

ASSEMBLY BIOSCIENCES, INC.

FORM DEF 14A (Proxy Statement (definitive))

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SCHEDULE 14A INFORMATION

Proxy Statement Pursuant to Section 14(a) of the Securities Exchange Act of 1934

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 Pursuant to § 240.14a-12

ASSEMBLY BIOSCIENCES, 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)(4) and 0-11.

1. Title of each class of securities to which transaction applies:

2. Aggregate number of securities to which transaction applies:

3. Per unit price or other underlying value of transaction computed pursuant to Exchange Act Rule 0-11 (set forth the amount on which the filing fee is calculated and state how it was determined):

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3. Filing Party:

4. Date Filed:



assembly
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ASSEMBLY BIOSCIENCES, INC.
99 Hudson Street, 5th Floor
New York, New York 10013

NOTICE OF ANNUAL MEETING OF STOCKHOLDERS
To Be Held Thursday, May 28, 2015

To The Stockholders of Assembly Biosciences, Inc.:

The Annual Meeting of Stockholders of Assembly Biosciences, Inc., a Delaware corporation, will be held at The Langham, 330 North Wabash Avenue, Chicago, Illinois, on Thursday, May 28, 2015, at 10:00 a.m. for the following purposes:

- to elect six directors to serve for one-year terms expiring in 2016; and
- to act upon such other matters that may properly come before the meeting or any adjournment thereof.

These matters are more fully described in the attached proxy statement.

The Board of Directors has fixed the close of business on April 7, 2015 as the record date for the determination of stockholders entitled to notice of and to vote at the meeting or any adjournment thereof.

Under Securities and Exchange Commission rules, the Company is providing access to the proxy materials for the Annual Meeting to shareholders via the Internet, including an electronic proxy card for the meeting and our 2014 Annual Report to Stockholders. Accordingly, you can access the proxy materials and vote at www.proxyvote.com. Instructions for accessing the proxy materials and voting are described below and in the Notice of Annual Meeting that you received in the mail. If you are a stockholder of record, you may vote over the Internet, by telephone, or, if you request to receive a printed set of the proxy materials, by completing, signing, dating and mailing the accompanying proxy card in the return envelope. Submitting your vote via the Internet or by telephone or proxy card will not affect your right to vote in person if you decide to attend the Annual Meeting. If your shares are held in street name (held for your account by a broker or other nominee), you will receive instructions from your broker or other nominee explaining how to vote your shares, and you will have the option to cast your vote by telephone or over the Internet if your voting instruction form from your broker or nominee includes instructions and a toll-free telephone number or Internet website to do so. In any event, to be sure that your vote will be received in time, please cast your vote by your choice of available means at your earliest convenience. Your vote is very important. Whether or not you plan to attend the meeting, please carefully review the enclosed proxy statement and then cast your vote, regardless of the number of shares you hold.

We hope that you will attend the meeting in person on May 28th, 2015, and we very much appreciate your continuing interest in Assembly.

By Order of the Board of Directors

Derek A. Small
President and Chief Executive Officer

April 14, 2015



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ASSEMBLY BIOSCIENCES, INC.
99 Hudson Street, 5th Floor
New York, New York 10013

PROXY STATEMENT

ANNUAL MEETING OF STOCKHOLDERS
MAY 28, 2015

INFORMATION CONCERNING SOLICITATION AND VOTING

We are furnishing this proxy statement to the holders of our common stock in connection with the solicitation of proxies on behalf of the Board of Directors for use at our Annual Meeting of Stockholders to be held at The Langham, 330 North Wabash Avenue, Chicago, Illinois, at 10:00 a.m. on Thursday, May 28, 2015, and any adjournment thereof. We will bear the cost of soliciting proxies. In addition to solicitation of proxies by mail, our employees, without extra remuneration, may solicit proxies personally or by telephone. We will reimburse brokerage firms and other custodians, nominees and fiduciaries for their reasonable out-of-pocket expenses for forwarding proxy materials to beneficial owners and seeking instruction with respect thereto. The mailing address of our principal executive offices is 99 Hudson Street, 5th Floor, New York, New York 10013.

In accordance with the rules of the Securities and Exchange Commission, or SEC, instead of mailing a printed copy of our proxy materials to each stockholder of record, we are furnishing proxy materials, including the notice, this proxy statement, our 2014 Annual Report to Stockholders, including financial statements, and a proxy card for the meeting, by providing access to them on the Internet to save printing costs and benefit the environment. These materials were first available on the Internet on April 17, 2015. We mailed a Notice of Internet Availability of Proxy Materials on or about April 17, 2015 to our stockholders of record and beneficial owners as of April 7, 2015, the record date for the meeting. This proxy statement and the Notice of Internet Availability of Proxy Materials contain instructions for accessing and reviewing our proxy materials on the Internet and for voting by proxy over the Internet. You will need to obtain your own Internet access if you choose to access the proxy materials and/or vote over the Internet. If you prefer to receive printed copies of our proxy materials, the Notice of Internet Availability of Proxy Materials contains instructions on how to request the materials by mail. You will not receive printed copies of the proxy materials unless you request them. If you elect to receive the materials by mail, you may also vote by proxy on the proxy card or voter instruction card that you will receive in response to your request.

Annual Report on Form 10-K

Our Annual Report on Form 10-K for the fiscal year ended December 31, 2014 as filed with the SEC is accessible free of charge on our website at <http://proxy.assemblybio.com>. It contains audited financial statements covering our fiscal years ended December 31, 2014 and 2013. **You can request a copy of our Annual Report on Form 10-K free of charge by calling 1-646-706-5208 or sending an e-mail to dbarrett@assemblybio.com. Please include your contact information with the request.** The Form 10-K, without exhibits, is included in the 2014 Annual Report to Stockholders that accompanies this proxy statement.

Revocability of Proxies

Any stockholder giving a proxy has the power to revoke it at any time before it is voted by giving a later proxy or written notice to us at the address given above (Attention: David Barrett, Corporate Secretary), or by attending the meeting and voting in person.

Voting

When a proxy is properly executed and returned (and not subsequently properly revoked), the shares it represents will be voted in accordance with the directions indicated thereon, or, if no direction is indicated thereon, it will be voted:

- (1) FOR the election of the six director nominees identified herein; and
- (2) in the discretion of the proxies with respect to any other matters properly brought before the stockholders at the meeting.

Consistent with state law and our bylaws, the presence, in person or by proxy, of at least a majority of the shares entitled to vote at the Annual Meeting will constitute a quorum for purposes of voting on a particular matter at the Annual Meeting. Once a share is represented for any purpose at the Annual Meeting, it is deemed present for quorum purposes for the remainder of the meeting and any adjournment thereof unless a new record date is set for the adjournment. Shares held of record by stockholders or their nominees who do not vote by proxy or attend the Annual Meeting in person will not be considered present or represented at the Annual Meeting and will not be counted in determining the presence of a quorum. Signed proxies that withhold authority or reflect abstentions or “broker non-votes” will be counted for purposes of determining whether a quorum is present. “Broker non-votes” are proxies received from brokerage firms or other nominees holding shares on behalf of their clients who have not been given specific voting instructions from their clients with respect to non-routine matters.

Assuming the presence of a quorum at the Annual Meeting:

- The election of directors will be determined by a plurality of the votes cast at the Annual Meeting. This means that the six nominees receiving the highest number of “FOR” votes will be elected as directors. Withheld votes and broker non-votes, if any, are not treated as votes cast, and therefore will have no effect on the proposal to elect directors.

With respect to “non-routine” matters, such as the election of directors, a bank, brokerage firm, or other nominee is not permitted under the SRO rules to vote its clients’ shares if the clients do not provide instructions. The bank, brokerage firm, or other nominee will so note on the voting instruction form, and this constitutes a “broker non-vote.” “Broker non-votes” will be counted for purposes of establishing a quorum to conduct business at the meeting, but not for determining the number of shares voted FOR, AGAINST, ABSTAINING or WITHHELD FROM with respect to non-routine matters such as the election of directors. “Broker non-votes” will be counted for determining the number of shares voted FOR, AGAINST, ABSTAINING or WITHHELD FROM with respect to the election of directors.

In summary, if you do not vote your proxy, your bank, brokerage firm, or other nominee may either:

- cast a “broker non-vote” on non-routine matters; or
- leave your shares unvoted altogether.

