

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549**

FORM S-8

**REGISTRATION STATEMENT
UNDER THE SECURITIES ACT OF 1933**

STEMLINE THERAPEUTICS, INC.

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of incorporation or organization)

45-0522567
(IRS Employer Identification No.)

**750 Lexington Avenue
11th Floor
New York, New York 10022**
(Address, including zip code, of Principal Executive Offices)

Stemline Therapeutics, Inc. 2016 Equity Incentive Plan
(Full title of the plan)

Ivan Bergstein, M.D.
Chairman, President and Chief Executive Officer
Stemline Therapeutics, Inc.
750 Lexington Avenue
11th Floor
New York, New York 10022
(646) 502-2311
(Name, address and telephone number of agent for service)

Copies to:
Matthew W. Mamak
Michael L. Stevens
Alston & Bird LLP
90 Park Avenue
New York, New York 10016
(212) 210-1256

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, 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	<input type="checkbox"/>	Accelerated filer	<input checked="" type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/> (Do not check if a smaller reporting company)	Smaller reporting company	<input type="checkbox"/>
		Emerging growth company	<input checked="" type="checkbox"/>

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 13(a) of the Exchange Act.

CALCULATION OF REGISTRATION FEE

Title of securities to be registered	Amount to be registered	Proposed maximum offering price per share	Proposed maximum aggregate offering price	Amount of registration fee
Common Stock, \$0.0001 par value	2,900,000(1)	\$ 16.28(2)	\$ 47,212,000(2)	\$ 5,877.89

- (1) Represents shares issuable pursuant to the Stemline Therapeutics, Inc. 2016 Equity Incentive Plan, as amended (the "2016 Plan"), including any additional shares that may become issuable in accordance with the adjustment and anti-dilution provisions of the 2016 Plan. The Company previously registered an aggregate of 4,312,932 shares on a Form S-8 filed on June 2, 2016 (File No. 333-211784) and an aggregate of 1,200,000 shares on a Form S-8 filed on August 8, 2018 (File No. 333-219796) for issuance under the 2016 Plan.
- (2) Estimated solely for the purpose of determining the amount of the registration fee pursuant to Rule 457(h) under the Securities Act of 1933, as amended (the "Securities Act"), based on the average of the high and low prices of the Company's Common Stock on the Nasdaq Capital Market on June 29, 2018.

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

(a) The documents constituting Part I of this registration statement will be delivered to participants in the 2016 Plan as specified by Rule 428(b) (1) under the Securities Act. These documents and the documents incorporated by reference in this registration statement pursuant to Item 3 of Part II of this form, taken together, constitute a prospectus that meets the requirements of Section 10(a) of the Securities Act.

(b) Upon written or oral request, Stemline Therapeutics, Inc. (the “Company”) will provide, without charge, the documents incorporated by reference in Item 3 of Part II of this registration statement. The documents are incorporated by reference in the Section 10(a) prospectus. The Company will also provide, without charge, upon written or oral request, other documents required to be delivered to participants pursuant to Rule 428(b). Requests for the above-mentioned information should be directed to Kenneth Hoberman, the Company’s Chief Operating Officer, at the address and telephone number on the cover of this registration statement.

PART II
INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation of Documents by Reference.

The following documents filed by the Company with the Securities and Exchange Commission (the “Commission”) pursuant to the Securities Exchange Act of 1934, as amended (the “Exchange Act”), are incorporated by reference and deemed to be a part hereof:

- the Company’s Annual Report on Form 10-K for the fiscal year ended December 31, 2017 (including information incorporated therein by reference), filed on March 16, 2018;
- the Company’s Quarterly Reports on Form 10-Q for the quarter ended March 31, 2018;
- the Company’s Current Reports on Form 8-K filed with the SEC on January 24, 2018, March 16, 2018, April 17, 2018, June 22, 2018, and June 26, 2018;
- the description of the Company’s Common Stock contained in the Registration Statement on Form 8-A12B, filed July 30, 2012, and any amendment or report filed for the purpose of updating such description; and
- all other documents subsequently filed by the Company pursuant to Section 13(a), 13(c), 14 and 15(d) of the Exchange Act prior to the filing of a post-effective amendment to this registration statement that indicates that all securities offered have been sold or that deregisters all securities that remain unsold.

Any statement contained in a document incorporated or deemed incorporated herein by reference shall be deemed to be modified or superseded for the purpose of this registration statement to the extent that a statement contained herein or in any subsequently filed document which also is, or is deemed to be, incorporated herein by reference modifies or supersedes such statement. Any such information so modified or superseded shall not be deemed, except as so modified or superseded, to constitute 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 102 of the Delaware General Corporation Law (the “DGCL”) 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 Company's restated certificate of incorporation provides that no director shall be personally liable to the Company 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 DGCL prohibits the elimination or limitation of liability of directors for breaches of fiduciary duty.

