

INITIAL STATEMENT OF BENEFICIAL OWNERSHIP OF SECURITIES

| OMB APPROVAL                                 |           |
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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*<br><u>Shanafelt Armen</u><br><br>(Last) (First) (Middle)<br>C/O LILLY VENTURES<br>115 WEST WASHINGTON ST. SUITE<br>1680-SOUTH<br><br>(Street)<br>INDIANAPOLIS IN 46204<br><br>(City) (State) (Zip) | 2. Date of Event Requiring Statement (Month/Day/Year)<br>06/28/2017 | 3. Issuer Name and Ticker or Trading Symbol<br><u>AILERON THERAPEUTICS INC [ ALRN ]</u>   |  |
|   |   | 4. Relationship of Reporting Person(s) to Issuer (Check all applicable)<br><input checked="" type="checkbox"/> Director <input checked="" type="checkbox"/> 10% Owner<br>Officer (give title below) Other (specify below) | 5. If Amendment, Date of Original Filed (Month/Day/Year)<br><br>6. Individual or Joint/Group Filing (Check Applicable Line)<br><input checked="" type="checkbox"/> Form filed by One Reporting Person<br><input type="checkbox"/> Form filed by More than One Reporting Person |

Table I - Non-Derivative Securities Beneficially Owned

| 1. Title of Security (Instr. 4) | 2. Amount of Securities Beneficially Owned (Instr. 4) | 3. Ownership Form: Direct (D) or Indirect (I) (Instr. 5) | 4. Nature of Indirect Beneficial Ownership (Instr. 5) |
|---------------------------------|---|--|---|
|---------------------------------|---|--|---|

Table II - Derivative Securities Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)

| 1. Title of Derivative Security (Instr. 4) | 2. Date Exercisable and Expiration Date (Month/Day/Year) |                 | 3. Title and Amount of Securities Underlying Derivative Security (Instr. 4) | 4. Conversion or Exercise Price of Derivative Security | 5. Ownership Form: Direct (D) or Indirect (I) (Instr. 5) | 6. Nature of Indirect Beneficial Ownership (Instr. 5) |
|--|--|-----------------|---|--|--|---|
|  | Date Exercisable   | Expiration Date |   |  |  |   |
| Series D Preferred Stock                   | (2)  | (2)             | Common Stock 341,238  | (2)  | I  | See Footnote <sup>(1)</sup>                           |
| Series E-2 Preferred Stock                 | (3)  | (3)             | Common Stock 191,946  | (3)  | I  | See Footnote <sup>(1)</sup>                           |
| Series E-3 Preferred Stock                 | (4)  | (4)             | Common Stock 166,489  | (4)  | I  | See Footnote <sup>(1)</sup>                           |
| Series F Preferred Stock                   | (5)  | (5)             | Common Stock 145,312  | (5)  | I  | See Footnote <sup>(1)</sup>                           |

Explanation of Responses:

- These shares are held directly by Lilly Ventures Fund I LLC, or LVFI. LV Management Group, LLC, or LVMG, is the management company for LVFI and as such may be deemed to indirectly beneficially own the shares held by LVFI. LVMG's voting and dispositive decisions with respect to the shares held by LVFI are made by LVMG's management committee, which includes the Reporting Person. The Reporting Person disclaims beneficial ownership of the reported securities except to the extent of his respective proportionate pecuniary interest therein.
- The Series D Preferred Stock is convertible into Common Stock on a 9.937-for-one basis into the number of shares of Common Stock shown in column 3 at any time at the holder's election and automatically upon the closing of the Issuer's initial public offering. The shares have no expiration date.
- The Series E-2 Preferred Stock is convertible into Common Stock on a 9.937-for-one basis into the number of shares of Common Stock shown in column 3 at any time at the holder's election and automatically upon the closing of the Issuer's initial public offering. The shares have no expiration date.
- The Series E-3 Preferred Stock is convertible into Common Stock on a 9.937-for-one basis into the number of shares of Common Stock shown in column 3 at any time at the holder's election and automatically upon the closing of the Issuer's initial public offering. The shares have no expiration date.
- The Series F Preferred Stock is convertible into Common Stock on a 9.937-for-one basis into the number of shares of Common Stock shown in column 3 at any time at the holder's election and automatically upon the closing of the Issuer's initial public offering. The shares have no expiration date.

Remarks:

/s/ Armen B. Shanafelt      06/28/2017

\*\* 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 5 (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.