We encourage you to provide instructions to your bank, brokerage firm, or other nominee by voting your proxy. This action ensures that your shares will be voted in accordance with your wishes at the Annual Meeting.

Record Date

Only the holders of record of our common stock at the close of business on the record date, April 7, 2015, are entitled to notice of and to vote at the meeting. On the record date, 17,084,147 shares of our common stock were outstanding. Stockholders are entitled to one vote for each share of common stock held on the record date.

Admission to the Meeting

Admission to the meeting will be limited to our stockholders of record, persons holding proxies from our stockholders and beneficial owners of our common stock. If your shares are registered in your name, we will verify your ownership at the meeting in our list of stockholders as of the record date. If your shares are held through a broker, bank or other nominee, you must bring proof of your ownership of the shares. This could consist of, for example, a bank or brokerage firm account statement or a letter from your bank or broker confirming your ownership as of the record date.

Delivery of Documents to Stockholders Sharing an Address

The SEC has adopted rules that permit companies to deliver a single Notice of Internet Availability or a single copy of proxy materials to multiple stockholders sharing an address unless a company has received contrary instructions from one or more of the stockholders at that address. Upon request, we will promptly deliver a separate Notice of Internet Availability or separate copy of proxy materials to one or more stockholders at a shared address to which a single Notice of Internet Availability or a single copy of proxy materials was delivered. Stockholders may request a separate Notice of Internet Availability or separate copy of proxy materials by contacting our Corporate Secretary either by calling 1-646-706-5208 or by mailing a request to 99 Hudson Street, 5th Floor, New York, New York 10013. Stockholders at a shared address who receive multiple Notices of Internet Availability or multiple copies of proxy materials may request to receive a single Notice of Internet Availability or a single copy of proxy materials in the future in the same manner as described above.

CORPORATE GOVERNANCE AND BOARD MATTERS

Our bylaws provide that the number of our directors is to be within a range of three to nine, with the exact number set by the Board. Our Board has set the number of directors at seven. In the future, the Board might decide to increase the number of directors, within the range, if suitable candidates with desired experience and expertise are found.

Independence of Directors

Because our common stock is listed on the NASDAQ Capital Market, our Board applies the NASDAQ Capital Market's test for director independence to all of our directors. Using that test, the Board has determined that current directors Mark Auerbach, Myron Z. Holubiak, Anthony Altig, Richard DiMarchi and William Ringo are independent under the NASDAQ Marketplace Rules. Derek Small is not independent because he is our current President and Chief Executive Officer. As part of such determination of independence, our Board has affirmatively determined that each of Mr. Auerbach, Mr. Holubiak, Mr. Altig, Dr. DiMarchi and Mr. Ringo does not have a relationship with our company that would interfere with the exercise of independent judgment in carrying out his responsibilities as a director.

Board Committees

William Ringo is the Chairman of our Board of Directors. Our Board has established the following three standing committees: Audit Committee; Compensation Committee; and Nominating and Governance Committee.

Our Audit Committee comprises Mr. Auerbach (Chair), Mr. Altig and Mr. Ringo. The Board has determined that each of Mr. Altig, Mr. Auerbach and Mr. Ringo qualifies as an "audit committee financial expert" as that term is defined in Item 407(d) of Regulation S-K promulgated by the SEC. The primary purpose of our Audit Committee is to oversee our accounting and financial reporting process and the audits of our financial statements, and our compliance with legal and regulatory requirements. In addition, our Audit Committee is responsible for reviewing and approving all related person transactions, including transactions with executive officers and directors, for potential conflicts of interests or other improprieties.

Our Compensation Committee comprises Mr. Holubiak (Chair), Mr. Auerbach and Mr. Ringo. The primary purpose of our Compensation Committee is to discharge our Board's responsibilities relating to compensation of our executive officers and employees and to administer our equity compensation and other benefit plans. In carrying out these responsibilities, our Compensation Committee reviews all components of executive officer and employee compensation for consistency with our Compensation Committee's compensation philosophy, as in effect from time to time.

Our Nominating and Governance Committee comprises Dr. DiMarchi (Chair), Mr. Altig and Mr. Holubiak. The primary purpose of our Nominating and Governance Committee is to select, and recommend to our Board, director nominees for each election of directors and recommend any corporate governance guidelines it deems appropriate.

The charters for the Audit Committee, Compensation Committee and Nominating and Governance Committee, which have been adopted by our Board of Directors, contain detailed descriptions of the committees' duties and responsibilities and are available in the *Investor Relations — Corporate Governance* section of our website at www.assemblybio.com.

Selection of Board Nominees

In fulfilling its responsibilities to select, and recommend to our Board, director nominees for each election of directors, our Nominating and Governance Committee will consider the following factors:

- the appropriate size of our Board and its committees;
- the perceived needs of our Board for particular skills, background and business experience;
- the skills, background, reputation, and business experience of nominees compared to the skills, background, reputation, and business experience already possessed by other Board members;

- nominees' independence from management; and
- applicable regulatory and listing requirements, including independence requirements and legal considerations.

The goal of our Nominating and Governance Committee is to assemble a Board that brings to our company a variety of perspectives and skills derived from high-quality business and professional experience. Directors should possess high personal and professional ethics, integrity and values, and be committed to representing the best interests of our stockholders. They must also have an inquisitive and objective perspective and mature judgment. While it does not have a specific written policy with regard to the consideration of diversity in identifying director nominees, the Committee does consider diversity to be an additional desirable characteristic in potential nominees. Director candidates, in the judgment of our Nominating and Governance Committee, must also have sufficient time available to perform all Board and committee responsibilities. Board members are expected to prepare for, attend and participate in all Board and applicable committee meetings.

Other than the foregoing, there are no stated minimum criteria for director nominees, although our Nominating and Governance Committee may also consider such other factors as it may deem, from time to time, to be in the best interests of the company and our stockholders.

Our Nominating and Governance Committee will annually evaluate our Board members who are willing to continue in service against the criteria set forth above in determining whether to recommend these directors for re-election.

Candidates for nomination as director may come to the attention of our Nominating and Governance Committee from time to time through incumbent directors, management, stockholders or third parties. These candidates may be considered at meetings of our Nominating and Governance Committee at any point during the year. Such candidates will be evaluated against the criteria set forth above. If our Nominating and Governance Committee believes at any time that it is desirable that our Board consider additional candidates for nomination, the Committee may poll directors and management for suggestions or conduct research to identify possible candidates and may, if our Nominating and Governance Committee believes it is appropriate, engage a third-party search firm to assist in identifying qualified candidates.

Our Nominating and Governance Committee's policy will be to evaluate any recommendation for director nominee proposed by a stockholder and our bylaws also permit stockholders to nominate directors for consideration at an annual meeting, subject to certain conditions. Any recommendation for director nominee must be submitted in writing to:

Assembly Biosciences, Inc.
Attention: Corporate Secretary
99 Hudson Street, 5th Floor
New York, New York 10013

Our bylaws require that any director nomination made by a stockholder for consideration at an annual meeting must be received in writing not more than 90 days nor less than 60 days in advance of the meeting, and at a special meeting called for the purpose of the election of directors not later than the close of business on the 10th business day following the date on which notice of such meeting is first given to our stockholders.

Each written notice containing a stockholder nomination of a director at an annual or special meeting must include:

- the name and address of the stockholder who intends to make the nomination and any stockholder associated with such stockholder, and the name and residence address of the person or persons to be nominated;
- the class and number of shares that are beneficially owned by the stockholder and any associated stockholder;

- a representation that the stockholder is a holder of record of stock entitled to vote at the meeting and intends to appear in person or by proxy at the meeting to nominate the person or persons specified in the notice;
- a description of all arrangements or understandings between the stockholder and each nominee and any other person or persons (naming such person or persons) pursuant to which the nomination or nominations are to be made by the stockholder;
- such other information regarding each nominee proposed by such stockholder as would be required to be disclosed in solicitations of proxies for election of directors, or as would otherwise be required, in each case pursuant to Regulation 14A under the Exchange Act including any information that would be required to be included in a proxy statement filed pursuant to Regulation 14A had the nominee been nominated by the board of directors;
- the written consent of each nominee to be named in a proxy statement and to serve as director of the corporation if so elected;
- whether and the extent to which any hedging or other transaction or series of transactions has been entered into by or on behalf of, or any other agreement, arrangement or understanding (including any short position or any borrowing or lending of shares) has been made, the effect or intent of which is to mitigate loss to or manage risk or benefit of share price changes for, or to increase or decrease the voting power of, such stockholder or any associated stockholder with respect to any share of our common stock; and
- to the extent known by the stockholder giving the notice, the name and address of any other stockholder supporting the nominee for election or reelection as a director or the proposal of other business on the date of such stockholder's notice.

