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

SCHEDULE 14A

Proxy Statement Pursuant to Section 14(a) of
the Securities Exchange Act of 1934 (Amendment No.)

Filed by the Registrant

Filed by a Party other than the Registrant

Check the appropriate box:

- Preliminary Proxy Statement
- Confidential, for Use of the Commission Only (as permitted by Rule 14a-6(e)(2))**
- Definitive Proxy Statement
- Definitive Additional Materials
- Soliciting Material under §240.14a-12

Stemline Therapeutics, Inc.

(Name of Registrant as Specified In Its Charter)

(Name of Person(s) Filing Proxy Statement, if other than the Registrant)

Payment of Filing Fee (Check the appropriate box):

- No fee required.
- Fee computed on table below per Exchange Act Rules 14a-6(i)(1) and 0-11.
- (1) Title of each class of securities to which transaction applies: _____
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-

(3) Filing Party:

(4) Date Filed:



STEMLINE THERAPEUTICS, INC.
750 Lexington Avenue, Eleventh Floor
New York, New York 10022

Dear Stockholder:

You are cordially invited to our 2017 Annual Meeting of Stockholders, to be held at 10:00 a.m. ET, June 19, 2017, at the offices of our legal counsel, Alston & Bird LLP, located at 90 Park Avenue (between 39th and 40th streets), New York, New York 10016. At the meeting, the stockholders will be asked to (i) elect two Class II directors to serve until their successors are duly elected and qualified, (ii) ratify the appointment of Ernst & Young LLP as our independent registered public accounting firm for the year ending December 31, 2017, (iii) approve an amendment to our 2016 Equity Incentive Plan to increase the number of authorized shares issuable thereunder by 1,200,000 shares, (iv) approve an amendment to our Certificate of Incorporation to increase our authorized share capital by 20,000,000 shares of common stock, and (v) the transaction of any other business that may properly come before the 2017 Annual Meeting or any adjournment of the 2017 Annual Meeting.

In accordance with the rules and regulations of the Securities and Exchange Commission, we are furnishing our proxy statement and annual report to stockholders for the year ended December 31, 2016 on the internet. You may have already received our "Important Notice Regarding the Availability of Proxy Materials," which was mailed on or about April 28, 2017. That notice described how you can obtain our proxy statement and annual report. You can also receive paper copies of our proxy statement and annual report upon request.

It is important that your stock be represented at the meeting regardless of the number of shares you hold. You are encouraged to specify your voting preferences by marking our proxy card and returning it as directed. If you do attend the meeting and wish to vote in person, you may revoke your proxy at the meeting.

If you have any questions about the proxy statement or the accompanying Annual Report, please contact Kenneth Hoberman, our Corporate Secretary, at (646) 502-2311.

We look forward to seeing you at the 2017 Annual Meeting.

Sincerely,

Ivan Bergstein, M.D.
Chairman, President, and Chief Executive Officer

April 28, 2017
New York, New York



STEMLINE THERAPEUTICS, INC.
750 Lexington Avenue, Eleventh Floor
New York, New York 10022

NOTICE OF 2017 ANNUAL MEETING OF STOCKHOLDERS

The 2017 Annual Meeting of Stockholders of Stemline Therapeutics, Inc. will be held at the offices of our legal counsel, Alston & Bird LLP, located at 90 Park Avenue (between 39th and 40th streets), New York, New York 10016, on Monday, June 19, 2017, at 10:00 a.m., ET. At the meeting, stockholders will consider and act on the following items:

1. The election of two Class II directors until their successors are elected and qualified;
2. The ratification of the appointment of Ernst & Young LLP as our independent registered public accounting firm for the year ending December 31, 2017;
3. To approve an amendment to our 2016 Equity Incentive Plan to increase the number of authorized shares issuable by 1,200,000 shares;
4. To approve an amendment to our Certificate of Incorporation to increase our authorized share capital by 20,000,000 shares of common stock, and
5. The transaction of any other business that may properly come before the 2017 Annual Meeting or any adjournment of the 2017 Annual Meeting.

Only those stockholders of record as of the close of business on April 20, 2017, are entitled to vote at the 2017 Annual Meeting or any postponements or adjournments thereof. A complete list of stockholders entitled to vote at the 2017 Annual Meeting will be available for your inspection beginning May 4, 2017, at our offices located at 750 Lexington Avenue, Eleventh Floor, New York, New York 10022, between the hours of 10:00 a.m. and 5:00 p.m., ET, each business day.

YOUR VOTE IS IMPORTANT!

Instructions on how to vote your shares via the internet are contained on the "Important Notice Regarding the Availability of Proxy Materials," which was mailed on or about April 28, 2017. Instructions on how to obtain a paper copy of our proxy statement and annual report to stockholders for the year ended December 31, 2016 are listed on the "Important Notice Regarding the Availability of Proxy Materials." These materials can also be viewed online by following the instructions listed on the "Important Notice Regarding the Availability of Proxy Materials."

If you received a paper copy of our proxy statement and annual report, you may vote your shares by completing and returning the enclosed proxy card.

Submitting your proxy does not affect your right to vote in person if you decide to attend the 2017 Annual Meeting. You are urged to submit your proxy as soon as possible, regardless of whether or not you expect to attend the 2017 Annual Meeting. You may revoke your proxy at any time before it is exercised at the 2017 Annual Meeting by (i) delivering written notice to our Corporate Secretary, Kenneth Hoberman, at our office located at 750 Lexington Avenue, Eleventh Floor, New York, NY 10022, (ii) submitting a later dated proxy card, (iii) voting again via the internet as described in the "Important Notice Regarding the Availability of Proxy Materials," or (iv) attending the 2017 Annual Meeting and voting in person. No revocation under (i) or (ii) will be effective unless written notice or the proxy card is received by our Corporate Secretary at or before the 2017 Annual Meeting.

When you submit your proxy, you authorize Ivan Bergstein and Kenneth Hoberman to vote your shares at the 2017 Annual Meeting and on any adjournments of the 2017 Annual Meeting in accordance with your instructions.

By Order of the Board of Directors,

Kenneth Hoberman
Corporate Secretary

April 28, 2017
New York, New York

STEMLINE THERAPEUTICS, INC.

750 Lexington Avenue, Eleventh Floor

New York, New York 10022

Phone (646) 502-2311

Fax: (646) 389-0968

PROXY STATEMENT

This proxy statement and the accompanying proxy card are being made available via internet access, beginning on or about April 28, 2017, to the owners of shares of common stock of Stemline Therapeutics, Inc. (the "Company," "our," "we," or "Stemline") as of April 20, 2017, in connection with the solicitation of proxies by our Board of Directors for our 2017 Annual Meeting of Stockholders (the "Annual Meeting"). On or about April 28, 2017, we sent an "Important Notice Regarding the Availability of Proxy Materials" to our stockholders. If you received this notice by mail, you will not automatically receive by mail our proxy statement and annual report to stockholders for the year ended December 31, 2016. If you would like to receive a printed copy of our proxy statement, annual report and proxy card, please follow the instructions for requesting such materials in the notice. Upon request, we will promptly mail you paper copies of such materials free of charge.

The Annual Meeting will take place at the offices of our legal counsel, Alston & Bird LLP, located at 90 Park Avenue (between 39th and 40th streets), New York, New York 10016 on Monday, June 19, 2017, at 10:00 a.m. ET. Our Board of Directors encourages you to read this document thoroughly and take this opportunity to vote, via proxy, on the matters to be decided at the Annual Meeting. As discussed below, you may revoke your proxy at any time before your shares are voted at the Annual Meeting.

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QUESTIONS AND ANSWERS

Q: *Why did I receive an "Important Notice Regarding the Availability of Proxy Materials"?*

- A. In accordance with Securities and Exchange Commission ("SEC") rules, instead of mailing a printed copy of our proxy materials, we may send an "Important Notice Regarding the Availability of Proxy Materials" to stockholders. All stockholders will have the ability to access the proxy materials on a website referred to in the notice or to request a printed set of these materials at no charge. You will not receive a printed copy of the proxy materials unless you specifically request one from us. Instead, the notice instructs you as to how you may access and review all of the important information contained in the proxy materials via the internet and submit your vote via the internet.

Important Notice Regarding the Availability of Proxy Materials for the Stockholder Meeting to Be Held on June 19, 2017. The proxy statement is available at www.edocumentview.com/STML.

Q: *What is the purpose of the Annual Meeting?*

- A. At the Annual Meeting, our stockholders will act upon the matters outlined in the Notice of 2017 Annual Meeting of Stockholders accompanying this proxy statement, including (i) the election of two Class II directors until their successors are elected and qualified, (ii) the ratification of the appointment of Ernst & Young LLP as our independent registered public accounting firm for the year ending December 31, 2017, (iii) the approval of an amendment to our 2016 Equity Incentive Plan to increase the number of authorized shares issuable thereunder by 1,200,000 shares, (iv) the approval of an amendment to our Certificate of Incorporation to increase our authorized share capital by 20,000,000 shares of common stock and (v) the transaction of any other business that may properly come before the 2017 Annual Meeting or any adjournment thereof.

Q: *Who is entitled to vote at our Annual Meeting?*

- A. The record holders of our common stock at the close of business on the record date, April 20, 2017, may vote at the Annual Meeting. Each share of our common stock is entitled to one vote. There were 25,096,214 shares of common stock outstanding on the record date and entitled to vote at the Annual Meeting. A list of stockholders entitled to vote at the Annual Meeting, including the address of and number of shares held by each stockholder of record, will be available for your inspection beginning May 4, 2017, at our offices located at 750 Lexington Avenue, Eleventh Floor, New York, New York 10022, between the hours of 10:00 a.m. and 5:00 p.m., ET, each business day.

Q: *How do I vote?*

- A. You may vote in person at the Annual Meeting, by use of a proxy card if you receive a printed copy of our proxy materials, via internet as directed in our "Important Notice Regarding the Availability of Proxy Materials," or by telephone as indicated in the proxy card.

Q: *What is a proxy?*

- A. A proxy is a person you appoint to vote your shares of our common stock on your behalf. If you are unable to attend the Annual Meeting, our Board of Directors is seeking your appointment of a proxy so that your shares of our common stock may be voted. If you vote by proxy, you will be designating Ivan Bergstein, M.D., our Chairman, President and Chief Executive Officer, and Kenneth Hoberman, our Chief Operating Officer and Corporate Secretary, as your proxies. Dr. Bergstein and/or Mr. Hoberman may act on your behalf and have the authority to appoint a substitute to act as your proxy.

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Q: How will my shares be voted if I vote by proxy?

A. Your proxy will be voted according to the instructions you provide. If you complete and submit your proxy but do not otherwise provide instructions on how to vote your shares, your shares will be voted (i) "FOR" the individuals nominated to serve as members of our Board of Directors, (ii) "FOR" the ratification of Ernst & Young LLP as our independent registered public accounting firm for the year ending December 31, 2017, (iii) "FOR" the approval of an amendment to our 2016 Equity Incentive Plan to increase the number of authorized shares issuable thereunder by 1,200,000 shares, and (iv) "FOR" the approval of an amendment to our Certificate of Incorporation to increase our authorized share capital by 20,000,000 shares of common stock. Presently, our Board of Directors does not know of any other matter that may come before the Annual Meeting. However, your proxies are authorized to vote on your behalf, using their discretion, on any other business that properly comes before the Annual Meeting.

Q: How do I revoke my proxy?

A. You may revoke your proxy at any time before your shares are voted at the Annual Meeting by:

- delivering written notice to our Corporate Secretary, Kenneth Hoberman, at 750 Lexington Avenue, Eleventh Floor, New York, NY 10022;
- submitting a later dated proxy card or voting again via the internet as described in the "Important Notice Regarding the Availability of Proxy Materials"; or
- attending the 2017 Annual Meeting and voting in person.

Q: Is my vote confidential?

A. Yes. All votes remain confidential, unless you provide otherwise.

Q: How are votes counted?

A. Before the Annual Meeting, our Board of Directors will appoint one or more inspectors of election for the meeting. The inspector(s) will determine the number of shares represented at the meeting, the existence of a quorum and the validity and effect of proxies. The inspector(s) will also receive, count, and tabulate ballots and votes and determine the results of the voting on each matter that comes before the Annual Meeting.

Abstentions and votes withheld, and shares represented by proxies reflecting abstentions or votes withheld, will be treated as present for purposes of determining the existence of a quorum at the Annual Meeting. They will not be considered as votes "for" or "against" any matter for which the stockholder has indicated their intention to abstain or withhold their vote. Broker or nominee non-votes, which occur when shares are held in "street name" by brokers or nominees who indicate that they do not have discretionary authority to vote on a particular matter, will not be considered as votes "for" or "against" that particular matter. Broker and nominee non-votes will be treated as present for purposes of determining the existence of a quorum, and may be entitled to vote on certain matters at the Annual Meeting.

Q: What constitutes a quorum at the Annual Meeting?

A. In accordance with Delaware law (the law under which we are incorporated) and our Amended and Restated Bylaws, the presence at the Annual Meeting, by proxy or in person, of the holders of a majority of the shares of our common stock outstanding on the record date constitutes a quorum, thereby permitting the stockholders to conduct business at the Annual Meeting. Abstentions, votes withheld, and broker or nominee non-votes will be included in the calculation of

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the number of shares considered present at the Annual Meeting for purposes of determining the existence of a quorum.

If a quorum is not present at the Annual Meeting, a majority of the stockholders present in person and by proxy may adjourn the meeting to another date. If an adjournment is for more than 30 days or a new record date is fixed for the adjourned meeting by our Board of Directors, we will provide notice of the adjourned meeting to each stockholder of record entitled to vote at the adjourned meeting. At any adjourned meeting at which a quorum is present, any business may be transacted that might have been transacted at the originally called meeting.

Q: *What vote is required to elect each of our director-nominees?*

- A. The affirmative vote of a plurality of the votes of the shares present, in person or by proxy, at the Annual Meeting is required for the election of each of the director nominees. "Plurality" means that the nominees receiving the largest number of votes up to the number of directors to be elected at the Annual Meeting will be duly elected as directors. Abstentions, votes withheld, and broker or nominee non-votes will not affect the outcome of director elections.

Q: *What vote is required to ratify Ernst & Young LLP as our independent registered public accounting firm for the year ending December 31, 2017?*

- A. The affirmative vote of a majority of the shares present, in person or by proxy, and entitled to vote at the Annual Meeting is required to approve the ratification of Ernst & Young LLP as our independent registered public accounting firm for the year ending December 31, 2017. Abstentions and votes withheld will have the same effect as a negative vote. However, broker or nominee non-votes, and shares represented by proxies reflecting broker or nominee non-votes, will not have the effect of a vote against this proposal as they are not considered to be present and entitled to vote on this matter.

Q: *What vote is required to approve the amendment to our 2016 Equity Incentive Plan to increase the number of authorized shares issuable thereunder by 1,200,000 shares?*

- A. The affirmative vote of a majority of the shares present, in person or by proxy, and entitled to vote at the Annual Meeting is required to approve an amendment to our 2016 Equity Incentive Plan to increase the number of authorized shares issuable thereunder by 1,200,000 shares. Abstentions and votes withheld will have the same effect as a negative vote. However, broker or nominee non-votes, and shares represented by proxies reflecting broker or nominee non-votes, will not have the effect of a vote against this proposal as they are not considered to be present and entitled to vote on this matter.

Q: *What vote is required to approve an amendment to our Certificate of Incorporation to increase our authorized share capital by 20,000,000 shares of common stock?*

- A. The affirmative vote of a majority of our common stock outstanding is required to approve the amendment to our Certificate of Incorporation to increase our authorized share capital by 20,000,000 shares of common stock. The effect of an abstention or a broker or nominee non-vote is the same as that of a vote against the proposal.

Q: *What percentage of our outstanding common stock do our directors and executive officers own?*

- A. As of April 20, 2017, our directors and executive officers owned, or have the right to acquire, approximately 30.7% of our outstanding common stock. See the discussion under the heading "Stock Ownership of Our Directors, Executive Officers, and 5% Beneficial Owners" on page 35 for more details.

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Q: *Who was our independent public accountant for the year ended December 31, 2016? Will they be represented at the Annual Meeting?*

A. Ernst & Young LLP is the independent registered public accounting firm that audited our financial statements for the year ended December 31, 2016. We expect a representative of Ernst & Young LLP to be present at the Annual Meeting. The representative will have an opportunity to make a statement and will be available to answer your questions.

Q: *How can I obtain a copy of our annual report on Form 10-K?*

A. **We have filed our annual report on Form 10-K for the year ended December 31, 2016, with the SEC. The annual report on Form 10-K is also included in the Annual Report to stockholders. You may obtain, free of charge, a copy of our annual report on Form 10-K, including financial statements and exhibits, by writing to our Corporate Secretary, Kenneth Hoberman. Upon request, we will also furnish any exhibits to the annual report on Form 10-K as filed with the SEC.**

CORPORATE GOVERNANCE

Our Board of Directors

Our Bylaws provide that the Board of Directors will consist of one or more members, as determined from time to time by resolution of the Board of Directors. Currently, our Board of Directors consists of five members listed in the chart below. The terms of two of our directors, Ron Bentsur and Eric L. Dobmeier, are set to expire at our 2017 Annual Meeting. Our Board of Directors has determined to nominate Ron Bentsur for re-election to our Board of Directors for a three-year term and Eric L. Dobmeier for a one-year term.

