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

FORM 8-K

CURRENT REPORT
Pursuant to Section 13 or 15(d)
of the Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): June 3, 2024

Sensei Biotherapeutics, Inc.
(Exact Name of Registrant as Specified in its Charter)

Delaware	**001-39980**	**83-1863385**
(State or Other Jurisdiction of Incorporation)	**(Commission File Number)**	**(IRS Employer Identification No.)**

1405 Research Blvd, Suite 125 **Rockville, MD**	**20850**
(Address of Principal Executive Offices)	**(Zip Code)**

Registrant's telephone number, including area code: (240) 243-8000

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

☐ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

☐ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

☐ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

☐ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Securities registered pursuant to Section 12(b) of the Securities Exchange Act of 1934:

Title of each class	Trading symbol	Name of each exchange on which registered
Common Stock	SNSE	The Nasdaq Stock Market LLC
Series A Preferred Stock Purchase Rights		The Nasdaq Stock Market LLC

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§240.12b-2 of this chapter).

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 13(a) of the Exchange Act. ☐

Item 7.01 Regulation FD Disclosure.

On June 3, 2024, Sensei Biotherapeutics, Inc. updated its corporate presentation for use in meetings with investors, analysts and others. A copy of the presentation is furnished as Exhibit 99.1 to this Current Report on Form 8-K.

The information in Item 7.01 and the exhibit attached hereto are being furnished and shall not be deemed "filed" for the purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), or otherwise subject to the liabilities of that section, nor shall they be deemed incorporated by reference into any filing under the Exchange Act or the Securities Act of 1933, as amended, whether filed before or after the date hereof and regardless of any general incorporation language in such filing.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits

Exhibit Number	Exhibit Description
99.1	Sensei Biotherapeutics, Inc. corporate presentation, dated June 3, 2024
104	The cover page from this Current Report on Form 8-K, formatted in Inline XBRL

SIGNATURES

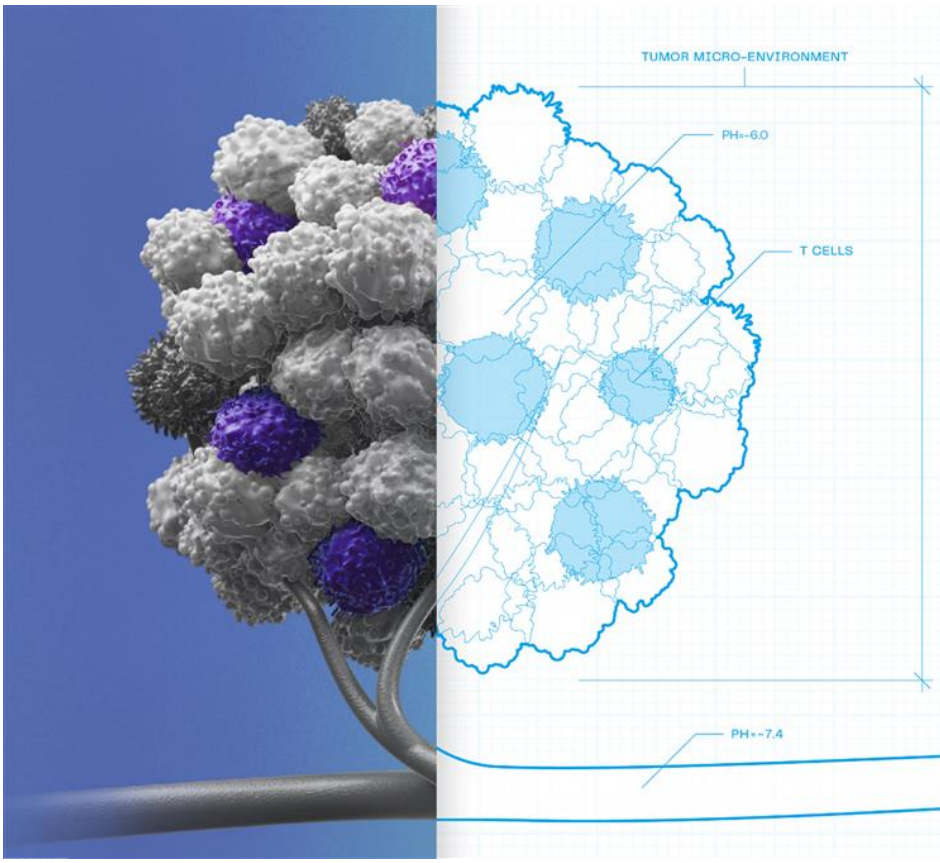
Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

Sensei Biotherapeutics, Inc.

Date: June 3, 2024

/s/ Christopher W. Gerry
Christopher W. Gerry
General Counsel and Secretary

Exhibit 99.1

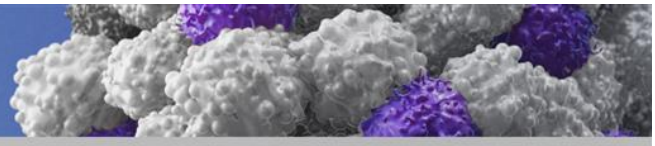


sensei BIO

Conditionally Active Antibodies for Immuno-oncology

Corporate Deck | June 2024

Disclaimer



This presentation has been prepared by Sensei Biotherapeutics, Inc. (the “Company,” "we," "us") and is made for informational purposes only. The information set forth herein does not purport to be complete or to contain all of the information you may desire. Statements contained herein are made as of the date of this presentation unless stated otherwise, and the delivery of this presentation at any time shall not under any circumstances create an implication that the information contained herein is correct as of any time after such date or that information will be updated or revised to reflect information that subsequently becomes available or changes occurring after the date hereof.

This presentation contains estimates and other statistical data made by independent parties and by us relating to market shares and other data about our industry. This presentation also contains "forward-looking" statements as that term is defined in the Private Securities Litigation Reform Act of 1995 that are based on our management's beliefs and assumptions and on information currently available to management. These forward-looking statements include, without limitation, expectations regarding the development and potential therapeutic benefits of our product candidates; the expected safety, pharmacokinetic and efficacy profile of our product candidates, including SNS-101; the expected timing of clinical data from our Phase 1/2 clinical trial of SNS-101; the expansion of the Phase 1 clinical trial to include additional patients with specific tumor types; and our belief that our existing cash and cash equivalents will be sufficient to fund our operations at least into the fourth quarter of 2025 and reach midway into Phase 2 clinical studies of SNS-101.

When used in this presentation, the words and phrases "designed to," "may," "believes," "intends," "seeks," "anticipates," "plans," "estimates," "expects," "should," "assumes," "continues," "could," "will," "future" and the negative of these or similar terms and phrases are intended to identify forward-looking statements. Forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. Risks and uncertainties that may cause actual results to differ materially include uncertainties inherent in the development of therapeutic product candidates, such as preclinical discovery and development; conduct of clinical trials and related regulatory requirements, including the risk of delay or cessation of any clinical trials of Sensei’s product candidates; the risk that prior results, such as signals of safety, activity or durability of effect, observed from preclinical trials and early results from the clinical trial of SNS-101, will not be replicated or will not continue in ongoing or future studies or clinical trials involving Sensei’s product candidates, including SNS-101; our reliance on third parties over which we may not always have full control; risks regarding the accuracy of our estimates of expenses, capital requirements and needs for additional financing; and other risk and uncertainties that are described in our Quarterly Report on Form 10-Q filed with the SEC on May 9, 2024 and our other Periodic Reports filed with the SEC. Forward-looking statements represent our management's beliefs and assumptions only as of the date of this presentation and include all matters that are not historical facts. Our actual future results may be materially different from what we expect. Except as required by law, we assume no obligation to update these forward-looking statements publicly, or to update the reasons actual results could differ materially from those anticipated in the forward-looking statements, even if new information becomes available in the future.

Certain information contained in this presentation relates to, or is based on, studies, publications, surveys and other data obtained from third-party sources and the Company's own internal estimates and research. While the Company believes these third-party sources to be reliable as of the date of this presentation, it has not independently verified, and makes no representation as to the adequacy, fairness, accuracy or completeness of, any information obtained from third-party sources. In addition, all of the market data included in this presentation involves a number of assumptions and limitations, and there can be no guarantee as to the accuracy or reliability of such assumptions. Finally, while we believe our own internal research is reliable, such research has not been verified by any independent source.

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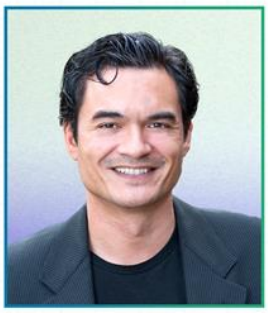
Company Highlights

- Sensei Bio’s proprietary platform is designed to harness conditional activation of antibodies to widen the therapeutic window and enable druggability of promising oncology targets
- SNS-101, the company's lead asset, is in a Phase 1b study and targets VISTA, a critical negative regulator of T-cell function and promising immune checkpoint target
- SNS-101 has demonstrated ability to overcome hurdles associated with drugging VISTA, including: a well-tolerated safety profile, potentially best-in-class PK, and initial signs of promising clinical activity
- Initial Phase 1 expansion data expected by year-end 2024
- Three additional early-stage drug candidates
- Cash runway into the fourth quarter of 2025, which is expected to fund operations midway into Phase 2 studies of SNS-101

Seasoned Leadership Team

John Celebi, MBA
President and CEO

Christopher Gerry, J.D.
SVP, General Counsel



Edward van der Horst, Ph.D.
Chief Scientific Officer

Stephanie Krebs, M.S., MBA
Chief Business Officer

Ron Weitzman, M.D.
Chief Medical Officer (part-time)

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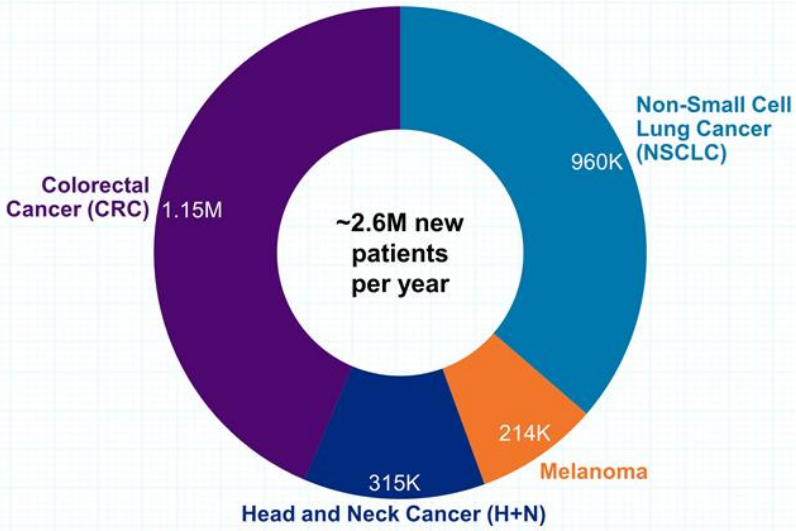
Large Commercial Opportunity for Immuno-Oncology Drugs

Newly Diagnosed Patients Annually in 2026[2]



VISTA's Potential Commercial Impact

- The checkpoint market is large and growing fast[1]
- Despite the widespread use of checkpoint inhibitors, only 20% of patients experience an objective response
- VISTA is implicated in numerous solid tumor types with large patient populations
- Indications such as CRC see little to no benefit from current treatment options

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1. Market opportunity estimates for PD-1, PDL-1 & anti-CTLA-4 Inhibitors – TD Cowen's Guide to Immuno-oncology
2. GlobalData; Incident cases diagnosed in 8MM 2026 (US, UK, Japan, China, France, Germany, Italy, Spain)

Lack of Tumor Targeting is a Major Obstacle in IO Innovation

Industry Problem	Sensei's Solution
Conventional antibodies target immune checkpoints that are highly expressed in normal tissues, resulting in:	**Conditionally active antibodies are selectively targeted to the tumor microenvironment, potentially providing:**
• Dose-limiting toxicities due to on-target/off-tumor action	• Little or no toxicity due to selective on-target/on-tumor action
• Pharmacological sink effect requires higher & more frequent dosing	• Lower & less frequent doses with tumor-specific binding
• Suboptimal activity due to poor PK & dose-limiting toxicities	• Powerful activity selectively focused on the tumor microenvironment

One new IO checkpoint inhibitor approved after the CTLA-4 and PD-1/PD-L1 group

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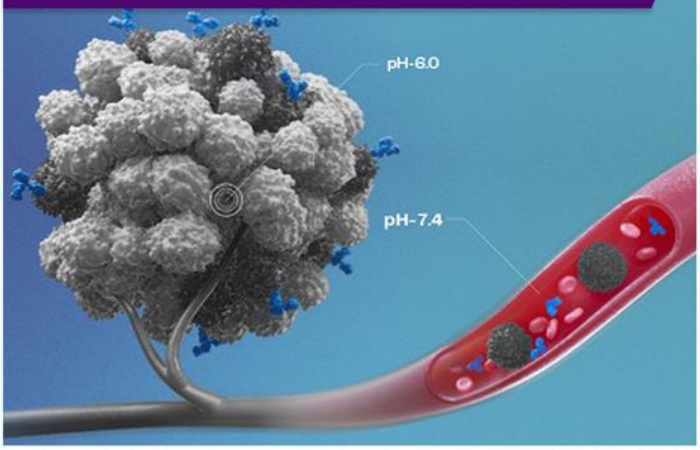
The TMAb Platform: pH-sensitive Antibodies Selectively Bind to Targets in the Low-pH Tumor Microenvironment

The tumor microenvironment of pH ~6 is lower than physiological pH of 7.4



Sensei's technology identifies pH-sensitive antibodies designed to bind only at the tumor

- Exploits the tumor microenvironment using pH-selective properties
- Intended to alleviate undesirable PK/PD properties:
  - Dose-limiting toxicities due to on-target/off-tumor binding
  - Higher and more frequent dosing due to poor pharmacokinetics
- Bolsters specific activities
- Unlocks previously undruggable immune targets

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Innovative Pipeline of IO Drugs with Broad Commercial Potential

REGENERON

*Sensei has entered into a clinical supply agreement with Regeneron supporting the planned evaluation of SNS-101 in combination with Regeneron's anti-PD-1 therapy Libtayo® (cemiplimab) in a Phase 1/2 clinical trial in solid tumors.