Board of Director Meetings

The business of our company is under the general oversight of the Board as provided by the laws of Delaware and our bylaws. During the fiscal year ended December 31, 2014, the Board held 10 meetings and also conducted business by written consent, the Audit Committee held four meetings and the Compensation Committee held three meetings. The Nominating and Governance Committee conducted its business during the 10 Board meetings so no separate meeting was required. Each person who was a director during 2014 attended at least 75% of the Board meetings and the meetings of the committees on which he served.

We strongly encourage all of our directors to attend our annual meetings of stockholders. All of our directors who had been nominated in 2014 attended last year's Annual Meeting.

Risk Oversight

Our Board is responsible for our company's risk oversight and has delegated that role to the Audit Committee. In fulfilling that role, the Committee focuses on our general risk management strategy, the most significant risks facing our company, and ensures that appropriate risk mitigation strategies are implemented by management. The Audit Committee regularly reports to the full Board as appropriate on its efforts at risk oversight, and will report any matter that rises to the level of a material or enterprise level risk. The Compensation Committee oversees risks related to our compensation and benefit plans and policies to ensure sound pay practices that do not cause risks to arise that are reasonably likely to have a material adverse effect on our company.

PROPOSAL NO. 1 — ELECTION OF DIRECTORS

Our Board currently consists of seven individuals, six of whom are standing for re-election in 2015. Five of these directors are independent as defined by NASDAQ Marketplace Rules: Anthony E. Altig, Mark Auerbach, Richard DiMarchi, Myron Holubiak and William Ringo. Their respective biographical summaries are:

Nominees

<u>Name</u>	<u>Age (as of 03/31/15)</u>	<u>Director Since</u>	<u>Business Experience For Last Five Years</u>
Anthony Altig	59	2012	Mr. Altig joined our Board in January 2012. Since 2008, Mr. Altig has been the Chief Financial Officer of Biotix Holdings, Inc., a company that manufactures microbiological consumables. From 2004 to 2007, Mr. Altig served as the Chief Financial Officer of Diversa Corporation (subsequently Verenum Corporation), a public company developing specialized industrial enzymes. Prior to joining Diversa, Mr. Altig served as the Chief Financial Officer of Maxim Pharmaceuticals, Inc., a public biopharmaceutical company. In addition, Mr. Altig serves as a director and chairman of the audit committee for TearLab Corporation (formerly OccuLogix, Inc.), a publicly traded eyecare technology company, and served as a director of Optimer Pharmaceuticals, Inc., a pharmaceutical company, which was a public company until its acquisition by Cubist Pharmaceuticals, Inc. in October 2013. Among other experience, qualifications, attributes and skills, Mr. Altig's extensive management experience and financial expertise, as well as his experience serving on the boards of directors of several public pharmaceutical and healthcare companies, led to the conclusion of our Board that he should serve as a director of our company in light of our business and structure.

Name	Age (as of 03/31/15)	Director Since	Business Experience For Last Five Years
Mark Auerbach	76	2010	<p>Mr. Auerbach was elected to our Board in November 2010. Mr. Auerbach is the non executive chairman of the audit committee of RCS Capital Corporation (NYSE: RCAP), a publicly traded financial services company. Mr. Auerbach previously served as a director and chairman of the audit committee of Optimer Pharmaceuticals, Inc., a public company, from 2005 until its acquisition by Cubist Pharmaceuticals, Inc. in October 2013. From January 2006 through March 2010, Mr. Auerbach served as the chairman of the board of directors for Neuro-Hitech, Inc., an early-stage pharmaceutical company specializing in brain degenerative diseases. Over the last 20 years, Mr. Auerbach also has served as a director for several other companies, including Par Pharmaceutical Companies, Inc., a publicly traded manufacturer and marketer of generic pharmaceuticals and the parent of Par Pharmaceutical, Inc., Collexis Holdings, Inc., a public company which develops knowledge management and discovery software, and RxElite Holdings, Inc., a company which develops, manufactures, and markets generic prescription drug products in specialty generic markets. From 1993 to 2005, Mr. Auerbach served as chief financial officer of Central Lewmar LLC, a national fine paper distributor. Mr. Auerbach received his B.S. degree in accounting from Rider University. Among other experience, qualifications, attributes and skills, Mr. Auerbach's extensive financial experience, his accounting degree and his experience as a director of several public companies, including his service as the chair of the audit committee of one of those public companies, led to the conclusion of our Board that he should serve as a director of our company in light of our business and structure.</p>

Name	Age (as of 03/31/15)	Director Since	Business Experience For Last Five Years
Richard DiMarchi	62	2014	<p>Dr. DiMarchi became a director upon the closing of the Assembly acquisition in July 2014. Dr. DiMarchi is a co-founder of Assembly Pharmaceuticals and has served on its board since inception in 2012. Dr. DiMarchi currently holds the Cox Distinguished Professor of Biochemistry and Gill Chair in Biomolecular Sciences at Indiana University. Dr. DiMarchi was a co-founder and board member of biotechnology companies Ambrx and Marcadia, current founder of Assembly and Calibrium Biotech, and advisor to venture firms 5AM, Twilight Ventures, and others. Dr. DiMarchi retired as Group Vice President at Eli Lilly & Company, where he provided leadership for more than two decades in biotechnology, endocrine research, and product development. Dr. DiMarchi previously served as a board member of the biotechnology trade group BIO, Isis and Millennium BioTherapeutics. His current research is focused on developing macromolecules with enhanced therapeutic properties through biochemical and chemical optimization, an approach he has termed chemical-biotechnology. Dr. DiMarchi contributed significantly to the discovery of Humalog® and to the commercial development of Humulin®, Humatrope®, Glucagon®, Xigris®, Forteo®, and Evista®. Dr. DiMarchi is the recipient of numerous prestigious awards and in 2014 was inducted to the National Inventors Hall of Fame. Dr. DiMarchi received his PhD in Biochemistry from Indiana University, and completed his postdoctoral studies at the Rockefeller University. Among other experience, qualifications, attributes and skills, Dr. DiMarchi’s medical training, extensive experience in the pharmaceutical industry, as well as his experience serving on the board of directors of several private pharmaceutical companies, led to the conclusion of our Board that he should serve as a director of our company in light of our business and structure.</p>
Myron Z. Holubiak	68	2010	<p>Mr. Holubiak joined our Board in July 2010. Mr. Holubiak is a founder and director as well as the chief executive officer of Leonard+Meron Biosciences, Inc., a privately held pharmaceutical company. Previously, Mr. Holubiak served as President of 1-800-DOCTORS, Inc. from May 2007 to January 2014. Mr. Holubiak is the former President of Roche Laboratories, Inc., USA, a major research-based pharmaceutical company, a position he held from December 1998 to August 2001. Prior to that, he held many sales and marketing positions at Roche Laboratories during his 19-year tenure there. Since September 2002, Mr. Holubiak has served on the board of directors of BioScrip, Inc., a publicly traded company and a leading home infusion provider with nationwide pharmacy and nursing capabilities, and is currently chairman of the board. From October 2012 to October 2014, Mr. Holubiak was a member of the board of directors of Intellicell Biosciences, Inc., a publicly traded regenerative medicine company. Mr. Holubiak is also a trustee of the Academy of Managed Care Pharmacy Foundation. Mr. Holubiak received his B.S. in Molecular Biology and Biophysics from the University of Pittsburgh. Among other experience, qualifications, attributes and skills, Mr. Holubiak’s extensive experience managing pharmaceutical and healthcare companies led to the conclusion of our Board that he should serve as a director of our company in light of our business and structure.</p>

