
**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**

Filed by the Registrant Filed by a Party other than the Registrant

Check the appropriate box:

- Preliminary Proxy Statement
- Definitive Proxy Statement
- Confidential, for Use of the Commission Only (as permitted by Rule 14a-6(e)(2))**
- Definitive Additional Materials
- Soliciting Material Pursuant to sec. 240.14a-11(c) or sec. 240.14a-12

RXi PHARMACEUTICALS CORPORATION

(Name of Registrant as Specified In Its Charter)

N/A

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

Payment of Filing Fee (Check the appropriate box):

- Fee not 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.

(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):

(4) Proposed maximum aggregate value of transaction.

(5) Total fee paid.

Fee paid previously with preliminary materials.

Check box if any part of the fee is offset as provided by Exchange Act Rule 0-11(a)(2) and identify the filing for which the offsetting fee was paid previously. Identify the previous filing by registration statement number, or the Form or Schedule and the date of its filing.

(1) Amount Previously Paid.

(2) Form, Schedule or Registration State No.:

(3) Filing Party:

(4) Date Filed:



257 Simarano Drive, Suite 101
Marlborough, MA 01752

**NOTICE OF ANNUAL MEETING OF STOCKHOLDERS
To Be Held on June 5, 2018**

Dear Stockholder:

You are cordially invited to attend the 2018 Annual Meeting of Stockholders (the “*Annual Meeting*”) of RXi Pharmaceuticals Corporation, a Delaware corporation (the “*Company*”), which will be held on June 5, 2018, at 10:00 a.m. local time, at the offices of Gibson, Dunn & Crutcher LLP, located at 200 Park Avenue, New York, NY 10166. Only stockholders who held stock at the close of business on the record date, April 16, 2018, may vote at the Annual Meeting, including any adjournment or postponement thereof. If you wish to attend the 2018 Annual Meeting in person, you must RSVP by marking the appropriate box on the proxy card or by contacting the Company by June 1, 2018 by telephone at 508-929-3646. In order to be admitted into the Annual Meeting, your name must appear on the attendance list and you must present government-issued photo identification (such as a driver’s license).

At the Annual Meeting, you will be asked to consider and vote upon:

- (1) the election of the six director nominees named in the accompanying Proxy Statement;
- (2) the ratification of BDO USA, LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2018;
- (3) an approval of the 2012 RXi Pharmaceuticals Corporation Long Term Incentive Plan, as amended, including an increase in the number of shares available for issuance thereunder;
- (4) an increase in the number of shares available for issuance under the RXi Pharmaceuticals Corporation Employee Stock Purchase Plan;
- (5) an approval, for purposes of complying with Nasdaq Listing Rule 5635(d), of the issuance of more than 20% of the Company’s issued and outstanding common stock pursuant to the Company’s purchase agreement with Lincoln Park Capital Fund, LLC; and
- (6) the transaction of any other business that may properly come before the meeting or any adjournment thereof. Pursuant to the Company’s bylaws, no other items of business are expected to be considered at the meeting and no other director nominees will be entertained.

The accompanying Proxy Statement more fully describes the details of the business to be conducted at the Annual Meeting. After careful consideration, our Board of Directors has unanimously approved the proposals and recommends that you vote FOR each nominee and proposal described in the Proxy Statement.

We are pleased to make use of the Securities and Exchange Commission rules that allow companies to furnish proxy materials to their stockholders via the Internet. We believe the ability to deliver proxy materials electronically allows us to provide our stockholders with the information they need, while lowering the costs of delivery and reducing the environmental impact from the distribution of our Annual Meeting materials.

We look forward to seeing you at the Annual Meeting.

Sincerely,

A handwritten signature in black ink, appearing to read 'Geert Cauwenbergh', written over a horizontal line.