NIH NATIONAL CANCER INSTITUTE

*Sensei has entered into a Cooperative Research and Development Agreement (CRADA) with the National Cancer Institute. The goal of this collaborative effort is to further elucidate the role of VISTA in immune checkpoint resistance and expand the potential of SNS-101 as a combination therapy beyond anti-PD-1.

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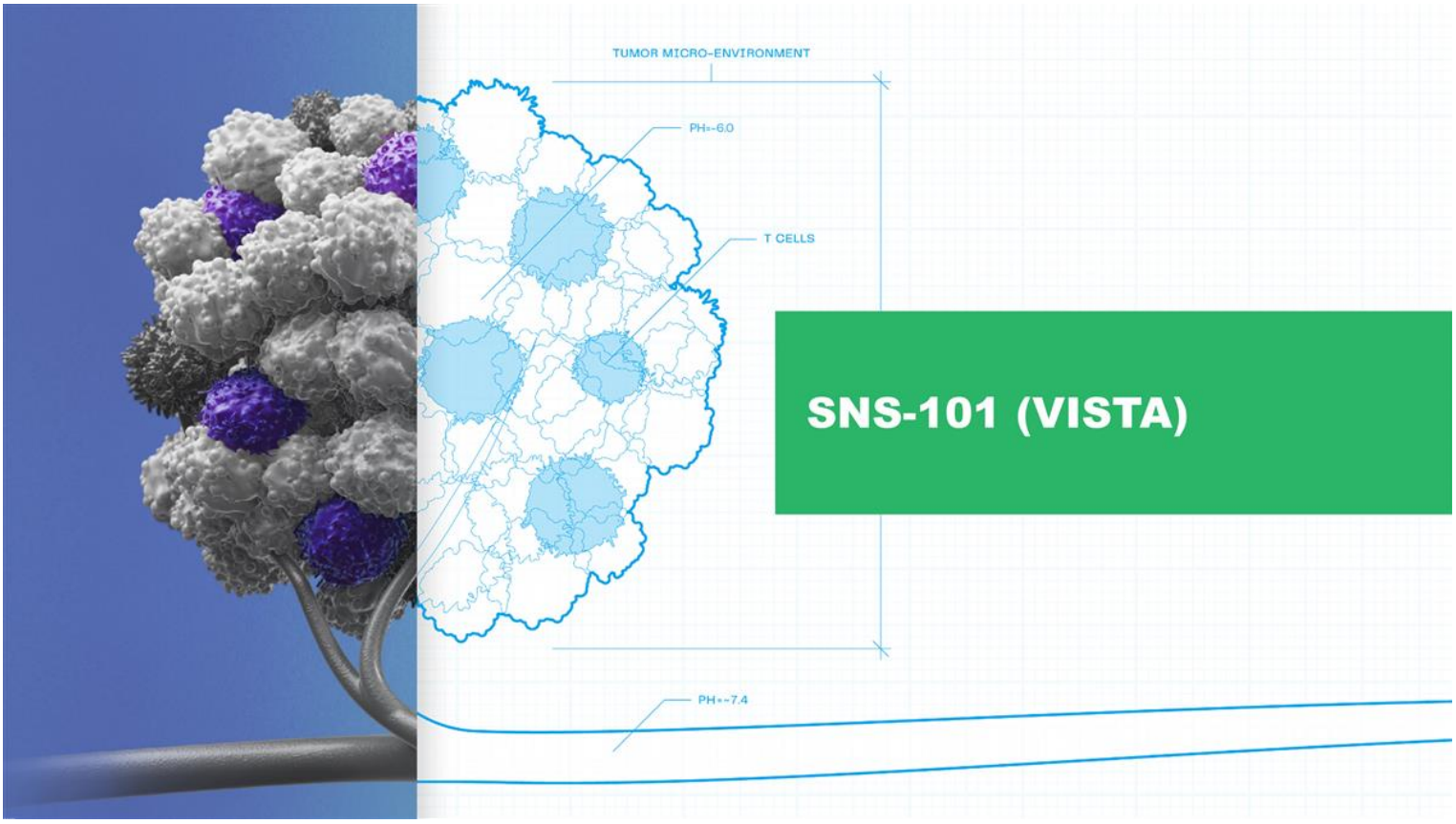


SNS-101 (VISTA)

VISTA is a Potent T cell Checkpoint Extensively Expressed on Myeloid Cells

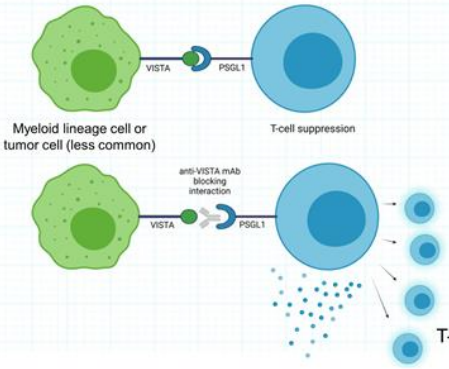
VISTA is a B7 family member that inhibits T cell activation[1]

Immunosuppressive function believed to be mediated by PSGL-1 receptor

Upregulated on immune suppressive myeloid-derived suppressor cells (MDSCs) via hypoxia[2]

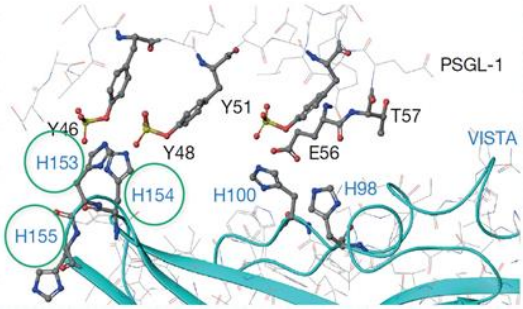
Increased expression on tissue infiltrating immune cells upon checkpoint therapy failure[3]

IS ACTIVATED IN A pH SENSITIVE MANNER



Extensive VISTA expression on off-tumor myeloid-lineage cells demands a conditionally active antibody approach

VISTA has inherent pH sensitivity: its extracellular domain is uniquely rich in histidines[4]



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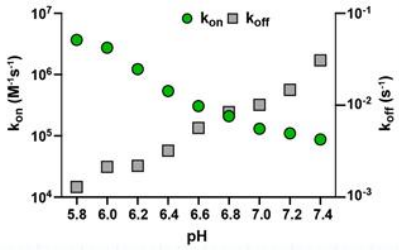
1 Wang et al, JEM, 2011
2 Deng et al, Cancer Immunonol Res 2019
3 Gao et al., Nat Med. 2017
4 Johnston et al., Nature 2019

SNS-101 is a pH-sensitive Antibody Selective for VISTA

Selectivity for active VISTA^{pH6} over VISTA$^{pH7.4}$



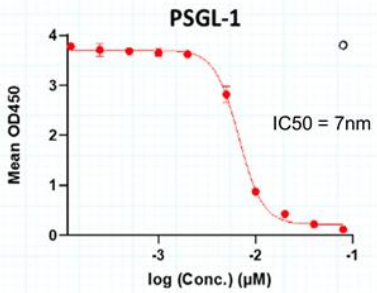
pH 6.0	pH 7.4
0.218 nM	132 nM (~No binding)

Monovalent Affinity (K_D)

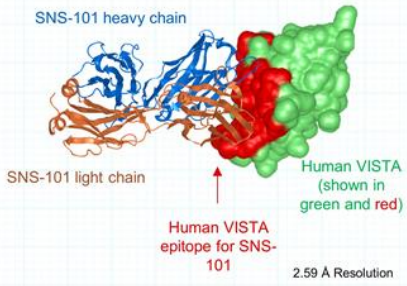
Additional SNS-101 features

- IgG1 format
- Active Fc

Blocks the key receptor regulating VISTA's immunosuppressive activity



SNS-101 potently inhibits the VISTA:PSGL-1 interaction and all other potential binding partners at pH 6.0 *in vitro*



VISTA:SNS-101 co-crystal structure demonstrates SNS-101 encompasses VISTA's PSGL-1 epitope

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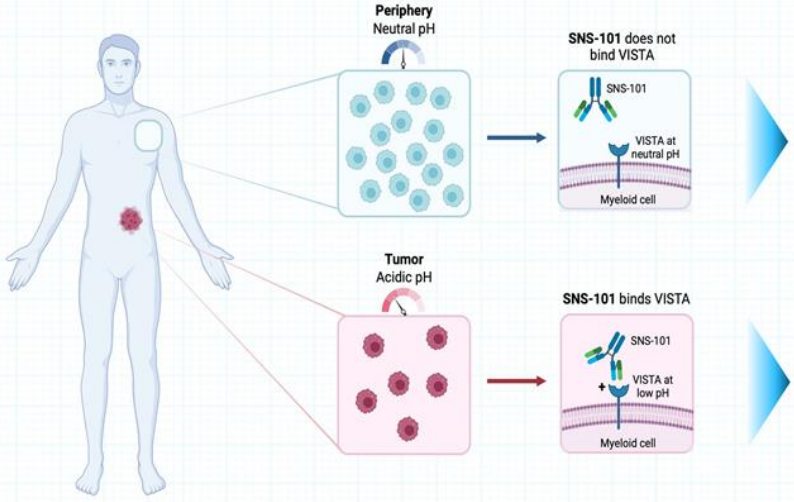
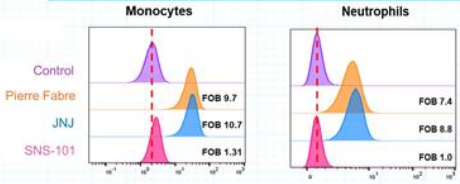
Thisted T. et al. *Nature Communications* 2024

SNS-101 Designed to Bind VISTA at the Tumor but Not in the Periphery



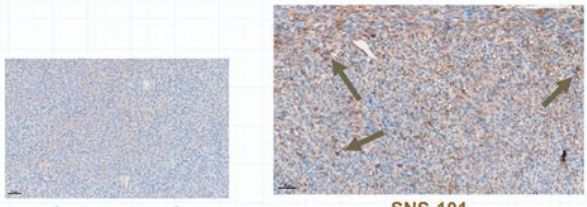
Periphery (Neutral pH)

SNS-101 has no detectable binding in peripheral or normal tissues



Tumor (Acidic pH)