Name	Age (as of 03/31/15)	Director Since	Business Experience For Last Five Years
William Ringo	68	2014	<p>Mr. Ringo became a director upon the closing of the Assembly acquisition in July 2014, and became non-executive Chairman of the Board in February 2015. Since July 2010, Mr. Ringo has been a senior advisor with Barclays Capital, the global investment banking division of Barclays Bank PLC. Since July 2010, Mr. Ringo has also served as a strategic advisor with Sofinnova Ventures, a life sciences-focused investment firm. Prior to his advisory roles with Barclays Capital and Sofinnova Ventures, Mr. Ringo served as senior Vice President of Strategy and Business Development for Pfizer Inc., a biopharmaceutical company, from April 2008 until his retirement in April 2010. From 2004 to 2006, Mr. Ringo served as President and Chief Executive Officer of Abgenix, Inc., a private biotechnology company acquired by Amgen. Mr. Ringo served on the Onyx Pharmaceuticals, Inc. board of directors from February 2011 until the October 2013 acquisition by Amgen. From 2001 to 2007, he served on various boards of directors, including Encysive Pharmaceuticals, Inc., Inspire Pharmaceuticals, Inc. and InterMune, Inc. where he was the non-executive chairman of the board of directors after serving as interim Chief Executive Officer from June to September 2003. From 1994 to 2002, he served as a director and chairman of the board for Community Health Systems, Inc. His experience in the global pharmaceutical sector also includes nearly 30 years with Eli Lilly and Company. Over the course of his career with Lilly, Mr. Ringo served in numerous executive roles, including Product Group President for oncology and critical care, President of internal medicine products, President of the infectious diseases business unit, and Vice President of sales and marketing for U.S. pharmaceuticals. He also was a member of Lilly's operating committee. Mr. Ringo is a director and chairman of the board of Sangamo BioSciences, Inc., Mirati Therapeutics, Immune Design, and is an advisor to Ascendis Pharma A/S. He also serves on the board of directors of BioCrossroads, an Indiana initiative and public-private collaboration that focuses on growing, advancing, and investing in the life sciences. Mr. Ringo received his B.S. in business administration and his M.B.A. from the University of Dayton. Among other experience, qualifications, attributes and skills, Mr. Ringo's extensive management experience in the pharmaceutical industry and experience in the capital markets, as well as his experience serving on the board of directors of a public pharmaceutical company and on the boards of directors of several private pharmaceutical companies, led to the conclusion of our Board that he should serve as a director of our company in light of our business and structure.</p>

Name	Age (as of 03/31/15)	Director Since	Business Experience For Last Five Years
Derek Small	39	2014	Mr. Small became a director and our President and Chief Operating Officer upon the closing of the Assembly acquisition in July 2014, and became Chief Executive Officer in February 2015. Mr. Small is a co-founder of Assembly Pharmaceuticals, and has served as Executive Chairman of the company since inception in 2012. From March 2008 to January 2014, Mr. Small served as a founding director, President, and Chief Executive Officer of Naurex, Inc., a privately held biotechnology company. From January 2009 to April 2012, Mr. Small also served as founding director, President, and Chief Executive Officer to Coferon, Inc., a privately held biotechnology company. Each of these companies was founded as portfolio companies of Luson Bioventures, a biotechnology and biopharmaceutical venture creation firm that Mr. Small founded in 2007. Mr. Small continues to serve on the Board of Directors of Naurex, Inc. Mr. Small received his BS in Business from Franklin College, including participation in the Harlaxton College affiliate program in England. Among other experience, qualifications, attributes and skills, Mr. Small’s extensive management experience in the pharmaceutical industry, as well as his experience serving on the board of directors of several private pharmaceutical companies, led to the conclusion of our Board that he should serve as a director of our company in light of our business and structure.

Vote Required

The six nominees receiving the highest number of affirmative votes of the shares present or represented and entitled to be voted at the meeting shall be elected as directors. Stockholders do not have cumulative voting rights. Your vote may be cast *for* or *withheld* from each nominee.

Our Board of Directors has unanimously approved and recommends that stockholders vote “FOR” the election of the director nominees listed above.

SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

Principal Stockholders

The following table sets forth certain information regarding the ownership of shares of our common stock as of March 15, 2015 by (1) each person known by us to beneficially own more than 5% of the outstanding shares of common stock, (2) each director and director nominee of our company, (3) each of the Named Executive Officers, as listed in the Summary Compensation Table below, and (4) all directors, director nominees and executive officers of our company as a group.

This table is based upon information supplied by our Named Executive Officers, directors, director nominees and principal stockholders and from Schedules 13G filed with the SEC. Unless otherwise indicated in the footnotes to this table and subject to community property laws where applicable, each of the stockholders named in this table has sole voting and investment power with respect to the shares indicated as beneficially owned. Share ownership in each case includes shares issuable upon exercise of options and warrants that may be exercised within 60 days after March 15, 2015 for purposes of computing the percentage of common stock owned by such person, but not for purposes of computing the percentage owned by any other person. Unless otherwise noted, the address for each person listed is 99 Hudson Street, 5th Floor, New York, New York 10013. Applicable percentages are based on 10,693,259 shares outstanding on March 15, 2015.

Name of Beneficial Owner	Shares Beneficially Owned	Percentage Owned (%)
5% Stockholders:		
EcoR1 Capital, LLC ⁽¹⁾ 409 Illinois Street San Francisco, CA 94158	1,009,752	9.4%
Jennison Associates LLC 466 Lexington Avenue New York, NY 10017	893,913	8.4%
Visium Asset Management, LP ⁽²⁾ 888 Seventh Avenue New York, NY 10019	834,284	7.8%
QVT Financial LP ⁽³⁾ 1177 Avenue of the Americas, 9 th Floor New York, NY 10036	535,000	5.0%
Adam Zlotnick ⁽⁴⁾ 615 Clifton Avenue Bloomington, IN 47401	1,363,676	12.7%
Directors and Named Executive Officers:		
Anthony Altig ⁽⁵⁾	29,333	*
Mark Auerbach ⁽⁶⁾	21,333	*
Richard DiMarchi ⁽⁷⁾	332,158	3.1%
Russell H. Ellison ⁽⁸⁾	556,546	5.0%
Myron Holubiak ⁽⁶⁾	21,333	*
William Ringo ⁽⁹⁾	41,798	*
Derek Small ⁽¹⁰⁾	818,657	7.5%
David J. Barrett ⁽¹¹⁾	267,203	2.4%
Uri Lopatin ⁽¹²⁾	674,984	6.3%
Lee Arnold ⁽⁶⁾	51,804	*
All directors and executive officers as a group (10 persons) ⁽¹³⁾	<u>2,815,149</u>	<u>23.7%</u>

* Less than 1%.

- (1) Based on the information contained in Schedule 13G/A filed with the SEC on February 17, 2015 by EcoR1 Capital, LLC, EcoR1 Capital Fund, L.P. and EcoR1 Capital Fund Qualified, L.P. According to the Schedule 13G/A, all three reporting persons hold shared voting and dispositive power over the shares. EcoR1 Capital Fund, L.P. directly owned 383,729 shares of common stock and EcoR1 Capital Fund Qualified, L.P. directly owned 626,023 shares of common stock. EcoR1 Capital, LLC, as the general partner of each of Capital Fund and Qualified Fund, may be deemed to beneficially own the 1,009,752 shares of common stock owned in the aggregate by Capital Fund and Qualified Fund. Oleg. Nodelman, as the Manager of EcoR1 Capital, LLC may be deemed to beneficially own the 1,009,752 shares of common stock owned in the aggregate by Capital Fund and Qualified Fund.
- (2) Based on the information contained in Schedule 13G/A filed with the SEC on February 13, 2015 by Visium Asset Management, LP (“VAM”), Visium Balanced Master Fund, Ltd., JG Asset, LLC and Jacob Gottlieb. According to the Schedule 13G/A, all three reporting persons hold shared voting and dispositive power over the shares. VAM is investment manager to pooled investment funds and may be deemed to beneficially own the shares that are beneficially owned by the pooled investment funds. JG Asset, LLC is the general partner of VAM and may be deemed to beneficially own the shares that are beneficially owned by VAM. Jacob Gottlieb is the managing member of JG Asset, LLC and may be deemed to beneficially own the shares that are beneficially owned by JG Asset, LLC.
- (3) Based on the information contained in Schedule 13G filed with the SEC on January 2, 2015 by QVT Financial LP, QVT Financial GP LLC and QVT Associates GP LLC. According to the Schedule 13G, all three reporting persons hold shared voting and dispositive power over the shares. QVT Financial LP (“QVT Financial”) is the investment manager for private investment funds (collectively, the “Funds”). The Funds aggregately own 535,000 shares of common stock. Accordingly, QVT Financial may be deemed to be the beneficial owner of an aggregate amount of 535,000 shares of common stock, consisting of the shares owned by the Funds. QVT Financial GP LLC, as General Partner of QVT Financial, may be deemed to beneficially own the same number of shares of common stock reported by QVT Financial. QVT Associates GP LLC, as General Partner of the Funds, may be deemed to beneficially own the aggregate number of shares of common stock owned by the Funds, and accordingly, QVT Associates GP LLC may be deemed to be the beneficial owner of an aggregate amount of 535,000 shares of common stock.
- (4) Includes 1,321,009 shares of common stock and 42,667 shares that Dr. Zlotnick has the right to acquire from us within 60 days of February 28, 2015 pursuant to the exercise of stock options.
- (5) Includes 8,000 shares of common stock and 21,333 shares that Mr. Altig has the right to acquire from us within 60 days of February 28, 2015 pursuant to the exercise of stock options.
- (6) Consists of shares that the individual has the right to acquire from us within 60 days of February 28, 2015 pursuant to the exercise of stock options.
- (7) Includes 310,825 shares of common stock and 21,333 shares that Dr. DiMarchi has the right to acquire from us within 60 days of February 28, 2015 pursuant to the exercise of stock options.
- (8) Consists of (i) 21,600 shares of common stock, (ii) 1,613 shares of our common stock issuable upon exercise of a warrant, and (iii) 533,333 shares that Dr. Ellison has the right to acquire from us within 60 days of February 28, 2015 pursuant to the exercise of stock options.
- (9) Includes 20,465 shares of common stock and 21,333 shares that Mr. Ringo has the right to acquire from us within 60 days of February 28, 2015 pursuant to the exercise of stock options.
- (10) Includes 624,391 shares of common stock and 194,266 shares that Mr. Small has the right to acquire from us within 60 days of February 28, 2015 pursuant to the exercise of stock options.
- (11) Consists of (i) 19,936 shares of common stock, and (ii) 247,267 shares that Mr. Barrett has the right to acquire from us within 60 days of February 28, 2015 pursuant to the exercise of stock options.
- (12) Includes 621,651 shares of common stock and 53,333 shares that Dr. Lopatin has the right to acquire from us within 60 days of February 28, 2015 pursuant to the exercise of stock options.
- (13) Includes the shares described in footnotes (5) through (12).