Geert Cauwenbergh, Dr. Med. Sc.
President and Chief Executive Officer

April , 2018

WHETHER OR NOT YOU EXPECT TO ATTEND THE MEETING, PLEASE VOTE VIA THE INTERNET OR OVER THE TELEPHONE AS INSTRUCTED IN THE **NOTICE REGARDING THE AVAILABILITY OF PROXY MATERIALS** AND ON THE ENCLOSED PROXY CARD OR, IF YOU REQUESTED AND RECEIVED A PRINTED COPY OF THE PROXY STATEMENT, COMPLETE, DATE, SIGN AND RETURN THE ENCLOSED PROXY CARD USING THE ENCLOSED RETURN ENVELOPE, AS PROMPTLY AS POSSIBLE IN ORDER TO ENSURE YOUR REPRESENTATION AT THE MEETING. EVEN IF YOU HAVE VOTED BY PROXY, YOU MAY STILL VOTE IN PERSON IF YOU ATTEND THE MEETING. PLEASE NOTE, HOWEVER, THAT IF YOUR SHARES ARE HELD OF RECORD BY A BROKER, BANK OR OTHER NOMINEE AND YOU WISH TO VOTE AT THE MEETING, YOU MUST OBTAIN A PROXY CARD ISSUED IN YOUR NAME FROM THAT INTERMEDIARY.



257 Simarano Drive, Suite 101
Marlborough, MA 01752

**PROXY STATEMENT FOR
2018 ANNUAL MEETING OF STOCKHOLDERS
TO BE HELD ON JUNE 5, 2018**

GENERAL INFORMATION

This Proxy Statement is furnished in connection with the solicitation of proxies by the Board of Directors (the “*Board*”) of RXi Pharmaceuticals Corporation (“*RXi*” or the “*Company*”) for use at the Company’s 2018 Annual Meeting of Stockholders (the “*Annual Meeting*”), to be held at the offices of Gibson, Dunn & Crutcher LLP, located at 200 Park Avenue, New York, NY 10166 on June 5, 2018, at 10:00 a.m. local time. This Proxy Statement is being made available via the Internet on April 11, 2018 and the mailing date of the Notice Regarding the Availability of Proxy Materials (the “*Notice*”) to our stockholders will be on or about April 11, 2018.

The Notice instructs you as to how you may access and review important information contained in the proxy materials. The Notice also instructs you on how you may submit your proxy via the Internet. If you receive a Notice by mail and would like to receive a printed copy of our proxy materials, you should follow the instructions for requesting such materials included in the Notice.

For a proxy to be effective, it must be properly executed and received prior to the Annual Meeting. Each proxy properly tendered will, unless otherwise directed by the stockholder, be voted for the proposals and nominees described in this Proxy Statement and at the discretion of the proxy holder(s) with regard to all other matters that may properly come before the meeting.

The Company will pay all of the costs of soliciting proxies. We will provide copies of our proxy materials to brokerage firms, fiduciaries and custodians for forwarding to beneficial owners who request printed copies of these materials and will reimburse these persons for their costs of forwarding these materials. Our directors, officers and employees may also solicit proxies by telephone, facsimile or personal solicitation; however, we will not pay them additional compensation for any of these services.

Shares Outstanding and Voting Rights

Only holders of record of our common stock (“*common stock*”) at the close of business on April 16, 2018 (the “*Record Date*”), are entitled to notice of and to vote at the Annual Meeting. On the Record Date, 10,000,000 shares of common stock were issued and outstanding. Each share of common stock is entitled to one vote on all matters to be voted upon at the Annual Meeting. Holders of common stock do not have the right to cumulative voting in the election of directors. The presence, in person or by proxy, of the holders of a majority of the outstanding shares on the Record Date will constitute a quorum for the transaction of business at the Annual Meeting and any adjournment thereof.