SNS-101 rapidly accumulates in the tumor



Isotype control
6h post-dosing

SNS-101
6h post-dosing

Blue = tumor
Brown = SNS-101

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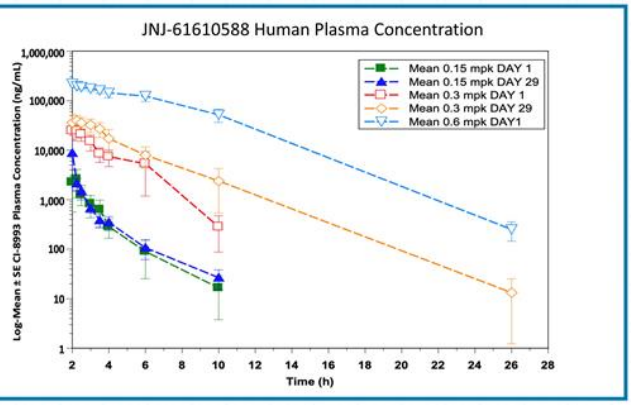
Competitors Halted Development of VISTA Antibodies as a Result of Severe Toxicities From Off-Tumor On-Target Activity & Poor PK

Dose-limiting toxicity
Grade 3 CRS-associated encephalopathy

- JNJ-61610588 (CI-8993) was the first anti-VISTA antibody to be studied in clinical trials in 2016 (NCT02671955) [1]
- Transient Cytokine Release Syndrome (CRS) observed in several patients at **0.15 mg/kg**
- Transient **Grade 3 CRS-associated encephalopathy** observed at **0.3 mg/kg**, after which Janssen halted the study

Challenging PK profile
Non-linear PK, short $t_{1/2}$



1 Curis, Inc., Corporate Presentation, Feb 2022

SNS-101 is Unique and Differentiated From Its Peers

	SNS-101 Sensei Bio	HMBD-002 (Hummingbird)	PMC-309 (PharmAbcine)	CI-8993; JNJ-61610588 (J&J/Curis)	K01401-020; WO180 (Pierre Fabre)	KVA12123 (Kineta)	VISTA.18 (BMS)
Inhibit PSGL-1 Binding	✓	✗	✓	✓	✓	✓	✓
pH Sensitive Binding	✓	✗	✗	✗	✗	✗	✓
Fc Active	✓ (IgG1)	✗ (IgG4)	✓ (IgG1)	✓ (IgG1)	✓ (IgG1)	✗ ($IgG1^{mut}$)	✗ (IgG4)
Most Advanced Stage	Phase 1	Phase 1	Phase 1	Phase 1	Phase 1	Phase 1	Preclinical

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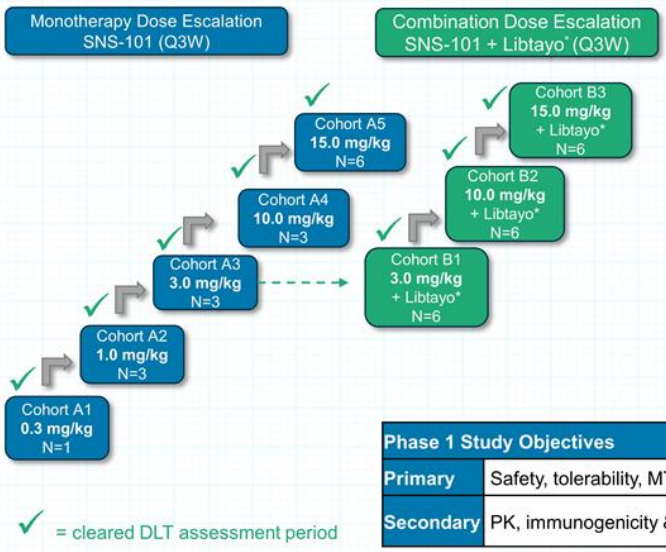
Johnston et al., Nature 2019; Kineta website; Snyder et al, AACR Annual Meeting 2016; Pierre Fabre website; Hummingbird website; Thakkar et al, J of Immunother Cancer, 2022; PharmAbcine website

Early Development Plan is in Alignment with Corporate Objectives

Corporate Objectives	Impact on Study Design
PRIMARY Rapidly confirm conditionally active MOA through: • Lack of severe CRS • Absence of TMDD • Reach doses several folds higher than doses where prior anti-VISTA mAbs experienced DLT	• Enroll **all-comer** solid tumor population during **dose escalation** which included both "hot" and "cold" tumor histologies, allowing for efficient enrollment
SECONDARY • Explore VISTA's role in both "cold" and "hot" tumor settings to allow for efficient enrollment and to explore signs of activity in both settings • Identify RP2D	• Enroll **selected patient populations** to balance cold/hot tumor ratio • Explore more discreet range of doses

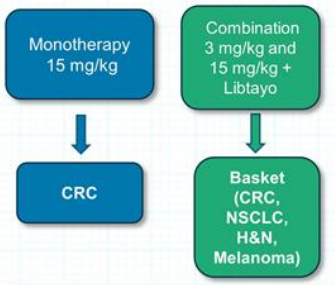
SNS-101 Phase 1/2 Study

Phase 1 Dose Escalation
BOIN design in patients with advanced solid tumors



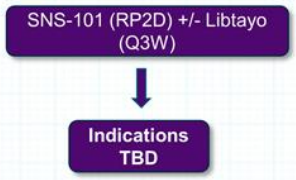
✓ = cleared DLT assessment period

Phase 1 Dose Expansion
~ 50 to 70 patients



Additional tumor types and doses may be considered for both the monotherapy & combination dose expansion

Phase 2
Single-arm, Simon two-stage minimax design



Phase 1 Study Objectives	
Primary	Safety, tolerability, MTD/RP2D
Secondary	PK, immunogenicity & anti-tumor activity

Phase 2 Study Objectives	
Primary	Anti-tumor activity
Secondary	Safety, tolerability, PK & immunogenicity

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* Libtayo 350 mg
Patient enrollment has started for the monotherapy & combination expansion cohorts

RP2D = Recommended Phase 2 Dose
MTD = Maximum Tolerated Dose
CRC = colorectal cancer
NSCLC = non small cell lung cancer
H&N = head and neck cancer

Patient Disposition

	Monotherapy	Combination
	SNS-101 n=16 (%)	SNS-101 + cemi n=18 (%)
Enrolled	16 (100.0)	18 (100.0)
Treatment Ongoing	2 (13)	2 (11)
Discontinued	14 (88)	16 (89)
Progressive Disease	13	13
Adverse Event	0	1#
Withdrew Consent	0	1
Death Regardless of Causality	1*	0
Death Related to Study Therapy	0	0
Clinical Progression	0	1

** Related to disease progression, not related to SNS-101 (1 mg/kg dose level)*
 # Patient discontinued due to immune mediated AEs of Grade 3 AST and ALT (10 mg/kg + cemi)

Majority of Patients had Tumor Type Typically Unresponsive to PD-1 Monotherapy

	SNS-101 Mono n=16 (%)	SNS-101 Combo n=18 (%)
Gender, n (%)		
Male	12 (75)	11 (61)
Female	4 (25)	7 (39)
Age, years		
Median	61.5	62
Min, Max	35, 79	33, 81
Race, n (%)		
Asian	1 (6)	1 (6)
Black or African American	0	2 (11)
Not Reported	1 (6)	1 (6)
White	14 (88)	14 (77)
Ethnicity, n (%)		
Not Hispanic or Latino	14 (88)	14 (77)
Hispanic or Latino	1 (6)	3 (17)
Not reported	1 (6)	1 (6)
Baseline ECOG, n (%)		
0	6 (37)	4 (22)
1	10 (63)	14 (78)

	SNS-101 Mono n=16 (%)	SNS-101 Combo n=18 (%)
Prior lines metastatic therapy		
Median	2	2.5
Min, Max	0,7	1,7
Prior PD-1/PDL-1 YES%		
% Yes	**8 (50)**	**4 (22)**
Cancer Type, n (%)		
Responsive to PD-1 monotherapy (e.g. "hot" tumors)	**3 (19)**	**2 (11)**
Head and Neck	2	0
Kidney	1	2
Typically Unresponsive to PD-1 monotherapy (e.g. "cold" tumors)	**13 (81)**	**16 (89)**
MSS Colon	4	7
MSS Endometrial	0	1
Esophageal	1	0
Pancreatic	0	3
*Sarcoma**	4	2
*Other***	4	3

85% of enrolled patients had tumors typically unresponsive to PD-1/PD-L1 therapy

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Data as of 30April2024

*Sarcoma: Leiomyosarcoma, Ewing Sarcoma, PEComa, Hemangiopericytoma (mono) and Leiomyosarcoma and Desmoplastic small round cell (combo)
**Other Tumor Types: Small cell lung carcinoma, Gallbladder, Adenocystic carcinoma maxillary sinus, and mediastinal carcinoma (mono) and Ovarian, Duodenal, granulosa cell tumor (germ cell)

SNS-101 Was Well Tolerated as Monotherapy and in Combination with Cemiplimab

- No dose-limiting toxicities observed
- Majority of AEs were Grade 1 or 2
- Two patients experienced Grade 1 CRS, suggesting that CRS is a class effect of VISTA-targeting antibodies

Summary of Adverse Events

	SNS-101 n=16 (%)	SNS-101 + cemi n=18 (%)
At least 1 TEAE	13 (81)	14 (78)
At least 1 SAE	1 (6)	8 (44)
≥Grade 3 TEAE	2 (13)	8 (44)
At least 1 TEAE leading to discontinuation	1* (6)	1 (5)
DLTs	0	0
AESI	1 (6)	5 (28)
Immune-mediated^	0	4 (22)
CRS#	1 (6)	1 (6)

**One patient experienced an SAE, Grade 5 bronchial obstruction, that resulted in death; not related to SNS-101, but to disease progression*
#Two patients experienced Grade 1 CRS
^One patient experienced Grade 2 rash maculo-papular at 3 mg/kg + cemi
^One patient experienced Grade 3 Diabetic Ketoacidosis at 3 mg/kg + cemi
^Two patients experienced elevated liver enzymes both at 10 mg/kg + cemi (one pt with Grade 3 ALT and Grade 1 AST and one pt with Grade 3 AST and ALT which resulted in discontinuation from treatment)

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Data as of 30April2024

Most Frequently Occurring AEs (≥ 2 Overall) Regardless of Causality

Preferred Term	SNS-101 Mono n=16	SNS-101 Combo n=18	Total n=34
Fatigue	0	5	5
Cough	3	1	4
Pleural effusion	1	2	3
Pyrexia	2	1	3
Rash maculopapular	1	2	3
Alanine aminotransferase increased	0	2	2
Anaemia	0	2	2
Aspartate aminotransferase increased	0	2	2
Blood bilirubin increased	0	2	2
Chills	1	1	2
COVID-19	1	1	2
Cytokine release syndrome	1	1	2
Dermatitis acneiform	2	0	2
Hypokalemia	1	1	2
Hypomagnesemia	1	1	2
Infusion related reaction	0	2	2
Lymphocyte count decreased	0	2	2
Nausea	0	2	2
Pruritis	0	2	2

SNS-101 Has Only Been Associated with Mild IRR/CRS-like Adverse Events (Unlike First Generation VISTA Antibodies)

Subject Number	Dose Level	Adverse Event Preferred Term (Event description)	Severity (Grade)	Time of Onset relative to start of Infusion
01-010	SNS-101 15.0 mg/kg	Cytokine Release Syndrome (Chills and fever)	Grade 1	C1D1 ~4 hours post SNS-101 Infusion
01-013	SNS-101 15.0 mg/kg + cemi	Cytokine Release Syndrome (Chills, no fever)	Grade 1	C1D1 ~5 hours post SNS-101 Infusion
01-009	SNS-101 3.0 mg/kg + cemi	Infusion-related reaction (Chills and flushing)	Grade 2	C2D1 At the end of the SNS-101 Infusion
04-015	SNS-101 15.0 mg/kg + cemi	Infusion-related reaction (chest tightness, muscle aches, hypotension) *Patient also reported grade 1 itching and flushing about 1 hour after C1D1*	Grade 2	C2D1 ~6 minutes after start of SNS-101 infusion

- **All CRS events have been low grade and manageable**
- **Demonstrates that SNS-101 has the potential to overcome a key hurdle that impeded development of first-generation VISTA mAbs**

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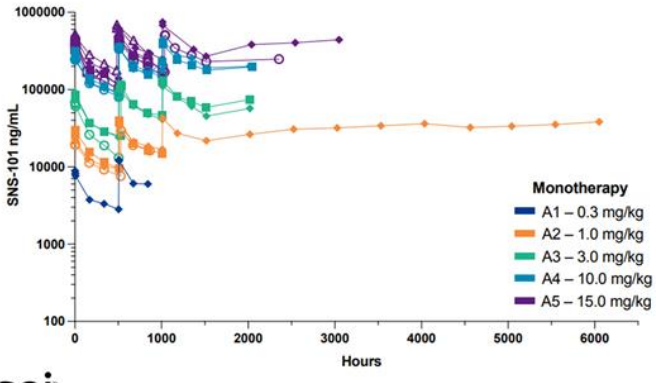
Data as of 30April2024