DIRECTOR COMPENSATION

The following table shows the compensation earned by each of our non-employee directors for the year ended December 31, 2014.

Non-Employee Director Compensation in Fiscal 2014

	Fees Earned or Paid in Cash	Option Awards ^{(1) (2)}	All Other Compensation	Total (\$)
Anthony E. Altig	\$ 40,000	\$ 373,168	\$ —	\$ 413,168
Mark Auerbach	45,000	339,017	—	384,017
Richard DiMarchi ⁽³⁾	20,000	357,198	—	377,198
Joseph Felder ⁽⁴⁾	20,000	—	—	20,000
Myron Holubiak	45,000	339,017	—	384,017
William Ringo ⁽³⁾	20,000	357,198	—	377,198

(1) As of December 31, 2014, our non-employee directors held the following options to purchase shares of our common stock: Mr. Altig, 64,000 shares; Mr. Auerbach, 64,000 shares; Mr. DiMarchi, 64,000 shares; Mr. Holubiak, 64,000 shares; and Mr. Ringo, 64,000 shares.

(2) The reported amount in the table above of the stock option grants made in 2014 represents the aggregate grant date fair value of the options computed in accordance with FASB ASC Topic 718. Assumptions used in the calculation of these amounts are included in Note 6 of the financial statements included in this Annual Report on Form 10-K.

(3) Became a director on July 11, 2014.

Dr. Felder ceased to be a director on July 10, 2014.

Directors receive a grant of options annually as determined by the Compensation Committee. In 2014, it was established that upon joining the Board, a new director will be granted 64,000 stock options. Cash compensation in 2015 will be different than 2014. Each non-employee director receives an annual cash fee of \$35,000 per year. The Chairman of the Board receives an annual cash fee of \$35,000 per year. Members of the Audit Committee receive a fee of \$7,500 per year with the Chair of the committee receiving an additional \$7,500. Members of the Compensation Committee and the Nominating and Governance Committee receive a fee of \$5,000 per year with the Chair of the committee receiving an additional fee of \$5,000.

EXECUTIVE COMPENSATION

Our executive officers are Derek Small, our President and Chief Executive Officer, David J. Barrett, our Chief Financial Officer and Chief Operating Officer, Uri Lopatin, our Chief Medical Officer, and Lee Arnold, our Chief Scientific Officer. Information on Derek Small is provided under “Proposal No. 1 — Election of Directors” above. Information on Mr. Barrett, Dr. Lopatin and Dr. Arnold is below.

Name	Age (as of 3/31/15)	Business Experience For Last Five Years
David J. Barrett	39	Mr. Barrett joined us as Chief Financial Officer in July 2010. From April 2006 to September 2009, Mr. Barrett served as Chief Financial Officer of Neuro-Hitech, Inc., a public company focused on developing, marketing and distributing branded and generic pharmaceutical products. From September 2003 to April 2006, Mr. Barrett was the Chief Financial Officer/Vice President of Finance of Overture Asset Managers and Overture Financial Services, which, at the time, was a start-up asset management firm that assembled investment products and platforms to distribute turnkey and unbundled investment solutions to financial intermediaries and institutional investors. From July 1999 to September 2003, Mr. Barrett was employed as a Manager at Deloitte & Touche, LLP. Mr. Barrett also is a director of Coronado Biosciences, Inc. (NASDAQ: CNDO), a biopharmaceutical Company. Mr. Barrett received his B.S. in Accounting and Economics and his M.S. in Accounting from the University of Florida. He is a certified public accountant.
Dr. Lopatin	43	Dr. Lopatin joined us as Chief Medical Officer and Vice President Research and Development in July 2014 upon the completion of the merger with Assembly Pharmaceuticals. At Assembly Pharmaceuticals, he was Chief Medical Officer and Vice President Research and Development, a position he held since October, 2012. Prior to that, he was a Senior Director for Clinical and Translational Research-Liver Disease at Gilead Sciences from October, 2010 to September, 2012, a Translational Medical Leader at Roche from May, 2008 to September, 2010. He has designed and coordinated pre-clinical and clinical collaborations, as well as phase I through IV clinical studies of multiple new molecular entities. Dr. Lopatin has published extensively, especially on hepatitis B and immunology and is an author of multiple patents in the field of treatment and diagnosis for viral hepatitis. Dr. Lopatin received his infectious disease Board certification following fellowship training in ID at the NIH, and internal medicine board certification following completion of residency at NYU. He received his MD in 2000 from University of Medicine and Dentistry-New Jersey Medical School.

Name	Age (as of 3/31/15)	Business Experience For Last Five Years
Dr. Arnold	55	Dr. Lee Arnold joined us as a Chief Scientific Officer in July 2014 upon the completion of the merger with Assembly Pharmaceuticals. At Assembly Pharmaceuticals, he served as Chief Scientific Officer since May 2014. Dr. Arnold has an exceptionally broad research background ranging from synthetic and medicinal chemistry, structure-based drug design, biochemistry and biophysics, drug metabolism, to preclinical efficacy, safety, toxicology, Process R&D, and IND-enabling studies. With pharma experience from Syntex, Pfizer, BASF/Abbott Bioresearch, and OSI Pharmaceuticals, he brings a history of over 27 years of industry contributions in molecularly-targeted small-molecule drug discovery in oncology, immunology and infectious disease. From July 2009 to April 2014, Dr. Arnold was Chief Scientific Officer for Coferon, Inc. Dr. Arnold led the creation, refinement, and deployment of an unprecedented self-assembling drug molecule platform to deliver larger, more potent and selective drugs into cells in parts. During his career, Dr. Arnold has played a direct role in delivering 7 innovative drug candidates into development for oncology. One of his inventions, TARCEVA, is the first orally-active kinase inhibitor demonstrated to improve survival in lung and pancreatic carcinoma patients. Since 2007 he has also been a visiting professor at the State University of New York at Stony Brook and a member of the Institute of Chemical Biology and Drug Discovery. Dr. Arnold is recognized in drug discovery through his inventorship on over sixty-five patent filings, more than thirty peer-reviewed publications, and numerous conference presentations.

Components of our Executive Compensation Program

The principal components of our executive compensation program are base salary, annual bonus, and long-term incentives. Our Compensation Committee believes that each component of executive compensation must be evaluated and determined with reference to competitive market data, individual and corporate performance, our recruiting and retention goals, internal equity and consistency, and other information we deem relevant. We believe that in the biopharmaceutical industry stock option and/or other equity awards are a primary motivator in attracting and retaining executives, in addition to salary and cash incentive bonuses.