Persons who hold shares of our common stock directly on the Record Date (“*record holders*”) must return a proxy card or attend the Annual Meeting in person in order to vote on the proposals. Persons who hold shares of

our common stock indirectly on the Record Date through a brokerage firm, bank or other financial institution (“**beneficial holders**”) must return a voting instruction form to have their shares voted on their behalf. Brokerage firms, banks or other financial institutions that do not receive voting instructions from beneficial holders may either vote these shares on behalf of the beneficial holders on certain “routine” matters or return a proxy leaving these shares un-voted (a “**broker non-vote**”).

Abstentions and broker non-votes will be counted for the purpose of determining the presence or absence of a quorum, but will not be counted for the purpose of determining the number of votes cast on a given proposal. The required vote for each of the proposals expected to be acted upon at the Annual Meeting is described below:

Proposal No. 1 — Election of directors. Directors are elected by a plurality, with the six nominees obtaining the most votes being elected. Because there is no minimum vote required, abstentions and broker non-votes will be entirely excluded from the vote and will have no effect on its outcome. Under the plurality vote standard, any shares that are not voted, whether by abstention, broker non-votes or otherwise, will not affect the election of directors.

Proposal No. 2 — Ratification of independent registered public accounting firm. This proposal must be approved by a majority of the votes cast on the matter affirmatively or negatively. As a result, abstentions and broker non-votes will be entirely excluded from the vote and will have no effect on its outcome.

Proposal No. 3 — Approval of the 2012 RXi Pharmaceuticals Corporation Long Term Incentive Plan, as amended, including an increase in the number of shares available for issuance thereunder. This proposal must be approved by a majority of the votes cast on the matter affirmatively or negatively. As a result, abstentions and broker non-votes will be entirely excluded from the vote and will have no effect on its outcome.

Proposal No. 4 — Approval of an increase in the number of shares available for issuance under the RXi Pharmaceuticals Corporation Employee Stock Purchase Plan. This proposal must be approved by a majority of the votes cast on the matter affirmatively or negatively. As a result, abstentions and broker non-votes will be entirely excluded from the vote and will have no effect on its outcome.

Proposal No. 5 — Approve, for purposes of complying with Nasdaq Listing Rule 5635(d), the issuance of more than 20% of the Company’s issued and outstanding common stock pursuant to the Company’s purchase agreement with Lincoln Park Capital Fund, LLC. This proposal must be approved by a majority of the votes cast on the matter affirmatively or negatively; provided, however, that the vote of all shares of the Company’s common stock issued pursuant to the purchase agreement will not be counted in determining whether or not the proposal is approved. As a result, abstentions and broker non-votes will be entirely excluded from the vote and will have no effect on its outcome.

We encourage you to vote by proxy, whether via telephone, through the Internet or mailing an executed proxy card. By voting in advance of the Annual Meeting, this ensures that your shares will be voted and reduces the likelihood that the Company will be forced to incur additional expenses soliciting proxies for the Annual Meeting. Any record holder of our common stock may attend the Annual Meeting in person and may revoke the enclosed form of proxy at any time by:

- executing and delivering to the Corporate Secretary a later-dated proxy;
- delivering a written revocation to the Corporate Secretary before the meeting; or
- voting in person at the Annual Meeting.

Beneficial holders of our common stock who wish to change or revoke their voting instructions should contact their brokerage firm, bank or other financial institution for information on how to do so. Beneficial holders who wish to attend the Annual Meeting and vote in person should contact their brokerage firm, bank or other financial

institution holding shares of our common stock on their behalf in order to obtain a “legal proxy,” which will allow them to both attend the Annual Meeting and vote in person. Without a legal proxy, beneficial holders cannot vote at the Annual Meeting because their brokerage firm, bank or other financial institution may have already voted or returned a broker non-vote on their behalf.