Current Board of Directors

<u>Name</u>	<u>Age</u>	<u>Position</u>	<u>Director Since</u>	<u>Class</u>
Ivan Bergstein, M.D.	51	President, Chief Executive Officer, and Chairman	2003	III
Ron Bentsur	51	Director	2009	II
Eric L. Dobmeier	48	Director	2012	II
Kenneth Zuerblis	58	Director	2012	I
Alan Forman	51	Director	2015	III

The Board of Directors is divided into three classes, designated Class I (term expiring 2019), Class II (new term expiring 2020) and Class III (term expiring 2018). Generally, each director will serve for a term ending on the date of the third annual meeting of stockholders following the annual meeting of stockholders at which such director was elected; provided that the term of each director will continue until the election and qualification of his or her successor and be subject to his or her earlier death, resignation or removal.

The Board of Directors does not have a formal policy regarding the separation of the roles of Chief Executive Officer and Chairman of the Board of Directors, as the Board of Directors believes that it is in the best interests of the Company to make that determination based on the direction of the Company and the current membership of the Board of Directors. The Board of Directors has determined that having Dr. Bergstein serve as both Chief Executive Officer and Chairman is in the best interest of the Company's stockholders at this time.

Stemline has a risk management program overseen by Dr. Bergstein, our President and Chief Executive Officer, Mr. Hoberman, our Chief Operating Officer, and David Gionco, our Chief Accounting Officer and Vice President of Finance. Dr. Bergstein, Mr. Hoberman and Mr. Gionco identify material risks and prioritize them for our Board of Directors. Our Board of Directors regularly reviews information regarding our credit, liquidity and operations, as well as the risks associated with each.

The corporate governance standards adopted by the Nasdaq Stock Market, or Nasdaq, require that a majority of the members of our Board of Directors be "independent" as Nasdaq defines that term. Additionally, the Nasdaq rules require our Board of Directors to make an affirmative determination as to the independence of each director. Consistent with these rules, our Board of Directors undertook its annual review of director independence in March 2017. During the review, our Board of Directors considered relationships and transactions during 2016 and during the past three fiscal years between each director or any member of his immediate family, on the one hand, and our company and our subsidiaries and affiliates, on the other hand. The purpose of this review was to determine whether any such relationships or transactions were inconsistent with a determination that the director is independent. Based on this review, our Board of Directors determined that Mr. Bentsur, Mr. Forman, Mr. Dobmeier, and Mr. Zuerblis are independent under the criteria established by Nasdaq and by our Board of Directors.

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The following biographies set forth the names of each of our directors (including our director-nominees, Ron Bentsur and Eric L. Dobmeier) and the following additional information: their ages, the year in which they first became directors, their positions with us, their principal occupations and employers for at least the past five years, any other directorships held by them during the past five years in companies that are subject to the reporting requirements of the Securities Exchange Act of 1934, or the Exchange Act, or any company registered as an investment company under the Investment Company Act of 1940, as well as additional information, all of which we believe sets forth each director's qualifications to serve on the Board of Directors. There is no family relationship between and among any of our executive officers or directors. There are no arrangements or understandings between any of our executive officers or directors and any other person pursuant to which any of them are elected as an officer or director.

Director-Nominees

Ron Bentsur, 51, has served as a member of our Board of Directors since 2009. Mr. Bentsur is currently the Chief Executive Officer and member of the Board of Directors of UroGen Pharma, Ltd. From 2009 to 2015, Mr. Bentsur served as Chief Executive Officer of Keryx Biopharmaceuticals, Inc. and as a member of its board of directors. Prior to joining Keryx Biopharmaceuticals, Inc., Mr. Bentsur served as Chief Executive Officer of XTL Biopharmaceuticals, Inc. from 2006 to 2009. From 2000 to 2006, Mr. Bentsur was employed by Keryx Biopharmaceuticals, Inc., where he served as Vice President of Finance and Chief Financial Officer from 2003 until 2006. From 1998 to 2000, Mr. Bentsur served as Director of Investment Banking at Leumi Underwriters Ltd. And from 1994 to 1998, Mr. Bentsur was a New York City-based investment banker, primarily at ING Barings Furman Selz. Mr. Bentsur holds a B.A. in Economics and Business Administration with distinction from the Hebrew University of Jerusalem, Israel and an M.B.A., magna cum laude, from NYU's Stern Graduate School of Business. We believe that Mr. Bentsur is qualified to serve on our Board of Directors due to his leadership and management experience, his service as an executive of a public biopharmaceutical company and his knowledge of our business and industry.

Eric L. Dobmeier, 48, has served as a member of our Board of Directors since April 2012. Mr. Dobmeier is currently the Chief Operating Officer of Seattle Genetics, Inc. In this role, he is responsible for Seattle Genetics' business development, manufacturing, corporate communications, program management and alliance management functions. Mr. Dobmeier joined Seattle Genetics in March 2002 and has served in positions of increasing responsibility since then, most recently as Chief Business Officer from May 2007 to June 2011. Prior to joining Seattle Genetics, Mr. Dobmeier was with the law firms of Venture Law Group and Heller Ehrman LLP where he represented technology companies in connection with public and private financings, mergers and acquisitions and corporate partnering transactions. Mr. Dobmeier also serves as a director of Atara Biotherapeutics, Inc., a publicly traded biotechnology company. Mr. Dobmeier received a J.D. from the University of California, Berkeley School of Law and an A.B. in History from Princeton University. We believe that Mr. Dobmeier is qualified to serve on our Board of Directors due to his legal, business development and operating background and years of senior management experience at a public biotechnology company.

Other Board Members

Ivan Bergstein, M.D., 51, Chairman, Chief Executive Officer and President. Dr. Bergstein is Chief Executive Officer and Founder of Stemline Therapeutics. Dr. Bergstein has managed the company's evolution from early-stage research and development to current late clinical stage. Prior to founding Stemline, Dr. Bergstein was Medical Director of Access Oncology, Inc., a clinical stage oncology-focused biotechnology company where he was a key member of a small team responsible for the acquisition and development of the company's clinical stage assets and ultimately the sale of the

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company to Keryx Biopharmaceuticals, Inc. (Nasdaq: KERX). Previously, he was a senior biopharmaceuticals analyst at a Wall Street-based firm that advised funds on investment opportunities in public companies with late clinical stage assets. He received a BA in mathematics from the University of Pennsylvania and was elected to the Pi Mu Epsilon National Mathematics Honor Society, and then received an MD from the Mount Sinai School of Medicine where he was elected to the Alpha Omega Alpha Honor Medical Society, received the Merck Award for Clinical Excellence, and subsequently completed an internship in general surgery. He then became the Jerome A. Urban Post-Doctoral Research Fellow at the Cornell University Medical College where he studied and published work relating to Wnt genes in human breast cancer. He then completed an internal medicine residency and hematology-oncology fellowship at the New York Presbyterian Hospital—Weill Medical College of Cornell University where he studied and published work on gene therapy manipulations of the sonic hedgehog pathway.

Kenneth Zuerblis, 58, has served as a member of our Board of Directors since March 2012. Prior to joining Stemline, Mr. Zuerblis served as Executive Vice President and Chief Financial Officer of Savient Pharmaceuticals, Inc. from September 2011 until May 2012. Prior to joining Savient, Mr. Zuerblis served as Chief Financial Officer and Senior Vice President at ImClone Systems from 2008 through 2009. In that role, he was responsible for the strategic planning and leadership of finance and related operations and helped lead all aspects of the sale of the company to Eli Lilly and Company. From 1994 through 2005, Mr. Zuerblis served as Chief Financial Officer of Enzon Pharmaceuticals, Inc., and held the position of Corporate Controller from 1991 through 1994. Enzon developed the first three FDA approved products using PEGylation technology. Most notably during Mr. Zuerblis' 14 year tenure, Enzon transformed from an early stage biotechnology company into a fully integrated biopharmaceutical company with five marketed products. He began his career at KPMG, LLP in 1982 where he held management positions of increasing responsibility over a ten-year period. Mr. Zuerblis previously served on the board of directors of Immunomedics, Inc. and XTL Biopharmaceuticals, Inc. Mr. Zuerblis currently serves on the board of directors of Resverlogix Corp., which is publically traded on the Toronto Stock Exchange, and Zenith Epigenetics, Inc., a private biotechnology company based in Calgary, Canada. Mr. Zuerblis brings nearly 30 years of proven leadership and expertise in building fully integrated biopharmaceutical organizations and has an established track record of managing complex commercial and research organizations, raising capital, overseeing multifaceted merger and acquisition transactions, and directing all investor and stockholder relations. Mr. Zuerblis earned his B.S. in Accounting from Seton Hall University and is a Certified Public Accountant in the State of New Jersey. We believe Mr. Zuerblis is qualified to serve on our Board of Directors due to his extensive accounting and financial experience and years of executive leadership in the biopharmaceutical industry.

Alan Forman, 51, has served as a member of our Board of Directors since April 2015. Mr. Forman is a Director of Investments at the Yale University Investments Office, the team charged with managing the University's \$25 billion dollar endowment fund. Mr. Forman has been a leader at the Investment Office for more than two decades during which time the office has become one of the top performing institutions in the world. While at the institution, he has executed billions of dollars of transactions across numerous investment cycles and industries. Mr. Forman served on the board of directors of Acadia Realty Trust, a public company, where he served as Chairman of Acadia's Compensation Committee and was a member of the Nominating and Corporate Governance Committees. He worked closely with the CEO and other board members on a wide range of strategic issues with particular emphasis on corporate strategy, company structure, M&A and fund raising, and was instrumental in the company's success. Mr. Forman was also on the board of directors of Kimpton Group Holdings, which was ultimately sold to Intercontinental Hotels Group. He served on the Compensation and Nominating and Governance Committees. After having sourced and structured the original investment, he then joined the board, served as a close advisor to the CEO and CFO, and was a key member of the team that orchestrated the company's successful acquisition. Mr. Forman received his B.A. degree from

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Dartmouth College and an M.B.A. degree from NYU's Stern Graduate School of Business. We believe Mr. Forman is qualified to serve on our Board of Directors due to his extensive financial and management experience for both public and private entities and his experience serving as member of the board of directors of other companies.

During 2016, our Board of Directors held five (5) meetings and took two (2) actions by unanimous written consent. Also in 2016, each incumbent director standing for election attended at least 75% of the meetings of the Board of Directors and the meetings of those committees on which each incumbent director served, in each case during the period that such person was a director. The permanent committees established by our Board of Directors are the Audit Committee, the Compensation Committee, and the Nominating and Corporate Governance Committee, descriptions of which are set forth in more detail below. Our directors are expected to attend each Annual Meeting of Stockholders, and it is our expectation that all of the directors standing for election will attend this year's Annual Meeting.

Communicating with the Board of Directors

Our Board of Directors has established a process by which stockholders can send communications to the Board of Directors. You may communicate with the Board of Directors as a group, or to specific directors, by writing to Kenneth Hoberman, our Corporate Secretary, at 750 Lexington Avenue, Eleventh Floor, New York, NY 10022. The Corporate Secretary will review all such correspondence and regularly forward to the Board of Directors a summary of all correspondence and copies of all correspondence that, in the opinion of the Corporate Secretary, deals with the functions of the Board of Directors or committees thereof or that he otherwise determines requires their attention. Directors may at any time review a log of all correspondence we receive that is addressed to members of our Board of Directors and request copies of any such correspondence. Concerns relating to accounting, internal controls, or auditing matters may be communicated in this manner, or may be submitted on an anonymous basis via e-mail at audit@stemline.com. These concerns will be immediately brought to the attention of our Audit Committee and handled in accordance with procedures established by our Audit Committee.

Audit Committee

The Audit Committee currently consists of Ron Bentsur, Alan Forman and Kenneth Zuerblis. Mr. Zuerblis chairs the Audit Committee.

The Audit Committee held four (4) meetings and took one (1) action by unanimous written consent during the fiscal year ended December 31, 2016. The duties and responsibilities of the Audit Committee are set forth in the Charter of the Audit Committee which was recently reviewed and updated by our Audit Committee. A copy of the Charter of the Audit Committee is available on our website, located at www.stemline.com. Among other things, the duties and responsibilities of the Audit Committee include reviewing and monitoring our financial statements and internal accounting procedures, the selection of our independent registered public accounting firm and consulting with and reviewing the services provided by our independent registered public accounting firm. Our Audit Committee has sole discretion over the retention, compensation, evaluation and oversight of our independent registered public accounting firm. The SEC and Nasdaq have established rules and regulations regarding the composition of audit committees and the qualifications of audit committee members. Our Board of Directors has examined the composition of our Audit Committee and the qualifications of our Audit Committee members in light of the current rules and regulations governing audit committees. Based upon this examination, our Board of Directors has determined that each member of our Audit Committee is independent and is otherwise qualified to be a member of our Audit Committee in accordance with the rules of the SEC and Nasdaq.

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Additionally, the SEC requires that at least one member of the Audit Committee have a "heightened" level of financial and accounting sophistication. Such a person is known as the "audit committee financial expert" under the SEC's rules. Our Board of Directors has determined that Mr. Zuerblis is an "audit committee financial expert," as the SEC defines that term, and is an independent member of our Board of Directors and our Audit Committee. Please see Mr. Zuerblis' biography under "Corporate Governance—Our Board of Directors" beginning on page 5 for a description of his relevant experience.

The report of the Audit Committee can be found on page 12 of this proxy statement.

Compensation Committee

The Compensation Committee currently consists of Ron Bentsur, Eric L. Dobmeier and Alan Forman. Mr. Dobmeier chairs the Compensation Committee.

The Compensation Committee held one (1) meeting and took two (2) actions by unanimous written consent during the fiscal year ended December 31, 2016. The duties and responsibilities of the Compensation Committee are set forth in the Charter of the Compensation Committee. A copy of the Charter of the Compensation Committee is available on our website, located at www.stemline.com. As discussed in its Charter, among other things, the duties and responsibilities of the Compensation Committee include evaluating the performance of our executive officers, determining the overall compensation of our executive officers and administering all executive compensation programs, including, but not limited to, our incentive and equity-based plans. The Compensation Committee evaluates the performance of our executive officers on an annual basis and reviews and approves on an annual basis all compensation programs and awards relating to such officers. The Compensation Committee applies discretion in the determination of individual executive compensation packages to ensure compliance with the Company's compensation philosophy. Our Chief Executive Officer makes recommendations to the Compensation Committee with respect to the compensation packages for officers other than himself. The Compensation Committee may delegate its authority to grant awards to certain employees to a special committee consisting of one or more directors who may but need not be officers of the Company. The Compensation Committee has delegated authority to Dr. Bergstein to make certain grants to non-executive employees.

Nasdaq has established rules and regulations regarding the composition of compensation committees and the qualifications of compensation committee members. Our Board of Directors has examined the composition of our Compensation Committee and the qualifications of our Compensation Committee members in light of the current rules and regulations governing compensation committees. Based upon this examination, our Board of Directors has determined that each member of our Compensation Committee is independent and is otherwise qualified to be a member of our Compensation Committee in accordance with such rules.

The report of the Compensation Committee can be found on page 21 of this proxy statement.

Nominating and Corporate Governance Committee

The Nominating and Corporate Governance Committee, or the Nominating Committee, currently consists of Eric L. Dobmeier, Alan Forman and Kenneth Zuerblis. Alan Forman chairs the Nominating Committee. The Nominating Committee did not hold a meeting during the fiscal year ended December 31, 2016. The duties and responsibilities of the Nominating Committee are set forth in the Nominating and Corporate Governance Committee Charter. A copy of the Nominating and Corporate Governance Committee Charter is available on our website at www.stemline.com. Among other things, the duties and responsibilities of the Nominating Committee include identifying individuals qualified to become Board members, evaluating the overall effectiveness of the Board, developing, mentoring and

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evaluating applicable corporate governance practices of the Company, and performing such other duties as enumerated in and consistent with the Charter.

Our Nominating Committee will also consider candidates recommended by stockholders for nomination to our Board of Directors. A stockholder who wishes to recommend a candidate for nomination to our Board of Directors must submit such recommendation to our Corporate Secretary, Kenneth Hoberman, at 750 Lexington Avenue, Eleventh Floor, New York, New York 10022. Any recommendation must be received not less than 90 calendar days nor more than 120 calendar days before the anniversary date of the previous year's annual meeting. All stockholder recommendations of candidates for nomination for election to our Board of Directors must be in writing and must set forth the following: (i) the candidate's name, age, business address, and other contact information, (ii) the number of shares of Stemline common stock beneficially owned by the candidate, (iii) a complete description of the candidate's qualifications, experience, background and affiliations, as would be required to be disclosed in the proxy statement pursuant to Schedule 14A under the Exchange Act, (iv) a sworn or certified statement by the candidate in which he or she consents to being named in the proxy statement as a nominee and to serve as director if elected, and (v) the name and address of the stockholder(s) of record making such a recommendation and the number of shares owned by the recommending stockholders.