The components of our compensation package are set forth below.

Base Salary

We provide base salaries for our Named Executive Officers to compensate them for their services rendered during the fiscal year. Base salaries for our Named Executive Officers have been established based on their position and scope of responsibilities, their prior experience and training, and competitive market compensation data we review for similar positions in our industry.

Base salaries are reviewed periodically and may be increased for merit reasons based on the executive's performance, for retention reasons or if the base salary is not competitive to salaries paid by comparative companies for similar positions. Additionally, we may adjust base salaries throughout the year for promotions or other changes in the scope or breadth of an executive's role or responsibilities.

Annual Incentive Bonus

A significant element of the cash compensation of our Named Executive Officers is an annual performance-based cash bonus. A Named Executive Officer's target bonus is generally set as a percentage of base salary to reward strong performance and retain his employment in a competitive labor market. In the case of Drs. Ellison, Lopatin and Arnold, and Messrs. Small and Barrett, their employment agreements, effective through 2014, provided an annual bonus of up to 50% and 30% of their base salary, respectively. Their current employment agreements provide for bonus opportunities of 50%, 30%, 30%, 50% and 50%, respectively. Bonuses are based on the achievement of significant company goals, including research and clinical development, financial, business development and operational milestones, with specific goals tailored

to the executive officer's area of responsibility. The performance goals generally are determined by our Compensation Committee in the first quarter of the calendar year but the bonuses are determined at the time bonuses are paid. Additionally, the Board or the Compensation Committee may increase or decrease an executive's bonus payment (above or below the target) based on its assessment of the company's and an executive's individual performance during a given year. For 2014, annual bonuses were based on achievement of company goals related to development of our HBV and Microbiome therapy programs, financial operations/investor relations, strategic planning, business development/commercialization, and corporate governance. In addition, our Compensation Committee determined that the performance of the Named Executive Officers should be evaluated in three distinct time periods — pre-merger, merger period, and post-merger, reflecting the types of activities associated with each of these periods. Each officer's potential bonus was weighted differently for each set of goals, depending on his respective area of responsibility. For the business and financial executive positions, the Compensation Committee believed no bonuses should be awarded for the pre-merger period because the activities and performance during that time period were recognized at the time of the merger; for the merger and post-merger periods, these executives were generally considered to have met their goals. For the science/technical executive position, both leaders were considered to have performed well in pursuit of the development objectives. The resulting bonuses were as follows for 2014: \$116,667 for Mr. Small (67% of his total possible bonus for 2014); \$142,500 for Dr. Ellison (60%); \$150,000 for Mr. Barrett (100%); \$104,400 for Dr. Lopatin (120%); and \$51,188 for Dr. Arnold (54%). The bonus amounts for Mr. Small and Drs. Lopatin and Arnold are based on their salaries paid by us during 2014, beginning immediately after the Assembly merger on July 11, 2014.

Long-term Incentives

Our equity-based long-term incentive program is designed to align our Named Executive Officers' long-term incentives with stockholder value creation. We believe that long-term participation by our executive officers in equity-based awards is a critical factor in the achievement of long-term company goals and business objectives. Our 2014 Plan allows the grant to executive officers of stock options, as well as other forms of equity incentives, as part of our overall compensation program. Grants of options to our executive officers other than our Chief Executive Officer are recommended by the Chief Executive Officer and finalized by the Compensation Committee and/or the Board. Grants of options to our Chief Executive Officer are made by the Compensation Committee and/or the Board.

In July 2014, we cancelled all outstanding options issued under our 2006 Plan and all outstanding options and unvested restricted stock units. At the same time, our Board and our stockholders adopted and approved our 2014 Stock Incentive Plan and we granted the following stock options to our Named Executive Officers: Dr. Ellison, 800,000 options; Mr. Barrett, 741,800 options; and Dr. Lopatin, 160,000 options. No options were granted to Mr. Small and Dr. Arnold because we assumed options to purchase 466,238 shares and 155,412 shares, respectively, in the merger with Assembly Pharmaceuticals, which had previously granted them those options. In approving these stock options, the Board's guiding principle was to create a program that is designed to incentivize management to generate a significant increase in total shareholder return as measured by sustained increases in our stock price.

Other Compensation

We maintain broad-based benefits and perquisites that are provided to all eligible employees, including health insurance, life and disability insurance, dental insurance and paid vacation.

Pension Benefits

We do not maintain any qualified or non-qualified defined benefit plans. As a result, none of our Named Executive Officers participate in or have account balances in qualified or non-qualified defined benefit plans sponsored by us. Our Compensation Committee may elect to adopt qualified or non-qualified benefit plans in the future if it determines that doing so is in our best interests.

Nonqualified Deferred Compensation

None of our Named Executive Officers participate in or have account balances in nonqualified defined contribution plans or other non-qualified deferred compensation plans maintained by us. Our Compensation Committee may elect to provide our officers and other employees with non-qualified defined contribution or other non-qualified deferred compensation benefits in the future if it determines that doing so is in our best interests.

Summary Compensation Table

The following table sets forth all compensation earned in the fiscal years ended December 31, 2014 and 2013 by our Named Executive Officers.

Name and Principal Position	Year	Salary	Bonus	Stock Awards	Option Awards ⁽¹⁾	Non-equity Incentive Plan Compensation ⁽²⁾	All Other	Total
Derek Small ⁽³⁾ President and Chief Executive Officer	2014	\$160,416	\$150,000	\$ —	\$ —	\$ 116,667	\$ —	\$ 427,083
	2013	—	—	—	—	—	—	—
Russell H. Ellison, M.D. ⁽⁴⁾ President and Chief Executive Officer	2014	465,000	—	—	4,694,538	142,500	—	5,302,038
	2013	375,000	—	147,500	—	18,750	—	541,250
David J. Barrett Chief Financial Officer	2014	299,358	—	—	4,373,237	150,000	—	4,822,595
	2013	250,000	—	147,500	—	68,750	—	466,250
Uri Lopatin, M.D. Chief Medical Officer	2014	120,833	100,000	—	892,996	104,400	—	1,218,229
	2013	—	—	—	—	—	—	—
Lee Arnold, M.D. Chief Scientific Officer	2014	144,375	—	—	—	51,188	—	195,563
	2013	—	—	—	—	—	—	—

(1) The reported amounts represent the grant date fair value of the award, computed in accordance with FASB ASC Topic 718. Assumptions used in the calculation of these amounts are included in Note 6 of the financial statements included in this Annual Report on Form 10-K.

(2) Non-equity incentive plan compensation represents amounts paid as annual performance awards.

(3) Became an employee on July 11, 2014.

(4) Dr. Ellison ceased to be an employee on February 10, 2015, but continues to serve as a consultant.

Outstanding Equity Awards at December 31, 2014

The following table contains certain information concerning unexercised options and unvested restricted stock units for the Named Executive Officers as of December 31, 2014.

Name	Grant Date	Number of Securities Underlying Unexercised Options Exercisable (#)	Number of Securities Underlying Unexercised Options Unexercisable (#)	Option Exercise Price (\$)	Option Expiration Date
Derek Small	5/15/2014 ⁽¹⁾	142,462	323,776	\$ 2.22	5/15/2024
Russell Ellison	7/10/2014 ⁽²⁾	266,667	533,333	7.20	7/11/2024
David Barrett	7/10/2014 ⁽²⁾	247,267	494,533	7.20	7/11/2024
Uri Lopatin	7/10/2014 ⁽²⁾	53,333	106,667	7.20	7/11/2024
Lee Arnold	5/15/2014 ⁽³⁾	34,536	120,877	2.22	5/15/2024

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- (1) These options were assumed in the Assembly merger and vest $1/36$ on a monthly basis beginning on February 2, 2014.
 - (2) One-third of the options vest on the grant date, one-third vest on the first anniversary of the grant date and one-third vest on the second anniversary of the grant date.
 - (3) These options were assumed in the Assembly merger and vest $1/36$ on a monthly basis beginning on May 15, 2014.

Employment Arrangements

All of our Named Executive Officers serve pursuant to an employment agreement.