PROPOSAL NO. 1
ELECTION OF DIRECTORS

The Amended and Restated Bylaws of the Company (the “*Bylaws*”) provide that the number of directors shall be not fewer than two and not more than six, with directors serving one-year terms. The total Board size is currently fixed at six directors. Currently, the directors (whose terms expire at the 2018 Annual Meeting of Stockholders) are Geert Cauwenbergh, Dr. Med. Sc., Robert J. Bitterman, Keith L. Brownlie, H. Paul Dorman, Jonathan E. Freeman, Ph.D., and Curtis A. Lockshin, Ph.D. Directors elected at the Annual Meeting will hold office until the 2019 Annual Meeting of Stockholders and until their successors are elected and qualified, unless they resign or their seats become vacant due to death, removal or other cause in accordance with the Bylaws.

As described below, the Board has nominated Drs. Cauwenbergh, Freeman and Lockshin and Messrs. Bitterman, Brownlie and Dorman for reelection as directors at the Annual Meeting. All nominees have indicated their willingness to serve if elected. Should any nominee become unavailable for election at the Annual Meeting, the persons named on the enclosed proxy as proxy holders may vote all proxies given in response to this solicitation for the election of a substitute nominee chosen by the Board.

Nomination of Directors

The Nominating and Governance Committee reviews and recommends to the Board potential nominees for election to the Board. In reviewing potential nominees, the Nominating and Governance Committee considers the qualifications of each potential nominee in light of the Board’s existing and desired mix of experience and expertise. The Nominating and Governance Committee considers many factors when making a determination to nominate a candidate for a director position on the Board, such as integrity and character, prior business experience, including experience relating to the biotechnology industry, financial literacy and the nominee’s willingness to commit substantial time to the Company. After reviewing the qualifications of potential Board candidates, the Nominating and Governance Committee presents its recommendations to the Board, which selects the final director nominees. Upon the recommendation of the Nominating and Governance Committee, the Board nominated Drs. Cauwenbergh, Freeman and Lockshin and Messrs. Bitterman, Brownlie and Dorman for reelection as directors. The Company did not pay any fees to any third parties to identify or assist in identifying or evaluating nominees for the Annual Meeting.

The Nominating and Governance Committee considers stockholder nominees using the same criteria set forth above. Stockholders who wish to present a potential nominee to the Nominating and Governance Committee for consideration for election at a future annual meeting of stockholders must provide the Nominating and Governance Committee with notice of the nomination and certain information regarding the candidate within the time periods set forth below under the caption “Stockholder Proposals.”

Although the Nominating and Governance Committee may consider whether nominees assist in achieving a mix of Board members that represents a diversity of background and experience, including but not limited to race, gender or national origin, we have no formal policy regarding Board diversity. The Nominating and Governance Committee assesses its effectiveness in achieving these goals in the course of assessing director candidates, which is an ongoing process.

Nominees and Incumbent Directors

The Nominating and Governance Committee has recommended and the Board has nominated Drs. Cauwenbergh, Freeman and Lockshin and Messrs. Bitterman, Brownlie and Dorman to be reelected as directors at the Annual Meeting. The following table sets forth the following information for these nominees: the year each was first elected a director of the Company, if applicable; their respective ages as of the date of filing of this Proxy

Statement; the positions currently held with the Company, if any, and the year their current term will expire, if applicable:

| Nominee / Director Name and Year First Became a Director (if applicable) | Age | Position(s) with the Company | Year Current Term Expires |
|---|-----|---|---------------------------------|
| <i>Nominees for Directors:</i> | | | |
| Geert Cauwenbergh, Dr. Med. Sc. (2012) | 64 | President, Chief Executive Officer, acting Chief Financial Officer and Director | 2018 |
| Robert J. Bitterman (2012) | 67 | Chairman of the Board of Directors | 2018 |
| Keith L. Brownlie (2012) | 65 | Director | 2018 |
| H. Paul Dorman (2013) | 81 | Director | 2018 |
| Jonathan E. Freeman, Ph.D. (2017) | 50 | Director | |
| Curtis A. Lockshin, Ph.D. (2013) | 57 | Director | 2018 |

Directors Nominated for Election

The following persons have been nominated by the Board to be elected as directors at the Annual Meeting.