We believe that our Board of Directors as a whole should encompass a range of talent, skill, and expertise enabling it to provide sound guidance with respect to our operations and interests. Our Nominating Committee evaluates all candidates to our Board of Directors by reviewing their biographical information and qualifications. If the independent directors determine that a candidate is qualified to serve on our Board of Directors, such candidate is interviewed by at least one of the independent directors and our Chief Executive Officer. Other members of the Board of Directors also have an opportunity to interview qualified candidates. The independent directors then determine, based on the background information and the information obtained in the interviews, whether to recommend to the Board of Directors that the candidate be nominated for approval by the stockholders to fill a directorship. With respect to an incumbent director whom the independent directors are considering as a potential nominee for re-election, the independent directors review and consider the incumbent director's service during his or her term, including the number of meetings attended, level of participation, and overall contribution to the Board of Directors. The manner in which the independent directors evaluate a potential nominee will not differ based on whether the candidate is recommended by our directors or stockholders.

Nasdaq has established rules and regulations regarding the composition of nominating committees and the qualifications of nominating committee members. Our Board of Directors has examined the composition of our Nominating Committee and the qualifications of our Nominating Committee members in light of the current rules and regulations governing nominating committees. Based upon this examination, our Board of Directors has determined that each member of our Nominating Committee is independent and is otherwise qualified to be a member of our Nominating Committee in accordance with such rules.

We do not have a formal policy in place with regard to the consideration of diversity in considering candidates for our Board of Directors, but the Board of Directors strives to nominate candidates with a variety of complementary skills so that, as a group, the Board of Directors will possess the appropriate talent, skills and expertise to oversee our business.

Code of Business Conduct and Ethics

We have adopted a written code of business conduct and ethics that applies to our directors, officers and employees, including our principal executive officer and principal financial officer. A current copy of the code is posted on the Corporate Governance section of our website at www.stemline.com.

INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM FEES AND OTHER MATTERS

Ernst & Young LLP, the independent registered public accounting firm that audited our financial statements for the years ended December 31, 2016 and December 31, 2015, has served as our independent registered public accounting firm since 2011. We expect a representative of Ernst & Young LLP to be present at the Annual Meeting. The representative will have an opportunity to make a statement and will be available to answer your questions.

Our Board of Directors has asked the stockholders to ratify the selection of Ernst & Young LLP as our independent registered public accounting firm. See Proposal Two: Ratification of Appointment of Ernst & Young LLP as Our Independent Registered Public Accounting Firm on page 38 of this proxy statement. The Audit Committee has reviewed the fees described below and concluded that the payment of such fees is compatible with maintaining Ernst & Young LLP's independence. All proposed engagements of Ernst & Young LLP, whether for audit services, audit-related services, tax services, or permissible non-audit services, were pre-approved by our Audit Committee.

Registered Public Accounting Firm Fees and Other Matters

The following table summarizes the fees of Ernst & Young LLP, our current registered public accounting firm, for 2016 and 2015:

	<u>2016</u>	<u>2015</u>
	<u>Ernst & Young LLP</u>	<u>Ernst & Young LLP</u>
Audit Fees(1)	\$ 528,000	\$ 337,998
Audit-Related Fees(2)	—	—
Tax Fees(3)	—	—
All Other Fees(4)	—	—
Total Fees	<u>\$ 528,000</u>	<u>\$ 337,998</u>

- (1) Audit Fees. For the fiscal years ended December 31, 2016 and December 31, 2015, Ernst & Young LLP billed us an aggregate of approximately \$528,000 and \$337,998, respectively, in fees for the professional services rendered in connection with the audits of our annual financial statements for those two fiscal years and our registration statement filings.
- (2) Audit-Related Fees. During the fiscal years ended December 31, 2016 and December 31, 2015, we were not billed by Ernst & Young LLP for professional services rendered in connection with audit-related services reasonably related to the performance of the audits and reviews.
- (3) Tax Fees. During the fiscal years ended December 31, 2016 and December 31, 2015, we were not billed by Ernst & Young LLP, for any tax related fees.
- (4) All Other Fees. During the fiscal years ended December 31, 2016 and December 31, 2015, we were not billed by Ernst & Young LLP for any fees for services, other than those described above, rendered to us for those two fiscal years.

Pre-Approval of Services

Our Audit Committee sets forth the procedures under which services provided by our independent registered public accounting firm will be pre-approved by our Audit Committee. The potential services that might be provided by our independent registered public accounting firm fall into two categories:

- Services that are permitted, including the audit of our annual financial statements, the review of our quarterly financial statements, related attestations, benefit plan audits and similar audit reports, financial and other due diligence on acquisitions, and federal, state, and non-US tax services; and
- Services that may be permitted, subject to individual pre-approval, including compliance and internal-control reviews, indirect tax services such as transfer pricing and customs and duties, and forensic auditing.

Services that our independent registered public accounting firm may not legally provide include such services as bookkeeping, certain human resources services, internal audit outsourcing, and investment or investment banking advice.

All proposed engagements of our independent registered public accounting firm, whether for audit services or permissible non-audit services, are pre-approved by the Audit Committee. We jointly prepare a schedule with our independent registered public accounting firm that outlines services that we reasonably expect we will need from our independent registered public accounting firm, and categorize them according to the classifications described above. Each service identified is reviewed and approved or rejected by the Audit Committee.

REPORT OF THE AUDIT COMMITTEE

In monitoring the preparation of our financial statements, the Audit Committee met with both management and Ernst & Young LLP, our independent registered public accounting firm for the year ended December 31, 2016, to review and discuss all financial statements prior to their issuance and to discuss any and all significant accounting issues. Management and our independent registered public accounting firm advised the Audit Committee that each of the financial statements were prepared in accordance with generally accepted accounting principles. The Audit Committee's review included a discussion of the matters required to be discussed pursuant to the Statement on Auditing Standards No. 61, "Communication with Audit Committees," as amended, (Codification of Statements on Auditing Standards, AU Section 380) as adopted by the Public Company Accounting Oversight Board (PCAOB) in Rule 3200T, or SAS 61. SAS 61 requires our independent registered public accounting firm to discuss with the Audit Committee, among other things, the following:

- Methods used to account for significant or unusual transactions;
- The effect of any accounting policies in controversial or emerging areas for which there is a lack of authoritative guidance or consensus;
- The process used by management to formulate sensitive accounting estimates and the basis for the independent registered public accounting firm's conclusion regarding the reasonableness of any such estimates; and
- Any disagreements with management over the application of accounting principles, the basis for management's accounting estimates and the disclosures necessary in the financial statements.

The Audit Committee has discussed the independence of Ernst & Young LLP, our independent registered public accounting firm for the year ended December 31, 2016, including the written disclosures made by Ernst & Young LLP to the Audit Committee, as required PCAOB Rule 3526, "Communication with Audit Committees Concerning Independence." PCAOB Rule 3526 requires the

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independent registered public accounting firm to (i) disclose in writing all relationships that, in the independent registered public accounting firm's professional opinion, may reasonably be thought to bear on independence, (ii) confirm their perceived independence, and (iii) engage in a discussion of independence with the Audit Committee.

Finally, the Audit Committee continues to monitor the scope and adequacy of our internal controls and other procedures, including any and all proposals for adequate staffing and for strengthening internal procedures and controls where appropriate and necessary.

On the basis of these reviews and discussions, the Audit Committee recommended to the Board of Directors that it approve the inclusion of our audited financial statements in our annual report on Form 10-K for the fiscal year ended December 31, 2016, for filing with the SEC.

The Audit Committee reviewed its written Charter previously adopted by our Board of Directors. Following this review, the Audit Committee revised and updated the Audit Committee Charter.

By the Audit Committee of the Board of Directors,

Kenneth Zuerblis, Chairperson
Ron Bentsur
Alan Forman

April 28, 2017

New York, New York

OUR EXECUTIVE OFFICERS

Our current executive officers are as follows:

Name	Age	Position
Ivan Bergstein, M.D.	51	President, Chief Executive Officer, and Chairman of the Board of Directors
Kenneth Hoberman	52	Chief Operating Officer
David G. Gionco	56	Vice President of Finance and Chief Accounting Officer

No executive officer is related by blood, marriage or adoption to any other director or executive officer. The biography of Ivan Bergstein, M.D. is presented in connection with "Corporate Governance" beginning on page 5 of this proxy statement.

Kenneth Hoberman, 52, has served as our Chief Operating Officer since 2012. Mr. Hoberman has extensive financial, accounting, investor relations, corporate governance and business development experience including M&A, strategic alliances and partnerships both domestic and international. His operational expertise includes regulatory oversight, human resources, manufacturing and clinical development. He was previously Vice President of Corporate and Business Development of Keryx Biopharmaceuticals, Inc. (Nasdaq: KERX), where he was instrumental in the success of the company. He also helped secure multiple sources of capital including over \$200 million in equity investments through public and private offerings. He also initiated and executed a \$100 million strategic alliance and originated, negotiated and closed dozens of licensing and operational contracts, helping to grow the company's market capitalization to over \$1 billion. He also led the team that originated, in-licensed, and developed Auryxia™ which was approved by the FDA in September 2014. He is on the Board of Directors of TG Therapeutics, Inc. (Nasdaq: TGTX). He received a B.S.B.A. in Finance from Boston University and completed post-baccalaureate studies at Columbia University.

David G. Gionco, 56, was appointed Vice President of Finance and Chief Accounting Officer of Stemline in January 2014. Mr. Gionco was previously Vice President, Chief Financial Officer and Chief Accounting Officer of Savient Pharmaceuticals, Inc. where he oversaw the finance function for the organization and was instrumental in helping to grow the company, raising over \$350 million. Prior to this, Mr. Gionco held audit, corporate accounting, financial planning, finance and controller roles at companies including Merck & Co., Inc. ("Merck") and, previously, Medco Health Solutions, Inc., which was acquired by Merck during his tenure. At Merck, Mr. Gionco held various financial and accounting positions of increasing responsibility. Mr. Gionco also held senior financial positions at Progenics Pharmaceuticals, Inc. and Odyssey Pharmaceuticals, Inc. (a subsidiary of Pliva, Inc., now Teva Pharmaceutical Industries Ltd.). Mr. Gionco previously had 7 years of financial auditing experience with a major public accounting firm. Mr. Gionco holds a B.S. in Accounting from Fairleigh Dickinson University and an M.B.A. in Finance from Rutgers University. Mr. Gionco is a Certified Public Accountant in the State of New York.

COMPENSATION DISCUSSION AND ANALYSIS

In the paragraphs that follow, we give an overview and analysis of our compensation program and policies, the material compensation decisions we have made under those programs and policies with respect to our executive officers, and the material factors that we considered in making those decisions. Later in this proxy statement under the heading "Executive Compensation," you will find a series of tables containing specific information about the compensation earned or paid in 2016 to the following individuals, whom we refer to as our named executive officers, or NEOs:

- Ivan Bergstein, M.D., our President and Chief Executive Officer;
- Kenneth Hoberman, our Chief Operating Officer; and
- David Gionco, our Chief Accounting Officer and Vice President of Finance.

Compensation Philosophy and Objectives

Our compensation programs are designed to motivate our employees to work toward achievement of our corporate mission to create long-term sustained stockholder value by discovering, acquiring, developing and commercializing proprietary therapeutics. In order to achieve our key business and strategic goals, we must be able to attract, retain and motivate quality employees in an exceptionally competitive environment. Our industry is highly scientific, regulated, scrutinized and dynamic, and as a result, we require employees that are highly educated, dedicated and experienced. The primary objectives of our executive compensation program are to:

- attract, retain and motivate experienced and talented executives;
- ensure executive compensation is aligned with our corporate strategies, research and development programs and business goals;
- recognize the individual contributions of executives while fostering a shared commitment among executives;
- promote the achievement of key strategic, development and operational performance measures by linking compensation to the achievement of measurable corporate performance goals; and
- align the interests of our executives with our stockholders by rewarding performance that leads to the creation of stockholder value.

Determining Executive Compensation

In determining compensation levels of our executive officers, our Compensation Committee considers the compensation objectives noted above, our financial status, the contributions that the management team had made to our business and trends in the industry in which we compete. Our Compensation Committee also considered the applicable terms of any employment agreements in effect with any of our executive officers. Currently, we have employment agreements with Dr. Bergstein, Mr. Hoberman and Mr. Gionco. Mr. Hoberman's employment agreement was entered into in January 2016. Other than for new hires, our Compensation Committee evaluates compensation annually at the beginning of any year for service provided in the prior year.

Our Chief Executive Officer continues to evaluate the compensation and performance of each other executive and makes a recommendation to our Compensation Committee with respect to the compensation packages for our executive officers, as to:

- the level of contributions made to the general management and guidance of the Company;
- whether salaries should be increased;

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- the amount of bonuses to be paid, including the achievement of stated corporate and individual performance goals; and
- whether or not equity incentive awards should be made.

These recommendations are reviewed by our Compensation Committee and taken into account when our Compensation Committee makes a final determination on all such matters.

The purpose of our executive compensation program is to set and maintain compensation at levels that are appropriate based on each executive's level of experience, performance and responsibility and competitive with those of other companies in our industry and our region that compete with us for executive talent. In addition, our executive compensation program ties a substantial portion of each executive's overall compensation to key strategic, financial and operational goals. We have provided, and expect to continue to provide, a portion of our executive compensation in the form of stock-based compensation, which we believe helps to retain our executives and aligns their interests with those of our stockholders by allowing them to participate in the long-term success of our Company.

When setting target compensation and determining the annual incentive payouts for the named executive officers for fiscal year 2016, our Compensation Committee considered publicly available compensation data for the following companies in the biotechnology and pharmaceutical industry: Advaxis Inc., Atara Biotherapeutics Inc., Celldex Therapeutics Inc., ChemoCentryx Inc., CTI BioPharma Corp., CytRx Corporation, Dicerna Pharmaceuticals, Inc., Dynavax Technologies Corp., Galena Biopharma Inc., Geron Corp., Immune Design Corp., ImmunoGen Inc., Infinity Pharmaceuticals Inc., Karyopharm Therapeutics Inc., Loxo Oncology, Newlink Genetics Corp, Oncomed Pharmaceuticals, Inc., Regulus Therapeutics, Inc., Spectrum Pharmaceuticals Inc., Synta Pharmaceuticals Corp., TG Therapeutics, Inc. and Verastem, Inc.

Components of Our Executive Compensation Program

Our executive compensation program consists of the following components:

<u>Compensation Element</u>	<u>Purpose</u>
Base salary	Base salary represents the fixed portion of an executive's annual compensation and is intended to recognize the executive's value to the Company based on skills and experience relative to the responsibilities of his position.
Annual performance-based cash bonuses	Annual cash incentive awards represent the portion of an executive's compensation that is intended to vary as a direct reflection of Company and individual performance for the year.
Stock-based awards	Long-term equity awards vest over a multi-year period and are intended to link the interests of the executives to those of the stockholders and to encourage retention.
Health and welfare benefits	These benefits are intended to provide competitive levels of medical, dental and disability coverage. Our executives participate in the same programs offered to all of our eligible employees.
Severance benefits	Certain of our executives have employment agreements that provide for severance benefits in certain circumstances. These severance benefits are intended to incentivize the executives to continue to create stockholder value in connection with change in control or other situations in which they could be terminated without cause.

While we set target annual cash bonus opportunities as a percentage of base salary, we do not have a formal or informal policy for allocating between long-term and short-term compensation, between cash and non-cash compensation or among the different forms of non-cash compensation. Instead, our Compensation Committee, after reviewing data it considers relevant, has determined subjectively what it believes to be the appropriate level and mix of the various compensation components. Ultimately, the objective in allocating between long-term and currently paid compensation is to ensure adequate base compensation to attract and retain personnel, while providing incentives to maximize long-term value for our Company and our stockholders.

Our employment agreements with Dr. Bergstein, Mr. Hoberman and Mr. Gionco contain provisions relating to base salaries, annual bonuses and severance and change in control arrangements. Details of these employment agreements are provided below under the heading "Employment Agreements."

2016 Executive Compensation

Base Salary

We use base salaries to recognize the experience, skills, knowledge and responsibilities of our employees, including our executive officers. Base salaries for our named executive officers initially were established through arm's-length negotiation at the time the executive was hired, taking into account the position for which the executive was considered and the executive's qualifications, prior experience and prior salary. Our Compensation Committee evaluates base salaries on an annual basis.

For 2016, Dr. Bergstein's annual base salary was increased to \$535,613 (3.5% increase from 2015), and Mr. Hoberman's salary was increased to \$428,490 (which represented an increase of 3.5%

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from 2015). Mr. Gionco's annual base salary was increased to \$294,587 (3.5% increase from 2015). We believe that the base salaries for our named executive officers are aligned with our executive compensation objectives stated above and are competitive with those provided by similarly situated companies. In approving these salary increases, our Compensation Committee considered the factors discussed above, including the qualifications, prior experience and prior salary of each of the executives, and various Company accomplishments under their leadership.

We expect that our Compensation Committee will continue to annually review and evaluate, with input from our Chief Executive Officer, the need for adjustment of the base salaries of our executives based on changes and expected changes in the scope of an executive's responsibilities, including promotions, the individual contributions made by and performance of the executive during the prior year, the executive's performance over a period of years, overall labor market conditions, the relative ease or difficulty of replacing the executive with a well-qualified person, our overall growth and development as a company, general salary trends in our industry and among our peer group. In making decisions regarding salary increases, we may also draw upon the experience of members of our Board of Directors with other companies.

