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

FORM S-8
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

Aileron Therapeutics, Inc.

(Exact Name of Registrant as Specified in Its Charter)

Delaware
(State or Other Jurisdiction of
Incorporation or Organization)

281 Albany Street
Cambridge, MA
(Address of Principal Executive Offices)

13-4196017
(I.R.S. Employer
Identification No.)

02139
(Zip Code)

2006 Stock Incentive Plan
2016 Stock Incentive Plan
2017 Stock Incentive Plan
2017 Employee Stock Purchase Plan
(Full Title of the Plan)

Joseph A. Yanchik III
President and Chief Executive Officer
Aileron Therapeutics, Inc.
281 Albany Street
Cambridge, MA 02139
(Name and Address of Agent For Service)

(617) 995-0900
(Telephone Number, Including Area Code, of Agent For Service)

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See the definitions of “large accelerated filer,” “accelerated filer,” “smaller reporting company,” and “emerging growth company” in Rule 12b-2 of the Exchange Act.

Large accelerated filer Accelerated filer
 Non-accelerated filer (Do not check if a smaller reporting company) Smaller reporting company
 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 7(a)(2)(B) of the Securities Act.

CALCULATION OF REGISTRATION FEE

Title of Securities to be Registered	Amount to be Registered ⁽¹⁾	Proposed Maximum Offering Price Per Share	Proposed Maximum Aggregate Offering Price	Amount of Registration Fee
Common Stock, \$0.001 par value per share	3,121,523 shares ⁽²⁾	\$8.67 ⁽³⁾	\$27,072,379.67 ⁽³⁾	\$3,137.69

- (1) In accordance with Rule 416 under the Securities Act of 1933, as amended, this registration statement shall be deemed to cover any additional securities that may from time to time be offered or issued to prevent dilution resulting from stock splits, stock dividends or similar transactions.
- (2) Consists of (i) 860,330 shares issuable under the 2006 Stock Incentive Plan (the “2006 Plan”), (ii) 436,556 shares issuable under the 2016 Stock Incentive Plan (the “2016 Plan”), (iii) 1,674,637 shares issuable under the 2017 Stock Incentive Plan (the “2017 Plan”) and (iv) 150,000 shares issuable under the 2017 Employee Stock Purchase Plan. Upon the expiration of outstanding awards under the 2006 Plan and 2016 Plan, the unissued balance of shares issuable under such awards will be issuable under the 2017 Plan.
- (3) Estimated solely for the purpose of calculating the registration fee pursuant to Rules 457(c) and 457(h) of the Securities Act of 1933, as amended. The price per share and aggregate offering price are calculated on the basis of (i) \$4.32, the weighted average exercise price of the 860,330 shares subject to outstanding stock options granted under the 2006 Plan, at prices ranging from \$0.80 to \$5.07 per share, (ii) \$5.77, the exercise price of the 436,556 shares subject to outstanding stock options granted under the 2016 Plan and (iii) \$15.00, the exercise price of the 147,428 shares subject to outstanding options under the 2017 Plan, and (iv) \$11.11 per share, the average high and low sale prices of the registrant’s common stock on the NASDAQ Global Market on June 30, 2017, in accordance with Rule 457(c) under the Securities Act of 1933, as amended, for the 1,527,209 remaining shares issuable under the 2016 Plan and the 150,000 shares issuable under the 2017 Employee Stock Purchase Plan. Pursuant to the 2017 Employee Stock Purchase Plan, the purchase price of the shares of common stock reserved for issuance thereunder will be 85% of the lesser of the closing price of the common stock on the first business day of the offering period or on the last business day of the offering period.

PART I
INFORMATION REQUIRED IN THE SECTION 10(a) PROSPECTUS

Item 1. Plan Information.

The information required by Item 1 is included in documents sent or given to participants in the plans covered by this registration statement pursuant to Rule 428(b)(1) of the Securities Act of 1933, as amended (the "Securities Act").

Item 2. Registrant Information and Employee Plan Annual Information.