Geert Cauwenbergh, Dr. Med. Sc. was appointed to the Board and was elected as President and Chief Executive Officer of the Company in April 2012. Prior to joining the Company, Dr. Cauwenbergh was active through his consulting company, Phases 123 LLC, in advising various small biotech and healthcare companies from June 2011 to April 2012. In addition, Dr. Cauwenbergh served as Chairman and Chief Executive Officer of Barrier Therapeutics, Inc., a publicly-traded biopharmaceutical company he founded in 2001 that focused on dermatology drug development and that was acquired by Stiefel Laboratories, Inc. in 2008. Prior to founding Barrier Therapeutics, Inc., Dr. Cauwenbergh was employed by Johnson & Johnson for 23 years where he held a number of ascending senior management positions, including Vice President of Research and Development for Johnson & Johnson's Skin Research Center where he was responsible for the worldwide research and development of all skin care products for the Johnson & Johnson consumer companies. He currently serves on the board of directors of Moberg Pharma AB and Cutanea Life Sciences, Inc., a wholly-owned subsidiary of Maruho Company, LTD. In 2005, Dr. Cauwenbergh was inducted into the New Jersey High-Tech Hall of Fame, and, from 2009 to 2010, he served as Chairman of the Board of Trustees of BioNJ. He has authored more than 100 publications and has been a guest editor for numerous books addressing mycology and infectious diseases. Dr. Cauwenbergh received his Doctorate in Medical Sciences from the Catholic University of Leuven, Faculty of Medicine (Belgium), where he also completed his masters and undergraduate work. Our Nominating and Governance Committee believes that Dr. Cauwenbergh is qualified to serve as a member of our Board of Directors due to his executive leadership and extensive knowledge and experience in the biotechnology industry.

Robert J. Bitterman has served as a member and the Chairman of our Board since 2012. Prior to joining the Company, Mr. Bitterman founded Cutanea Life Sciences, Inc. in September 2005 as its President, Chief Executive Officer and director. Cutanea Life Sciences, Inc. focuses on the development and commercialization of proprietary technologies to treat diseased and aging skin and was successfully acquired by Maruho Company, LTD. in February 2012, where Mr. Bitterman has continued his role as President and Chief Executive Officer. Prior to his role at Cutanea Life Sciences, Inc., Mr. Bitterman also held the position of President and Chief Executive Officer of Isolagen, Inc., President and General Manager of Dermik Laboratories and various positions of increasing responsibility in financial and commercial capacities within Aventis S.A. Mr. Bitterman holds an A.B. degree in Economics from The College of the Holy Cross and a Master of Business Administration degree from Boston University. He also holds a Doctor of Human Letters (Honoris Causa) from the New York College of Podiatric Medicine and is a member of the Philadelphia Business Leaders Network. Our Nominating and Governance Committee believes that Mr. Bitterman is qualified to serve as a member of our Board of Directors due to his executive leadership and his experience in the pharmaceutical industry.

Keith L. Brownlie has served as a member of our Board since June 2012. Prior to joining us, Mr. Brownlie was employed by the accounting firm Ernst & Young LLP from 1974 to 2010. At Ernst & Young, he served as audit

partner for numerous public companies and was the Life Sciences Industry Leader for the New York Metro Area. Mr. Brownlie co-founded the New Jersey Entrepreneur of the Year Program and was co-chair of the BIONJ/PABIO Annual Symposium. Since his retirement from Ernst & Young in 2010, Mr. Brownlie currently serves as a member of the board of directors and chairman of the audit committees of Soligenix, Inc. and Celldex Therapeutics, Inc. Mr. Brownlie also previously served on the board of directors and as chairman of the audit committees of Cancer Genetics, Inc. and EpiCept Corporation, which merged with Immune Pharmaceuticals in August 2013. Mr. Brownlie received a B.S. in Accounting from Lehigh University and is a Certified Public Accountant. Our Nominating and Governance Committee believes that Mr. Brownlie is qualified to serve as a member of our Board of Directors due to his significant financial expertise and background serving as a director of other public companies.