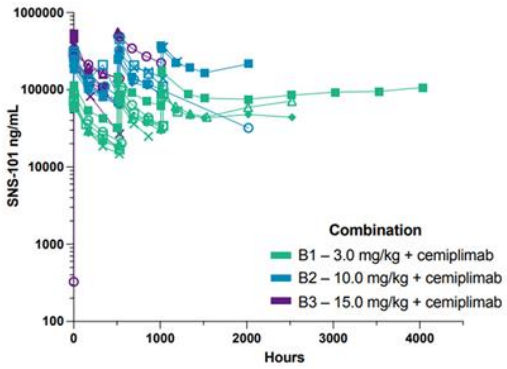
Pharmacokinetic Data Show Linear Elimination Kinetics with Long Half-Life

- Dose proportional exposure through 5 dose levels of SNS-101 (0.3 to 15.0 mg/kg)
- Consistent with lack of TMDD and supports Q3W dosing in humans
- No apparent effect on PK with combination
- Some increase with repeat dosing, but no notable accumulation
- No significant immunogenicity detected in analysis of ADAs

SNS-101



SNS-101 + cemiplimab



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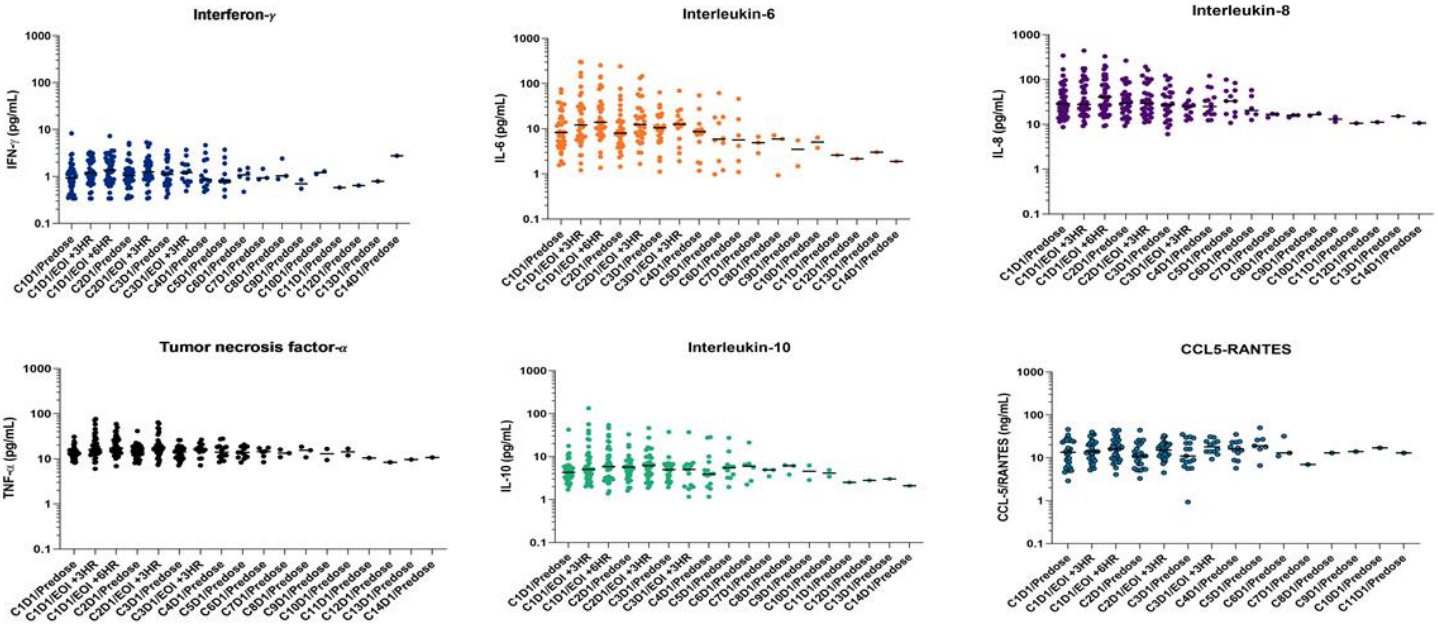
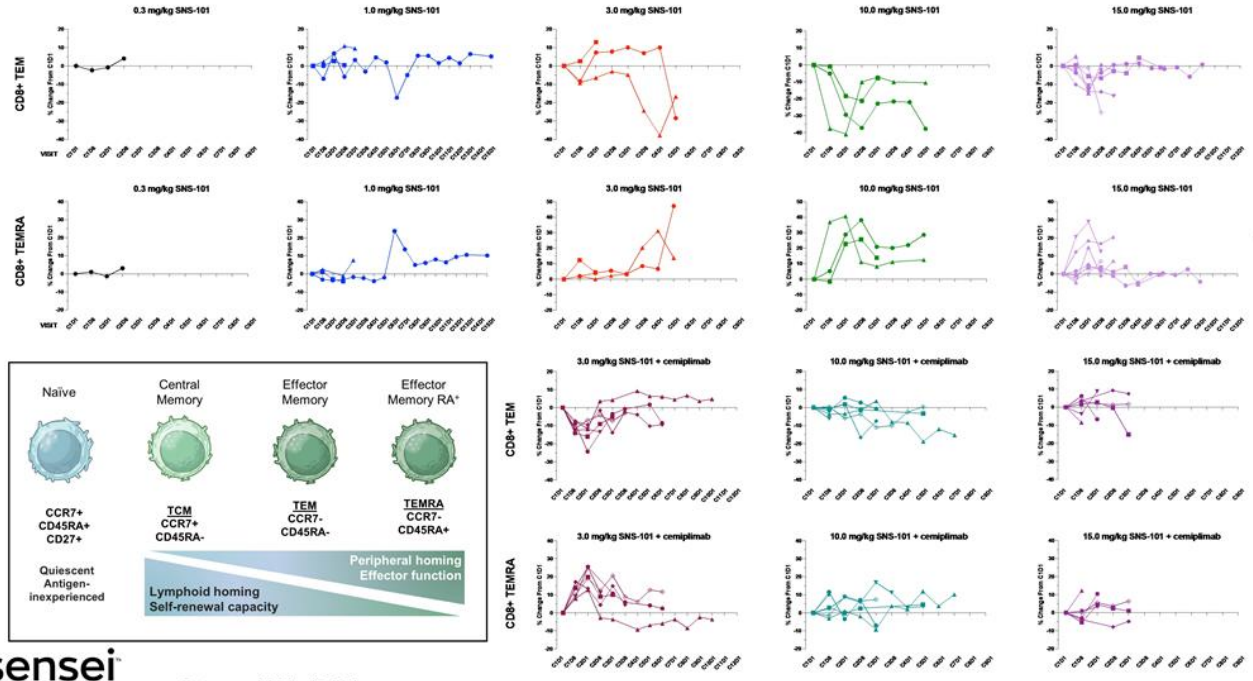
* Cemiplimab administered on Cycle 1 Day 2; co-administration thereafter

Data as of 30April2024

No Significant Changes in Key Inflammatory Cytokines



Dose-dependent Changes in Specific T-cell Populations Indicate Potential SNS-101-Related Pharmacological Effect



Data as of 30April2024

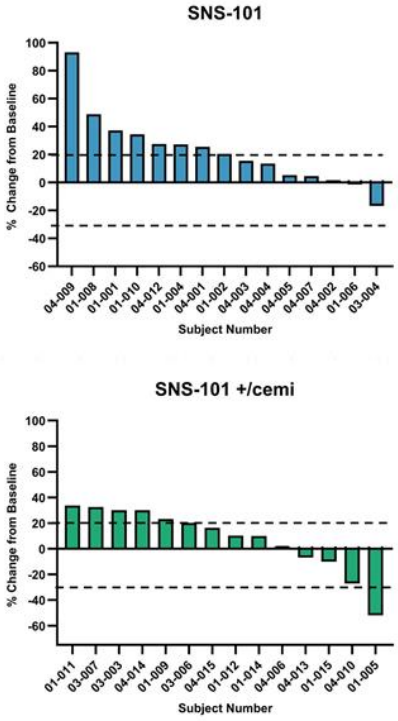
SNS-101 Alone or in Combination with Cemiplimab Has Shown Early Signs of Clinical Activity

Monotherapy Dose Escalation

- 16 patients enrolled: 15 patients received both baseline and at least one follow-up scan
- 7 patients achieved stable disease as best overall response
- Patients of interest:
  - One pembrolizumab-resistant HPV+ H&N pt had tumor regression of 17% at a dose level of 15.0 mg/kg; discontinued at Week 12 due to PD
  - One pt with adenocystic carcinoma (maxillary sinus) continues on treatment with SD at 42+ weeks at a dose level of 1.0 mg/kg
  - One pt with leiomyosarcoma (kidney) continues on treatment with SD at 24+ weeks at a dose level of 15.0 mg/kg

Combination Dose Escalation

- 18 patients enrolled: 16 patients received both baseline and at least one follow-up scan.
- Patients of interest:
  - One **MSS** endometrial pt at 3 mg/kg + cemi had a confirmed PR (59% decrease); ongoing 30+ weeks
  - One **MSS** colon pt at 3 mg/kg + cemi had tumor regression of 27%; discontinued at Week 18 due to PD
  - One RCC pt at 10 mg/kg + cemi had tumor regression of 18%; discontinued due to immune-mediated toxicity



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Data as of 30April2024

Two Examples of Patients with MSS Solid Tumors and Objective Tumor Regression

I/O-naïve MSS Endometrial Cancer with PR
3.0 mg/kg SNS-101 + cemiplimab (Patient 01-005)

68 yo female with endometrial carcinoma, dx Dec 2020, ECOG 0

- ER/PR positive, HER negative; PD-1/PD-L1: Not tested

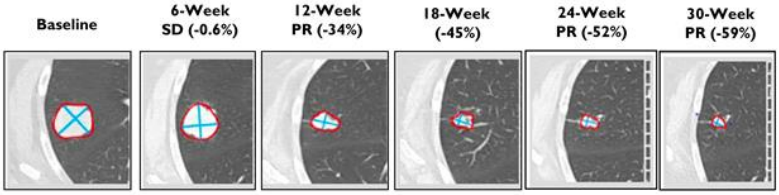
Prior Treatment/Surgery

- Total laparoscopic hysterectomy with bilateral salpingo-oophorectomy, and additional sentinel lymph node dissection, Dec 2020
- Paclitaxel/Carboplatin (adjuvant setting), Feb 2021 to Aug 2021
- Anastrozole (metastatic setting), Aug 2023 to Sep 2023

Adverse Events

- Grade 3 diabetic ketoacidosis 4 days after Cycle 3 infusions, related to SNS-101 and cemiplimab, AESI (immune-mediated) and SAE (hospitalization)
  - Patient recovered and maintained on Insulin and continued study therapy

Tumor Assessments in Solitary Target Lesion



I/O-naïve MSS Colon Cancer
3.0 mg/kg SNS-101 + cemiplimab (Patient 04-010)

62 yo male with colon cancer; dx Jan 2017, ECOG 1

- PD-1/PD-L1: Negative

Prior Treatment/Surgery

- Received 7 prior lines of therapy in the metastatic setting with the last 3 therapies investigational

Adverse Events

- Grade 2 dry skin, related to SNS-101, not related to cemiplimab
- Grade 2 rash maculo-popular, related to SNS-101 and cemiplimab, AESI (immune-mediated), resolved after treatment with prednisone
- Grade 2 pruritis, related to SNS-101 and cemiplimab

Tumor Assessments

- 6-Week Scans: Stable Disease (19% decrease)
- 12-Week Scans: Stable Disease (27% decrease)
- 18-Week Scans: Progressive Disease (23% increase from nadir)

Microsatellite stable (MSS) colon and endometrial tumors are typically unresponsive to PD-1/PD-L1 single agent therapy