The written statement required by Item 2 is included in documents sent or given to participants in the plans covered by this registration statement pursuant to Rule 428(b)(1) of the Securities Act.

PART II
INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation of Documents by Reference.

The registrant is subject to the informational and reporting requirements of Sections 13(a), 14, and 15(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and in accordance therewith files reports, proxy statements and other information with the Securities and Exchange Commission (the "Commission"). The following documents, which are on file with the Commission, are incorporated in this registration statement by reference:

- (a) The registrant's latest annual report filed pursuant to Section 13(a) or 15(d) of the Exchange Act or the latest prospectus filed pursuant to Rule 424(b) under the Securities Act that contains audited financial statements for the registrant's latest fiscal year for which such statements have been filed.
- (b) All other reports filed pursuant to Section 13(a) or 15(d) of the Exchange Act since the end of the fiscal year covered by the document referred to in (a) above.
- (c) The description of the securities contained in the registrant's registration statement on Form 8-A filed under the Exchange Act, including any amendment or report filed for the purpose of updating such description.

All documents subsequently filed by the registrant pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act, prior to the filing of a post-effective amendment which indicates that all securities offered hereby have been sold or which deregisters all securities then remaining unsold, shall be deemed to be incorporated by reference in this registration statement and to be part hereof from the date of the filing of such documents. Any statement contained in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for the purposes of this registration statement to the extent that a statement contained herein or in any other subsequently filed document which also is or is deemed to be incorporated by reference herein modifies or supersedes such statement. Any statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this registration statement.

Item 4. Description of Securities.

Not applicable.

Item 5. Interests of Named Experts and Counsel.

Wilmer Cutler Pickering Hale and Dorr LLP has opined as to the legality of the securities being offered by this registration statement.

Item 6. Indemnification of Directors and Officers.

Section 102 of the Delaware General Corporation Law permits a corporation to eliminate the personal liability of its directors or its stockholders for monetary damages for a breach of fiduciary duty as a director, except where the director breached his or her duty of loyalty, failed to act in good faith, engaged in intentional misconduct or knowingly violated a law, authorized the payment of a dividend or approved a stock repurchase in violation of Delaware corporate law or obtained an improper personal benefit. The registrant's certificate of incorporation provides that no director shall be personally liable to the registrant or its stockholders for monetary damages for any breach of fiduciary duty as a director, notwithstanding any provision of law imposing such liability, except to the extent that the Delaware General Corporation Law prohibits the elimination or limitation of liability of directors for breaches of fiduciary duty.

Section 145 of the Delaware General Corporation Law provides that a corporation has the power to indemnify a director, officer, employee or agent of the corporation and certain other persons serving at the request of the corporation in related capacities against expenses (including attorneys' fees), judgments, fines and amounts paid in settlements actually and reasonably incurred by the person in connection with an action, suit or proceeding to which he or she is or is threatened to be made a party by reason of such position, if such person acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the best interests of the corporation, and, in any criminal action or proceeding, had no reasonable cause to believe his or her conduct was unlawful, except that, in the case of actions brought by or in the right of the corporation, no indemnification shall be made with respect to any claim, issue or matter as to which such person shall have been adjudged to be liable to the corporation unless and only to the extent that the Court of Chancery or other adjudicating court determines that, despite the adjudication of liability but in view of all of the circumstances of the case, such person is fairly and reasonably entitled to indemnification for such expenses which the Court of Chancery or such other court shall deem proper.