H. Paul Dorman has served as a member of our Board since April 2013. Mr. Dorman currently serves as the Chairman and CEO of DFB Pharmaceuticals, a holdings company specializing in investing in and operating pharmaceutical businesses. From 1990 to 2012, Mr. Dorman also served as the Chairman and CEO of DPT Laboratories, a contract manufacturer and developer of pharmaceutical products. During that time, Mr. Dorman expanded DPT into a portfolio of healthcare companies that provides services and proprietary branded pharmaceutical products to the global market. Prior to acquiring DPT, Mr. Dorman was employed by Johnson & Johnson for 12 years, where he served in various positions, including Vice President and as a member of the board of directors of several Johnson & Johnson companies. Prior to Johnson & Johnson, Mr. Dorman was employed by Baxter-Travenol, a large pharmaceuticals company. Mr. Dorman holds a B.S. degree in Mechanical Engineering from Tulane University and a Juris Doctor of Law from Loyola University. Our Nominating and Governance Committee believes that Mr. Dorman is qualified to serve as a member of our Board of Directors due to his executive leadership and business experience in the pharmaceutical industry.

Jonathan E. Freeman, Ph.D. has served as a member of our Board since June 2017. Dr. Freeman currently serves as Chief Business Officer of Vedanta Biosciences, a private company pioneering an innovative class of therapies modulating interaction pathways between the human microbe and the host immune system. Prior to his role with Vedanta Biosciences, Dr. Freeman held the positions of Senior Vice President, Head of Strategy Development & Portfolio Management, from 2013 to 2016, and Head of Licensing, Global Business Development, from 2008 to 2012, at Merck KGaA, a leading science and technology company in healthcare, life science and performance materials. Prior to Merck KGaA, Dr. Freeman was the Director of M&A at Baxter Healthcare from 2005 to 2008, and from 1999 to 2005 was Head of Licensing at Serono. He is a past member of the board of directors and former Vice President of the Swiss Pharma Group, and the representative to the International Pharma Society. Dr. Freeman holds a First Class Honours in Biochemistry and an M.A. from Cambridge University, a Ph.D. in cancer research from the Imperial Cancer Research Fund (now CRUK) and an MBA with a finance major from Webster, St. Louis. He held various post-doctoral positions in the Swiss Institute for Cancer Research and the Geneva Medical School generating grants from the Swiss National Fund, the EMBL and the London Royal Society. Our Nominating and Governance Committee believes that Dr. Freeman is qualified to serve as a member of our Board of Directors due to his executive leadership and his background in immunology.

Curtis A. Lockshin, Ph.D. has served as a member of our Board since April 2013. Dr. Lockshin currently serves as the Chief Scientific Officer of Xenetic Biosciences, Inc., a biopharmaceutical company focused on developing biologic drugs and novel oncology therapeutics. Prior to his appointment as Chief Scientific Officer, Dr. Lockshin served as the Vice President of Research and Operations from March 2014 to January 2017. In addition, he served as Chief Executive Officer and director of SciVac Therapeutics, Inc., and its subsidiary SciVac, Ltd., from September 2014 until July 2016. SciVac Therapeutics, Inc. developed, produced and marketed biological products for human healthcare. With SciVac Therapeutics, Inc.'s merger with VBI Vaccines, Inc. in July 2016, Dr. Lockshin served as Chief Technical Officer of the merged company until December 2016. The merger of SciVac Therapeutics, Inc. and VBI Vaccines, Inc. created a commercial stage biopharmaceutical company developing a next generation of vaccines to address unmet needs in infectious disease and immuno-oncology. Since May 2013, Dr. Lockshin has served as President and Chief Executive Officer of Guardum

