FORM 4

## UNITED STATES SECURITIES AND EXCHANGE COMMISSION

| Washington, | D.C. | 20549 |
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STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP

|  | OMB APPROVAL                                     |  |  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|--|--|--|
|  | OMB Number: 3235-0287                            |  |  |  |  |  |  |  |  |  |
|  | Estimated average burden hours per response: 0.5 |  |  |  |  |  |  |  |  |  |
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Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. See Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934 or Section 30(h) of the Investment Company Act of 1940 Instruction 1(b)

| Name and Address of Reporting Person*     Peyer James                            |  |  |  |         | 2. Issuer Name and Ticker or Trading Symbol Sensei Biotherapeutics, Inc. [ SNSE ] |   |        |  |  |     |            |  | S. Relationship of Reporting Person(s) to Issuer (Check all applicable)     X Director X 10% Owner |   |  |   |   |  |  |
|--|--|--|--|---------|---|---|--------|--|--|-----|------------|--|--|---|--|---|---|--|--|
|  | SEI BIOT   | HERAPEUTICS                                |  |         |   | 3. Date of Earliest Transaction (Month/Day/Year) 06/10/2022 |        |  |  |     |            |  |  | Officer (give title Other (specify below) below)            |  |   |   |  |  |
| 1405 RESEARCH BLVD. SUITE 125  |  |  |  |         |   | 4. If Amendment, Date of Original Filed (Month/Day/Year)    |        |  |  |     |            |  |  | 6. Individual or Joint/Group Filing (Check Applicable Line) |  |   |   |  |  |
| (Street) ROCKV   | ILLE N   | 1D   | 20850  |         |   |   |        |  |  |     |            |  |  |   | iled by Mo   |   | orting Pers   |  |  |
| (City)   | (\$  | State)                                     | (Zip)  |         |   | 1 Sison   |        |  |  |     |            |  |  |   |  |   |   |  |  |
| Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned |  |  |  |         |   |   |        |  |  |     |            |  |  |   |  |   |   |  |  |
| 1. Title of Security (Instr. 3)  2. Transac Date (Month/Da                       |  |  |  |         | Execution Date,   |   |        | 3. Transaction Code (Instr. 8) 4. Securities Acqu Disposed Of (D) (II 5) |  |     |            | Securities<br>Beneficial   | 5. Amount of<br>Securities<br>Beneficially<br>Owner Following                                      |   | nership<br>Direct<br>Indirect<br>tr. 4)  | 7. Nature of Indirect Beneficial Ownership (Instr. 4) |   |  |  |
|  |  |  |  |         |   |   |        |  | Code   | v   | Amount     | (A) or<br>(D)  | Price  | Transaction   | Transaction(s)<br>(Instr. 3 and 4)   |   |   | (instr. 4)                               |  |
| Restricted Stock Unit Grant 06/10/2  |  |  |  | 2022    |   | A   |        | 4,466 <sup>(1)</sup> A   |  | \$0 | 5,235,954  |  | (2)  |   | See<br>Footnote <sup>(2)</sup>   |   |   |  |  |
|  | Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities) |  |  |         |   |   |        |  |  |     |            |  |  |   |  |   |   |  |  |
| 1. Title of<br>Derivative<br>Security<br>(Instr. 3)                              | 2.<br>Conversion<br>or Exercise<br>Price of<br>Derivative<br>Security  | 3. Transaction<br>Date<br>(Month/Day/Year) | 3A. Deeme<br>Execution<br>if any<br>(Month/Day | Date, 1 | I.<br>Fransa<br>Code (I   |   |        |  | 6. Date Exercis<br>Expiration Date<br>(Month/Day/Yea |     | 9          | 7. Title and Amoun<br>of Securities<br>Underlying<br>Derivative Security<br>(Instr. 3 and 4) |  | Derivative<br>Security                                      | 9. Numb<br>derivativ<br>Securitie<br>Benefici<br>Owned<br>Followin<br>Reported<br>Transact<br>(Instr. 4) | ve<br>es<br>ally<br>eg<br>d<br>tion(s)                | 10.<br>Ownersh<br>Form:<br>Direct (D<br>or Indirec<br>(I) (Instr. | Beneficial<br>Ownership<br>ct (Instr. 4) |  |
|  |  |  |  |         | Code  | v   | (A)    | (D)  | Date<br>Exercisal                                    |     |            | Title  | Amount<br>or<br>Number<br>of<br>Shares   |   |  |   |   |  |  |
| Stock<br>Option<br>(right to<br>buy)   | \$2.05   | 06/10/2022                                 |  |         | A   |   | 14,550 |  | (3)  |     | 06/09/2032 | Common<br>Stock  | 14,550   | \$0   | 14,5   | 50  | I   | See<br>Footnote <sup>(2)</sup>           |  |

- 1. These shares represent restricted stock units (the "RSUs"). Each RSU represents a contingent right to receive one share of the common stock of the Issuer. The shares underlying the RSUs vest in full on the first anniversary of the date of grant, or June 10, 2023, subject to the Reporting Person's continuous service with the Issuer through such vesting date.
- 2. These shares are held by Cambrian Biopharma Inc, a Delaware corporation ("Cambrian"). The Reporting Person is the Chief Executive Officer of Cambrian and in such capacity 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. Mr. Peyer disclaims beneficial ownership of such shares.
- 3. The shares subject to the option vest and become exercisable in 12 equal monthly installments over a one year period such that the option is fully vested on the first anniversary of the date of grant, or June 10, 2023, subject to the Reporting Person's continuous service with the Issuer as of each such vesting date; provided that the option will in any case be fully vested on the date of the Company's next annual stockholder meeting, subject to the Reporting Person's continuous service with the Issuer through such vesting date.

/s/ Sarah Field, Attorney-in-06/14/2022 **Fact** 

\*\* Signature of Reporting Person Date

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

- \* If the form is filed by more than one reporting person, see Instruction 4 (b)(v).
- \*\* Intentional misstatements or omissions of facts constitute Federal Criminal Violations See 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, see Instruction 6 for procedure.

Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB Number.