On February 10, 2015, we named Mr. Small our Chief Executive Officer, in addition to his current position as President, and we named Mr. Barrett our Chief Operating Officer, in addition to his current role as Chief Financial Officer. In his new position, Mr. Small received a 20% salary increase, bringing his salary to \$420,000, and for his additional responsibility, Mr. Barrett receive a 3% salary increase, bring his salary to \$357,000. As had been agreed during the Assembly merger, Mr. Small succeeded Dr. Ellison as our Chief Executive Officer. At the same time, our director William Ringo succeeded Dr. Ellison as Chairman. Dr. Ellison will continue to serve as a director until the 2015 annual meeting, and he will also continue as a Senior Advisor and head of our microbiome development program. The succession constitutes a “termination without cause” under Dr. Ellison’s employment agreement. As a result, Dr. Ellison is entitled to 12 months of salary, immediate vesting of an additional one third of his outstanding option and an extension of the exercise period to the option expiration date of July 10, 2024, and reimbursement of COBRA premiums for 12 months or until he is eligible for insurance benefits from another employer, whichever is earlier.

In January 2014, we entered into an employment agreement with each of Russell Ellison and David Barrett. Each employment agreement has a term of two years and will be automatically extended for additional one-year periods unless we notify the officer at least 180 days prior to the then current expiration date that we intend to not extend the employment agreement. The employment agreements provide for a base salary of \$475,000 per year for Dr. Ellison and \$300,000 for Mr. Barrett (subsequently increased to \$350,000), and an annual discretionary bonus of up to 50% of the officer’s base salary based on financial, clinical development and business milestones established by the Board of Directors.

Under the employment agreements, Dr. Ellison and Mr. Barrett are prohibited for 12 months after termination of employment from (i) engaging within the restricted territory (as defined in the agreement) in developing novel prescription drugs for the specific disease treatment of hemorrhoids, anal fissures, and fecal incontinence or any other business in which we are actively engaged at the time of termination of employment, (ii) holding a position in or with responsibility for all or a part of the restricted territory (A) with any person or entity engaged in such a business and for which the officer will perform services that are the same or substantially similar to those performed by him for us within 12 months prior to termination of employment, or (B) in which the officer will use or disclose any of our confidential information, (iii) being employed or engaged by any person or entity that was an agent or customer of ours with whom the officer worked during his employment with us and for whom he will be performing services that are the same or substantially similar to those services he provided to the agent or customer during the officer’s employment with us, (iv) soliciting our customers for purposes of marketing or selling similar or competitive products, or interfering with the business relationship between our company and our customers, and (v) inducing any employee or consultant of ours to terminate employment or a contractual relationship with us. In the employment agreement, the term “restricted territory” is defined generally as any country in which we conduct business as of the date of termination of the officer’s employment.

If we terminate either Dr. Ellison or Mr. Barrett for cause (as defined in the agreement) or if he terminates without good reason (as defined in the agreement), we will pay his then-current base salary through the date of his termination and any expense reimbursement amounts owed through the date of termination. If Dr. Ellison’s or Mr. Barrett’s employment is terminated as a result of death, then we will pay to his estate his then-current base salary for a period of 12 months following such termination.

If either Dr. Ellison’s or Mr. Barrett’s employment is terminated in connection with or within six months of a change of control (as defined in the agreement), we will provide him the following benefits: (i) a lump-sum payment equal to 18 months of his then-current base salary, (ii) the full annual discretionary bonus as established by the Board, (iii) immediate vesting in full of all equity awards, (iv) extension of the exercise period for all stock options to the end of their term, and (v) reimbursement of COBRA premiums for 18 months or until the officer is eligible for insurance benefits from another employer, whichever is earlier. In the employment agreement, the term “change in control” is defined generally as the acquisition by any person of more than 50% of the voting power of our then-outstanding securities, and/or the merger or consolidation of our company or the sale of all or substantially all of our assets.

If either Dr. Ellison's or Mr. Barrett's employment is terminated as a result of disability, by us without cause (as defined in the agreement), or by the officer for good reason (as defined in the agreement), we will provide him the following benefits: (i) continued payment of his then-base salary for 12 months following date of termination of employment, (ii) immediate vesting in full of all equity awards that would have become vested during the 12 months following termination of employment, (iii) extension of the exercise period for all vested stock options to the end of their term, and (iv) reimbursement of COBRA premiums for 18 months or until the officer is eligible for insurance benefits from another employer, whichever is earlier.

In the employment agreements, the term "cause" is defined generally as (i) willful failure to perform the officer's duties, (ii) willful or intentional misconduct or gross negligence, (iii) indictment of any felony or a misdemeanor involving moral turpitude, (iv) engagement in some form of harassment prohibited by law, (v) intentional misappropriation or embezzlement of our property, (vi) breach by the officer of the non-misappropriation, non-compete and non-solicitation provisions of the agreement, and (vii) uncured breach by the officer of any other provision of the agreement. In the employment agreements, the term "good reason" is defined generally as (i) any material reduction of the officer's duties, responsibilities, or authority, (ii) any material reduction of the officer's compensation or benefits, (iii) relocation of our headquarters or the officer's residence or primary place of employment to a location outside a 30-mile radius of New York, New York.

In connection with the Assembly Pharmaceuticals merger, we entered into employment agreements with Derek Small, Uri Lopatin and Lee Arnold. Pursuant to these agreements, Mr. Small serves as President, Chief Operating Officer and Budget Chief (in February 2015, Mr. Small became our President and Chief Executive Officer and relinquished his title of Chief Operating Officer), Dr. Lopatin serves as Chief Medical Officer and Vice President, Research and Development, and Dr. Arnold serves as Chief Scientific Officer and Vice President, Research and Development. Mr. Small's employment agreement has a term of two years and Dr. Lopatin and Dr. Arnold's employment agreements provide for at-will employment, subject to payment of severance benefits depending on the circumstances of termination. The employment agreements provide for a base salary of \$350,000 per year for Mr. Small, \$290,000 per year for Dr. Lopatin and \$315,000 per year for Dr. Arnold. Each employee is also eligible for an annual discretionary bonus based on achievement of financial, clinical development and business milestones established by the Board of Directors, with Mr. Small eligible for a bonus of up to 50% of his base salary, and Dr. Arnold and Dr. Lopatin eligible for a bonus of up to 30% of their respective base salaries. Mr. Small and Dr. Lopatin received a retention bonus after three months of employment in the amount of \$150,000 for Mr. Small and \$100,000 for Dr. Lopatin. Under the employment agreements, Mr. Small and Dr. Arnold are prohibited for 12 months after termination of employment from engaging in certain competitive activities. Dr. Lopatin will be subject to and bound by a Confidentiality and Assignment of Inventions Agreement.

CERTAIN RELATIONSHIPS, RELATED TRANSACTIONS AND DIRECTOR INDEPENDENCE

INDEPENDENCE OF DIRECTORS

Because our common stock is listed on the NASDAQ Capital Market, our Board applies the NASDAQ Capital Market's test for director independence to all of our directors. Using that test, the Board has determined that directors Mark Auerbach, Anthony Altig, Richard DiMarchi, Myron Holubiak and William Ringo are independent under the NASDAQ Marketplace Rules. Derek Small is not independent because he is our President and Chief Executive Officer. Russell Ellison is not independent because he is our immediate post Chief Executive Officer. As part of such determination of independence, our Board has affirmatively determined that each of Mr. Altig, Mr. Auerbach, Mr. DiMarchi, Mr. Holubiak and Mr. Ringo does not have a relationship with our company that would interfere with the exercise of independent judgment in carrying out his responsibilities as a director.

CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

The written charter of our Audit Committee authorizes and the NASDAQ Marketplace Rules require our Audit Committee to review and approve related party transactions. In reviewing related party transactions, our Audit Committee applies the basic standard that transactions with affiliates should be made on terms no less favorable to us than could have been obtained from unaffiliated parties. Therefore, the Audit Committee reviews the benefits of the transactions, terms of the transactions and the terms available from unrelated third parties, as applicable. All transactions other than compensatory arrangements between us and our officers, directors, principal stockholders and their affiliates will be approved by our Audit Committee or a majority of the disinterested directors, and will continue to be on terms no less favorable to us than could be obtained from unaffiliated third parties. There were no related party transactions in 2014 and, as of the date of this proxy statement, none have been undertaken in 2015.