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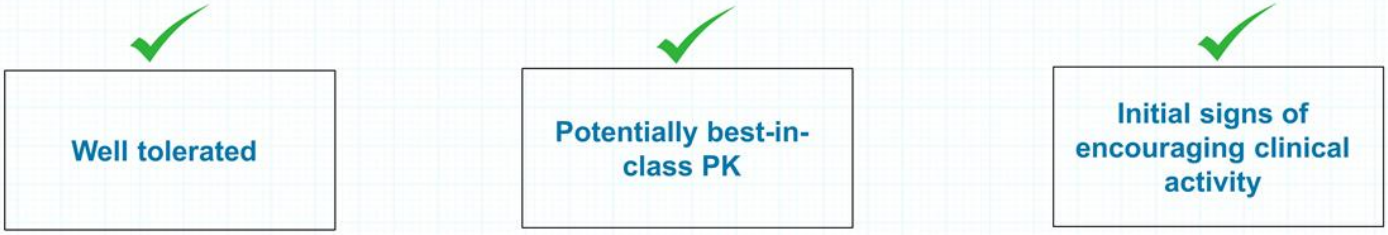
Data as of 30April2024

SNS-101 ASCO 2024 Summary

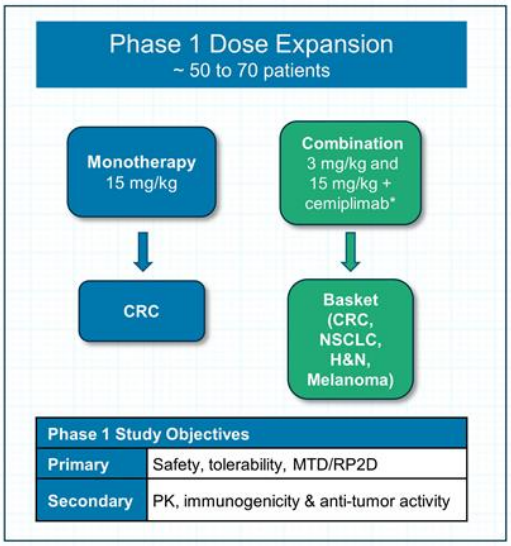
SNS-101 is a conditionally active VISTA targeting mAb that has demonstrated promising early clinical data consistent with its mechanism of action, including:

- First VISTA-targeting mAb without dose-limiting CRS at pharmacologically relevant dose levels
- Initial signals of anti-tumor activity in a predominantly "cold" solid tumor patient population



SNS-101 well positioned to be the first VISTA-targeted mAb to test the VISTA IO hypothesis

SNS-101 Next Steps



Phase 1 Study Objectives	
Primary	Safety, tolerability, MTD/RP2D
Secondary	PK, immunogenicity & anti-tumor activity

- Patient enrollment advancing in dose expansion cohorts
- Exploring two dose levels in the combination cohort to further optimize study design for Phase 2
- Expansion tumor types focused on a basket of “hot” tumors and one “cold” tumor, to rebalance between cold/hot given ~85% of patients in dose escalation had “cold” tumor types.
- Additional tumor types and doses may be considered
  - All patients with “hot” tumors will have received and failed a prior PD-1/PDL-1
- Expansion phase expected to include ~50 to 70 patients
- Cash runway guidance unchanged (Q4 2025)

Initial data from dose expansion expected in Q4 2024

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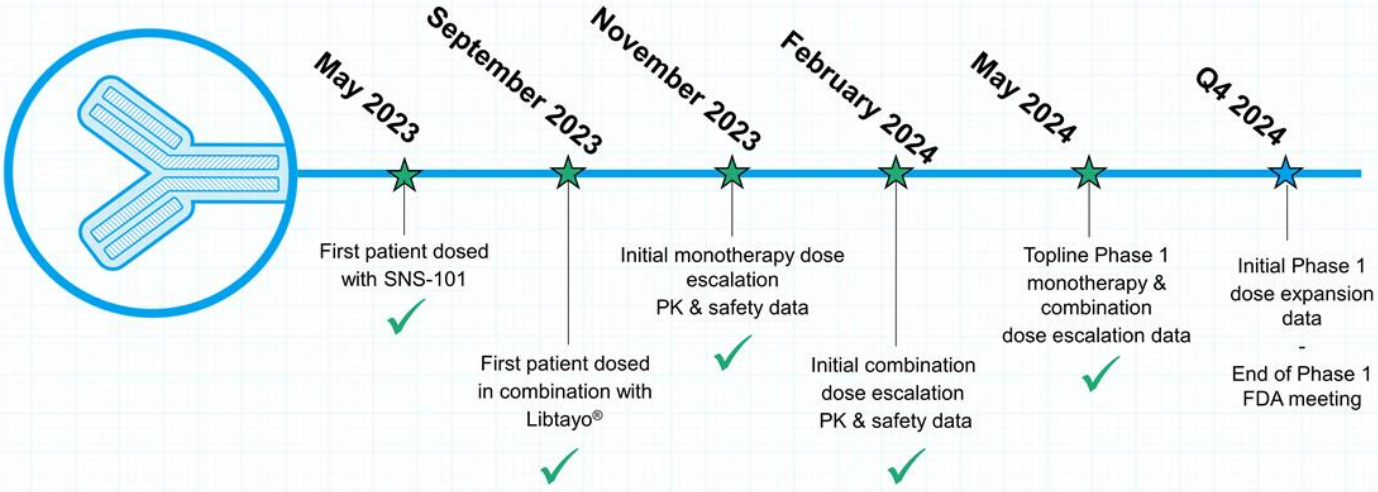
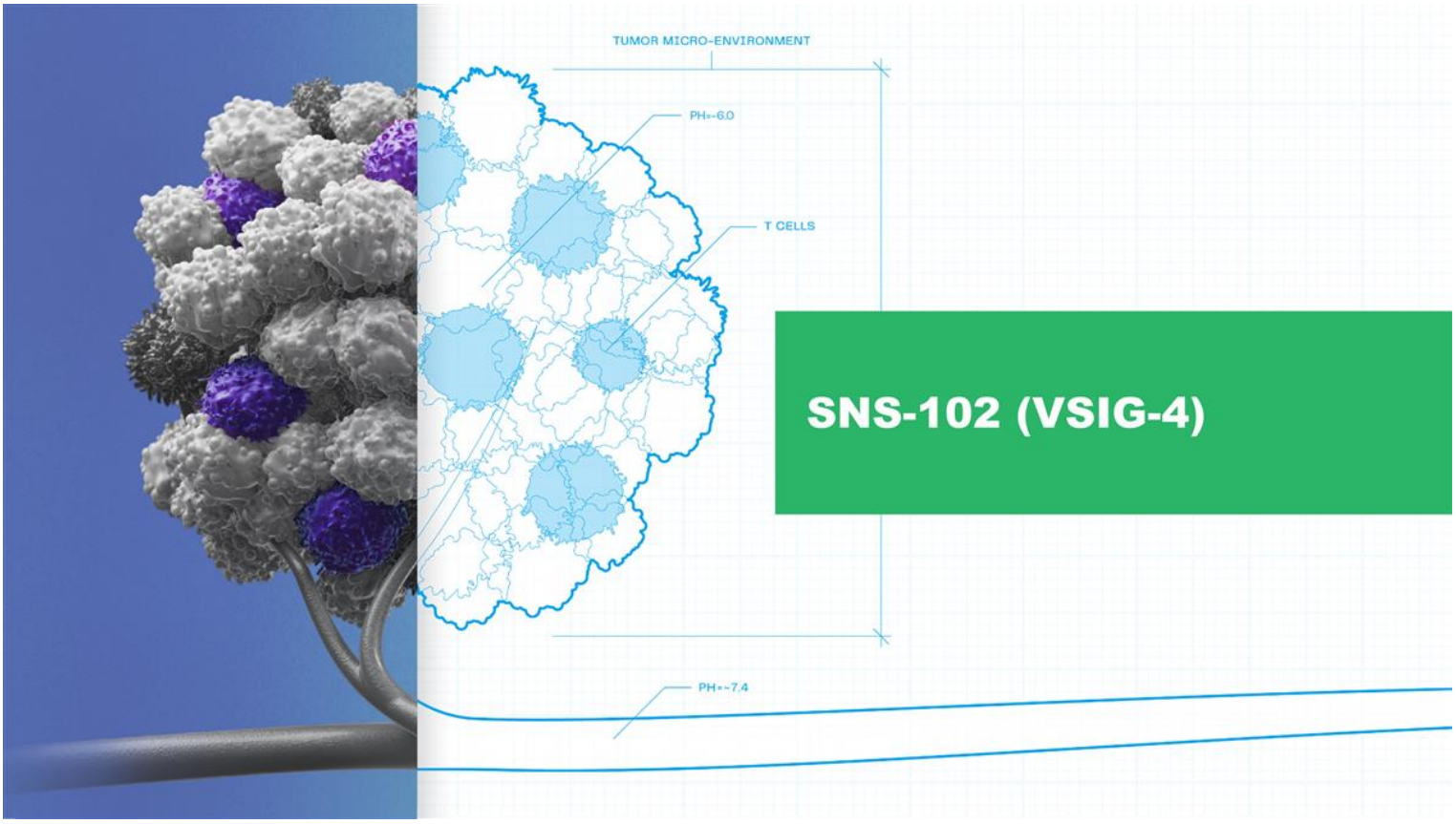
* cemiplimab 350 mg
"Hot" tumors: Responsive to PD-1 monotherapy
"Cold" tumors: Unresponsive to PD-1 monotherapy

RP2D = Recommended Phase 2 Dose
MTD = Maximum Tolerated Dose
CRC = colorectal cancer
NSCLC = non small cell lung cancer
H&N = head and neck cancer

Completed and Anticipated SNS-101 Clinical Milestones

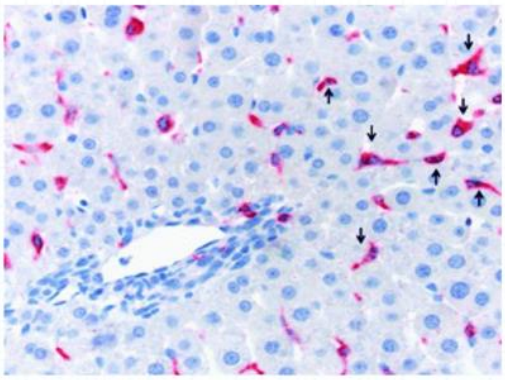




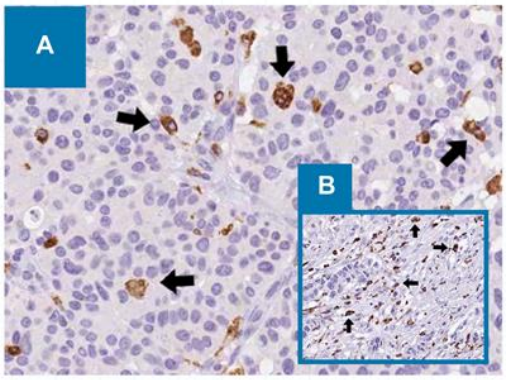
SNS-102 (VSIG-4)

VSIG4 is an Immunosuppressive Receptor with On-Target, Off-Tumor Challenges

Tissue macrophages (Kupffer cells) in the liver



Tumor-associated macrophages in tumors & stroma (inset)



In the liver, VSIG-4 …
Is expressed on Kupffer cells[1-2]

Appears to drive significant target-mediated drug disposition (TMDD) and clearance

In the tumor microenvironment, VSIG-4 …
Correlates with immunosuppressive "M2" macrophage infiltration[3]

Inhibits T cell activation[4]

Promotes tumor growth based on data from a syngeneic Lewis lung carcinoma model in knockout mice[5]

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1. doi: 10.1016/j.cell.2005.12.039.
2. doi: 10.4049/jimmunol.2101109.
3. doi: 10.4414/smw.2016.14301.
4. doi: 10.1172/JCI25673.
5. doi: 10.1038/labinvest.2014.73.