Annual Cash Bonus

For 2016, our Compensation Committee adopted an annual cash bonus program primarily based upon the achievement of specified annual corporate goals that it established in advance. Our annual cash bonus program emphasizes pay-for-performance and is intended to closely align executive compensation with achievement of specified operating results. The performance goals established by our Compensation Committee are based on the business strategy of the Company and the objective of building stockholder value.

Our process for determining if and the extent to which an annual cash bonus will be payable to a named executive officer consists of three steps. First, at the beginning of the year, our Compensation Committee determines the target annual cash incentive award for the named executive officer based on a percentage of the officer's annual base salary for that year. Second, our Compensation Committee establishes the specific performance goals that must be met for the officer to receive the award. Third, shortly after the end of the year, the Compensation Committee determines the extent to which these performance goals were achieved and determines the amount of the award. Our Compensation Committee works with our Chief Executive Officer to develop corporate goals that they believe can be reasonably achieved with hard work over the course of the year.

For 2016, our Compensation Committee set the annual bonus opportunities of the NEOs at the following percentages of their base salary:

Executive	Target Annual Cash Bonus	
	(as a % of Annual Base Salary)	(\$)
Ivan Bergstein, M.D.	75%	401,709
Kenneth Hoberman	50%	214,245
David Gionco	50%	147,293

Corporate Performance Goals

Our 2016 annual incentive awards were based, in large part, upon the achievement of a combination of clinical, regulatory and manufacturing goals related to our products (weighted at an aggregate of 95% of the target awards) and subjective goals relating to human resources functions and management (weighted at 5% of the target awards). Also, reach goals were identified and provided additional opportunities of obtaining an annual incentive award. The goals were achieved at an aggregate level of 100% reflecting the successful achievement of clinical, regulatory, operational,

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financial, human resources, and other goals as well as some of our reach goals. The Compensation Committee considered performance against these goals in determining the amounts paid as annual incentive awards in 2016, as well as its subjective assessment of our executives' contributions to Company performance.

Stock-Based Awards

Our equity award program is the primary vehicle for offering long-term incentives to our executives. While we do not have any equity ownership guidelines for our executives, we believe that equity grants provide our executives with a strong link to our long-term performance, create an ownership culture and help to align the interests of our executives and our stockholders. In addition, the vesting feature of our equity awards contributes to executive retention by providing an incentive for our executives to remain in our employ during the vesting period. Under our 2016 Equity Incentive Plan, the Compensation Committee or the Board of Directors may grant stock options, restricted stock awards, restricted stock unit awards, stock appreciation rights and other stock-based equity awards.

Historically, our equity awards have been granted in the form of stock options and restricted stock. Because our executives profit from stock options only if our stock price increases relative to the stock option's exercise price, we believe stock options provide meaningful incentives for our executives to achieve increases in the value of our stock over time. The exercise price of all stock options granted in 2016 was equal to the fair market value of shares of our common stock on the date of grant, which was determined by reference to the closing market price of our common stock on the date of grant. The stock options and restricted stock awards that we granted to our executives in 2016 vest over a period of four years following the grant date, other than the options and restricted stock granted to Mr. Hoberman upon signing of his employment contract, half of which vests over a three-year period, and the other half of which vests in four years, with accelerated vesting if certain performance goals relating to the Company's market capitalization are achieved. In determining the number of equity awards to grant to the executives, our Compensation Committee considered the factors discussed above, including the qualifications, prior experience and prior equity awards granted to each of the executives, and various Company accomplishments under their leadership.

We expect that our Compensation Committee will continue to use annual equity awards to compensate our executive officers. We may also make additional discretionary grants, typically in connection with the promotion of an employee, to reward an employee, for retention purposes or in other circumstances as the Compensation Committee deems appropriate.

Benefits and Other Compensation

We believe that establishing competitive benefit packages for our employees is an important factor in attracting and retaining highly qualified personnel. We maintain a health benefits program that is provided to all employees. All of our executives are eligible to participate in all of our employee benefit plans, in each case on the same basis as other employees.

Severance and Change in Control Benefits

Pursuant to employment agreements we have entered into with our named executive officers, Messrs. Bergstein, Hoberman and Gionco are entitled to severance benefits in the event of the termination of their employment under specified circumstances, including termination following a change in control of our Company. Please refer to "Employment Agreements" for a more detailed discussion of these benefits. We have provided estimates of the value of the severance payments made and other benefits provided to executives under various termination circumstances, which is presented in connection with "Executive Compensation" beginning on page 17.

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We believe that providing these benefits helps us compete for executive talent. Based on the substantial business experience of our executive officers, we believe that our severance and change in control benefits are generally in line with severance packages offered to executives of companies at comparable stages of development in our industry and related industries.

Minimum Holding Policy

The Company maintains a minimum holding policy for equity awards granted to executive officers. This policy, which became effective January 1, 2016, provides that every executive officer of the Company is required to retain at least 50% of the "net shares" received upon exercise or settlement of stock options granted by the Company (whether time-based or performance-based) for a period of at least twelve months, or, if earlier, until (i) the executive's satisfaction of share ownership requirements under guidelines adopted by the Company from time to time or (ii) the termination of the executive's employment. For these purposes "net shares" are those shares held by the executive after deducting any shares withheld by the Company or sold by the executive for the sole purpose of satisfying the exercise price and/or the executive's tax liabilities and related fees, if any, related to the exercise or settlement event.

Clawback Policy

The Company maintains a compensation recoupment policy that became effective January 1, 2016. This policy provides that in the event the Company is required to prepare an accounting restatement due to material noncompliance with financial reporting requirements under the U.S. securities laws, it will seek to recover incentive-based compensation (including equity compensation) received by any current or former executive officer during the three-year period preceding the date on which the accounting restatement was required to be made. The amount to be recovered is the excess of the amount paid calculated by reference to the erroneous data, over the amount that would have been paid to the executive officer calculated using the corrected data. This compensation recovery would be applied regardless of whether the executive officer engaged in misconduct or otherwise caused or contributed to the requirement for the restatement.

In addition, the policy provides that the Company will seek reimbursement of any non-equity incentive compensation paid to any current or former employee or executive officer after January 1, 2016 and within 12 months prior to the date the Company determines that such person engaged in misconduct, where (i) the payment was predicated upon the achievement of specified financial results, (ii) the financial results were subsequently the subject of a restatement or other material adjustment, (iii) in the Compensation Committee's view the individual engaged in misconduct which caused or contributed to the need for the restatement or material adjustment, and (iv) a lower payment would have been made to the individual based upon the correct financial results. In each such instance, the Company will seek to recover the individual's entire non-equity incentive compensation payment for the relevant periods.

REPORT OF THE COMPENSATION COMMITTEE

The Compensation Committee of the Board of Directors has reviewed and discussed with management the Compensation Discussion and Analysis set forth above. Based on the review and discussions noted above, the Compensation Committee recommended to the Board of Directors that the Compensation Discussion and Analysis be included in this proxy statement and incorporated by reference in the Company's annual report on Form 10-K for the fiscal year ended December 31, 2016, for filing with the SEC.

By the Compensation Committee of the Board of Directors,

Eric L. Dobmeier, Chairperson
Ron Bentsur
Alan Forman

April 28, 2017

New York, New York

RISK ASSESSMENT OF COMPENSATION PROGRAMS

The Compensation Committee has reviewed with management the design and operation of our incentive compensation arrangements for all employees, including executive officers, for the purpose of determining whether such programs might encourage inappropriate risk-taking that could have a material adverse effect on the Company. Management and the Compensation Committee reviewed the Company's incentive compensation arrangements for the purpose of identifying any aspects of such programs that might encourage behaviors that could exacerbate business risks. In conducting this assessment, the Compensation Committee considered, among other things, the performance objectives used in connection with these incentive awards and the features of the Company's compensation program that are designed to mitigate compensation-related risk. The Compensation Committee concluded that any risks arising from the Company's compensation plans, policies and practices are not reasonably likely to have a material adverse effect on the Company.

EXECUTIVE COMPENSATION

The following table sets forth the total compensation awarded to, earned by or paid to our named executive officers during 2016, 2015 and 2014.

Summary Compensation Table

Name and Principal Position	Year	Salary (\$)	Bonus (\$)	Stock Awards \$(1)	Option Awards \$(2)	Non-Equity Incentive Plan Compensation \$(3)	All Other Compensation (\$)	Total (\$)
Ivan Bergstein, M.D.	2016	535,613	401,709	733,702	1,769,653	—	—	3,440,677
<i>President and Chief Executive Officer</i>	2015	517,500	385,214	791,595	1,583,405	400,000	—	3,677,714
	2014	500,000	375,000	722,893	1,463,207	75,000	—	3,136,100
Kenneth Hoberman	2016	428,490	214,245	1,227,998	1,466,022	—	—	3,336,755
<i>Chief Operating Officer</i>	2015	414,000	205,448	383,969	768,029	—	—	1,771,446
	2014	400,000	200,000	375,374	759,820	40,000	—	1,775,194
David Gionco	2016	294,587	147,293	296,735	715,705	—	—	1,454,320
<i>Vice President of Finance and Chief Accounting Officer</i>	2015	284,625	141,245	182,212	364,487	—	—	972,569
	2014	263,542	96,250	654,600	657,414	19,250	10,413	1,701,469

- (1) The amounts in the "Stock Awards" column reflect the aggregate grant date fair value of restricted stock granted during the year computed in accordance with the provisions of FASB ASC Topic 718. The assumptions used in calculating these amounts are incorporated by reference to Note 2 to the financial statements in our annual report on Form 10-K filed with the SEC on March 16, 2017.
- (2) The amounts in the "Option Awards" column reflect the aggregate grant date fair value of stock options granted during the year computed in accordance with the provisions of FASB ASC Topic 718. The assumptions used in calculating these amounts are incorporated by reference to Note 2 to the financial statements in our annual report on Form 10-K filed with the SEC on March 16, 2017.
- (3) During 2014, non-equity incentive plan compensation includes cash incentive awards earned by Dr. Bergstein, Mr. Hoberman and Mr. Gionco based on the Board of Directors' evaluation of the NEO's performance against certain reach goals and objectives. During 2015, Dr. Bergstein earned a \$400,000 cash award based upon certain performance objectives met by the Company.

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The following table sets forth information regarding grants of plan-based awards to our named executive officers during 2016.

Grants of Plan Based Awards in 2016

Name	Grant Date	Approval Date(1)	Estimated Future Payouts Under Non-Equity Incentive Plan Awards (\$)		Estimated Future Payouts Under Equity Incentive Plan Awards Target (#)	All Other Stock Awards: Number of Shares of Stock or Units(2)	All Other Option Awards: Number of Securities Underlying Options (3)	Exercise or Base Price of Option Awards (\$/Sh)	Fair Value of Stock and Option Awards Grant Date \$(4)
			Target	Maximum					
Ivan Bergstein, M.D.	02/24/16	02/24/16	—	—	—	178,083	—	—	733,702
	05/25/16	02/24/16	—	—	—	—	356,700	4.12	1,769,653
Kenneth Hoberman	01/07/16	01/07/16	—	—	—	75,000	—	—	432,750
	01/07/16	01/07/16	—	—	—	—	75,000	5.77	280,678
	01/07/16	01/07/16	—	—	—	75,000	—	—	432,750
	01/07/16	01/07/16	—	—	—	—	75,000	5.77	311,015
	02/24/16	02/24/16	—	—	—	87,985	—	—	362,498
	05/25/16	02/24/16	—	—	—	—	176,234	4.12	874,329
David Gionco	02/24/16	02/24/16	—	—	—	72,023	—	—	296,735
	05/25/16	02/24/16	—	—	—	—	144,261	4.12	715,705

- (1) Represents the date the grant was approved by the Compensation Committee.
- (2) Represents shares of restricted stock that are scheduled to vest as to 25% of the shares on each of the first four anniversaries of the grant date provided the executive is providing services on each such anniversary, except for the January 7, 2016 award to Mr. Hoberman, of which 75,000 shares vest in equal installments on each of the first three anniversaries of the grant date, and of which 75,000 shares vest on the fourth anniversary of the grant date, with accelerated vesting if certain market capitalization goals are achieved, in each case on condition that he is providing services on each such anniversary.
- (3) Represents stock options that are scheduled to vest as to 25% of the shares on each of the first four anniversaries of the grant date provided the executive is providing services on each such anniversary, except for the January 7, 2016 award to Mr. Hoberman, of which 75,000 shares vest in equal installments on each of the first three anniversaries of the grant date, and of which 75,000 shares vest on the fourth anniversary of the grant date, with accelerated vesting if certain market capitalization goals are achieved, in each case on condition that he is providing services on each such anniversary.
- (4) The amounts in the "Grant Date Fair Value of Stock and Option Awards" column reflect the grant date fair value of stock and option awards granted in 2016 calculated in accordance with FASB ASC Topic 718. The assumptions used in calculating these amounts are incorporated by reference to Note 2 to the financial statements in our annual report on Form 10-K filed with the SEC on March 16, 2017.

Employment Agreements

During 2016, Ivan Bergstein, M.D., our President and Chief Executive Officer, Kenneth Hoberman, our Vice President of Operations and Chief Operating Officer, and David Gionco, our Vice President of Finance and Chief Accounting Officer, had employment agreements with the Company. These employment agreements provide that employment will continue until either we or the employee provides written notice of termination in accordance with the terms thereof. In addition, each of these executive officers is bound by non-competition, confidentiality and employee and customer non-solicitation restrictions that, among other things, prevent the executive from competing with us during the term of his employment and for a specified time thereafter.

Ivan Bergstein, M.D.

In June 2012, we entered into an amended and restated employment agreement with Dr. Bergstein, which became effective on the effective date of the registration statement relating to our initial public offering. The employment agreement provided for an initial annual base salary of \$458,779, subject to increase by the Company and annual increases based on a Consumer Price Index, and a target annual performance bonus based on a percentage of Dr. Bergstein's annual base salary, subject to increase by the Company. For 2016, Mr. Bergstein's base salary was \$535,613, and his target annual performance bonus was 75% of base salary. Dr. Bergstein is also eligible to receive bonuses, in amounts and forms to be determined by the Board of Directors, upon our achieving specified clinical development, financial and operational milestones. If we terminate Dr. Bergstein without "cause" or

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for "disability," or if he terminates his employment with us for "good reason" (each as defined in his employment agreement), we are obligated to pay Dr. Bergstein a sum equal to 24 months of his then-current base salary in a lump sum six months following such termination, any unpaid annual performance and other bonuses earned in the prior year or the current year, provide continuing coverage under our group medical benefits for up to six months following such termination. In the event a change in control occurs within one year of a termination without cause or for good reason, we are obligated to pay Dr. Bergstein a lump sum payment equivalent to 2.99 times the aggregate of his then-current base salary and target annual performance bonus (less any severance amounts already received).

David G. Gionco

We entered into an employment agreement with David G. Gionco in January 2014. The employment agreement provides for an initial annual base salary of \$275,000, subject to increase by the Company at any time in its sole discretion. For 2016, Mr. Gionco's base salary was \$294,587. Pursuant to his agreement, Mr. Gionco is also eligible to receive an annual cash bonus, not to exceed 35% of his then-base salary, subject to the achievement of performance goals established by the Company. The Compensation Committee in February 2016 authorized Mr. Gionco's annual target annual bonus to be increased to 50% of his current salary. If the Company terminates his employment without cause or if he resigns his employment for good reason, he will be entitled to a severance payment equal to 12 months' base salary and reimbursement for a portion of the premiums for continuing healthcare coverage under COBRA for a period of 12 months.

Kenneth Hoberman

We entered into an employment agreement with Kenneth Hoberman in January 2016. The employment agreement provides for an annual base salary of \$414,000, subject to a minimum annual increase based on the Consumer Price Index. For 2016, Mr. Hoberman's base salary was \$428,490. He is also eligible to receive an annual performance-based cash bonus with a target of 50% of his base salary, as determined by the Company's Board of Directors or the Compensation Committee. In addition, Mr. Hoberman is eligible to earn additional incentive bonuses upon the Company achieving certain performance milestones as defined in the employment agreement. In the event that (i) the Company terminates his employment without Cause (as defined in the Employment Agreement), (ii) he resigns from his employment for Good Reason (as defined in the Employment Agreement), or (iii) he is terminated as a result of death or a disability, Mr. Hoberman will be entitled to a lump sum cash severance payment in an amount equal to 18 months of base salary plus his last annual performance bonus, accelerated vesting on all outstanding equity awards and continued health coverage for 18 months.