The registrant's certificate of incorporation provides that it will indemnify each person who was or is a party or threatened to be made a party to any threatened, pending or completed action, suit or proceeding whether civil, criminal, administrative or investigative (other than an action by or in the right of the registrant) by reason of the fact that he or she is or was, or has agreed to become, a director or officer of the registrant, or is or was serving, or has agreed to serve, at the registrant's request as a director, officer, partner, employee or trustee of, or in a similar capacity with, another corporation, partnership, joint venture, trust or other enterprise (including any employee benefit plan) (all such persons being referred to as an "Indemnitee"), or by reason of any action alleged to have been taken or omitted in such capacity, against all expenses (including attorneys' fees), liabilities, losses, judgments, fines (including excise taxes and penalties arising under the Employee Retirement Income Security Act of 1974), and amounts paid in settlement actually and reasonably incurred by or on behalf of the Indemnitee in connection with such action, suit or proceeding and any appeal therefrom, if such Indemnitee acted in good faith and in a manner he or she reasonably believed to be in, or not opposed to, the registrant's best interests, and, with respect to any criminal action or proceeding, he or she had no reasonable cause to believe his or her conduct was unlawful.

The registrant's certificate of incorporation also provides that it will indemnify any Indemnitee who was or is a party to or threatened to be made a party to any threatened, pending or completed action or suit by or in the right of the registrant to procure a judgment in the registrant's favor by reason of the fact that the Indemnitee is or was, or has agreed to become, a director or officer of the registrant, or is or was serving, or has agreed to serve, at the registrant's request as a director, officer, partner, employee or trustee of, or in a similar capacity with, another corporation, partnership, joint venture, trust or other enterprise (including any employee benefit plan), or by reason of any action alleged to have been taken or omitted in such capacity, against all expenses (including attorneys' fees) and, to the extent permitted by law, amounts paid in settlement actually and reasonably incurred by or on behalf of the Indemnitee in connection with such action, suit or proceeding, and any appeal therefrom, if the Indemnitee acted in good faith and in a manner he or she reasonably believed to be in, or not opposed to, the registrant's best interests, except that no indemnification shall be made with respect to any claim, issue or matter as to which Indemnitee shall have been adjudged to be liable to the registrant, unless, and only to the extent, that the Court of Chancery of Delaware or the court in which such action or suit was brought shall determine upon application that, despite the adjudication of such liability but in view of all the circumstances of the case, he or she is fairly and reasonably entitled to indemnity for such expenses (including attorney's fees) which the Court of Chancery or such other court shall deem proper.

The registrant has entered into indemnification agreements with each of its directors and executive officers. These indemnification agreements require the registrant, among other things, to indemnify such directors and executive officers for some expenses, including attorneys' fees, judgments, fines, and settlement amounts incurred by each of these directors and executive officers in any action or proceeding arising out of his or her service as one of the registrant's directors or officers.

The registrant maintains a general liability insurance policy that covers specified liabilities of the directors and officers of the registrant arising out of claims based on acts or omissions in their capacities as directors or officers.

Item 7. Exemption from Registration Claimed.

Not applicable.

Item 8. Exhibits.

The Exhibit Index immediately preceding the exhibits is incorporated herein by reference.

Item 9. Undertakings.

1. Item 512(a) of Regulation S-K. The undersigned registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) To include any prospectus required by Section 10(a)(3) of the Securities Act;

(ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement; and

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

provided, however, that paragraphs (i) and (ii) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by the registrant pursuant to Section 13 or Section 15(d) of the Exchange Act that are incorporated by reference in the registration statement.

(2) That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

2. Item 512(b) of Regulation S-K. The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Exchange Act that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

3. Item 512(h) of Regulation S-K. Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Cambridge, Commonwealth of Massachusetts on this 5th day of July, 2017.

AILERON THERAPEUTICS, INC.

By: /s/ Joseph A. Yanchik III
Joseph A. Yanchik III
President and Chief Executive Officer

POWER OF ATTORNEY AND SIGNATURES

We, the undersigned officers and directors of Aileron Therapeutics, Inc., hereby severally constitute and appoint Joseph A. Yanchik III and Donald V. Dougherty and each of them singly, our true and lawful attorneys with full power to them, and each of them singly, to sign for us and in our names in the capacities indicated below, the registration statement on Form S-8 filed herewith and any and all subsequent amendments to said registration statement, and generally to do all such things in our names and on our behalf in our capacities as officers and directors to enable Aileron Therapeutics, Inc. to comply with the provisions of the Securities Act of 1933, as amended, and all requirements of the Securities and Exchange Commission, hereby ratifying and confirming our signatures as they may be signed by our said attorneys, or any of them, to said registration statement and any and all amendments thereto.