SNS-102 is a pH-sensitive Antibody Designed With the Goal of Reversing T-cell Suppression within the Tumor Microenvironment

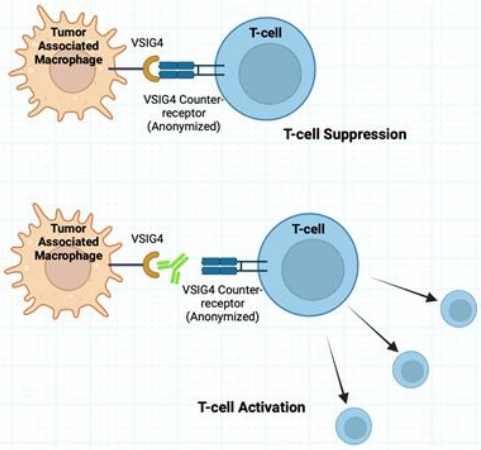
SNS-102 blocks the interaction of VSIG4 with its novel counter-receptor, which has been provisionally identified

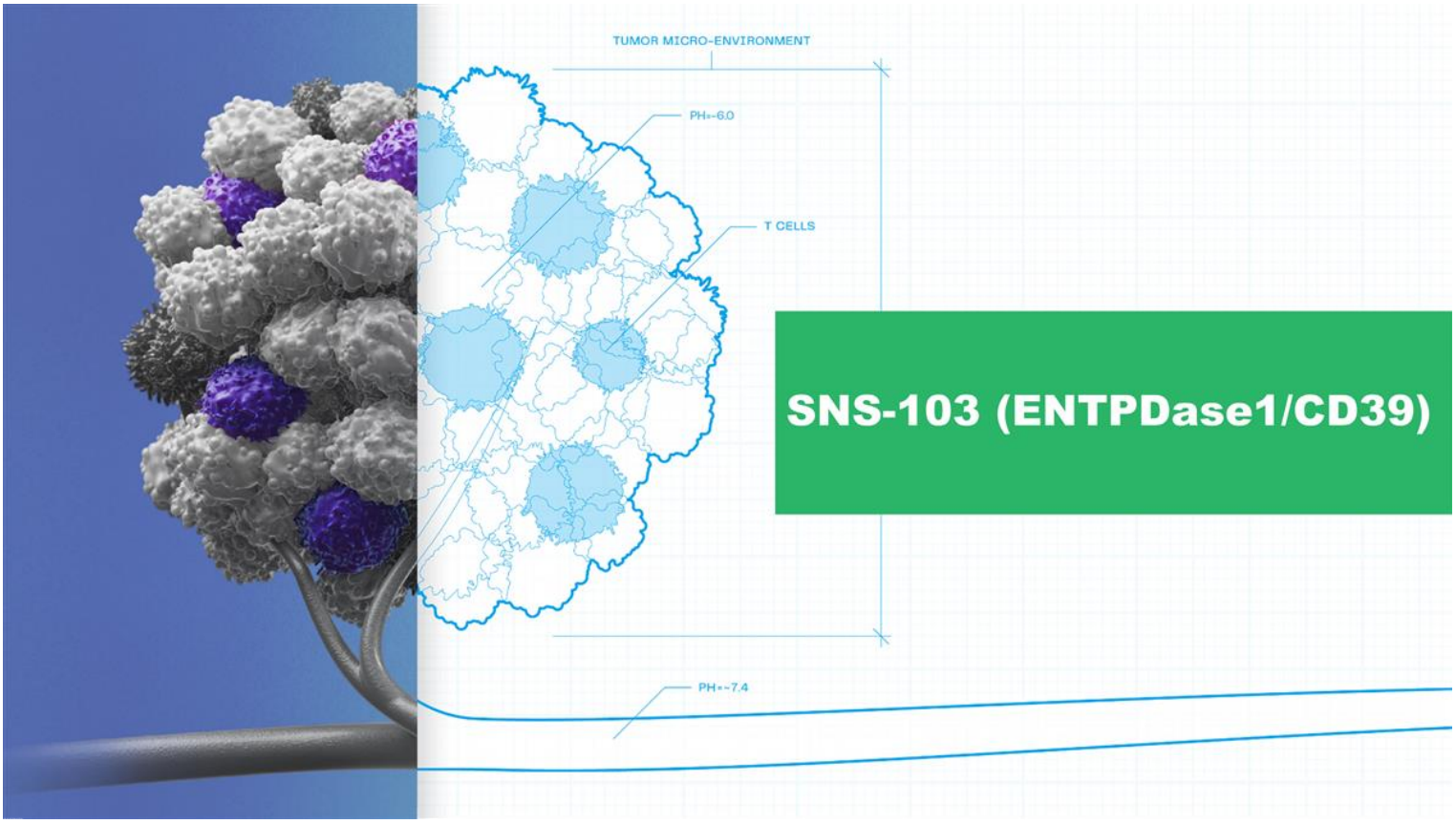
Monovalent Affinity (K_D)

pH 6.0	pH 7.4
0.7nm	410 nm (~No binding)

Ratio = 585

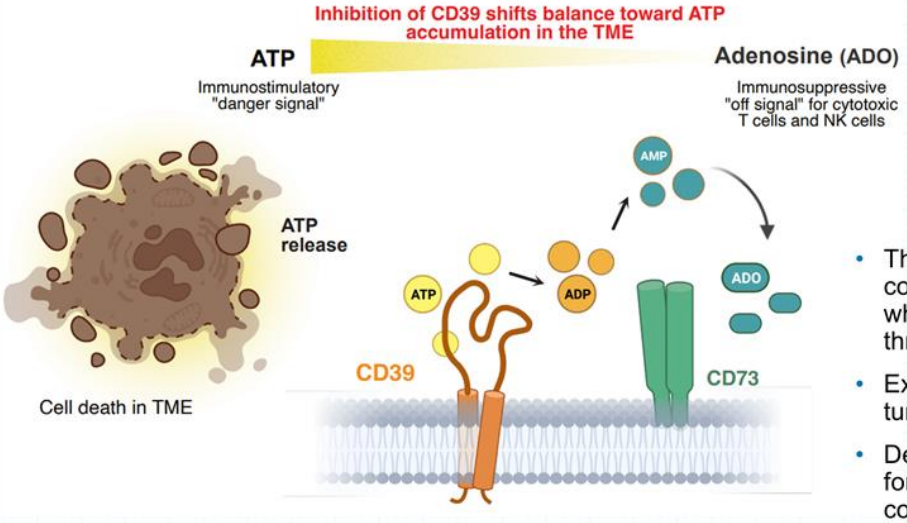
SNS-102 is **585-fold more selective** for VSIG4 at low pH conditions



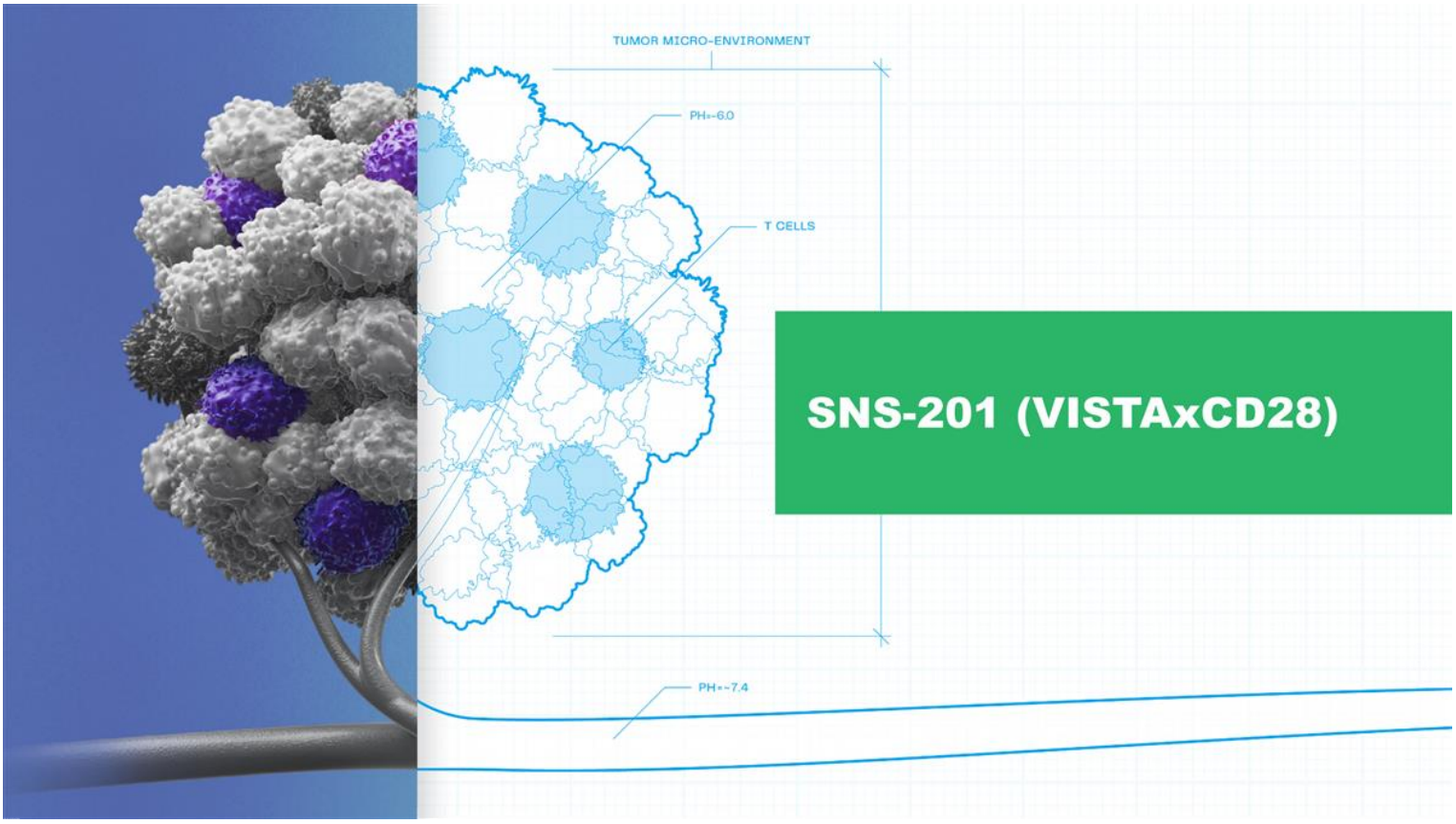


SNS-103 (ENTPDase1/CD39)

ENTPDase1 (CD39) is the Rate Limiting Enzyme in the Production of Immunosuppressive Adenosine

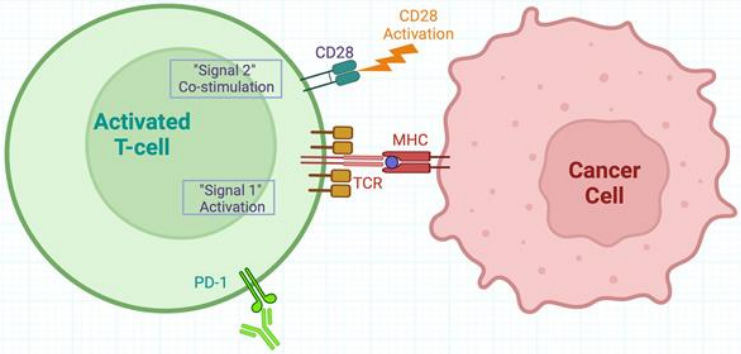


- The primary function of ENTPDase 1 is conversion of extracellular ATP to adenosine, which exerts immunosuppressive properties through binding to A2a/A2b receptors
- Expressed on various immune cells in both tumors and normal tissues
- Development of a TMAb antibody has potential for improved safety and PK profile compared to competitor CD39 mAbs


TUMOR MICRO-ENVIRONMENT
PH=~6.0
T CELLS
PH=~7.4
SNS-201 (VISTAxCD28)

Overcoming Toxicity Challenges Associated with Targeting CD28

CD28 is a major co-stimulatory pathway for T cells and a clinically validated therapeutic target for activating T cells in the tumor microenvironment



The Challenge

Targeting CD28 has shown clinical evidence of efficacy, but has been limited by dose-limiting toxicities resulting from systemic CD28 activation

Sensei's Solution

Leverage TMAb approach to potentially restrict CD28 activation to the tumor microenvironment, with no co-stimulation in the periphery

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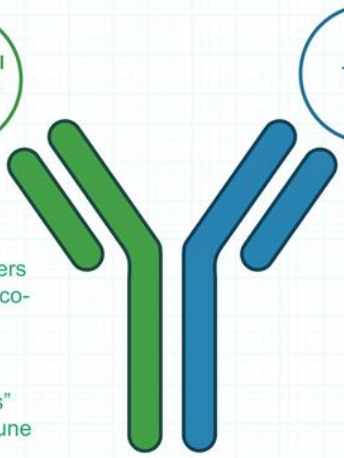
Bispecific TMAb Approach Can Generate T Cell Co-Stimulation Selectively Within the TME



pH-Sensitive anti-VISTA Arm

pH-sensitive arm confers tumor selective CD28 co-stimulation

Can be used in “cis” (tumor cell) or in “trans” (myeloid or other immune infiltrate)

