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

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

## Achillion Pharmaceuticals, Inc.
(Exact Name of Registrant as Specified in Its Charter)

- **Delaware**
- **52-2113479**
  (State or Other Jurisdiction of Incorporation or Organization)
  (I.R.S. Employer Identification No.)

- **300 George Street**
  New Haven, Connecticut
  (Address of Principal Executive Offices)
  (Zip Code)

### Inducement Stock Option Award
(Full Title of the Plan)

- **Milind S. Deshpande**
  Chief Executive Officer
  300 George Street
  New Haven, Connecticut
  (Name and Address of Agent For Service)

- **(203) 624-7000**
  (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

<table>
<thead>
<tr>
<th>Title of Securities to be Registered</th>
<th>Amount to be Registered(1)</th>
<th>Proposed Maximum Offering Price Per Share</th>
<th>Proposed Maximum Aggregate Offering Price</th>
<th>Amount of Registration Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Common Stock, $0.001 par value per share</td>
<td>32,500 shares(2)</td>
<td>$4.83(3)</td>
<td>$156,975(3)</td>
<td>$20</td>
</tr>
</tbody>
</table>

(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 a portion of the shares issuable under a new hire inducement stock option award granted on September 6, 2017 in accordance with NASDAQ Listing Rule 5635(c)(4).
Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457(h) of the Securities Act of 1933, as amended, based upon the exercise price of the options outstanding under the inducement stock option award.
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 the participant in the award agreement 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 information required by Item 2 is included in documents sent or given to the participant in the award agreement 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.
Not applicable.

Item 6. Indemnification of Directors and Officers.

Section 145 of the General Corporation Law of the State of Delaware (“DGCL”) provides, generally, that a corporation shall have the power to indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding (except actions by or in the right of the corporation) by reason of the fact that such person is or was a director, officer, employee or agent of the corporation against all expenses, judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with such action, suit or proceeding if such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the corporation and, with respect to any criminal action or proceeding, had no reasonable cause to believe his or her conduct was unlawful. A corporation may similarly indemnify such person for expenses actually and reasonably incurred by such person in connection with the defense or settlement of any action or suit by or in the right of the corporation, provided that such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the corporation, and, in the case of claims, issues and matters as to which such person shall have been adjudged liable to the corporation, provided that a court shall have determined, upon application, 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 indemnity for such expenses which such court shall deem proper.

Section 102(b)(7) of the DGCL provides, generally, that the certificate of incorporation may contain a provision eliminating or limiting the personal liability of a director to the corporation or its shareholders for monetary damages for breach of fiduciary duty as a director, provided that such provision may not eliminate or limit the liability of a director (i) for any breach of the director’s duty of loyalty to the corporation or its shareholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) under Section 174 of the DGCL, or (iv) for any transaction from which the director derived an improper personal benefit. No such provision may eliminate or limit the liability of a director for any act or omission occurring prior to the date when such provision became effective.

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 request of the Registrant, 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), judgments, fines 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 the Indemnitee acted in good faith and in a manner which the Indemnitee reasonably believed to be in, or not opposed to, the best interests of the Registrant, and, with respect to any criminal action or proceeding, had no reasonable cause to believe his or her
conduct was unlawful. The termination of any action, suit or proceeding by judgment, order, settlement, conviction or upon a plea of nolo contendere or its
equivalent, will not, of itself, create a presumption that the Indemnitee did not act in good faith and in a manner which the Indemnitee reasonably believed to
be in, or not opposed to, the best interests of the Registrant, and, with respect to any criminal action or proceeding, had reasonable cause to believe that his or
her conduct was unlawful.

The Registrant’s certificate of incorporation also provides that the Registrant 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 its 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 request of
the Registrant, 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 Indemnitee acted in good faith and in a manner which Indemnitee reasonably
believed to be in, or not opposed to, the best interests of the Registrant, except that no indemnification will be made in respect of any claim, issue or matter as
to which the Indemnitee shall have been adjudged to be liable to the Registrant, unless, and only to the extent, that the Court of Chancery of Delaware
determines upon application that, despite the adjudication of such liability but in view of all the circumstances of the case, Indemnitee is fairly and
reasonably entitled to indemnity for such expenses (including attorneys’ fees) which the Court of Chancery of Delaware deems proper.

Notwithstanding the foregoing, to the extent that an Indemnitee has been successful, on the merits or otherwise, in defense of any action, suit or
proceeding referred to above, or in defense of any claim, issue or matter therein, or on appeal from any such action, suit or proceeding, such Indemnitee shall
be indemnified against all expenses (including attorneys’ fees) actually and reasonably incurred by or on behalf of the Indemnitee in connection therewith.
Without limiting the foregoing, if any action, suit or proceeding is disposed of, on the merits or otherwise (including a disposition without prejudice),
without (i) the disposition being adverse to the Indemnitee, (ii) an adjudication that the Indemnitee was liable to the Registrant, (iii) a plea of guilty or nolo
contendere by the Indemnitee, (iv) an adjudication that the Indemnitee did not act in good faith and in a manner the Indemnitee reasonably believed to be in
or not opposed to the best interests of the Registrant, and (v) with respect to any criminal proceeding, an adjudication that the Indemnitee had reasonable
cause to believe his conduct was unlawful, the Indemnitee will be considered for to have been wholly successful with respect to such action, suit or
proceeding.