Outstanding Equity Awards at December 31, 2016

Name	Option Awards				Stock Awards	
	Number of securities underlying unexercised options (#) exercisable	Number of securities underlying unexercised options (#) unexercisable	Option exercise price (\$)	Option Expiration Date	Number of Shares or Units of Stock That Have Not Vested (#)	Market Value of Shares or Units of Stock That Have Not Vested (\$)
Ivan Bergstein, M.D.	271,057(1)	—	2.21	3/22/2020		
	90,352(2)	—	2.92	3/8/2021		
	175,057(3)	5,647(3)	3.30	3/9/2022		
	38,828(4)	38,827(4)	25.05	2/14/2024		
	35,667(5)	107,001(5)	15.75	3/6/2025		
	—	356,700(6)	4.12	2/24/2026		
				14,428(18)	154,380(18)	
				37,695(19)	403,337(19)	
				178,083(20)	1,905,488(20)	
Kenneth Hoberman	12,281(7)	—	2.21	3/22/2020		
	36,140(8)	—	2.92	3/8/2021		
	94,869(9)	2,711(9)	3.30	3/9/2022		
	20,163(10)	20,162(10)	25.05	2/14/2024		
	17,301(11)	51,900(11)	15.75	3/6/2025		
	—	75,000(12)	5.77	1/7/2026		
	—	75,000(13)	5.77	1/7/2026		
	—	176,234(14)	4.12	2/24/2026		
					7,492(21)	80,164(21)
					18,284(22)	195,639(22)
				75,000(23)	802,500(23)	
				75,000(24)	802,500(24)	
				87,985(25)	941,440(25)	
David Gionco	17,500(15)	22,500(15)	21.82	1/16/2024		
	8,211(16)	24,630(16)	15.75	3/6/2025		
	—	144,261(17)	4.12	2/24/2026		
				15,000(26)	160,500(26)	
				8,676(27)	92,833(27)	
				72,023(28)	770,646(28)	

- (1) Represents an option to purchase up to 271,057 shares of our common stock granted to Dr. Bergstein on March 22, 2010. The shares underlying this option vested and became exercisable upon the successful completion of our IPO in January 2013.
- (2) Represents an option to purchase 90,352 shares of our common stock granted to Dr. Bergstein on March 8, 2011. Of the 90,352 shares underlying the option award, 45,176 vested and became exercisable over four years, beginning one year after the date of grant, and the remaining 45,176 vested and became exercisable upon the successful completion of our IPO in January 2013.
- (3) Represents an option to purchase 180,704 shares of our common stock granted to Dr. Bergstein on March 9, 2012. Of the 180,704 shares underlying the option award, 22,588 shares vested on January 1, 2013. An additional 22,588 shares vested upon the completion of our IPO in January 2013. 67,764 shares vested and became exercisable on a quarterly basis over a three-year period

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beginning with the successful completion of our IPO in January 2013. An additional 67,764 shares vested on a quarterly basis beginning on April 1, 2013 over a three-year period.

- (4) Represents an option to purchase 77,655 shares of our common stock granted to Dr. Bergstein on February 14, 2014. These stock options granted to Dr. Bergstein are scheduled to vest 25% of the shares on each of the first four anniversaries of the grant date provided the executive is providing services on each such anniversary.
- (5) Represents an option to purchase 142,668 shares of our common stock granted to Dr. Bergstein on March 6, 2015. These stock options granted to Dr. Bergstein are scheduled to vest 25% of the shares on each of the first four anniversaries of the grant date provided the executive is providing services on each such anniversary.
- (6) Represents an option to purchase 356,700 shares of our common stock granted to Dr. Bergstein, as approved by the Compensation Committee on February 24, 2016. These stock options granted to Dr. Bergstein are scheduled to vest 25% of the shares on each of the first four anniversaries of the approval date provided the executive is providing services on each such anniversary.
- (7) Represents an option to purchase up to 63,246 shares of our common stock granted to Mr. Hoberman on March 22, 2010. The shares underlying this option vested and became exercisable upon our IPO in January 2013.
- (8) Represents an option to purchase 36,140 shares of our common stock granted to Mr. Hoberman on March 8, 2011. Of the 36,140 shares underlying the option award, 18,070 vested and became exercisable over four years, beginning one year after the date of grant, and the remaining 18,070 vested and became exercisable upon the successful completion of our IPO in January 2013.
- (9) Represents an option to purchase 97,580 shares of our common stock granted to Mr. Hoberman on March 9, 2012. Of the 97,580 shares underlying the option award, 13,552 shares vested on March 1, 2013. 40,659 shares will vest quarterly over a three-year period with the first vesting date being June 1, 2013. An additional 32,527 shares will vest quarterly over a three-year period with the first vesting date being April 30, 2014. The remaining 10,842 shares vested on January 31, 2014, the one-year anniversary of the successful completion of our IPO in January 2013.
- (10) Represents an option to purchase 40,325 shares of our common stock granted to Mr. Hoberman on February 14, 2014. These stock options granted to Mr. Hoberman are scheduled to vest 25% of the shares on each of the first four anniversaries of the grant date provided the executive is providing services on each such anniversary.
- (11) Represents an option to purchase 69,201 shares of our common stock granted to Mr. Hoberman on March 6, 2015. These stock options granted to Mr. Hoberman are scheduled to vest 25% of the shares on each of the first four anniversaries of the grant date provided the executive is providing services on each such anniversary.
- (12) Represents an option to purchase 75,000 shares of our common stock granted to Mr. Hoberman on January 7, 2016 pursuant to the execution of his employment agreement. These stock options granted to Mr. Hoberman are scheduled to vest evenly over each of the first three anniversaries of the grant date provided the executive is providing services on each such anniversary.
- (13) Represents an option to purchase 75,000 shares of our common stock granted to Mr. Hoberman on January 7, 2016 pursuant to the execution of his employment agreement. Of the 75,000 shares underlying the option award, 25,000 shall vest upon the Company attaining an average market capitalization over a 30 day period of \$350 million; 25,000 shall vest upon the Company attaining an average market capitalization over a 30 day period of \$500 million; and 25,000 shall vest upon the Company attaining an average market capitalization over a 30 day period of \$750 million. All

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options which have not already vested prior to the fourth anniversary of this agreement shall vest in full upon the fourth anniversary from the grant date.

- (14) Represents an option to purchase 356,700 shares of our common stock granted to Mr. Hoberman, as approved by the Compensation Committee on February 24, 2016. These stock options granted to Mr. Hoberman are scheduled to vest 25% of the shares on each of the first four anniversaries of the approval date provided the executive is providing services on each such anniversary.
- (15) Represents an option to purchase 40,000 shares of our common stock granted to Mr. Gionco on January 16, 2014 upon commencement of his employment. These stock options granted to Mr. Gionco are scheduled to vest 7,500, 10,000, 11,250 and 11,250 shares, respectively, on each of the first four anniversaries of the grant date provided the executive is providing services on each such anniversary.
- (16) Represents an option to purchase 32,841 shares of our common stock granted to Mr. Gionco on March 6, 2015. These stock options granted to Mr. Gionco are scheduled to vest 25% of the shares on each of the first four anniversaries of the grant date provided the executive is providing services on each such anniversary.
- (17) Represents an option to purchase 144,261 shares of our common stock granted to Mr. Gionco, as approved by the Compensation Committee on February 24, 2016. These stock options granted to Mr. Gionco are scheduled to vest 25% of the shares on each of the first four anniversaries of the approval date provided the executive is providing services on each such anniversary.
- (18) Represents 28,858 shares of restricted stock granted to Dr. Bergstein on February 14, 2014 of which 25% is scheduled to vest on each of the first four anniversaries of the grant date, provided Dr. Bergstein is providing services on each such anniversary. The value represents the number of unvested shares of restricted stock outstanding multiplied by the closing market price of our stock on December 31, 2016.
- (19) Represents 50,260 shares of restricted stock granted to Dr. Bergstein on March 6, 2015 of which 25% is scheduled to vest on each of the first four anniversaries of the grant date, provided Dr. Bergstein is providing services on each such anniversary. The value represents the number of unvested shares of restricted stock outstanding multiplied by the closing market price of our stock on December 31, 2016.
- (20) Represents 178,083 shares of restricted stock granted to Dr. Bergstein on February 24, 2016 of which 25% is scheduled to vest on each of the first four anniversaries of the grant date, provided Dr. Bergstein is providing services on each such anniversary. The value represents the number of unvested shares of restricted stock outstanding multiplied by the closing market price of our stock on December 31, 2016.
- (21) Represents 14,985 shares of restricted stock granted to Mr. Hoberman on February 14, 2014 of which 25% is scheduled to vest on each of the first four anniversaries of the grant date, provided Mr. Hoberman is providing services on each such anniversary. The value represents the number of unvested shares of restricted stock outstanding multiplied by the closing market price of our stock on December 31, 2016.
- (22) Represents 24,379 shares of restricted stock granted to Mr. Hoberman on March 6, 2015 of which 25% is scheduled to vest on each of the first four anniversaries of the grant date, provided Mr. Hoberman is providing services on each such anniversary. The value represents the number of unvested shares of restricted stock outstanding multiplied by the closing market price of our stock on December 31, 2016.
- (23) Represents 75,000 shares of restricted stock granted to Mr. Hoberman on January 7, 2016 pursuant to the execution of his employment agreement. The restricted stock granted to Mr. Hoberman are

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scheduled to vest evenly over each of the first three anniversaries of the grant date provided the executive is providing services on each such anniversary. The value represents the number of unvested shares of restricted stock outstanding multiplied by the closing market price of our stock on December 31, 2016.

- (24) Represents 75,000 shares of restricted stock granted to Mr. Hoberman on January 7, 2016 pursuant to the execution of his employment agreement. Of the 75,000 shares of restricted stock, 25,000 shall vest upon the Company attaining an average market capitalization over a 30 day period of \$350 million; 25,000 shall vest upon the Company attaining an average market capitalization over a 30 day period of \$500 million; and 25,000 shall vest upon the Company attaining an average market capitalization over a 30 day period of \$750 million. All restricted stock which has not already vested prior to the fourth anniversary of this agreement shall vest in full upon the fourth anniversary from the grant date. The value represents the number of unvested shares of restricted stock outstanding multiplied by the closing market price of our stock on December 31, 2016.
- (25) Represents 87,985 shares of restricted stock granted to Mr. Hoberman on February 24, 2016 of which 25% is scheduled to vest on each of the first four anniversaries of the grant date, provided Mr. Hoberman is providing services on each such anniversary. The value represents the number of unvested shares of restricted stock outstanding multiplied by the closing market price of our stock on December 31, 2016.
- (26) Represents 30,000 shares of restricted stock granted to Mr. Gionco on January 16, 2014 upon commencement of his employment. This restricted stock granted to Mr. Gionco is scheduled to vest 25% of the shares on each of the first four anniversaries of the grant date, provided Mr. Gionco is providing services on each such anniversary. The value represents the number of unvested shares of restricted stock outstanding multiplied by the closing market price of our stock on December 31, 2016.
- (27) Represents 11,569 shares of restricted stock granted to Mr. Gionco on March 6, 2015 of which 25% is scheduled to vest on each of the first four anniversaries of the grant date, provided Mr. Gionco is providing services on each such anniversary. The value represents the number of unvested shares of restricted stock outstanding multiplied by the closing market price of our stock on December 31, 2016.
- (28) Represents 72,023 shares of restricted stock granted to Mr. Gionco on February 24, 2016 of which 25% is scheduled to vest on each of the first four anniversaries of the grant date, provided Mr. Gionco is providing services on each such anniversary. The value represents the number of unvested shares of restricted stock outstanding multiplied by the closing market price of our stock on December 31, 2016.

Options Exercised and Stock Vested in 2016

The following table presents information concerning stock options exercised by the named executive officers in 2016 and stock awards held by our named executive officers that vested in 2016.

Name	Option Awards		Stock Awards	
	Number of Shares Acquired on Exercise	Value Realized on Exercise(1)	Number of Shares Acquired on Vesting	Value Realized on Vesting(2)
Ivan Bergstein, M.D.	—	—	19,780	\$ 102,249
Kenneth Hoberman	—	—	9,841	50,652
David Gionco	—	—	10,393	52,882

- (1) The amounts in this column were calculated by determining the difference between the market price of the underlying securities at exercise and the exercise price of the options and then multiplying this amount by the number of options exercised.
- (2) The value realized represents the number of shares of restricted stock vested multiplied by the market value of the underlying shares on the vesting date.

Potential Payments upon Termination or Change in Control

The following tables set forth information regarding potential payments that each named executive officer who was serving as an executive officer as of December 31, 2016 would have received if the executive officer's employment had terminated as of December 31, 2016 under the circumstances set forth below. For purposes of this analysis, we assumed the executive's compensation as base salary, target annual incentive opportunity and target long-term incentive opportunity, each as of December 31, 2016. Each column assumes the named executive officer's date of termination is December 31, 2016. The closing price per share of our common stock on this date was \$10.70.

Ivan Bergstein, M.D.

Executive Benefits and Payments Upon Termination	Potential Payments Upon Termination without a Change in Control			Potential Payments Upon Termination with a Change in Control		
	Voluntary Termination	Involuntary or Good Reason Termination(1)	For Cause Termination	Involuntary or Good Reason Termination(2)	Disability(3)	Death(4)
Cash Severance:	—	\$ 1,472,935	—	\$ 2,802,595	\$ 1,472,935	\$ 401,709
Long-term Incentives:						
Accelerated Vesting of Restricted Stock	—	—	—	2,463,204	—	—
Accelerated Vesting of Options	—	—	—	2,388,874	—	—
Post-termination Health Care Benefits:	—	9,937	—	9,937	9,937	—
Total:	—	1,482,872	—	7,664,610	1,482,872	401,709

- (1) Pursuant to Dr. Bergstein's employment agreement, in the event of his termination without cause or resignation for good reason, Dr. Bergstein would be entitled to severance equal to 24 months' salary, any annual performance bonus and additional bonus payment earned but not yet paid, and health care coverage for 6 months.

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- (2) Pursuant to Dr. Bergstein's employment agreement, Dr. Bergstein would receive enhanced severance equal to 2.99 times his base salary plus annual performance bonus if a change in control occurs within one year of a termination without cause or resignation for good reason. Pursuant to the 2016 Equity Incentive Plan, the 2012 Equity Incentive Plan, as amended, and the Amended and Restated 2004 Employee, Director and Consultant Stock Plan, if there is a change of control, vesting will accelerate if the successor company does not assume the existing grants or if grants are assumed by a successor company and an employee is terminated or resigns under certain circumstances in the 24 months following a change of control. Dr. Bergstein's payments and benefits would be subject to potential reduction under the "best net" 280G provision included in his employment agreement. The amounts shown in the table above have not been reduced for such purposes.
- (3) Pursuant to Dr. Bergstein's employment agreement, in the event of his termination due to disability, Dr. Bergstein would receive the same severance amount as if he were terminated without cause or resigned for good reason, plus any disability benefits provided under applicable benefit plans.
- (4) Pursuant to Dr. Bergstein's employment agreement, in the event of his termination due to death, Dr. Bergstein would receive, any annual performance bonus and additional bonus payment earned but not yet paid and death benefits under applicable benefit plans.

Kenneth Hoberman

Executive Benefits and Payments Upon Termination	Potential Payments Upon Termination without a Change in Control			Potential Payments Upon Termination with a Change in Control		
	Voluntary Termination	Involuntary or Good Reason Termination(1)	For Cause Termination(3)	Involuntary or Good Reason Termination(2)	Disability(1)	Death(1)
Cash Severance:	\$ 214,245	\$ 856,980	\$ 214,245	\$ 856,980	\$ 856,980	\$ 856,980
Long-term Incentives:						
Accelerated Vesting of Restricted Stock	—	2,822,243	—	2,822,243	2,822,243	2,822,243
Accelerated Vesting of Options	—	1,919,181	—	1,919,181	1,919,181	1,919,181
Post-termination Health Care Benefits:	—	29,810	—	29,810	29,810	—
Total:	214,245	5,628,214	214,245	5,628,214	5,628,214	5,598,404

- (1) Pursuant to Mr. Hoberman's employment agreement, in the event of his termination without cause, resignation for good reason, or as a result of disability or death, Mr. Hoberman would be entitled to severance equal to 18 months' salary, an amount equal to his prior year's bonus, and health care coverage for 18 months. In addition, all unvested stock options shall vest immediately and remain exercisable for their original terms and all unvested shares of restricted stock shall vest immediately and become unrestricted.
- (2) Pursuant to Mr. Hoberman's employment agreement, in the event of his termination without cause (including terminations without cause as a result of a change in control), Mr. Hoberman would be entitled to severance equal to 18 months' salary, and an amount equal to his prior year's bonus and health care coverage for 18 months. Pursuant to the 2016 Equity Incentive Plan, the 2012 Equity Incentive Plan, as amended, and the Amended and Restated 2004 Employee, Director and Consultant Stock Plan, if there is a change of control, vesting will accelerate if the successor company does not assume the existing grants or if grants are assumed by a successor company and

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an employee is terminated or resigns under certain circumstances in the 24 months following a change of control.

- (3) Pursuant to Mr. Hoberman's employment agreement, in the event of his termination for cause or resignation without good reason, Mr. Hoberman would be entitled to payment of salary, accrued up to and including the date of termination or resignation, payment of any annual performance bonus earned but not yet paid, payment in lieu of accrued but unused vacation time, payment of unreimbursed expenses, and continued coverage through the longest applicable limitations period under Company's officers insurance policies.