Anti-CD28

CD28 agonist drives signal 2

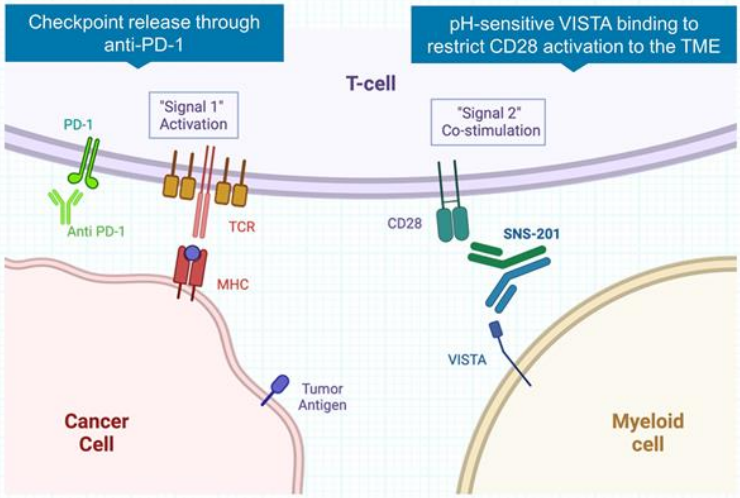
Co-Stimulatory VISTAxCD28 Bispecific

- ✓ Powerful co-stimulatory “signal 2” selectively within the TME
- ✓ Potential for little or no toxicity due to selective targeting
- ✓ No linkers or masks
- ✓ A single, off-the-shelf bispecific approach
- ✓ Avoids use of "tumor associated" antigens

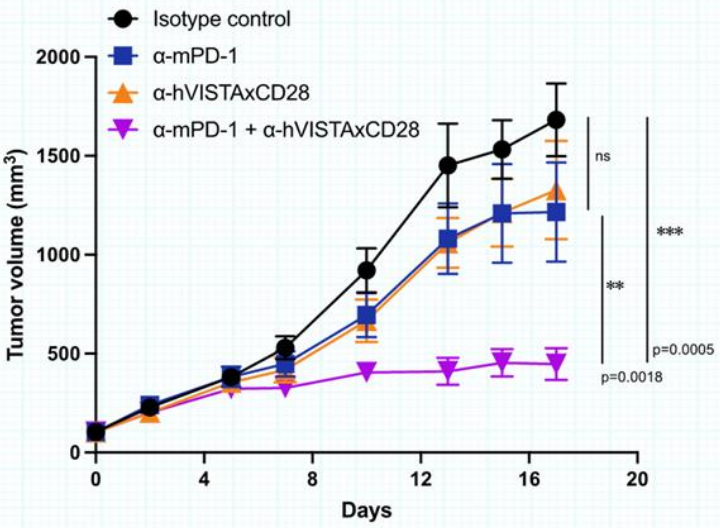
SNS-201 Provides Potential for Profound Anti-Tumor Activity By Selectively Co-Stimulating T Cells

SNS-201 (VISTAxCD28)

- Bispecific format with monovalent CD28 engagement
- Bivalent pH-selective VISTA binding for efficient engagement at low pH with cells displaying moderate VISTA copy numbers
- IgG1 backbone with silencing mutations abolishing Fc receptor interactions



In Vivo Study Shows Prototype Bispecific CD28xVISTA Induces Significant Tumor Growth Inhibition in Combo with anti-mPD-1



NS = not significant
*** = P<0.001
** = P<0.01

Engineered Selectivity to Extend the Clinical Reach of IO Agents

LEAD PROGRAM

- SNS-101, a conditionally active antibody targeting VISTA
- Clinical data demonstrated initial signs of promising clinical activity in multiple tumor types, a well-tolerated safety profile and potential best-in-class pharmacokinetic profile

TMAb PLATFORM

- Conditionally active antibodies designed to widen therapeutic window and enable druggability of promising oncology targets

EXPECTED MILESTONES

- Initial dose expansion data by end of 2024
- Q4 2024: End of Phase 1 FDA Meeting

FINANCIALS

- Ended Q1 2024: $58.1M*
- Cash runway into Q4 2025
- Cash currently expected to reach midway into Phase 2 clinical studies for SNS-101

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*Consists of cash, cash equivalents and marketable securities


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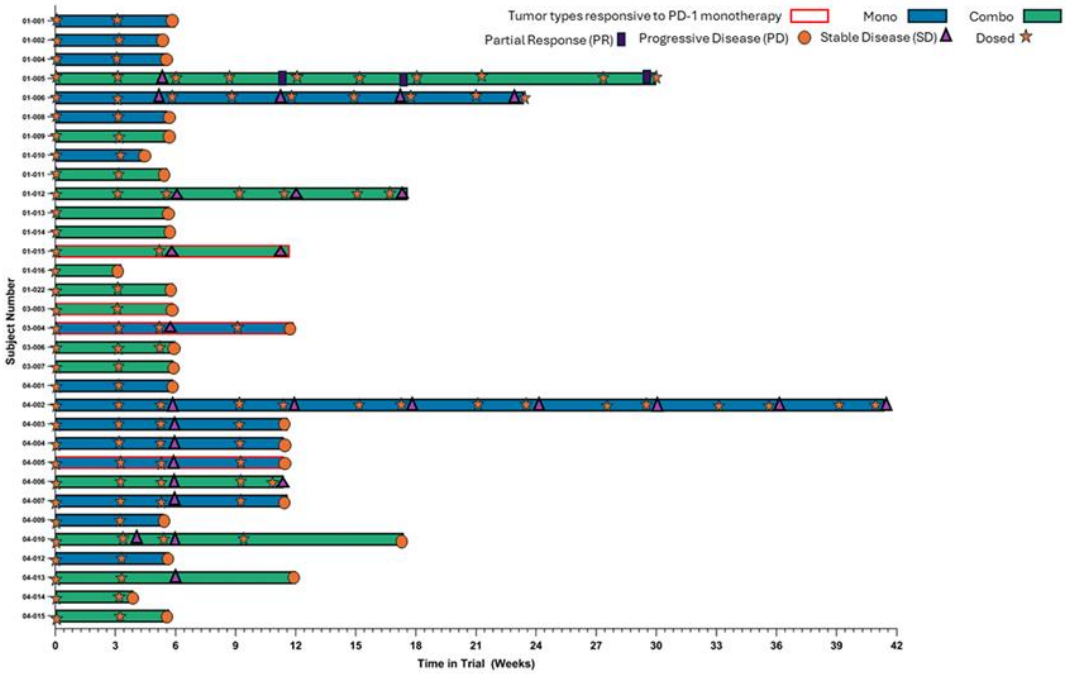
SNS-101 Duration of Treatment



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Data as of 30April2024

Key Partnerships Supporting SNS-101's Clinical Development

Potential opportunities for combination therapy and biomarker identification

Partner / Collaborator	Goal	Description
REGENERON Clinical Supply Agreement	Support evaluation of SNS-101 in combination with Libtayo® (cemiplimab) in planned Phase 1/2 clinical trial	• Sensei to fund planned clinical trial • Regeneron to provide Libtayo® • Sensei maintains global development and commercial rights to SNS-101
NIH NATIONAL CANCER INSTITUTE Cooperative Research & Development Agreement	Further elucidate role of VISTA in immune checkpoint resistance and expand potential of SNS-101 as a combination therapy beyond anti-PD-1	• Sensei collaborating with NCI Center for Immuno-Oncology Co-Directors, Jeffrey Schlom, Ph.D., and James Gulley, M.D., Ph.D. • Preclinical studies will assess SNS-101 mechanism of action in combination with therapies beyond anti-PD-1
Washington University in St. Louis Research Collaboration	Further study the mechanism of SNS-101's anti-tumor activity	• Sensei collaborating with laboratory of immuno-oncology KOL, Robert Schreiber, Ph.D. • Preclinical studies will include identification of SNS-101 response biomarkers

Commercially Validated Precedent for pH-sensitive Approach

Soliris® (eculizumab), an anti-C5 monoclonal antibody (mAb), was considered standard of care for patients with paroxysmal nocturnal hemoglobinuria (PNH) and atypical hemolytic uremic syndrome, but had a short half-life as a result of extensive TMDD.

Engineering eculizumab using histidine substitutions resulted in a pH-sensitive mAb with markedly improved half-life.

Antibody Engineering of Solaris Led to pH Sensitivity and Half-Life Improvements

	Soliris (Eculizumab)	→	Ultomiris (Ravulizumab, ALXN1210)
K_D pH 7.4 (nM)	0.03		0.49
K_D pH 6.0 (nM)	0.6		22
$t_{½}$ (d)	**3.9**		**13.4**

Revulizumab utilized histidine insertions into the CDR regions (VH_Y27H, VH_S57H) and Fc substitutions (M428L, N434S) of eculizumab

Due to its longer half-life (13.4d vs 3.9d), ravulizumab given every 8w achieved noninferiority compared with eculizumab given every 2w for all efficacy endpoints, while maintaining a similar safety profile.

2018: FDA approves Ultomiris® (ravulizumab, ALXN1210)

2020: Ultomiris sales = $1.08 billion

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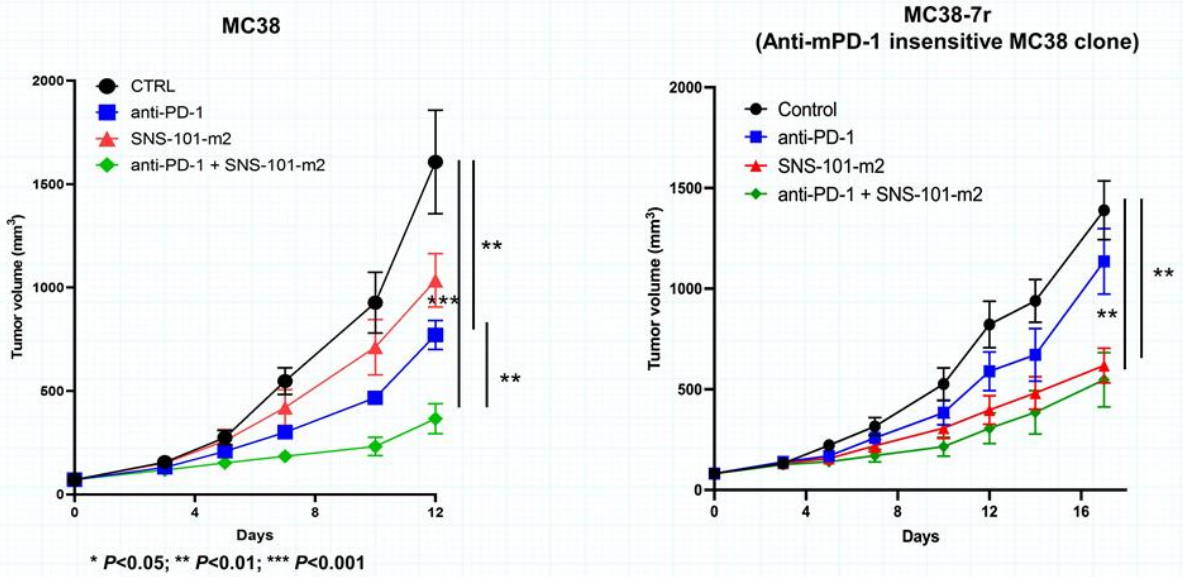
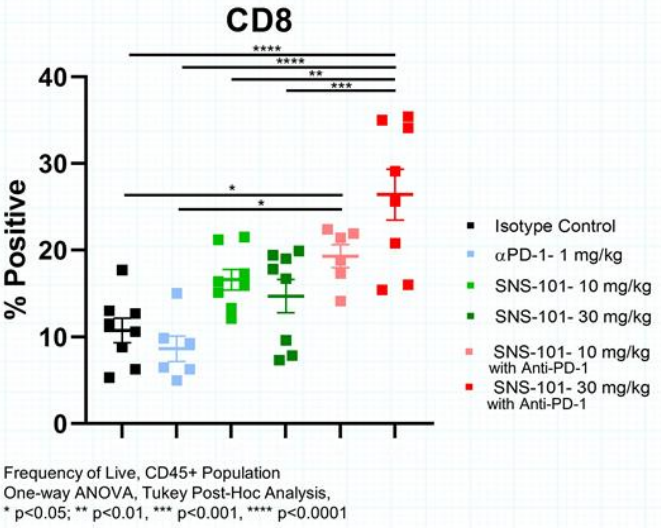
Sheridan et al, PLOS One, April 2018 (https://doi.org/10.1371/journal.pone.0195909)
Lee et al, Blood, (doi:10.1182/blood-2018-09-876136)
Sales figures: https://media.alexion.com/news-releases/news-release-details/alexion-reports-fourth-quarter-and-full-year-2020-results