The Registrant maintains a general liability insurance policy which covers certain liabilities of its directors and officers 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.

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>4.1</td>
<td>Amended and Restated Certificate of Incorporation of the Registrant, as amended (previously filed as exhibit 3.1 to the Registrant’s annual report on Form 10-K filed with the SEC on March 8, 2012 (File No. 001-33095) and incorporated herein by reference).</td>
</tr>
<tr>
<td>4.2</td>
<td>Amended and Restated By-laws of the Registrant (previously filed as exhibit 3.2 to the Registrant’s annual report on Form 10-K filed with the SEC on March 29, 2007 (File No. 001-33095) and incorporated herein by reference).</td>
</tr>
<tr>
<td>5</td>
<td>Opinion of Wilmer Cutler Pickering Hale and Dorr LLP, counsel to the Registrant.</td>
</tr>
<tr>
<td>23.1</td>
<td>Consent of Wilmer Cutler Pickering Hale and Dorr LLP (included in Exhibit 5).</td>
</tr>
<tr>
<td>23.2</td>
<td>Consent of PricewaterhouseCoopers LLP, independent registered public accounting firm.</td>
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<tr>
<td>24</td>
<td>Power of attorney (included on the signature pages of this registration statement).</td>
</tr>
<tr>
<td>99.1</td>
<td>Form of Inducement Grant Nonstatutory Stock Option Agreement (previously filed as exhibit 10.1 to the Registrant’s quarterly report on Form 10-Q filed with the SEC on November 1, 2017 (File No. 001-33095) and incorporated herein by reference).</td>
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Item 9. Undertakings.

1. 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. 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. 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, 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 New Haven, State of Connecticut, on this 26th day of April, 2018.

ACHILLION PHARMACEUTICALS, INC.

By: /s/ Milind S. Deshpande, Ph.D.
Milind S. Deshpande, Ph.D.
Chief Executive Officer

POWER OF ATTORNEY AND SIGNATURES

We, the undersigned officers and directors of Achillion Pharmaceuticals, Inc., hereby severally constitute and appoint Milind S. Deshpande, Ph.D. and Mary Kay Fenton, 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 Achillion Pharmaceuticals, 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, this registration statement has been signed by the following persons in the capacities and on the dates indicated.

<table>
<thead>
<tr>
<th>Signature</th>
<th>Title</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>/s/ Milind S. Deshpande, Ph.D.</td>
<td>Chief Executive Officer and Director</td>
<td>April 26, 2018</td>
</tr>
<tr>
<td></td>
<td>(Principal Executive Officer)</td>
<td></td>
</tr>
<tr>
<td>/s/ Mary Kay Fenton</td>
<td>Executive Vice President and Chief Financial Officer</td>
<td>April 26, 2018</td>
</tr>
<tr>
<td></td>
<td>(Principal Financial Officer and Accounting Officer)</td>
<td></td>
</tr>
<tr>
<td>/s/ David I. Scheer</td>
<td>Chairman of the Board</td>
<td>April 26, 2018</td>
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<tr>
<td>/s/ Jason S. Fisherman, M.D.</td>
<td>Director</td>
<td>April 26, 2018</td>
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<tr>
<td>/s/ Gary E. Frashier</td>
<td>Director</td>
<td>April 24, 2018</td>
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<tr>
<td>/s/ Kurt Graves</td>
<td>Director</td>
<td>April 26, 2018</td>
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<tr>
<td>/s/ Michael D. Kishbauch</td>
<td>Director</td>
<td>April 26, 2018</td>
</tr>
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Re: Inducement Stock Option Award granted September 6, 2017

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 32,500 shares (the “Shares”) of common stock, $0.001 par value per share (the “Common Stock”), of Achillion Pharmaceuticals, Inc., a Delaware corporation (the “Company”), issuable pursuant to a nonqualified stock option agreement dated September 6, 2017 (the “Inducement Award Agreement”), pursuant to which, and in accordance with Nasdaq Stock Market Rule 5635(c)(4), the Company granted to Dr. Avner Ingerman a nonstatutory stock option to purchase 130,000 shares of the Company’s common stock as an inducement material to Dr. Ingerman’s acceptance of employment with the Company.

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, certificates of representatives of the Company 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 Inducement Award Agreement, 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 General Corporation Law of the State of Delaware and the federal laws of the United States of America.

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 Inducement Award Agreement, 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/ Cynthia T. Mazareas
    Cynthia T. Mazareas, a 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 Achillion Pharmaceuticals, Inc. of our report dated February 22, 2018 relating to the financial statements and the effectiveness of internal control over financial reporting, which appears in Achillion Pharmaceuticals, Inc.’s Annual Report on Form 10-K for the year ended December 31, 2017.

/s/ PricewaterhouseCoopers LLP

Hartford, Connecticut
April 26, 2018