Section 145 of the DGCL 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 party 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 Company's restated 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 Company) by reason of the fact that he or she is or was, or has agreed to become, the Company's director or officer, or is or was serving, or has agreed to serve, at the Company'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 (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 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 Company'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 Company's restated certificate of incorporation also provides that it will indemnify any Indemnitee who was or is a party to an action or suit by or in the right of the Company to procure a judgment in the Company's favor by reason of the fact that the Indemnitee is or was, or has agreed to become, the Company's director or officer, or is or was serving, or has agreed to serve, at the Company's request as a director, officer, partner, employee or trustee or, or in a similar capacity with, another corporation, partnership, joint venture, trust or other enterprise, 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 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 Company's best interests, except that 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 Company, unless a court determines that, despite such adjudication but in view of all of the circumstances, he or she is entitled to indemnification of such expenses. Notwithstanding the foregoing, to the extent that any Indemnitee has been successful, on the merits or otherwise, he or she will be indemnified by the Company against all expenses (including attorneys' fees) actually and reasonably incurred by him or her or on his or her behalf in connection therewith. If the Company doesn't assume the defense, expenses must be advanced to an Indemnitee under certain circumstances.

The Company has entered into indemnification agreements with its directors. In general, these agreements provide that the Company will indemnify the director to the fullest extent permitted by law for claims arising in his or her capacity as a director of the Company or in connection with his or her service at the Company's request for another corporation or entity. The indemnification agreements also provide for procedures that will apply in the event that a director makes a claim for indemnification and establish certain presumptions that are favorable to the director.

The Company maintains a general liability insurance policy which covers certain liabilities of the Company's 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.

See the Exhibit Index, which is incorporated herein by reference.

Item 9. Undertakings.

(a) 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 this 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. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low and high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective 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 (a)(1)(i) and (a)(1)(ii) do not apply if the registration statement is on Form S-8, and information required to be included in a post-effective amendment by those paragraphs is contained in periodic reports filed with or furnished to the Commission by the registrant pursuant to Section 13 or 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.

(b) 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 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.

(c) 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 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.

**EXHIBIT INDEX
TO
REGISTRATION STATEMENT ON FORM S-8**

Exhibit Number	Description
4.1	<u>Restated Certificate of Incorporation of Stemline Therapeutics, Inc., filed as Exhibit 3.1 to Form 8-K filed on February 6, 2013 (File No.001-35619) and incorporated herein by reference.</u>
4.2	<u>Amendment to the Restated Certificate of Incorporation of Stemline Therapeutics, Inc., filed as Exhibit 3.2 to Form 10-Q filed on August 8, 2017 (File No. 001-35619) and incorporated herein by reference.</u>
4.3	<u>Amended and Restated Bylaws of Stemline Therapeutics, Inc., filed as Exhibit 3.2 to Form 8-K filed on February 6, 2013 (File No. 001-35619) and incorporated herein by reference.</u>
5.1	<u>Opinion of Alston & Bird LLP.</u>
23.1	<u>Consent of Alston & Bird LLP (included in Exhibit 5.1).</u>
23.2	<u>Consent of Ernst & Young LLP.</u>
24.1	<u>Power of Attorney (included on signature page).</u>
99.1	<u>Stemline Therapeutics, Inc. 2016 Equity Incentive Plan, filed as Appendix A to the Proxy Statement on Schedule 14A filed on April 8, 2016 (File No. 001-35619) and incorporated herein by reference.</u>
99.2	<u>Amendment to the Stemline Therapeutics, Inc. 2016 Equity Incentive Plan, filed as Appendix A to the Proxy Statement on Schedule 14A filed on May 1, 2017 (File No. 001-35619) and incorporated herein by reference.</u>
99.3	<u>Amendment to the Stemline Therapeutics, Inc. 2016 Equity Incentive Plan, filed as Appendix A to the Proxy Statement on Schedule 14A filed on April 30, 2018 (File No. 001-35619) and incorporated herein by reference.</u>

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 York, State of New York, on this 2nd day of July, 2018.

Date: July 2, 2018

STEMLINE THERAPEUTICS, INC

By: /s/ Ivan Bergstein, M.D.
Ivan Bergstein, M.D.
Chairman, President and Chief Executive Officer
(Principal Executive Officer)

By: /s/ David G. Gionco
David G. Gionco
Vice President of Finance and Chief Accounting Officer
(Principal Financial and Accounting Officer)

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, that the individuals whose signatures appear below constitute and appoint each of Ivan Bergstein, M.D. and Kenneth Hoberman, his or her true and lawful attorney-in-fact and agents with full and several power of substitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments) to this registration statement, and to file the same, with all exhibits thereto, and all documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agents or any of them, or their substitutes, may lawfully do or cause to be done.

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.