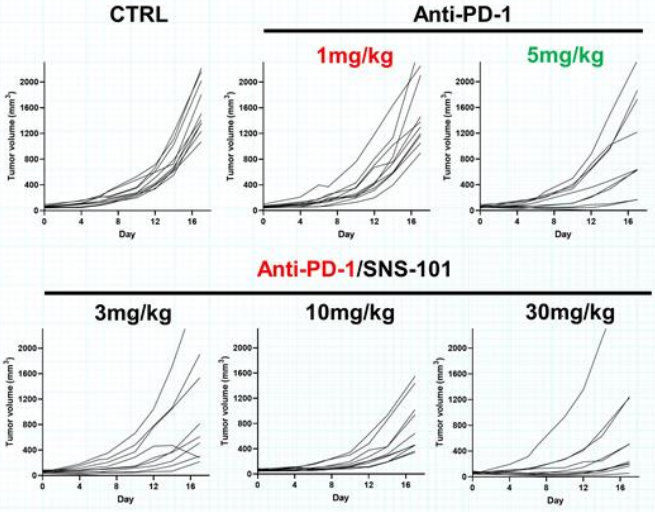
Single-agent Activity and Deepened Anti-tumor Responses to PD-1 Combo in Human VISTA KI Mice *In vivo*



SNS-101 Increased CD8 T-cells in Combination With Anti-PD-1 in MC38 Tumors *In Vivo*



Frequency of Live, CD45+ Population
One-way ANOVA, Tukey Post-Hoc Analysis,
* p<0.05; ** p<0.01, *** p<0.001, **** p<0.0001



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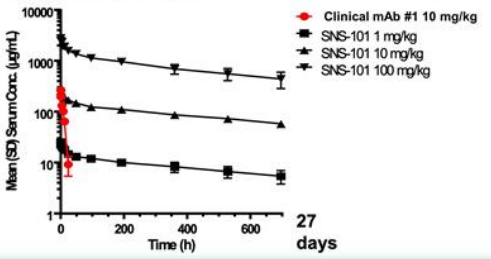
PK Sink Continues to be an Issue with Non-pH-Sensitive VISTA programs*

SNS-101 is designed to overcome elimination kinetics and half-life related to PK sink observed in non-pH-sensitive VISTA programs

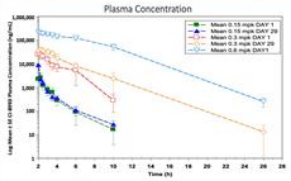
Linear

SNS-101 Cyno PK

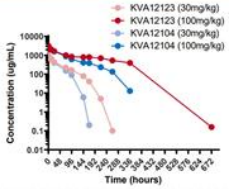


Non-linear

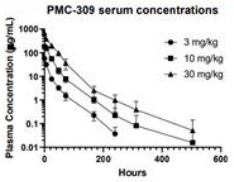
Curis CI-8993 Plasma Concentration



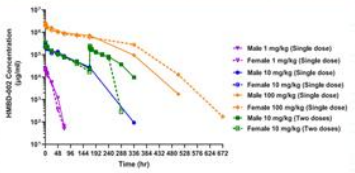
Kineta KVA12123 Cyno PK



Abcine PMC-309 Serum Conc Cyno



Hummingbird HMBD-002 Preclinical PK



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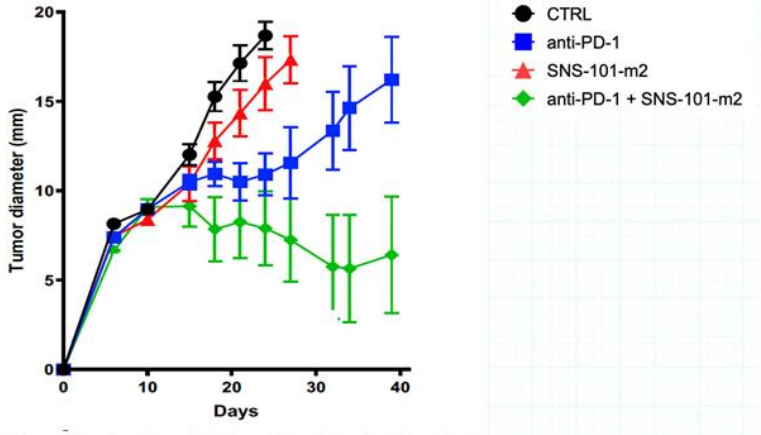
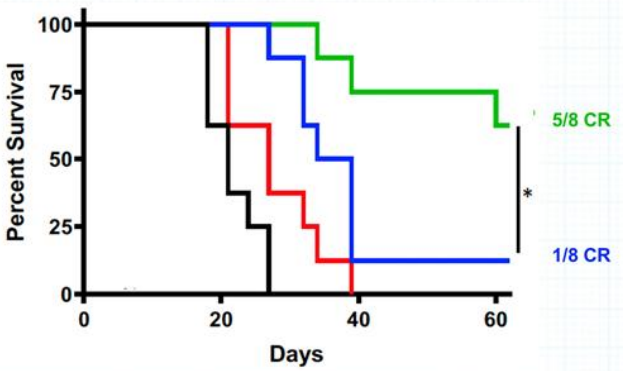
1. Hummingbird SITC 2022; 2. Kineta Corporate Presentation; 3. Abcine, SITC 2022; 4. Curis, SITC 2022

Each graph differs by time course based on data presented

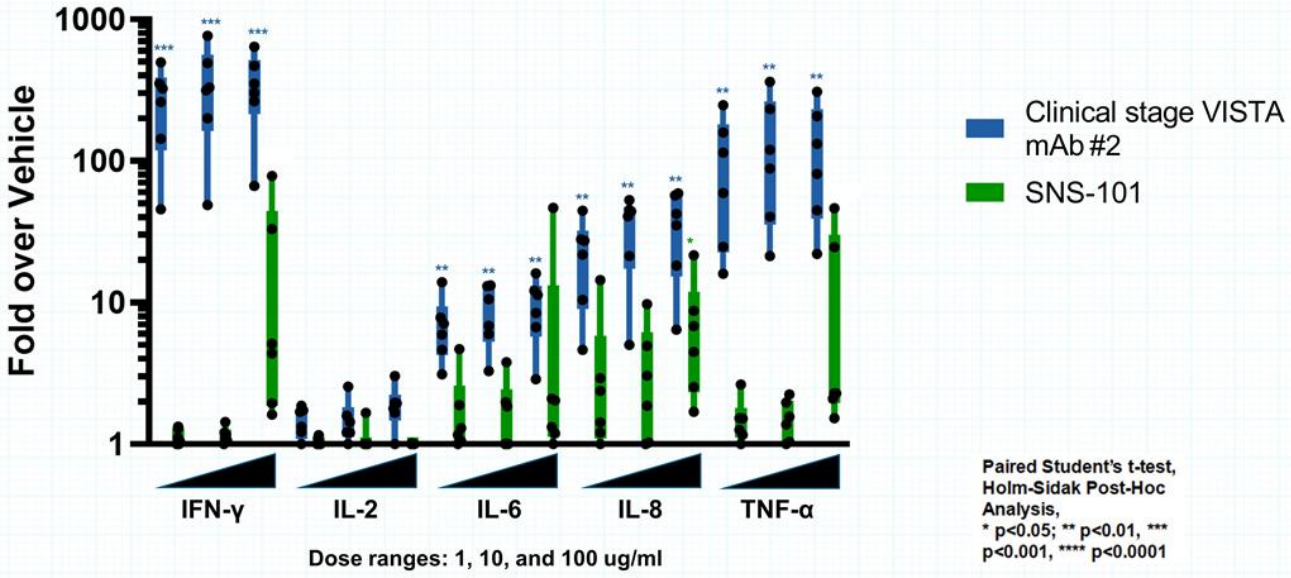
SNS-101 Re-sensitized Anti-PD-1 Insensitive Sarcoma Tumors in Human VISTA Knock-in Mice





* p<0.05

SNS-101 Induced Substantially Lower Cytokine Release in Whole-blood Assay at Neutral pH Compared to pH-independent VISTA Antibody



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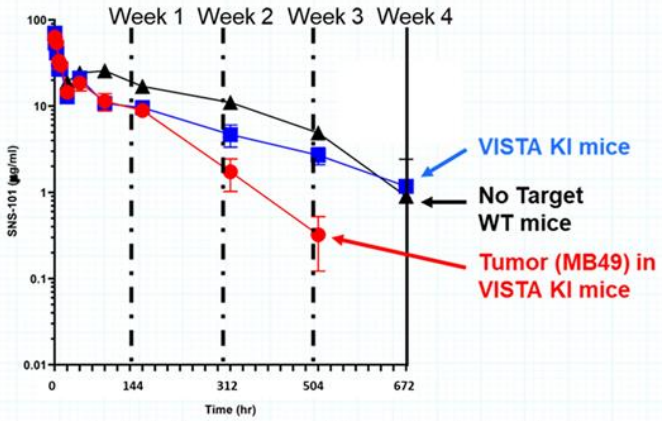
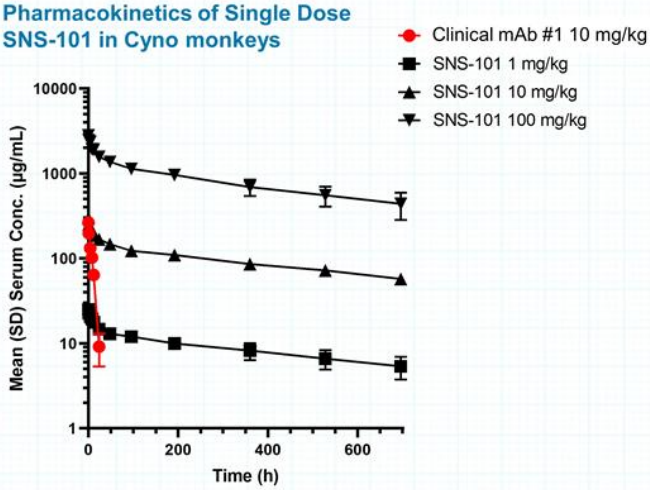
SNS-101 Has Displayed a Favorable Single-dose PK Profile in Preclinical Studies - *No Significant TMDD in Human VISTA KI Mice or Non-human Primates*

Pharmacokinetics of Single Dose 5 mg/kg SNS-101 in VISTA Knock-in Mice



Demonstrated a long mean residence time in the blood, indicating a lack of significant target-mediated drug disposition (TMDD) and clearance in non-malignant tissues

Pharmacokinetics of Single Dose SNS-101 in Cyno monkeys

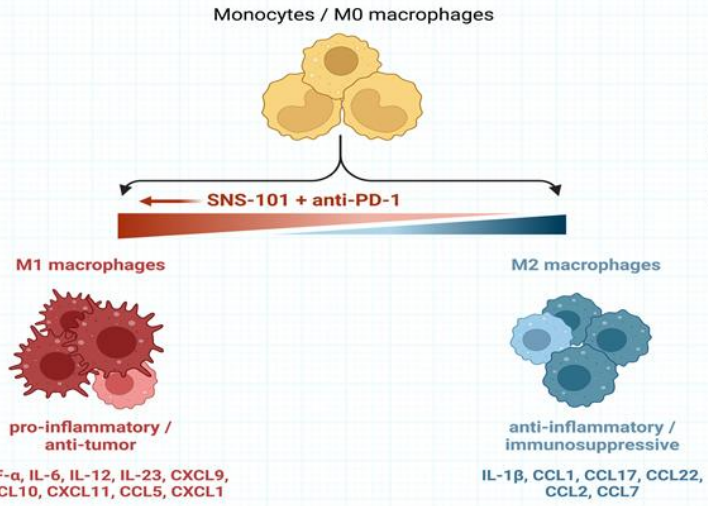


SNS-101 displayed linear elimination kinetics unlike a pH-independent anti-VISTA mAb, which demonstrated TMDD and rapid clearance

Targeting VISTA and PD-1 Checkpoints in the TME Promotes Anti-tumoral M1 Macrophage Polarization

SNS-101 targets suppressive signaling in the myeloid compartment, and in combination with anti-PD-1 may help shift the balance of macrophage polarization toward an anti-tumor M1 phenotype

M1 macrophages are anti-tumorigenic through secretion of pro-inflammatory cytokines and chemokines, and driving of Th1 CD4+ T cell responses



M2 macrophages are immunosuppressive; pro-tumor TAMs are a subset of M2-type cells