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 | | | | | | | | | |

Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. See Instruction 1(b)

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934 or Section 30(h) of the Investment Company Act of 1940

| 1. Name and Address of Reporting Person* Jacobson Mark L. (Last) (First) (Middle) C/O AXSOME THERAPEUTICS, INC. 22 CORTLANDT STREET, 16TH FLOOR (Street) NEW YORK NY 10007 (City) (State) (Zip) | | | | | 3. Da 03/0. | Susuer Name and Ticker or Trading Symbol Axsome Therapeutics, Inc. [AXSM] Date of Earliest Transaction (Month/Day/Year) 03/02/2023 4. If Amendment, Date of Original Filed (Month/Day/Year) | | | | | | | | | S. Relationship of Reporting Person(s) to Issuer (Check all applicable) Director 10% Owner X Officer (give title Other (specify below) CHIEF OPERATING OFFICER 6. Individual or Joint/Group Filing (Check Applicable Line) X Form filed by One Reporting Person Form filed by More than One Reporting Person | | | | | |
|--|---------|------------|----------|--|-----------------------------------|---|---------------------------|---|------------------|---|-----------------|---|-----------------------------------|--|---|-----------------------------------|--|---------------------------------------|--|--|
| Date | | | | 2. Transa | action 2A. Deemed Execution Date, | | 3. Trans Code 8) | 3. 4. Securi Transaction Disposed Code (Instr. 5) | | ities Acquired (A) od Of (D) (Instr. 3, 4 | | or 5. Amou 4 and Securitie Benefici | | int of es Fo ially (I) following d tion(s) | | : Direct r Indirect str. 4) | 7. Nature of Indirect Beneficial Ownership (Instr. 4) | | | |
| | | | e.g., pu | uts, calls, warrants 5. Number of Of Derivative | | | oer ve es d | quired, Disposed of, s, options, converti 6. Date Exercisable and Expiration Date (Month/Day/Year) | | | | | int 8 | Owned Derivative security instr. 5) | 9. Number derivative Securities Beneficial Owned Following Reported Transaction | illy | 10. Ownership Form: Direct (D) or Indirect (I) (Instr. 4) | Beneficial Ownership (Instr. 4) | | |
| | | | | C | ode V | , | (A) | (D) | Date Exercisa | | Expiration Date | Title | Amou or Numb of Share | er | | (Instr. 4) | | | | |
| Employee Stock Option (Right to Buy) | \$65.32 | 03/02/2023 | | | A | | 41,424 | | (1) | (| 03/01/2033 | Common Stock | 41,42 | 24 | \$0.00 | 41,424 | 4 | D | | |
| Restricted Stock Units | (2) | 03/02/2023 | | | A | | 23,491 | | (3) | | (3) | Common Stock | 23,49 | 91 | \$0.00 | 23,491 | 1 | D | | |

Explanation of Responses:

- 1. The option will vest in substantially equal quarterly installments over four years such that the option will be fully vested on March 2, 2027.
- 2. Each restricted stock unit ("RSU") represents a contingent right to receive one share of the Issuer's common stock.
- 3. 25% of the RSUs will vest on the one (1) year anniversary of the date of grant. The remaining RSUs will vest in in three substantially equal annual installments, such that the RSUs will be fully vested on March 2, 2027. Vested shares will be delivered to the reporting person upon the earlier of (i) the closing of a Change in Control (as defined in the Issuer's Amended and Restated 2015 Omnibus Incentive Compensation Plan (the "Plan"), (ii) the reporting person's separation of service from the Issuer (including termination with or without Cause (as defined in the Plan), or termination due to death or disability), or (iii) seven (7) years from the date of grant.

Remarks:

/s/ Mark Jacobson ** Signature of Reporting Person 03/06/2023 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.