war, dissolution, national or local economic depression or crisis or any reasons beyond the control of the Company, then this Agreement shall terminate as of the day the Company determines to cease operation with the same force and effect as if such day of the month were originally set as the termination date hereof. In the event this Agreement is terminated pursuant to this Section 6.6, Executive will not receive the Non-CIC Severance Benefits, the CIC Severance Benefits, or any other severance compensation or benefit, except that, pursuant to the Company's standard payroll policies, the Company shall provide to Executive the Accrued Obligations.

6.7 Notice; Effective Date of Termination.

(a) Termination of Executive's employment (the "***Separation Date***") pursuant to this Agreement shall be effective on the earliest of:

(i) immediately after the Company gives notice to Executive of Executive's termination, with or without Cause, unless pursuant to Section 6.3(b)(vi) in which case ten (10) days after notice if not cured, or unless the Company specifies a later date, in which case, termination shall be effective as of such later date;

(ii) immediately upon Executive's death;

(iii) immediately after the Company gives written notice to Executive of Executive's termination on account of Executive's Disability, unless the Company specifies a later Separation Date, in which case, termination shall be effective as of such later Separation Date, *provided* that Executive has not returned to the full-time performance of Executive's duties prior to such date;

(iv) except as addressed by Section 6.7(a)(v), forty-five (45) days (or such shorter period agreed to by the President and Chief Executive Officer and Executive in writing) after Executive gives written notice to the Company of Executive's resignation for any reason, *provided* that the Company may set a Separation Date at any time between the date of notice and the date of resignation, in which case Executive's resignation shall be effective as of such other date. Executive will receive compensation through any required notice period; or

(v) for a termination for Good Reason, immediately upon Executive's full satisfaction of the requirements of Section 6.1(g).

(b) In the event notice of a termination under subsection (a)(i) is given orally, at the other party's request, the party giving notice must provide written confirmation of such notice within five (5) business days of the request in compliance with the requirement of Section 7.1 below. In the event of a termination for Cause, written confirmation shall specify the subsection(s) of the definition of Cause relied on to support the decision to terminate.

6.8 Cooperation With Company After Termination of Employment. Following termination of Executive's employment for any reason, Executive shall reasonably cooperate with the Company in all matters relating to the winding up of Executive's pending work including, but not limited to, any litigation in which the Company is involved, and the orderly transfer of any such pending work to such other employees as may be designated by the Company.

6.9 Effect of Termination. Executive agrees that should Executive's employment be terminated for any reason, Executive shall be deemed to have resigned from any and all positions with the Company and its subsidiaries.

6.10 Application of Section 409A.

(a) It is intended that all of the compensation payable under this Agreement, to the greatest extent possible, either complies with the requirements of Section 409A of the Internal Revenue Code of 1986, as amended (the "***Code***") and the regulations and other guidance thereunder and any state law of similar effect (collectively, "***Section 409A***") or satisfies one or more of the exemptions from the application of Section 409A, and this Agreement will be construed in a manner consistent with such intention, incorporating by reference all required definitions and payment terms.

(b) No severance payments will be made under this Agreement unless Executive's termination of employment constitutes a Separation from Service. For purposes of Section 409A (including, without limitation, for purposes of Treasury Regulations Section 1.409A-2(b)(2)(iii)), Executive's right to receive any installment payments under this Agreement (whether severance payments or otherwise) shall be treated as a right to receive a series of separate payments and, accordingly, each installment payment hereunder shall at all times be considered a separate and distinct payment.

(c) To the extent that any severance payments are deferred compensation under Section 409A, and are not otherwise exempt from the application of Section 409A, then, to the extent required to comply with Section 409A, if the period during which Executive may consider and sign the Release spans two calendar years, the severance payments will not begin until the second calendar year. If the Company determines that the severance benefits provided under this Agreement constitutes "deferred compensation" under Section 409A and if Executive is a "specified employee" of the Company, as such term is defined in Section 409A(a)(2)(B)(i) of the Code at the time of Executive's Separation from Service, then, solely to the extent necessary to avoid the incurrence of the adverse personal tax consequences under Section 409A, the timing of the severance will be delayed as follows: on the earlier to occur of (a) the date that is six months and one day after Executive's Separation from Service, and (b) the date of Executive's death, the Company will: (i) pay to Executive a lump sum amount equal to the sum of the severance benefits that Executive would otherwise have received if the commencement of the payment of the severance benefits had not been delayed pursuant to this Section 6.10(c); and (ii) commence paying the balance of the severance benefits in accordance with the applicable payment schedule set forth in Sections 6.1 and 6.2. No interest shall be due on any amounts deferred pursuant to this Section 6.10(c).