David Gionco

Executive Benefits and Payments Upon Termination	Potential Payments Upon Termination without a Change in Control			Potential Payments Upon Termination with a Change in Control	Disability	Death
	Voluntary Termination	Involuntary or Good Reason Termination(1)	For Cause Termination	Involuntary or Good Reason Termination(2)		
Cash Severance:	—	\$ 294,587	—	\$ 294,587	—	—
Long-term Incentives:						
Accelerated Vesting of Restricted Stock	—	—	—	1,023,979	—	—
Accelerated Vesting of Options	—	—	—	949,237	—	—
Post-termination Health Care Benefits:	—	19,873	—	19,873	—	—
Total:	—	314,460	—	2,287,676	—	—

- (1) Pursuant to Mr. Gionco's employment agreement, in the event of his termination without cause or resignation for good reason, Mr. Gionco would be entitled to severance equal to 12 months' salary and health care coverage for 12 months.
- (2) Pursuant to Mr. Gionco's employment agreement, in the event of his termination with a change in control, Mr. Gionco would be entitled to severance equal to 12 months' salary and health care coverage for 12 months. Pursuant to the 2016 Equity Incentive Plan, the 2012 Equity Incentive Plan, as amended, and the Amended and Restated 2004 Employee, Director and Consultant Stock Plan, if there is a change of control, vesting will accelerate if the successor company does not assume the existing grants or if grants are assumed by a successor company and an employee is terminated or resigns under certain circumstances in the 24 months following a change of control.

Director Compensation

For 2016, our non-employee directors were compensated for service on our Board of Directors as follows:

- an annual retainer for our directors for service on our Board of Directors of \$40,000;
- for members of our Audit Committee, an annual fee of \$7,500 (\$15,000 for the chair);
- for members of our Nominating Committee, an annual fee of \$3,750 (\$7,500 for the chair);
- for members of our Compensation Committee, an annual fee of \$5,000 (\$10,000 for the chair);
- for any lead director of our Board of Directors, an additional annual fee of \$20,000; and

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- for continuing service on our Board of Directors, an annual grant of 34,000 options, which vest annually in equal installments over a three-year period.

In addition, we will continue to reimburse our non-employee directors for reasonable travel and other expenses incurred in connection with attending Board of Directors meetings.

2016 Director Compensation

<u>Name(1)</u>	<u>Fees Earned or Paid in Cash (\$)(1)</u>	<u>Stock Awards (\$)</u>	<u>Option Awards (\$)(2)</u>	<u>Total (\$)</u>
Ron Bentsur	52,500	—	149,084	201,584
Eric L. Dobmeier	53,750	—	149,084	202,834
Kenneth Zuerblis	58,750	—	149,084	207,834
Alan Forman	56,250	—	149,084	205,334
J. Kevin Buchi(3)	24,066	—	—	24,066

- (1) Fees earned or paid in cash reflect annual retainer and committee meeting fees.
- (2) Stock options granted to directors vest in equal yearly installments over a three-year period from the date of grant. The amounts in the "Option Awards" column reflect the aggregate grant date fair value of stock options granted during the year computed in accordance with the provisions of FASB ASC Topic 718. The assumptions used in calculating these amounts are incorporated by reference to Note 2 to the financial statements in our annual report on Form 10-K filed with the SEC on March 16, 2017.
- (3) Mr. Buchi previously served as a member of the Company's Board of Directors through May 25, 2016. The fees earned represented a pro-rated fee that covered his services through May 25, 2016.

COMPENSATION COMMITTEE INTERLOCKS AND INSIDER PARTICIPATION

The current members of our Compensation Committee are Eric L. Dobmeier, Ron Bentsur and Alan Forman. No member of our Compensation Committee during fiscal year 2016 or as of the date of this proxy statement, is or has been an officer or employee of Stemline, nor has any member of our Compensation Committee had any relationship with Stemline requiring further disclosure.

During the last fiscal year, none of our executive officers served as a director or member of the Compensation Committee (or other committee serving an equivalent function) of any other entity, whose executive officers either served as a member of our Compensation Committee or our Board of Directors.

SECTION 16(a) BENEFICIAL OWNERSHIP REPORTING COMPLIANCE

Section 16(a) of the Exchange Act requires our directors, executive officers and persons who own more than 10% of the shares of our common stock to file an initial report of ownership on Form 3 and changes in ownership on Form 4 or Form 5 with the SEC. Such officers, directors and 10% stockholders are also required by SEC rules to furnish us with copies of any Forms 3, 4 or 5 that they file. The SEC rules require us to disclose late filings of initial reports of stock ownership and changes in stock ownership by our directors, executive officers and 10% stockholders. Based solely on a review of copies of the Forms 3, 4 and 5 furnished to us by reporting persons and any written representations furnished by certain reporting persons, we believe that during the fiscal year ended December 31, 2016, all Section 16(a) reporting requirements applicable to our directors, executive officers and 10% stockholders were completed in a timely manner.

RELATED-PERSON TRANSACTIONS

Policy and Procedure

Our Board of Directors has adopted written policies and procedures for the review of any transaction, arrangement or relationship in which we are a participant, the amount involved exceeds \$120,000 and one of our executive officers, directors, director nominees or 5% stockholders, or their immediate family members, each of whom we refer to as a "related person," has a direct or indirect material interest.

If a related person proposes to enter into such a transaction, arrangement or relationship, which we refer to as a "related person transaction," the related person must report the proposed related person transaction to our Chief Executive Officer. The policy calls for the proposed related person transaction to be reviewed and, if deemed appropriate, approved by our Audit Committee. Whenever practicable, the reporting, review and approval will occur prior to entry into the transaction. If advance review and approval is not practicable, our Audit Committee will review, and, in its discretion, may ratify the related person transaction. The policy also permits the chairman of our Audit Committee to review and, if deemed appropriate, approve proposed related person transactions that arise between committee meetings, subject to ratification by our Audit Committee at its next meeting. Any related person transactions that are ongoing in nature will be reviewed annually.

A related person transaction reviewed under the policy will be considered approved or ratified if it is authorized by our Audit Committee after full disclosure of the related person's interest in the transaction. As appropriate for the circumstances, our Audit Committee will review and consider:

- the related person's interest in the related person transaction;
- the approximate dollar value of the amount involved in the related person transaction;
- the approximate dollar value of the amount of the related person's interest in the transaction without regard to the amount of any profit or loss;
- whether the transaction was undertaken in the ordinary course of our business;
- whether the terms of the transaction are no less favorable to us than terms that could have been reached with an unrelated third party;
- the purpose of, and the potential benefits to us of, the transaction; and
- any other information regarding the related person transaction or the related person in the context of the proposed transaction that would be material to investors in light of the circumstances of the particular transaction.

Our Audit Committee may approve or ratify the transaction only if our Audit Committee determines that, under all of the circumstances, the transaction is in our best interests. Our Audit Committee may impose any conditions on the related person transaction that it deems appropriate.

In addition to the transactions that are excluded by the instructions to the SEC's related person transaction disclosure rule, our Board of Directors has determined that the following transactions do not create a material direct or indirect interest on behalf of related persons and, therefore, are not related person transactions for purposes of this policy:

- interests arising solely from the related person's position as an executive officer of another entity (whether or not the person is also a director of such entity) that is a participant in the transaction, where (i) the related person and all other related persons own in the aggregate less than a 10% equity interest in such entity, (ii) the related person and his or her immediate family members are not involved in the negotiation of the terms of the transaction and do not receive any special benefits as a result of the transaction and (iii) the amount involved in the transaction

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is less than the greater of \$200,000 or 5% of the annual gross revenues of the company receiving payment under the transaction; and

- a transaction that is specifically contemplated by provisions of our charter or bylaws.

The policy provides that transactions involving compensation of executive officers will be reviewed and approved by our Compensation Committee in the manner specified in its charter.

Related Person Transactions

We did not have any related person transactions in 2016 and none are currently proposed.

**STOCK OWNERSHIP OF OUR DIRECTORS, EXECUTIVE OFFICERS,
AND 5% BENEFICIAL OWNERS**

The following table sets forth information with respect to the beneficial ownership of our common stock as of April 20, 2017, by:

- each of our directors;
- each of our NEOs;
- all of our directors and executive officers as a group; and
- each person, or group of affiliated persons, who is known by us to beneficially own more than 5% of our common stock.

Beneficial ownership is determined in accordance with the rules and regulations of the SEC and includes voting or investment power with respect to our common stock. Shares of our common stock subject to options that are currently exercisable or exercisable within 60 days of April 20, 2017, are considered outstanding and beneficially owned by the person holding the options for the purpose of calculating the percentage ownership of that person but not for the purpose of calculating the percentage ownership of any other person. Except as otherwise indicated in the footnotes below, we believe the persons and entities in this table have sole voting and investing power with respect to all of the shares of our common stock beneficially owned by them, subject to community property laws, where applicable. Except as otherwise indicated in the footnotes below, the address of the beneficial owner is c/o Stemline Therapeutics, Inc., 750 Lexington Avenue, Eleventh Floor, New York, New York 10022.

<u>Name of Beneficial Owner</u>	<u>Number of Shares Beneficially Owned</u>	<u>Percentage of Shares Beneficially Owned</u>
Institutional Investors		
Fidelity Investments (FMR LLC)	2,538,892(1)	9.6%
Franklin Advisers, Inc.	1,449,073(2)	5.5%
Directors and Named Executive Officers		
Ivan Bergstein, M.D.	2,846,244(3)	10.7%
Kenneth Hoberman	689,048(4)	2.6%
Ron Bentsur	138,251(5)	*
David G. Gionco	247,450(6)	*
Kenneth Zuerblis	81,297(7)	*
Eric L. Dobmeier	77,297(8)	*
Alan Forman	69,474(9)	*
All directors and executive officers as a group (7 persons)	4,149,061(10)	15.7%
5% Stockholders		
Ivan Bergstein, M.D.	2,846,244(3)	10.7%
Fidelity Investments (FMR LLC).	2,538,892(1)	9.6%
Franklin Advisers, Inc.	1,449,073(2)	5.5%

* Represents beneficial ownership of less than one percent of our outstanding common stock.

(1) Based solely upon a Schedule 13G filed on February 10, 2017 by Fidelity Investments (FMR LLC). FMR LLC beneficially owns 2,538,892 shares of our common stock and has sole dispositive power as to 2,538,892 shares of our common stock. The address of FMR LLC is 245 Summer Street, Boston, Massachusetts 02210.

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- (2) Based solely upon a Schedule 13G filed on February 9, 2017 by Franklin Advisers, Inc. Franklin Advisers, Inc. owns 1,449,073 shares of our common stock and has sole dispositive power as to 1,449,073 shares of our common stock. The address of Franklin Advisers, Inc. is One Franklin Parkway, San Mateo, CA 94403-1906.
- (3) Based on the Form 4 filed on March 9, 2017 illustrating Dr. Bergstein owns 2,085,380 shares of our common stock. The amount illustrated in the table also includes 760,864 shares of our common stock underlying options that are exercisable as of April 20, 2017 or will become exercisable within 60 days after such date.
- (4) Based on the Form 4 filed on March 9, 2017 illustrating Mr. Hoberman owns 409,143 shares of our common stock. The amount illustrated in the table also includes 279,905 shares of our common stock underlying options that are exercisable as of April 20, 2017 or will become exercisable within 60 days after such date.
- (5) Based on the Form 4 filed on June 25, 2015 illustrating Mr. Bentsur owns 17,285 shares of our common stock. The amount illustrated in the table also includes 120,966 shares of our common stock underlying options that are exercisable as of April 20, 2017 or will become exercisable within 60 days after such date.
- (6) Based on the Form 4 filed on March 9, 2017 illustrating Mr. Gionco owns 166,213 shares of our common stock. The amount illustrated in the table also includes 81,237 shares of our common stock underlying options that are exercisable as of April 20, 2017 or will become exercisable within 60 days after such date.
- (7) Based on the Form 4 filed on June 25, 2015 illustrating Mr. Zuerblis owns 21,963 shares of our common stock. The amount illustrated in the table also includes 59,334 shares of our common stock underlying options that are exercisable as of April 20, 2017 or will become exercisable within 60 days after such date.
- (8) Based on the Form 4 filed on June 25, 2015 illustrating Mr. Dobmeier owns 17,963 shares of our common stock. The amount illustrated in the table also includes 59,334 shares of our common stock underlying options that are exercisable as of April 20, 2017 or will become exercisable within 60 days after such date.
- (9) Based on the Form 4 filed on June 25, 2015 illustrating Mr. Forman owns 48,140 shares of our common stock. The amount illustrated in the table also includes 21,334 shares of our common stock underlying options that are exercisable as of April 20, 2017 or will become exercisable within 60 days after such date.
- (10) Includes 1,382,974 shares of common stock underlying options that are exercisable as of April 20, 2017, or will become exercisable within 60 days after such date.

PROPOSAL ONE: ELECTION OF DIRECTOR; NOMINEES

Our Bylaws provide that the Board of Directors will consist of one or more members, as determined from time to time by resolution of the Board of Directors. Our Board of Directors currently consists of five members. The terms of two of our directors, Ron Bentsur and Eric L. Dobmeier, are set to expire at our 2017 Annual Meeting. Our Board of Directors has determined to nominate Messrs. Bentsur and Dobmeier for re-election to our Board of Directors. For information about the nominees and our Board of Directors generally, please see "Corporate Governance—Our Board of Directors" beginning on page 5. If elected, Ron Bentsur will hold office for a three-year term and Eric L. Dobmeier will hold office for a one-year term, and until a respective successor is elected and has been qualified, or until such director resigns or is removed from office. Management expects that the nominees will be available for re-election, but if either is unable to serve at the time the election occurs, your proxy will be voted for the election of another nominee to be designated by a majority of the independent directors serving on our Board of Directors.

THE BOARD OF DIRECTORS UNANIMOUSLY RECOMMENDS A VOTE "FOR" THE ELECTION OF THE NOMINEES FOR DIRECTOR. IF A CHOICE IS SPECIFIED ON THE PROXY BY THE STOCKHOLDER, THE SHARES WILL BE VOTED AS SPECIFIED. IF NO SPECIFICATION IS MADE, THE SHARES WILL BE VOTED "FOR" THE NOMINEE. THE AFFIRMATIVE VOTE OF THE HOLDERS OF A PLURALITY OF THE SHARES OF COMMON STOCK REPRESENTED AND ENTITLED TO VOTE AT THE ANNUAL MEETING AT WHICH A QUORUM IS PRESENT IS REQUIRED FOR THE ELECTION OF THE NOMINEE.

PROPOSAL TWO: RATIFICATION OF APPOINTMENT OF ERNST & YOUNG LLP AS OUR INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Directors is submitting the selection of Ernst & Young LLP as our independent registered public accounting firm to the stockholders for ratification at our Annual Meeting. Stockholder ratification of our independent registered public accounting firm is not required by our Bylaws or otherwise. If Ernst & Young LLP is not ratified as our independent registered public accounting firm by a majority of the shares present or represented by proxy, the Audit Committee will review its future selection of an independent registered public accounting firm. Ernst & Young LLP will still serve as our independent registered public accounting firm for the year ending December 31, 2017, if it is not ratified by our stockholders.

THE BOARD OF DIRECTORS UNANIMOUSLY RECOMMENDS A VOTE "FOR" RATIFICATION OF THE APPOINTMENT OF ERNST & YOUNG LLP AS STEMLINE'S INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM FOR THE YEAR ENDING DECEMBER 31, 2017. PROXIES SOLICITED BY THE BOARD OF DIRECTORS WILL BE SO VOTED UNLESS THE STOCKHOLDER SPECIFIES OTHERWISE. THE AFFIRMATIVE VOTE OF THE HOLDERS OF A MAJORITY OF THE SHARES OF COMMON STOCK REPRESENTED AND ENTITLED TO VOTE AT THE ANNUAL MEETING AT WHICH A QUORUM IS PRESENT IS REQUIRED FOR RATIFICATION OF THE APPOINTMENT OF ERNST & YOUNG LLP.

PROPOSAL THREE: APPROVAL OF AN AMENDMENT TO THE COMPANY'S 2016 EQUITY INCENTIVE PLAN TO INCREASE THE NUMBER OF SHARES ISSUABLE BY 1,200,000

On [], 2017, the Compensation Committee approved, pursuant to approval by the Board of Directors, an amendment to the 2016 Equity Incentive Plan (the "2016 Plan"), which provides for a 1,200,000 share increase in the aggregate number of shares of the Company's common stock that may be subject to future awards under the 2016 Plan, subject to stockholder approval (the "2016 Plan Amendment"). Therefore, this amendment will not become effective if the stockholders do not approve it.

As such, our stockholders have the opportunity to vote for or against, or to abstain from voting on, the following resolution:

"RESOLVED, that the stockholders approve the amendment to our 2016 Equity Incentive Plan to increase the number of authorized shares issuable thereunder by 1,200,000 shares.

This amendment is proposed in order to give the Company flexibility to grant incentive and non-qualified stock options, stock appreciation rights, and restricted stock and restricted stock units under the 2016 Plan. As evidenced by our long-standing practice of granting performance-based stock awards with additional time-based vesting conditions, the Company believes that grants of stock-based awards help to motivate high levels of performance, incentivize long-term employee retention, and provide an effective means of recognizing employee contributions to the success of the Company. Moreover, stock-based awards align the interests of the employees with the interests of the stockholders. When the Company performs well, employees are rewarded along with other stockholders. The Company believes that stock-based awards are of great value in recruiting and retaining highly qualified technical and other key personnel. The Board of Directors believes that the ability to grant stock-based awards will be important to the Company's future success by allowing it to remain competitive in attracting and retaining such key personnel.

