FORM 4

## UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

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

## STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP

**OMB APPROVAL** OMB Number: Estimated average burden hours per response: 0.5

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

| Name and Address of Reporting Person*     Mitchener Stephen  |   |            |   |                                   | 2. Issuer Name <b>and</b> Ticker or Trading Symbol Axcella Health Inc. [ AXLA ] |        |        |  |                    |   |  | elationship deck all application  | able)  | g Perso | on(s) to Issu<br>10% Ow<br>Other (sp                                     | ner  |  |
|--|---|------------|---|-----------------------------------|---|--------|--------|--|--------------------|---|--|---|--|---------|--|--|--|
| (Last) (First) (Middle) C/O AXCELLA HEALTH INC.  |   |            |   |                                   | 3. Date of Earliest Transaction (Month/Day/Year) 12/18/2019                     |        |        |  |                    |   |  | below)  |  |         | below)   | , l  |  |
| 840 MEMORIAL DRIVE   |   |            |   |                                   | If Amendment, Date of Original Filed (Month/Day/Year)                           |        |        |  |                    |   |  | 6. Individual or Joint/Group Filing (Check Applicable                             |  |         |  |  |  |
| (Street)  CAMBRIDGE MA 02139   |   |            | 02139   |                                   | ,,,,  |        |        |  |                    |   |  | X Form filed by One Reporting Person Form filed by More than One Reporting Person |  |         |  |  |  |
| (City)   | (S  | tate)      | (Zip)   |                                   |   |        |        |  |                    |   |  | reisui  | l  |         |  |  |  |
| Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned   |   |            |   |                                   |   |        |        |  |                    |   |  |   |  |         |  |  |  |
| Date   |   |            |   | Transaction<br>ate<br>lonth/Day/Y | Execution Date  |        |        | Transaction Disposed Code (Instr. 5)                           |                    | ities Acquired (A) or<br>d Of (D) (Instr. 3, 4 an   |  | 5. Amour<br>Securitie<br>Beneficia<br>Owned F                                     | s<br>ally<br>ollowing  | Form:   | Direct of Endirect Estr. 4)  | 7. Nature<br>of Indirect<br>Beneficial<br>Ownership<br>(Instr. 4)  |  |
|  |   |            |   |                                   |   |        | Code V | Amount   | (A) or (D)         | Price   | Transact<br>(Instr. 3 a                | ion(s)  |  |         | instr. 4)  |  |  |
| 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 |            | 3A. Deemed<br>Execution Date<br>if any<br>(Month/Day/Ye | Code (                            |   |        |        | 6. Date Exercisable and<br>Expiration Date<br>(Month/Day/Year) |                    | 7. Title and Amount<br>of Securities<br>Underlying<br>Derivative Security<br>(Instr. 3 and 4) |  | 8. Price of<br>Derivative<br>Security<br>(Instr. 5)                               | 9. Number of<br>derivative<br>Securities<br>Beneficially<br>Owned<br>Following<br>Reported<br>Transaction(s)<br>(Instr. 4) |         | 10.<br>Ownership<br>Form:<br>Direct (D)<br>or Indirect<br>(I) (Instr. 4) | 11. Nature<br>of Indirect<br>Beneficial<br>Ownership<br>(Instr. 4) |  |
|  |   |            |   | Code                              | v   | (A)    | (D)    | Date<br>Exercisable  | Expiration<br>Date | Title   | Amount<br>or<br>Number<br>of<br>Shares |   |  |         |  |  |  |
| Stock<br>Option<br>(Right to<br>Buy)   | \$3.4   | 12/18/2019 |   | A                                 |   | 43,000 |        | (1)  | 12/18/2029         | Common<br>Stock   | 43,000                                 | \$0   | 43,000   |         | D  |  |  |

## **Explanation of Responses:**

1. 25% of this option shall vest and become exercisable on December 18, 2020, with the remainder to vest in 12 equal quarterly installments thereafter.

By: /s/ Heidy King-Jones, as Attorney-in-fact

12/20/2019

\*\* 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.