(d) To the extent required to avoid accelerated taxation and/or tax penalties under Section 409A, amounts reimbursable to Executive under this Agreement shall be paid to Executive on or before the last day of the year following the year in which the expense was incurred and the amount of expenses eligible for reimbursement (and in-kind benefits provided to Executive) during any one year may not effect amounts reimbursable or provided in any subsequent year.

(e) Notwithstanding the foregoing, the Company makes no representations that the payments and benefits provided under this Agreement comply with Section 409A, and in no event shall the Company be liable for all or any portion of any taxes, penalties, interest, or other expenses that may be incurred by the Executive on account of non-compliance with Section 409A.

6.11 Excise Tax Adjustment.

(a) If any payment or benefit Executive will or may receive from the Company or otherwise (a "***280G Payment***") would (i) constitute a "parachute payment" within the meaning of Section 280G of the Code, and (ii) but for this Section, be subject to the excise tax imposed by Section 4999 of the Code (the "***Excise Tax***"), then any such 280G Payment provided pursuant to this Agreement (a "***Payment***") shall be equal to the Reduced Amount. The "***Reduced Amount***" shall be either (x) the largest portion of the Payment that would result in no portion of the Payment (after reduction) being subject to the Excise Tax, or (y) the largest portion, up to and including the total, of the Payment, whichever amount (i.e., the amount determined by clause (x) or by clause (y)), after taking into account all applicable federal, state, and local employment taxes, income taxes, and the Excise Tax (all computed at the highest applicable marginal rate), results in Executive's receipt, on an after-tax basis, of the greater economic benefit notwithstanding that all or some portion of the Payment may be subject to the Excise Tax. If a reduction in a Payment is required pursuant to the preceding sentence and the Reduced Amount is determined pursuant to clause (x) of the preceding sentence, the reduction shall occur in the manner (the "***Reduction Method***") that results in the greatest economic benefit for Executive. If more than one method of reduction will result in the same economic benefit, the items so reduced will be reduced pro rata (the "***Pro Rata Reduction Method***").

(b) Notwithstanding any provision of this Section 6.11 to the contrary, if the Reduction Method or the Pro Rata Reduction Method would result in any portion of the Payment being subject to taxes pursuant to Section 409A that would not otherwise be subject to taxes pursuant to Section 409A, then the Reduction Method and/or the Pro Rata Reduction Method, as the case may be, shall be modified so as to avoid the imposition of taxes pursuant to Section 409A as follows: (A) as a first priority, the modification shall preserve to the greatest extent possible, the greatest economic benefit for Executive as determined on an after-tax basis; (B) as a second priority, Payments that are contingent on future events (*e.g.*, being terminated without Cause), shall be reduced (or eliminated) before Payments that are not contingent on future events; and (C) as a third priority, Payments that are "deferred compensation" within the meaning of Section 409A shall be reduced (or eliminated) before Payments that are not deferred compensation within the meaning of Section 409A.

(c) Unless Executive and the Company agree on an alternative accounting firm or law firm, the accounting firm engaged by the Company for general tax compliance purposes as of the day prior to the effective date of the Change in Control transaction shall perform the foregoing calculations. If the accounting firm so engaged by the Company is serving as accountant or auditor for the individual, entity, or group effecting the Change in Control transaction, the Company shall appoint a nationally-recognized accounting or law firm to make the determinations required by this Section 6.11. The Company shall bear all expenses with respect to the determinations by such accounting or law firm required to be made hereunder.