AUDITOR AND AUDIT COMMITTEE MATTERS

Report of the Audit Committee

The Audit Committee has reviewed and discussed our consolidated audited financial statements for the year ended December 31, 2014 with management. The Audit Committee has discussed with EisnerAmper the matters required to be discussed by Auditing Standard No. 16, issued by the Public Company Accounting Oversight Board, or PCAOB. The Audit Committee has received the written disclosures and the letter from EisnerAmper required by the PCAOB, and has discussed with EisnerAmper its independence. Based on the review and discussions described above, among other things, the Audit Committee recommended to the Board that the consolidated audited financial statements be included in our Annual Report on Form 10-K for fiscal 2014.

The Board has determined that the members of the Audit Committee are independent as defined in Nasdaq Marketplace Rule 5605(a)(2). The Board also has determined that each of Anthony Altig, Mark Auerbach and William Ringo is an “audit committee financial expert” as defined in Item 401(h) of Regulation S-K.

Principal Accounting Fees and Services

Audit Fees. Audit fees include fees billed to us by EisnerAmper in connection with its annual audit of our financial statements and procedures related to our regulatory filings, including regulatory filings and the comfort letters for our 2014 and 2013 public offerings, our 2014 merger, and our 2014, 2013 and 2012 at-the-market sales program. The aggregate fees billed to us by EisnerAmper for such audit services rendered for the fiscal years ended December 31, 2014 and 2013 were \$239,404 and \$177,479, respectively.

Audit-Related Fees . Audit-related services consist solely of routine accounting consultations. During the fiscal years ended December 31, 2014 and 2013, EisnerAmper did not bill us for any audit-related services.

Tax Fees. Tax fees include corporate tax compliance, assistance with an IRS examination as well as advisory services. The aggregate fees billed to us by EisnerAmper for tax-related services in the fiscal years ended December 31, 2014 and 2013 were \$10,000 and \$15,500, respectively.

All Other Fees . During the fiscal years ended December 31, 2014 and 2013, EisnerAmper did not bill us for any other fees.

The Audit Committee of the Board considered all of the above activities to be compatible with the maintenance of EisnerAmper’s independence. The Audit Committee discussed these services with EisnerAmper and our management to determine that they are permitted under the rules and regulations concerning auditor independence promulgated by the SEC to implement the Sarbanes-Oxley Act of 2002, as well as the PCAOB.

Although the Audit Committee does not have formal pre-approval policies and procedures in place, it pre-approved all of the services performed by EisnerAmper as discussed above, as required by SEC regulation.

Submitted by:	The Audit Committee
	Mark Auerbach, Chairman
	Anthony Altig
	William Ringo

This Audit Committee Report shall not be deemed to be filed with the SEC or incorporated by reference into any of our previous or future filings with the SEC, except as otherwise explicitly specified by us in any such filing.

SECTION 16(A) BENEFICIAL OWNERSHIP REPORTING COMPLIANCE

Pursuant to Section 16(a) of the Securities Exchange Act, our directors and executive officers are required to file reports with the SEC indicating their holdings of and transactions in our equity securities. To our knowledge, based solely on our review of the copies of such reports furnished to us and written representations that our officers, directors and holders of more than 10% of our common stock complied with all applicable filing requirements during the fiscal year ended December 31, 2014, with the exception of (i) a late filing made by Adam Zlotnick who filed a late Form 3 on September 9, 2014 reporting a 10% or greater ownership interest arising on July 11, 2014, (ii) a late filing made by Adam Zlotnick who filed a late Form 4 on September 9, 2014 reporting the grant of a stock option on July 10, 2014, (iii) a late filing made by Russell Ellison who filed a late Form 4 on March 12, 2014 reporting the grant of stock options on January 15, 2014, and (iv) a late filing made by David Barrett who filed a late Form 4 on March 12, 2014 reporting the grant of certain stock options on January 15, 2014.

DEADLINE FOR STOCKHOLDER PROPOSALS FOR 2015 ANNUAL MEETING

Stockholders having proposals that they desire to present at next year's annual meeting of our stockholders should, if they desire that such proposals be included in our proxy statement relating to such meeting, submit such proposals in time to be received by us not later than December 18, 2016. To be so included, all such submissions must comply with the requirements of Rule 14a-8 promulgated under the Securities Exchange Act and we direct your close attention to that rule. In addition, management's proxy holders will have discretion to vote proxies given to them on any stockholder proposal of which we do not have notice prior to April 3, 2016. Proposals should be mailed to the Corporate Secretary, 99 Hudson Street, 5th Floor, New York, New York 10013.

STOCKHOLDER COMMUNICATIONS

Stockholders and other interested parties may communicate with the Board by writing to Derek Small, our President and Chief Executive Officer, at Assembly Biosciences, Inc., 99 Hudson Street, 5th Floor, New York, New York 10013. Mr. Small will relay such communications to the Board.

OTHER MATTERS

The Board knows of no other business to be brought before the meeting, but intends that, as to any such other business, the shares will be voted pursuant to the proxy in accordance with the best judgment of the person or persons acting thereunder.

ASSEMBLY BIOSCIENCES INC.
 99 HUDSON ST, 5TH FLOOR
 NEW YORK, NY 10013

VOTE BY INTERNET - www.proxyvote.com

Use the Internet to transmit your voting instructions and for electronic delivery of information up until 11:59 P.M. Eastern Time the day before the cut-off date or meeting date. Have your proxy card in hand when you access the web site and follow the instructions to obtain your records and to create an electronic voting instruction form.

ELECTRONIC DELIVERY OF FUTURE PROXY MATERIALS

If you would like to reduce the costs incurred by our company in mailing proxy materials, you can consent to receiving all future proxy statements, proxy cards and annual reports electronically via e-mail or the Internet. To sign up for electronic delivery, please follow the instructions above to vote using the Internet and, when prompted, indicate that you agree to receive or access proxy materials electronically in future years.

VOTE BY PHONE - 1-800-690-6903

Use any touch-tone telephone to transmit your voting instructions up until 11:59 P.M. Eastern Time the day before the cut-off date or meeting date. Have your proxy card in hand when you call and then follow the instructions.

VOTE BY MAIL

Mark, sign and date your proxy card and return it in the postage-paid envelope we have provided or return it to Vote Processing, c/o Broadridge, 51 Mercedes Way, Edgewood, NY 11717.

TO VOTE, MARK BLOCKS BELOW IN BLUE OR BLACK INK AS FOLLOWS:

KEEP THIS PORTION FOR YOUR RECORDS
 DETACH AND RETURN THIS PORTION ONLY

THIS PROXY CARD IS VALID ONLY WHEN SIGNED AND DATED.

The Board of Directors recommends you vote FOR the following:		For All	Withhold All	For All Except	To withhold authority to vote for any individual nominee(s), mark "For All Except" and write the number(s) of the nominee(s) on the line below.
1. Election of Directors Nominees		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
01 Anthony E. Altig 06 Derek Small	02 Mark Auerbach			03 Richard DiMarchi	04 Myron Holubiak
					05 William Ringo
NOTE: To act upon such other matters that may properly come before the meeting or any adjournment thereof.					
Please sign exactly as your name(s) appear(s) hereon. When signing as attorney, executor, administrator, or other fiduciary, please give full title as such. Joint owners should each sign personally. All holders must sign. If a corporation or partnership, please sign in full corporate or partnership name, by authorized officer.					
<input type="text"/> Signature [PLEASE SIGN WITHIN BOX]		<input type="text"/> Date		<input type="text"/> Signature (Joint Owners)	
		<input type="text"/> Date			

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Important Notice Regarding the Availability of Proxy Materials for the Annual Meeting: The Notice & Proxy Statement, Form 10-K is/are available at www.proxyvote.com.

**ASSEMBLY BIOSCIENCES INC.
Annual Meeting of Shareholders
May 28, 2015 10:00 AM
This proxy is solicited by the Board of Directors**

The shareholder(s) hereby appoint(s) Derek Small and David Barrett, or either of them, as proxies, each with the power to appoint (his/her) substitute, and hereby authorizes them to represent and to vote, as designated on the reverse side of this ballot, all of the shares of Common stock of ASSEMBLY BIOSCIENCES INC. that the shareholder(s) is/are entitled to vote at the Annual Meeting of shareholder(s) to be held at 10:00 AM, EDT on May 28, 2015, at The Langham, 330 N. Wabash Ave., Chicago, IL 60611 and any adjournment or postponement thereof.

This proxy, when properly executed, will be voted in the manner directed herein. If no such direction is made, this proxy will be voted in accordance with the Board of Directors' recommendations.

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Continued and to be signed on reverse side