In order to pass, this Proposal must receive the affirmative vote of a majority of the votes cast on the Proposal. The Board of Directors believes that the approval of Proposal 3 is in the best interests of the Company and its stockholders.

If this amendment is approved by stockholders, the shares available for future awards will increase to 1,338,884 based on the number shares remaining available for grant under the 2016 Plan as of April 20, 2016.

General

Our stockholders first approved the 2016 Plan at the annual meeting of stockholders on May 25, 2016. The 2016 Plan authorized 1,800,000 new shares, plus the number of shares that remained available for grant under the 2012 Plan at that time, plus the number of shares underlying awards outstanding under the 2012 Plan at that time that terminate or expire unexercised or are cancelled, forfeited or lapse for any reason. No further awards are granted under the 2012 Plan, and the 2012 Plan remains in effect only for so long as awards granted thereunder remain outstanding. If the 2016 Plan Amendment is not approved by our stockholders, there will be no increase to the number of authorized shares issuable under the 2016 Plan, and the 2016 Plan will remain in effect as it existed immediately prior to our 2017 Annual Meeting.

Background for the Request to Increase the Authorized Share Reserve under the 2016 Plan

On [], 2017, the Board of Directors adopted the 2016 Plan Amendment, subject to stockholder approval at the Annual Meeting, pursuant to which the maximum aggregate number of shares of stock available for issuance will be increased by 1,200,000 shares. The 2016 Plan Amendment will be effective as of the date of the Annual Meeting, if approved by our stockholders. Other than the

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proposed increase in the number of shares available for issuance, the 2016 Plan Amendment does not contain any changes that would require stockholder approval.

If the stockholders do not approve the 2016 Plan Amendment, the 2016 Plan will remain in effect as it existed immediately prior to the proposed amendment. As of April 20, 2017, approximately 138,884 shares of common stock remained available for the future grant of awards under the 2016 Plan. After the approval of the 2016 Plan Amendment, approximately 1,338,884 shares of common stock would then be available for issuance, representing approximately 5.3% of our total outstanding shares as of April 20, 2017.

In setting the number of proposed shares for the 2016 Plan Amendment, the Compensation Committee and the Board of Directors considered a number of factors, including the following:

- Key data relating to outstanding equity awards and shares available for grant;
- Significant historical award information, including burn rate, dilution and overhang;
- Future share needs and estimated share pool duration;
- Plan features, including the repricing prohibition, minimum vesting requirements, double-trigger acceleration provisions and the absence of liberal share counting provisions.

Significant Historical Award Information

Common measures of a stock plan's cost include dilution and overhang. Dilution measures the degree to which our stockholders' ownership has been diluted by stock-based compensation awarded under our various equity plans and also includes shares that may be awarded under our various equity plans in the future, which is commonly referred to as overhang.

<u>Key Equity Metrics</u>	<u>2016 (%)</u>	<u>2015 (%)</u>	<u>2014 (%)</u>
Overhang(1)	20.4	14.5	21.2
Dilution(2)	16.1	11.6	12.4

- (1) Overhang is calculated by dividing (a) the sum of (x) the number of shares subject to equity awards outstanding at the end of the year and (y) the number of shares available for future grants, by (b) the number of shares outstanding at the end of the year.
- (2) Dilution is calculated by dividing the number of shares subject to equity awards outstanding at the end of the fiscal year by the number of shares outstanding at the end of the fiscal year.

Information Regarding our Authorized Shares and Stock Price

Our Second Amended and Restated Certificate of Incorporation authorizes the issuance of 33,750,000 million shares of common stock. As of April 20, 2017, there were 25,096,214 shares of common stock issued and outstanding and the closing price of a share of our common stock was \$X.XX.

Important Provisions of the 2016 Plan

The 2016 Plan contains the following provisions that the Compensation Committee believes are consistent with the interests of stockholders and sound corporate governance practices:

- *No repricing of stock options or SARs.* The 2016 Plan prohibits the repricing of stock options or stock appreciation rights, or SARs, without stockholder approval. This prohibition includes reducing the exercise price or base price after the date of grant or replacing, regranting or

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canceling a stock option or SAR for cash or another award (including following a participant's voluntary surrender of underwater stock options or SARs).

- *No discounted stock options or SARs.* All stock options and SARs must have an exercise price or base price equal to or greater than the fair market value of the underlying stock on the date of grant.
- *No Liberal Share Recycling Provisions.* The 2016 Plan prohibits the re-use of shares withheld or delivered to satisfy the exercise price of a stock option or stock appreciation right or to satisfy tax withholding requirements. The 2016 Plan also prohibits "net share counting" upon the exercise of stock options or stock appreciation rights. Shares repurchased by the Company using option proceeds shall not go back to the share pool.
- *Minimum Vesting.* The 2016 Plan provides that the minimum vesting period for any option or SAR will not be less than one year, with certain exceptions described below.
- *Limited Discretionary Acceleration.* The Compensation Committee may accelerate vesting of outstanding awards under the 2016 Plan only in the event of a participant's death or disability or the occurrence of a change in control.
- *No liberal change-in-control definition.* The change-in-control definition contained in the 2016 Plan is not a "liberal" definition that would be activated on mere stockholder approval of a transaction.
- *"Double-trigger" change in control vesting.* If awards granted under the 2016 Plan are assumed by a successor in connection with a change in control, such awards will not automatically vest and pay out solely as a result of the change in control. Instead, such awards will vest if within two years after the effective date of the change in control, the participant's employment is terminated without cause or the participant resigns for good reason.
- *No award may be transferred for value.* The 2016 Plan prohibits the transfer of unexercised, unvested or restricted awards to independent third parties for value.
- *No dividends on unearned performance awards.* The 2016 Plan prohibits the current payment of dividends or dividend equivalent rights on unearned performance awards.
- *Minimum Holding Policy.* The Company's minimum holding policy provides that each executive officer must retain at least 50% of the shares received upon exercise of stock options issued by the Company (net of exercise price, tax liabilities and related fees) for at least 12 months, or upon the earlier termination of the executive's employment or the executive's compliance with any share ownership requirements the Company may adopt from time to time.
- *Clawback policy.* The Company's compensation recoupment policy applies to equity awards and cash incentive awards issued by the Company, including those which may be issued under the 2016 Plan.

Summary of Material Terms of the 2016 Plan

A summary of the material terms of the 2016 Plan is set forth below. This summary is qualified in its entirety by the full text of the 2016 Plan, as amended, which is filed with this Proxy Statement as *Appendix A*.

Purpose. The purpose of the 2016 Plan is to advance the interests of the Company's stockholders by enhancing the Company's ability to attract, retain and motivate persons who are expected to make important contributions to the Company and by providing such persons with equity ownership opportunities and performance-based incentives that are intended to better align the interests of such persons with those of the Company's stockholders.

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Eligibility. The 2016 Plan permits the grant of awards to employees, officers, non-employee directors and consultants of the Company and its affiliates as selected by the Compensation Committee. The number of eligible participants in the 2016 Plan will vary from year to year. As of the record date, approximately 30 employees and 26 non-employees (including our non-employee directors) were eligible to receive awards under the 2016 Plan.

Administration. The 2016 Plan is administered by the Compensation Committee. The Compensation Committee has the authority to grant awards, construe and interpret the terms of the 2016 Plan and award agreements, and adopt, amend and repeal such administrative rules, guidelines and practices relating to the 2016 Plan as it shall deem advisable. The Board of Directors may at any time administer the 2016 Plan. If it does so, it will have all the powers of the Compensation Committee under the 2016 Plan.

- **Authorized Shares.** Subject to adjustment as provided in the 2016 Plan Amendment, the aggregate number of shares of common stock reserved and available for issuance pursuant to awards granted under the 2016 Plan, as amended pursuant to the 2016 Plan Amendment, is equal 1,338,884 shares as of April 20, 2017. Pursuant to the terms of the 2016 Plan, any shares underlying awards that were outstanding under the 2012 Plan as of the date of the 2016 annual meeting and that later terminate or expire unexercised or are cancelled, forfeited or lapse for any reason (not to exceed 2,500,000 shares) also will be available for grant under the 2016 Plan.

Shares subject to awards that are canceled, terminated, forfeited or settled in cash will again be available for awards under the 2016 Plan. However, to the extent that the full number of shares of common stock subject to any award is not issued for any reason, including by reason of net exercise, net settlement or failure to achieve maximum performance goals, the unissued shares of common stock originally subject to the award will not be added back to the number of shares available for awards under the 2016 Plan. In addition, shares that have been repurchased by the Company using option exercise proceeds will not be added back to the number of shares available for awards under the 2016 Plan. In the event of a nonreciprocal transaction between us and our stockholders that causes the per share value of our common stock to change (including, without limitation, any stock dividend, stock split, spin-off, rights offering, or large nonrecurring cash dividend), the share authorization limits under the 2016 Plan will be adjusted proportionately, and the Compensation Committee must make such adjustments to the 2016 Plan and awards as it deems necessary, in its sole discretion, to prevent dilution or enlargement of rights immediately resulting from such transaction.

Limitations on Individual Awards. The maximum aggregate number of shares of common stock subject to stock-based awards that may be granted under the 2016 Plan in any one calendar year to any one participant is as follows:

- Options—2,000,000
- Stock appreciation rights—2,000,000
- Performance-based awards—2,000,000

The maximum aggregate amount awarded or credited with respect to cash-based awards under the 2016 Plan to any one participant in any one calendar year is \$20,000,000. These limits are subject to anti-dilution adjustments in the event of stock splits, mergers, consolidations, stock dividends, recapitalizations and similar transactions, but may not otherwise be amended without stockholder approval.

Permissible Awards. The 2016 Plan authorizes the granting of awards in any of the following forms:

- options to purchase shares of our common stock, which may be designated under the tax code as nonstatutory stock options (which may be granted to all participants) or incentive stock options (which may be granted to officers and employees but not to consultants or non-employee directors);
- stock appreciation rights (SARs), which give the holder the right to receive the difference (payable in cash or stock, as specified in the award agreement) between the fair market value per share of our common stock on the date of exercise over the base price of the award;
- restricted stock, which is subject to restrictions on transferability and subject to forfeiture on terms set by the Compensation Committee;
- restricted stock units, or RSUs, which represent the right to receive shares of our common stock (or an equivalent value in cash or other property, as specified in the award agreement) in the future, based upon the attainment of stated vesting criteria;
- performance awards, which are awards payable in cash or stock upon the attainment of specified performance goals (any award that may be granted under the 2016 Plan may be granted in the form of a performance award);
- other stock-based awards in the discretion of the Compensation Committee, including unrestricted stock grants; and
- cash-based awards.

Limitations on Transfer; Beneficiaries. No award will be assignable or transferable by a participant other than by will or the laws of descent and distribution or, other than with respect to incentive stock options, pursuant to a qualified domestic relations order; provided, however, that certain transfers (other than transfers for value) of vested awards to or for the benefit of any immediate family member, family trust or other entity established for the benefit of the participant and/or an immediate family member of such participant are permitted. A participant may, in the manner determined by the Compensation Committee, designate a beneficiary to exercise the rights of the participant and to receive any distribution with respect to any award upon the participant's death.

Treatment of Awards upon a Change in Control. Unless otherwise provided in an award certificate or any special plan document governing an award, upon the occurrence of a change in control of our company in which awards are not assumed by the surviving entity or otherwise equitably converted or substituted in connection with the change in control in a manner approved by the Compensation Committee or Board of Directors:

- all time-based vesting requirements on outstanding awards will be deemed to have been satisfied and vested in full; and
- all performance-based vesting requirements on outstanding awards will be deemed to have been satisfied based on target performance and the awards will pay out on a pro rata basis, based on the time elapsed prior to the change in control.

With respect to awards assumed by the surviving entity or otherwise equitably converted or substituted in connection with a change in control, if within two years after the effective date of the change in control, a participant's employment is terminated without Cause or the participant resigns for Good Reason (as such terms are defined), then:

- all time-based vesting requirements on outstanding awards will be deemed to have been satisfied and vested in full; and

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- all performance-based vesting requirements on outstanding awards will be deemed to have been satisfied based on target performance and the awards will pay out on a pro rata basis, based on the time elapsed prior to the change in control.

Minimum Vesting. Except in the case of substitute awards granted in connection with certain mergers, acquisitions and other similar transactions, the minimum vesting period for any option or SAR will not be less than one year, provided, however, that (i) the Compensation Committee may permit acceleration of vesting in the event of a Participant's death or disability, or the occurrence of a change in control, as applicable, or (ii) the Compensation Committee may grant options or SARs covering an aggregate of five percent (5%) or fewer of the total number of shares of common stock authorized under the 2016 Plan without regard to such minimum vesting requirements. The Compensation Committee may accelerate vesting of outstanding awards under the 2016 Plan only in the event of a participant's death or disability or the occurrence of a change in control.

Performance Goals. Options and SARs granted under the 2016 Plan are designed to be exempt from the \$1 million deduction limit imposed by Section 162(m). When granting any other award, the Compensation Committee may designate such award as a "qualified performance-based award" intended to qualify for the Section 162(m) exemption. If an award is so designated, the Compensation Committee must establish objectively determinable performance goals for such award within the time period prescribed by Section 162(m) based on the relative or absolute attainment of specified goals related to one or more of the following business criteria, which may be determined pursuant to GAAP or on a non-GAAP basis:

- scientific progress;
- product development progress;
- business development progress, including in-licensing;
- net income/(loss);
- earnings/(loss) before or after discontinued operations, interest, taxes, depreciation and/or amortization;
- operating profit/ (loss) before or after discontinued operations and/or taxes;
- sales;
- sales growth;
- earnings growth;
- cash flow or cash position;
- gross margins;
- stock price;
- financings (issuance of debt or equity);
- refinancings;
- market share;
- return on sales, assets, equity or investment;
- improvement of financial ratings;
- achievement of balance sheet or income statement objectives; or
- total stockholder return.

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The goals may reflect absolute entity or business unit performance or a relative comparison to the performance of a peer group of entities or other external measure of the selected performance criteria and may be absolute in their terms or measured against or in relationship to other companies comparably, similarly or otherwise situated. The Compensation Committee may specify that such performance measures shall exclude or otherwise objectively adjust for any specified circumstance or event that occurs during a performance period, including by way of example but without limitation any one or more of the following (a) asset write-downs or impairment charges; (b) litigation or claim judgments or settlements; (c) the effect of changes in tax laws, accounting principles or other laws or provisions affecting reported results; (d) accruals for reorganization and restructuring programs; (e) unusual or infrequently occurring items as described in Accounting Standards Codification Topic 225-20 (or any successor pronouncements thereto) and/or in management's discussion and analysis of financial condition and results of operations appearing in our annual report to stockholders for the applicable year; (f) acquisitions or divestitures; (g) any other specific, unusual or nonrecurring events, or objectively determinable category thereof, including discontinued operations or changes in the Company's fiscal year; and (h) foreign exchange gains and losses.

Certain Transactions. Upon the occurrence or in anticipation of certain corporate events or extraordinary transactions, the Compensation Committee may also make discretionary adjustments to awards, including settling awards for cash, providing that awards will become fully vested and exercisable, or providing for awards to be assumed or substituted.

Termination and Amendment. The 2016 Plan will terminate on May 25, 2026, the tenth anniversary of the date of our 2016 Annual Meeting, unless earlier terminated by the Board of Directors or Compensation Committee. The Board of Directors may, at any time and from time to time, terminate or amend the 2016 Plan, but if an amendment to the 2016 Plan would constitute a material amendment requiring stockholder approval under applicable listing requirements, laws, policies or regulations, then such amendment will be subject to stockholder approval. No termination or amendment of the 2016 Plan may adversely affect any award previously granted under the 2016 Plan without the written consent of the participant.

Prohibition on Repricing. As indicated above under "Termination and Amendment," outstanding stock options and SARs cannot be repriced, directly or indirectly, without the prior consent of our stockholders. The exchange of an "underwater" option or stock appreciation right (i.e., an option or stock appreciation right having an exercise price or base price in excess of the current market value of the underlying stock) for cash or for another award would be considered an indirect repricing and would, therefore, require the prior consent of our stockholders.

Certain Federal Income Tax Effects

The U.S. federal income tax discussion set forth below is intended for general information only and does not purport to be a complete analysis of all of the potential tax effects of the 2016 Plan. It is based upon laws, regulations, rulings and decisions now in effect, all of which are subject to change. State and local income tax consequences are not discussed and may vary from locality to locality.

Nonstatutory Stock Options. There will be no federal income tax consequences to the optionee or to us upon the grant of a nonstatutory stock option under the 2016 Plan. When the optionee exercises a nonstatutory option, however, he or she will recognize ordinary income in an amount equal to the excess of the fair market value of our common stock received upon exercise of the option at the time of exercise over the exercise price, and we will be allowed a corresponding federal income tax deduction. Any gain that the optionee realizes when he or she later sells or disposes of the option shares will be short-term or long-term capital gain, depending on how long the shares were held.