The Company shall use commercially reasonable efforts to cause the accounting or law firm engaged to make the determinations hereunder to provide its calculations, together with detailed supporting documentation, to Executive and the Company within fifteen (15) calendar days after the date on which Executive's right to a 280G Payment becomes reasonably likely to occur (if requested at that time by Executive or the Company) or such other time as requested by Executive or the Company.

(d) If Executive receives a Payment for which the Reduced Amount was determined pursuant to clause (x) of Section 6.11(a) and the Internal Revenue Service determines thereafter that some portion of the Payment is subject to the Excise Tax, Executive agrees to promptly return to the Company a sufficient amount of the Payment (after reduction pursuant to clause (x) of Section 6.11(a)) so that no portion of the remaining Payment is subject to the Excise Tax. For the avoidance of doubt, if the Reduced Amount was determined pursuant to clause (y) of Section 6.11(a), Executive shall have no obligation to return any portion of the Payment pursuant to the preceding sentence.

7. GENERAL PROVISIONS.

7.1 Notices. Any notices required hereunder to be in writing shall be deemed effectively given: (a) upon personal delivery to the party to be notified, (b) when sent by electronic mail, telex or confirmed facsimile if sent during normal business hours of the recipient, and if not, then on the next business day, (c) five (5) days after having been sent by registered or certified mail, return receipt requested, postage prepaid, or (d) one (1) day after deposit with a nationally-recognized overnight courier, specifying next-day delivery, with written verification of receipt. All communications shall be sent to the Company at its primary office location and to Executive at Executive's address as listed on the Company payroll or Executive's Company-provided email address, or at such other address as the Company or Executive may designate by ten (10) days' advance written notice to the other.

7.2 Severability. Whenever possible, each provision of this Agreement will be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Agreement is held to be invalid, illegal or unenforceable in any respect under any applicable law or rule in any jurisdiction, such invalidity, illegality or unenforceability will not affect any other provision or any other jurisdiction, but this Agreement will be reformed, construed and enforced in such jurisdiction as if such invalid, illegal or unenforceable provisions had never been contained herein.

7.3 Waiver. If either party should waive any breach of any provisions of this Agreement, Executive or it shall not thereby be deemed to have waived any preceding or succeeding breach of the same or any other provision of this Agreement.

7.4 Complete Agreement. This Agreement constitutes the entire agreement between Executive and the Company with regard to the subject matter hereof. This Agreement is the complete, final, and exclusive embodiment of their agreement with regard to this subject matter and supersedes any prior oral discussions or written communications and agreements, including the Prior Agreement. This Agreement is entered into without reliance on any promise or representation other than those expressly contained herein, and it cannot be modified or

amended except in writing signed by Executive and an authorized officer of the Company. The parties have entered into or are entering into a separate Confidential Information Agreement in connection herewith and have or may enter into separate agreements related to equity awards. These separate agreements govern other aspects of the relationship between the parties, have or may have provisions that survive termination of Executive's employment under this Agreement, may be amended or superseded by the parties without regard to this Agreement and are enforceable according to their terms without regard to the enforcement provision of this Agreement.

7.5 Counterparts. This Agreement may be executed in separate counterparts, any one of which need not contain signatures of more than one party, but all of which taken together will constitute one and the same agreement.

7.6 Headings. The headings of the sections hereof are inserted for convenience only and shall not be deemed to constitute a part hereof nor to affect the meaning thereof.

7.7 Successors and Assigns. The Company shall assign this Agreement and its rights and obligations hereunder in whole, but not in part, to any Company or other entity with or into which the Company may hereafter merge or consolidate or to which the Company may transfer all or substantially all of its assets, if in any such case said Company or other entity shall by operation of law or expressly in writing assume all obligations of the Company hereunder as fully as if it had been originally made a party hereto, but may not otherwise assign this Agreement or its rights and obligations hereunder. Executive may not assign or transfer this Agreement or any rights or obligations hereunder, other than to Executive's estate upon Executive's death.

7.8 Choice of Law. All questions concerning the construction, validity and interpretation of this Agreement will be governed by the law of the State of California.