Pursuant to the requirements of the Securities Act of 1933, as amended, this registration statement has been signed by the following persons in the capacities and on the dates indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Joseph A. Yanchik III</u> Joseph A. Yanchik III	President, Chief Executive Officer and Director (principal executive officer)	July 5, 2017
<u>/s/ Donald V. Dougherty</u> Donald V. Dougherty	Senior Vice President, Chief Financial Officer (principal financial officer)	July 5, 2017
<u>/s/ Kira A. Nelson</u> Kira A. Nelson	Vice President, Finance and Operations (principal accounting officer)	July 5, 2017
<u>/s/ Scott B. Kapnick</u> Scott B. Kapnick	Chairman of the Board of Directors	July 5, 2017
<u>/s/ Reinhard J. Ambros</u> Reinhard J. Ambros, Ph.D.	Director	July 5, 2017
<u>/s/ Brian M. Gallagher, Jr.</u> Brian M. Gallagher, Jr., Ph.D.	Director	July 5, 2017

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Armen B. Shanafelt</u> Armen B. Shanafelt, Ph.D.	Director	July 5, 2017
<u>/s/ Caleb Winder</u> Caleb Winder	Director	July 5, 2017
<u>/s/ Jodie P. Morrison</u> Jodie P. Morrison	Director	July 5, 2017

INDEX TO EXHIBITS

<u>Exhibit Number</u>	<u>Description of Exhibit</u>
4.1	Tenth Amended and Restated Certificate of Incorporation of the Registrant (incorporated by reference to Exhibit 3.1 to the Registrant's Registration Statement on Form S-1 (File No. 333-218474) filed with the Securities and Exchange Commission on June 19, 2016)
4.2	Bylaws of the Registrant (incorporated by reference to Exhibit 3.2 to the Registrant's Registration Statement on Form S-1 (File No. 333-218474) filed with the Securities and Exchange Commission on June 19, 2016)
4.3	Amended and Restated Certificate of Incorporation of the Registrant (incorporated by reference to Exhibit 3.3 to the Registrant's Registration Statement on Form S-1 (File No. 333-218474) filed with the Securities and Exchange Commission on June 19, 2016)
4.4	Amended and Restated By-Laws of the Registrant (incorporated by reference to Exhibit 3.4 to the Registrant's Registration Statement on Form S-1 (File No. 333-218474) filed with the Securities and Exchange Commission on June 19, 2016)
4.5	Certificate of Amendment to Tenth Amended and Restated Certificate of Incorporation of the Registrant, effective June 16, 2017 (incorporated by reference to Exhibit 3.5 to the Registrant's Registration Statement on Form S-1 (File No. 333-218474) filed with the Securities and Exchange Commission on June 19, 2016)
5.1	Opinion of Wilmer Cutler Pickering Hale and Dorr LLP, counsel to the Registrant
23.1	Consent of PricewaterhouseCoopers LLP, independent registered public accounting firm
23.2	Consent of Wilmer Cutler Pickering Hale and Dorr LLP (included in Exhibit 5.1)
24.1	Power of Attorney (included on the signature page)
99.1	2006 Stock Incentive Plan (incorporated by reference to Exhibit 10.1 to the Registrant's Registration Statement on Form S-1 (File No. 333-218474) filed with the Securities and Exchange Commission on June 19, 2016)
99.2	2016 Stock Incentive Plan (incorporated by reference to Exhibit 10.4 to the Registrant's Registration Statement on Form S-1 (File No. 333-218474) filed with the Securities and Exchange Commission on June 19, 2016)
99.3	2017 Stock Incentive Plan (incorporated by reference to Exhibit 10.8 to the Registrant's Registration Statement on Form S-1 (File No. 333-218474) filed with the Securities and Exchange Commission on June 19, 2016)
99.4	2017 Employee Stock Purchase Plan (incorporated by reference to Exhibit 10.11 to the Registrant's Registration Statement on Form S-1 (File No. 333-218474) filed with the Securities and Exchange Commission on June 19, 2016)