Pharmaceuticals, LLC, a private pharmaceutical company, and was previously the Vice President of Corporate R&D Initiatives for OPKO Health, Inc. from October 2011 to February 2013. Since April 2004, Dr. Lockshin has also served as a member of the board of directors of the Ruth K. Broad Biomedical Research Foundation, a Duke University Support Corporation that supports basic research related to Alzheimer's disease and neurodegeneration via intramural, extramural and international grants. He is a past member of the board of directors of ChromaDex, Inc. and Sorrento Therapeutics, Inc. Dr. Lockshin holds a S.B. degree in Life Sciences and a Ph.D. in Biological Chemistry from the Massachusetts Institute of Technology. Our Nominating and Governance Committee believes that Dr. Lockshin is qualified to serve as a member of our Board of Directors due to his scientific background, his significant industry knowledge and management experience.

Vote Required

The six nominees who receive the greatest number of affirmative votes of the shares present in person or by proxy will be elected as directors. Any shares that are not voted, whether by abstention, broker non-votes or otherwise, will not affect the election of directors.

Holders of proxies solicited by this Proxy Statement will vote the proxies received by them as directed on the proxy card or, if no direction is made, then FOR the election of the nominees named in this Proxy Statement.

**THE BOARD RECOMMENDS A VOTE "FOR"
THE NOMINEES IDENTIFIED ABOVE.**

PROPOSAL NO. 2
RATIFICATION OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Our Audit Committee has selected BDO USA, LLP (“**BDO**”) as our independent registered public accounting firm for the fiscal year ending December 31, 2018, and has further directed that we submit the selection of BDO for ratification by our stockholders at the Annual Meeting.

The Company is not required to submit the selection of our independent registered public accounting firm for stockholder approval. However, if the stockholders do not ratify this selection, the Audit Committee will reconsider its selection of BDO. Even if the selection is ratified, our Audit Committee may direct the appointment of a different independent registered public accounting firm at any time during the year if the Audit Committee determines that the change would be in the best interests of the Company.

The Audit Committee reviews and pre-approves all audit and non-audit services performed by its independent registered public accounting firm, as well as the fees charged for such services. All fees incurred in fiscal years 2017 and 2016 for services rendered by BDO were approved in accordance with these policies. In its review of non-audit service fees, the Audit Committee considers, among other things, the possible impact of the performance of such services on the auditor’s independence. Additional information concerning the Audit Committee and its activities can be found in the “Board Committees” section of this Proxy Statement.

Representatives of BDO are expected to be present at the Annual Meeting, will have the opportunity to make a statement if they desire to do so and will be available to respond to appropriate stockholder questions.

Fees for Independent Registered Public Accounting Firm

The following is a summary of the fees billed to the Company by BDO for professional services rendered for the fiscal years ended December 31, 2017 and 2016. These fees are for work invoiced in the fiscal years indicated.

| | <u>2017</u> | <u>2016</u> |
|--|-------------------|-------------------|
| <i>Audit Fees:</i> | | |
| Consists of fees billed for professional services rendered for the audit of the Company’s annual financial statements and the review of the interim financial statements included in the Company’s quarterly reports (together, the “ Financial Statements ”) and for services normally provided in connection with statutory and regulatory filings or engagements, including auditor consents | \$ 225,664 | \$ 174,242 |
| <i>Other Fees:</i> | | |
| <i>Audit-Related Fees</i> | | |
| Consists of fees billed for assurance and related services reasonably related to the performance of the annual audit or review of the Financial Statements | — | — |
| <i>Tax Fees</i> | | |
| Consists of fees billed for tax compliance, tax advice and tax planning | — | — |
| <i>All Other Fees</i> | | |
| Consists of fees billed for other products and services not described above, which consisted of fees relating to: accounting policy | — | — |
| Total Other Fees | — | — |
| <i>Total All Fees:</i> | <u>\$ 225,664</u> | <u>\$ 174,242</u> |

Recommendation

The Board recommends a vote “FOR” the ratification of BDO as our independent registered public accounting firm for the fiscal year ending December 31, 2018. Proxies will be so voted unless stockholders specify otherwise in their proxies.