7.9 Resolution of Disputes. To ensure the rapid and economical resolution of disputes that may arise in connection with Executive's employment with the Company, Executive and the Company agree that any and all disputes, claims, or causes of action, in law or equity, including but not limited to statutory claims, arising from or relating to the enforcement, breach, performance, or interpretation of this Agreement, Executive's employment with the Company, or the termination of Executive's employment, shall be resolved pursuant to the Federal Arbitration Act, 9 U.S.C. § 1-16, to the fullest extent permitted by law, by final, binding and confidential arbitration, before a single arbitrator, conducted by JAMS or its successor, under JAMS' then applicable Employment Arbitration Rules and Procedures (available upon request and also currently available at http://www.jamsadr.com/rules-employment-arbitration/) and subject to JAMS' then applicable Policy on Employment Arbitration Minimum Standards of Procedural Fairness. **Executive acknowledges that by agreeing to this arbitration procedure, both Executive and the Company waive the right to resolve any such dispute through a trial by jury or judge or administrative proceeding.** In addition, all claims, disputes, or causes of action under this Section, whether by Executive or the Company, must be brought in an individual capacity, and shall not be brought as a plaintiff (or claimant) or class member in any purported class or representative proceeding, nor joined or consolidated with the claims of any

other person or entity. The arbitrator may not consolidate the claims of more than one person or entity, and may not preside over any form of representative or class proceeding. To the extent that the preceding sentences regarding class claims or proceedings are found to violate applicable law or are otherwise found unenforceable, any claim(s) alleged or brought on behalf of a class shall proceed in a court of law rather than by arbitration. This Section shall not apply to any action or claim that cannot be subject to mandatory arbitration as a matter of law, including, without limitation, claims brought pursuant to the California Private Attorneys General Act of 2004, as amended, the California Fair Employment and Housing Act, as amended, and the California Labor Code, as amended, to the extent such claims are not permitted by applicable law(s) to be submitted to mandatory arbitration and the applicable law(s) are not preempted by the Federal Arbitration Act or otherwise invalid (collectively, the "***Excluded Claims***"). In the event Executive intends to bring multiple claims, including one of the Excluded Claims listed above, the Excluded Claims may be filed with a court, while any other claims will remain subject to mandatory arbitration. Executive will have the right to be represented by legal counsel at any arbitration proceeding. Questions of whether a claim is subject to arbitration under this Agreement shall be decided by the arbitrator. Likewise, procedural questions which grow out of the dispute and bear on the final disposition are also matters for the arbitrator. The arbitrator shall: (a) have the authority to compel adequate discovery for the resolution of the dispute and to award such relief as would otherwise be permitted by law; and (b) issue a written statement signed by the arbitrator regarding the disposition of each claim and the relief, if any, awarded as to each claim, the reasons for the award, and the arbitrator's essential findings and conclusions on which the award is based. The arbitrator shall be authorized to award all relief that Executive or the Company would be entitled to seek in a court of law. The Company shall pay all JAMS arbitration fees in excess of the administrative fees that Executive would be required to pay if the dispute were decided in a court of law. Nothing in this letter agreement is intended to prevent either Executive or the Company from obtaining injunctive relief in court to prevent irreparable harm pending the conclusion of any such arbitration. Any awards or orders in such arbitrations may be entered and enforced as judgments in the federal and state courts of any competent jurisdiction.

IN WITNESS WHEREOF, the parties have executed this Second Amended and Restated Employment Agreement on the day and year first written above.

SENSEI BIOTHERAPEUTICS, INC.

By: /s/ John Celebi
Name: John Celebi
Title: CEO

Executive:

/s/ Anupama Hoey
Anupama Hoey

Exhibit 23.1

Consent of Independent Registered Public Accounting Firm

We consent to the use in this Registration Statement No. 333-252138 on Form S-1 of our report dated November 12, 2020 (February 1, 2021 as to the effects of the reverse stock split discussed in Note 15) relating to the financial statements of Sensei Biotherapeutics, Inc. We also consent to the reference to us under the heading “Experts” in such Registration Statement.

/s/ Deloitte & Touche LLP

Baltimore, Maryland
February 1, 2021