July 5, 2017

+1 617 526 6000 (t)
+1 617 526 5000 (f)
wilmerhale.comAileron Therapeutics, Inc.
281 Albany Street
Cambridge, MA 02139Re: 2006 Stock Incentive Plan, as amended
2016 Stock Incentive Plan
2017 Stock Incentive Plan
2017 Employee Stock Purchase Plan

Ladies and Gentlemen:

We have assisted in the preparation of a Registration Statement on Form S-8 (the “**Registration Statement**”) to be filed with the Securities and Exchange Commission (the “**Commission**”) under the Securities Act of 1933, as amended (the “**Securities Act**”), relating to an aggregate of 3,121,523 shares of common stock, \$0.001 par value per share (the “**Shares**”), of Aileron Therapeutics, Inc., a Delaware corporation (the “**Company**”), issuable under the Company’s 2006 Stock Incentive Plan, as amended, the Company’s 2016 Stock Incentive Plan, the Company’s 2017 Stock Incentive Plan and the Company’s 2017 Employee Stock Purchase Plan (collectively, the “**Plans**”).

We have examined the Certificate of Incorporation and By-laws of the Company, each as amended and restated to date, and originals, or copies certified to our satisfaction, of all pertinent records of the meetings of the directors and stockholders of the Company, the Registration Statement and such other documents relating to the Company as we have deemed material for the purposes of this opinion.

In our examination of the foregoing documents, we have assumed the genuineness of all signatures, the authenticity of all documents submitted to us as originals, the conformity to original documents of all documents submitted to us as certified, photostatic or other copies, the authenticity of the originals of any such documents and the legal competence of all signatories to such documents.

We assume that the appropriate action will be taken, prior to the offer and sale of the Shares in accordance with the Plans, to register and qualify the Shares for sale under all applicable state securities or “blue sky” laws.

We express no opinion herein as to the laws of any state or jurisdiction other than the state laws of the Commonwealth of Massachusetts, the General Corporation Law of the State of Delaware and the federal laws of the United States of America.

Wilmer Cutler Pickering Hale and Dorr LLP, 60 State Street, Boston, Massachusetts 02109

Beijing Berlin Boston Brussels Denver Frankfurt London Los Angeles New York Palo Alto Washington

Aileron Therapeutics, Inc.
July 5, 2017
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It is understood that this opinion is to be used only in connection with the offer and sale of the Shares while the Registration Statement is in effect.

Please note that we are opining only as to the matters expressly set forth herein, and no opinion should be inferred as to any other matters.

Based on the foregoing, we are of the opinion that the Shares have been duly authorized for issuance and, when the Shares are issued and paid for in accordance with the terms and conditions of the Plans, the Shares will be validly issued, fully paid and nonassessable.

We hereby consent to the filing of this opinion with the Commission in connection with the Registration Statement in accordance with the requirements of Item 601(b)(5) of Regulation S-K under the Securities Act. In giving such consent, we do not hereby admit that we are in the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations of the Commission.

Very truly yours,

WILMER CUTLER PICKERING
HALE AND DORR LLP

By: /s/ Stuart M. Falber
Stuart M. Falber, Partner

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in this Registration Statement on Form S-8 of Aileron Therapeutics, Inc. of our report dated April 14, 2017, except for the effects of the reverse stock split discussed in Note 15 to the financial statements, as to which the date is June 19, 2017, relating to the financial statements, which appears in Aileron Therapeutics, Inc.'s Amendment No. 1 to the Registration Statement on Form S-1 (No. 333-218474).

/s/ PricewaterhouseCoopers LLP

Boston, Massachusetts

July 5, 2017