Incentive Stock Options. There typically will be no federal income tax consequences to the optionee or to us upon the grant or exercise of an incentive stock option. If the optionee holds the acquired option shares for the required holding period of at least two years after the date the option was granted and one year after exercise, the difference between the exercise price and the amount realized upon sale or disposition of the option shares will be long-term capital gain or loss, and we will not be entitled to a federal income tax deduction. If the optionee disposes of the option shares in a sale, exchange or other disqualifying disposition before the required holding period ends, he or she will recognize taxable ordinary income in an amount equal to the excess of the fair market value of the option shares at the time of exercise over the exercise price, and we will be allowed a federal income tax deduction equal to such amount. While the exercise of an incentive stock option does not result in current taxable income, the excess of the fair market value of the option shares at the time of exercise over the exercise price will be an item of adjustment for purposes of determining the optionee's alternative minimum taxable income.

SARs. A participant receiving a SAR under the 2016 Plan will not recognize income, and we will not be allowed a tax deduction, at the time the award is granted. When the participant exercises a SAR, the amount of cash and the fair market value of any shares of common stock received will be ordinary income to the participant, and we will be allowed a corresponding federal income tax deduction at that time.

Restricted Stock. Unless a participant makes an election to accelerate recognition of the income to the date of grant as described below, a participant will not recognize income, and we will not be allowed a tax deduction, at the time a restricted stock award is granted, provided that the award is nontransferable and is subject to a substantial risk of forfeiture. When the restrictions lapse, the participant will recognize ordinary income equal to the fair market value of our common stock as of that date (less any amount he or she paid for the stock), and we will be allowed a corresponding federal income tax deduction at that time, subject to any applicable limitations under Section 162(m). If the participant files an election under Section 83(b) of the tax code within 30 days after the date of grant of the restricted stock, he or she will recognize ordinary income as of the date of grant equal to the fair market value of the stock as of that date (less any amount paid for the stock), and we will be allowed a corresponding federal income tax deduction at that time, subject to any applicable limitations under Section 162(m). Any future appreciation in the stock will be taxable to the participant at capital gains rates. However, if the stock is later forfeited, the participant will not be able to recover the tax previously paid pursuant to the Section 83(b) election.

Restricted Stock Units. A participant will not recognize income, and we will not be allowed a tax deduction, at the time a stock unit award is granted. When the participant receives or has the right to receive shares of common stock (or the equivalent value in cash or other property) in settlement of a stock unit award, a participant will recognize ordinary income equal to the fair market value of our common stock or other property as of that date (less any amount he or she paid for the stock or property), and we will be allowed a corresponding federal income tax deduction at that time, subject to any applicable limitations under Section 162(m).

Performance Awards Payable in Cash. A participant will not recognize income, and we will not be allowed a tax deduction, at the time a performance award payable in cash is granted (for example, when the performance goals are established). Upon receipt of cash in settlement of the award, a participant will recognize ordinary income equal to the cash received, and we will be allowed a corresponding federal income tax deduction at that time, subject to any applicable limitations under Section 162(m).

Section 409A. The 2016 Plan permits the grant of various types of incentive awards, which may or may not be exempt from Section 409A of the tax code. If an award is subject to Section 409A, and if the requirements of Section 409A are not met, the taxable events as described above could apply

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earlier than described, and could result in the imposition of additional taxes and penalties. Restricted stock awards, and stock options and SARs that comply with the terms of the 2016 Plan are generally exempt from the application of Section 409A of the tax code. Stock units, other stock-based awards and cash-based awards that are granted in one year and payable in a later year generally are subject to Section 409A unless they are designed to satisfy the short-term deferral exemption from such law. If not exempt, such awards must be specially designed to meet the requirements of Section 409A in order to avoid early taxation and penalties.

Tax Withholding. Our company and any of our affiliates have the right to deduct or withhold, or require a participant to remit to us, an amount sufficient to satisfy federal, state and local taxes (including employment taxes) required by law to be withheld with respect to any exercise, lapse of restriction or other taxable event arising as a result of the 2016 Plan.

Existing Plan Benefits

Awards under the 2016 Plan are at the discretion of the Compensation Committee. Accordingly, future awards under the 2016 Plan are not determinable. Pursuant to SEC rules, the table below shows the number of shares subject to awards granted under the 2016 Plan through the record date, April 20, 2017, net of cancellations, to our named executive officers and the other individuals and groups indicated.

<u>Name and Position</u>	<u>Options (# of shares)</u>	<u>Restricted Stock (# of shares)</u>
Ivan Bergstein, M.D. <i>President and Chief Executive Officer</i>	356,700	266,285
Kenneth Hoberman <i>Chief Operating Officer</i>	176,234	131,469
David Gionco <i>Vice President of Finance and Chief Accounting Officer</i>	144,261	70,299
All Executive Officers as a Group	677,195	468,053
All Employees as a Group (including all officers who are not executive officers)	-64,000	276,323
All Non-Employee Directors as a Group	136,000	—
All Non-Employee Consultants as a Group	59,877	20,969

Securities Authorized for Issuance Under Equity Compensation Plans

The following table contains information about our equity compensation plans as of December 31, 2016.

Equity Compensation Plan Information			
Plan Category	Number of securities to be issued upon exercise of outstanding options and restricted stock	Weighted-average exercise price of outstanding options	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a))
	(a)	(b)	(c)
Equity compensation plans approved by security holders:			
Options	3,090,752	\$ 8.78	829,216
Restricted stock	1,268,092	N/A	—
Equity compensation plans not approved by security holders:			
Options	—	—	—
Restricted stock	—	—	—
Total	4,358,844	—	829,216

Future Benefits to Named Executive Officers and Others

If the amendment to the 2016 Equity Incentive Plan is approved by the Company's stockholders, all awards under the 2016 Equity Incentive Plan will be made at the discretion of the Compensation Committee. It is not presently possible to determine the benefits or amounts that will be received by any individuals or groups as a result of this amendment in the future.

THE BOARD OF DIRECTORS UNANIMOUSLY RECOMMENDS A VOTE "FOR" APPROVAL OF THE AMENDMENT TO OUR 2016 EQUITY INCENTIVE PLAN TO INCREASE THE NUMBER OF AUTHORIZED SHARES ISSUABLE THEREUNDER BY 1,200,000. PROXIES SOLICITED BY THE BOARD OF DIRECTORS WILL BE SO VOTED UNLESS THE STOCKHOLDER SPECIFIES OTHERWISE. THE AFFIRMATIVE VOTE OF THE HOLDERS OF A MAJORITY OF THE SHARES OF COMMON STOCK REPRESENTED AND ENTITLED TO VOTE AT THE ANNUAL MEETING AT WHICH A QUORUM IS PRESENT IS REQUIRED FOR APPROVAL OF THE AMENDMENT TO THE 2016 EQUITY INCENTIVE PLAN.

PROPOSAL FOUR: APPROVAL OF AN AMENDMENT TO OUR CERTIFICATE OF INCORPORATION TO INCREASE OUR AUTHORIZED SHARE CAPITAL BY 20,000,000 SHARES OF COMMON STOCK

The Board of Directors has determined that it is advisable to increase our authorized common stock from 33,750,000 shares to 53,750,000 shares, and has voted to recommend that the stockholders adopt an amendment to our Certificate of Incorporation effecting the proposed increase. A copy of the proposed amendment to the Certificate of Incorporation is attached to this Proxy Statement as Exhibit B (referred to as the Proposed Amendment herein).

As of April 20, 2017, approximately 25,096,214 shares of our common stock were issued and outstanding (excluding treasury shares), and approximately 3,183,943 million shares of our common stock were reserved for issuance upon the conversion of existing securities and exercise of options granted under our various stock-based plans. Accordingly, a total of approximately 5,469,843 shares of common stock is available for future issuance.

In addition to providing for sufficient shares of authorized common stock to allow for issuance of additional shares of common stock under the 2016 Equity Incentive Plan as discussed above, the Board of Directors believes it continues to be in our best interest to have sufficient additional authorized but unissued shares of common stock available in order to provide flexibility for corporate action in the future. Management believes that the availability of additional authorized shares for issuance from time to time in the Board of Directors' discretion in connection with possible acquisitions of other companies, future financings, investment opportunities, stock splits or dividends or for other corporate purposes is desirable in order to avoid repeated separate amendments to our Certificate of Incorporation and the delay and expense incurred in holding special meetings of the stockholders to approve such amendments. We currently have no specific understandings, arrangements or agreements with respect to any future acquisitions that would require us to issue a material amount of the additional new shares of our common stock. However, the Board of Directors believes that the currently available unissued shares do not provide sufficient flexibility for corporate action in the future.

We will not solicit further authorization by vote of the stockholders for the issuance of the additional shares of common stock proposed to be authorized, except as required by law, regulatory authorities or rules of the Nasdaq or any other stock exchange on which our shares may then be listed. The issuance of additional shares of common stock could have the effect of diluting existing stockholder earnings per share, book value per share and voting power. Our stockholders do not have any preemptive right to purchase or subscribe for any part of any new or additional issuance of our securities. Baupost and its affiliates have agreed to vote their respective shares of our common stock in favor of this proposal.

If the Proposed Amendment is approved by the stockholders, it will become effective upon filing and recording of a Certificate of Amendment as required by the Delaware General Corporation Law.

THE BOARD OF DIRECTORS UNANIMOUSLY RECOMMENDS A VOTE "FOR" THE APPROVAL OF THE AMENDMENT OF OUR CERTIFICATE OF INCORPORATION TO INCREASE OUR AUTHORIZED SHARE CAPITAL BY 20,000,000 SHARES OF COMMON STOCK. THE AFFIRMATIVE VOTE OF NOT LESS THAN A MAJORITY OF THE VOTES ENTITLED TO BE CAST BY ALL SHARES OF COMMON STOCK ISSUED AND OUTSTANDING ON THE RECORD DATE IS REQUIRED TO APPROVE THE PROPOSED AMENDMENT.

ADDITIONAL INFORMATION

Householding of Annual Meeting Materials

Some banks, brokers and other nominee record holders may be participating in the practice of "householding" proxy statements and annual reports. This means that only one copy of our proxy statement and Annual Report may have been sent to multiple stockholders in your household. We will promptly deliver a separate copy of either document to you if you contact us at: Stemline Therapeutics, Inc., 750 Lexington Avenue, Eleventh Floor, New York, New York 10022, Attn: Kenneth Hoberman. You may also contact us at (646) 502-2311.

If you want to receive separate copies of the proxy statement and annual report in the future, or if you are receiving multiple copies and would like to receive only one copy for your household, you should contact your bank, broker, or other nominee record holder, or you may contact us at the above address or phone number.

Stockholder Proposals for Our 2018 Annual Meeting

Only proper proposals under Rule 14a-8 of the Exchange Act which are timely received will be included in the proxy materials for our next annual meeting. In order to be considered timely, such proposal must be received by our Corporate Secretary, Kenneth Hoberman, at Stemline Therapeutics, Inc., 750 Lexington Avenue, Eleventh Floor, New York, New York 10022, no later than December 31, 2017. We suggest that stockholders submit any stockholder proposal by certified mail, return receipt requested.

Our Bylaws require stockholders to provide advance notice to the Company of any stockholder director nomination(s) and any other matter a stockholder wishes to present for action at an annual meeting of stockholders (other than matters to be included in our proxy statement, which are discussed in the previous paragraph). In order to properly bring business before an annual meeting, our Bylaws require, among other things, that the stockholder submit written notice thereof complying with our Bylaws to Kenneth Hoberman, our Corporate Secretary, at the above address, not less than 90 days nor more than 120 days prior to the anniversary of the preceding year's annual meeting. Therefore, Stemline must receive notice of a stockholder proposal submitted other than pursuant to Rule 14a-8 (as discussed above) no sooner than January 1, 2018, and no later than February 24, 2018. If a stockholder fails to provide timely notice of a proposal to be presented at our 2018 Annual Meeting of Stockholders, the proxy designated by our Board of Directors will have discretionary authority to vote on any such proposal that may come before the meeting.

Other Matters

Our Board of Directors does not know of any other matters that may come before the meeting. However, if any other matters are properly presented to the meeting, it is the intention of the person named in the accompanying proxy card to vote, or otherwise act, in accordance with their judgment on such matters.

Solicitation of Proxies

We will bear the cost of solicitation of proxies. In addition to the solicitation of proxies by mail, our officers and employees may solicit proxies in person or by telephone. We may reimburse brokers or persons holding stock in their names, or in the names of their nominees, for their expenses in sending proxies and proxy material to beneficial owners.

Incorporation of Information by Reference

The Compensation Committee Report and the Audit Committee Report contained in this proxy statement are not deemed filed with the SEC and shall not be deemed incorporated by reference into any prior or future filings made by us under the Securities Act or the Exchange Act, except to the extent that we specifically incorporate such information by reference.

**FORM OF
AMENDMENT TO THE 2016 EQUITY
INCENTIVE PLAN
OF
STEMLINE THERAPEUTICS, INC.**

**AMENDMENT TO THE
STEMLINE THERAPEUTICS, INC.
2016 EQUITY INCENTIVE PLAN**

This Amendment to the Stemline Therapeutics, Inc. 2016 Equity Incentive Plan (the "Plan"), is hereby adopted this []th day of June, 2017, by the Board of Directors (the "Board") of Stemline Therapeutics, Inc. (the "Company").

WITNESSETH:

WHEREAS, the Company adopted the Plan for the purposes set forth therein; and

WHEREAS, pursuant to Section 11(d) of the Plan, the Board has the right to amend the Plan with respect to certain matters, provided that any material increase in the number of Shares available under the Plan shall be subject to stockholder approval; and

WHEREAS, the Board has approved and authorized this Amendment to the Plan and has recommended that the stockholders of the Company approve this Amendment;

NOW, THEREFORE, BE IT RESOLVED, that the Plan is hereby amended, subject to and effective as of the date of stockholder approval hereof, in the following particulars:

1. Section 4(a)(1) of the Plan is hereby amended by increasing the share references in such section from 1,800,000 to 3,000,000, so that such section reads in its entirety as follows:

"4. Stock Available for Awards

(a) *Number of Shares; Share Counting.*

(1) *Authorized Number of Shares.* Subject to adjustment under Section 9, Awards may be granted under the Plan for up to 3,000,000 shares of common stock, \$0.0001 par value per share, of the Company (the "*Common Stock*") plus: (X) 12,932 shares of Common Stock reserved but unissued as of the Effective Date under the Stemline Therapeutics, Inc. 2012 Equity Incentive Plan (the "*Prior Plan*"); and (Y) the number of shares of Common Stock underlying awards outstanding as of the Effective Date under the Prior Plan that thereafter terminate or expire unexercised or are cancelled, forfeited or lapse for any reason, not to exceed 2,500,000 shares; provided that, as of the Effective Date, no further awards shall be made pursuant to the Prior Plan and such Prior Plan shall remain in effect only so long as awards granted thereunder shall remain outstanding. The maximum number of shares of Common Stock that may be issued upon exercise of Incentive Stock Options granted under the Plan shall be 3,000,000."

2. Except as specifically set forth herein, the terms of the Plan shall be and remain unchanged, and the Plan as amended shall remain in full force and effect.

The foregoing is hereby acknowledged as being the Amendment to the Stemline Therapeutics, Inc. 2016 Equity Incentive Plan, as adopted by the Board on June [], 2017, and approved by the Company's stockholders on June [], 2017.

STEMLINE THERAPEUTICS, INC.

By: _____

Its: _____

**FORM OF
AMENDMENT TO THE
CERTIFICATE OF INCORPORATION
OF
STEMLINE THERAPEUTICS, INC.**

**CERTIFICATE OF AMENDMENT
OF CERTIFICATE OF INCORPORATION
OF
STEMLINE THERAPEUTICS, INC.**

June , 2017.

Stemline Therapeutics, Inc. (the "*Corporation*"), a corporation organized and existing under and by virtue of the Delaware General Corporation Law (the "DGCL"), does hereby certify:

FIRST: That the Board of Directors of the Corporation (the "*Board*"), pursuant to a unanimous written consent of the Board dated April 15, 2013, duly adopted resolutions approving an amendment to the Restated Certificate of Incorporation and declared said amendment to be advisable. The proposed amendment is as follows:

RESOLVED, the Corporation's Restated Certificate of Incorporation be amended by deleting the first paragraph of the Article Fourth and by substituting in lieu thereof the following as the amended first paragraph:

"FOURTH: The total number of shares of all classes of stock which the Corporation shall have authority to issue is 58,750,000 shares, consisting of (i) 53,750,000 shares of Common Stock, \$0.0001 par value per share ("*Common Stock*"), and (ii) 5,000,000 shares of Preferred Stock, \$0.0001 par value per share ("*Preferred Stock*")."

SECOND: That said amendment was duly adopted in accordance with the provisions of Section 242 of the Delaware General Corporation Law.

IN WITNESS WHEREOF, the Corporation has caused this certificate to be signed by a duly authorized officer as of the date first written above.

IN WITNESS WHEREOF, the Corporation has caused this certificate to be signed by a duly authorized officer as of the date first written above.

STEMLINE THERAPEUTICS, INC.

By: _____

Its: _____