<u>Signatures</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Ivan Bergstein, M.D.</u> Ivan Bergstein, M.D.	Chairman, President and Chief Executive Officer (Principal Executive Officer)	July 2, 2018
<u>/s/ David G. Gionco</u> David G. Gionco	Vice President of Finance and Chief Accounting Officer (Principal Financial and Accounting Officer)	July 2, 2018
<u>/s/ Ron Bentsur</u> Ron Bentsur	Director	July 2, 2018
<u>/s/ Darren Cline</u> Darren Cline	Director	July 2, 2018
<u>/s/ Alan Forman</u> Alan Forman	Director	July 2, 2018
<u>/s/ Daniel Hume</u> Daniel Hume	Director	July 2, 2018
<u>/s/ Mark Sard</u> Mark Sard	Director	July 2, 2018
<u>/s/ Kenneth Zuerblis</u> Kenneth Zuerblis	Director	July 2, 2018

ALSTON & BIRD

90 Park Avenue
New York, NY 10016
212-210-9400 | Fax: 212-210-9444

Matthew W. Mamak

Direct Dial: 212-210-1256

Email: matthew.mamak@alston.com

July 2, 2018

Stemline Therapeutics, Inc.
750 Lexington Avenue
Eleventh Floor
New York, New York 10022

Re: Registration Statement on Form S-8
Stemline Therapeutics, Inc. 2016 Equity Incentive Plan, as Amended

Ladies and Gentlemen:

We have acted as counsel to Stemline Therapeutics, Inc., a Delaware corporation (the "Corporation"), in connection with the above-referenced Registration Statement on Form S-8 (the "Registration Statement") to be filed on the date hereof by the Corporation with the Securities and Exchange Commission (the "Commission") to register under the Securities Act of 1933, as amended (the "Securities Act"), 2,900,000 shares of the Corporation's common stock, \$0.0001 par value per share (the "Shares"), which may be issued by the Company upon the grant or exercise of awards pursuant to the Stemline Therapeutics, Inc. 2016 Equity Incentive Plan, as amended (the "Plan"). We are furnishing this opinion letter pursuant to Item 8 of Form S-8 and Item 601(b)(5) of the Commission's Regulation S-K.

In connection with our opinion below, we have examined the Restated Certificate of Incorporation of the Corporation, as amended June 19, 2017, the Amended and Restated Bylaws of the Corporation, and records of proceedings of the Board of Directors of the Corporation, or committees thereof, and records of proceedings of the stockholders, deemed by us to be relevant to this opinion letter, the Plan and the Registration Statement. We also have made such further legal and factual examinations and investigations as we deemed necessary for purposes of expressing the opinion set forth herein. In our examination, we have assumed the genuineness of all signatures, the legal capacity of all natural persons, the authenticity of all documents submitted to us as original documents and the conformity to original documents of all documents submitted to us as certified, conformed, facsimile, electronic or photostatic copies.

As to certain factual matters relevant to this opinion letter, we have relied conclusively upon originals or copies, certified or otherwise identified to our satisfaction, of such other records, agreements, documents and instruments, including certificates or comparable documents of officers of the Corporation and of public officials, as we have deemed appropriate as a basis for the opinion hereinafter

Alston & Bird LLP

www.alston.com

Atlanta | Beijing | Brussels | Charlotte | Dallas | Los Angeles | New York | Raleigh | San Francisco | Silicon Valley | Washington, D.C.

set forth. Except to the extent expressly set forth herein, we have made no independent investigations with regard to matters of fact, and, accordingly, we do not express any opinion as to matters that might have been disclosed by independent verification.

Our opinion set forth below is limited to the General Corporation Law of the State of Delaware, applicable provisions of the Constitution of the State of Delaware and reported judicial decisions interpreting such General Corporation Law and Constitution that, in our professional judgment, are normally applicable to transactions of the type contemplated by the Plan, and we do not express any opinion herein concerning any other laws.

This opinion letter is provided for use in connection with the transactions contemplated by the Registration Statement and may not be used, circulated, quoted or otherwise relied upon for any other purpose without our express written consent. The only opinion rendered by us consists of those matters set forth in the sixth paragraph hereof, and no opinion may be implied or inferred beyond the opinion expressly stated. This opinion letter is rendered as of the date hereof and we make no undertaking and expressly disclaim any duty to supplement or update the opinions rendered herein, if, after the date hereof, facts or circumstances come to our attention or changes in the law occur which could affect such opinions. We note specifically that the Shares may be issued from time to time hereafter, and our opinion is limited to the applicable laws, including the related rules and regulations, as in effect on the date hereof.

Based on the foregoing, it is our opinion that the Shares to be issued under the Plan are duly authorized, and, when issued by the Corporation in accordance with the terms of the Plan, will be validly issued, fully paid and non-assessable.

We consent to the filing of this opinion letter as an exhibit to the Registration Statement. In giving such consent, we do not thereby admit that we are within the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations of the Commission thereunder.

Sincerely,

ALSTON & BIRD LLP

By: /s/ Matthew W. Mamak
Matthew W. Mamak
Partner

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the Registration Statement (Form S-8 No. 333-00000) pertaining to the Stemline Therapeutics, Inc. 2016 Equity Incentive Plan of our report dated March 16, 2018, with respect to the financial statements of Stemline Therapeutics, Inc. included in its Annual Report (Form 10-K) for the year ended December 31, 2017, filed with the Securities and Exchange Commission.

/s/ Ernst & Young LLP

Stamford, Connecticut

July 2, 2018