Vote Required

Ratification of the selection of the independent registered public accounting firm requires the affirmative vote of a majority of the votes cast on the matter affirmatively or negatively. Abstentions and broker non-votes will be entirely excluded from the vote and will have no effect on its outcome.

THE BOARD RECOMMENDS A VOTE “FOR” PROPOSAL NO. 2.

PROPOSAL NO. 3

APPROVAL OF THE 2012 RXi PHARMACEUTICALS CORPORATION LONG TERM INCENTIVE PLAN, AS AMENDED, INCLUDING AN INCREASE IN THE NUMBER OF SHARES AVAILABLE FOR ISSUANCE THEREUNDER

Our Board believes that stock options and other stock-based incentive awards can play an important role in the success of our Company. These incentives are given to employees, officers, directors and other key persons of our Company and provide these individuals with a proprietary interest in our Company. Our Board believes a compensation policy that includes a balanced mix of cash and equity is the most effective way to attract and retain talented employees whose interests are aligned with stockholders.

Background

The purpose of our 2012 RXi Pharmaceuticals Corporation's Long Term Incentive Plan (as amended, the "*2012 Incentive Plan*") is to advance the interests of our Company by giving stock-based incentives to the employees, officers, directors and other key persons of our Company who are in a position to make a significant contribution to the success of our Company. The 2012 Incentive Plan was originally adopted by our Board and our then sole stockholder on January 23, 2012. Since then, the 2012 Incentive Plan has been amended by our Board with the approval of our stockholders to increase the maximum number of shares of common stock available for issuance under the 2012 Incentive Plan from 30,000 originally to 125,000 at present.

As of April 16, 2018, there were _____ shares of common stock subject to outstanding options and _____ shares of common stock that remained available for issuance under the 2012 Incentive Plan. In order to continue to provide employees, officers, directors and other key persons with stock-based incentives, the Board has authorized an amendment and restatement of the 2012 Incentive Plan, subject to stockholder approval. The amendment and restatement will increase the number of shares of common stock reserved for issuance under the 2012 Incentive Plan by 625,000 to a total of 750,000 shares, which represents approximately _____ % of the total outstanding shares of our common stock as of April 16, 2018. The Board currently intends that the additional 625,000 shares under the 2012 Incentive Plan will be sufficient to fund the Company's equity compensation needs for approximately 3 years. In addition, the amendment and restatement implements a limit on non-employee director compensation, eliminates certain provisions relating to awards of "performance-based compensation" in light of recent changes in the tax code and makes certain other ministerial changes.

While approving the share increase under the Amended and Restated 2012 Incentive Plan, the Board considered, among other things, the following:

- Potential dilution to its current stockholders as measured by burn rate and overhang (as described in "Key Data" below);
- The recommendations of stockholder advisory firms like Glass Lewis and Institutional Shareholder Services;
- Market standards and peer group companies;
- 100% employee participation in the 2012 Incentive Plan; and
- The continued importance of motivating, recruiting and retaining key employees.

Key Data

When approving the share increase under the Amended and Restated 2012 Incentive Plan, the Board considered the burn rate with respect to the equity awards granted by the Company, as well as the Company's overhang. The burn rate is equal to the total number of equity awards the Company granted in a fiscal year divided by the weighted average common stock outstanding during the year. Overhang is equal to the total number of equity awards outstanding plus the total number of shares available for grant under the Company's equity plans, divided by the sum of the total common stock outstanding, the number of equity awards outstanding and the total number of shares available for grant under the Company's equity plans. The Company's three-year average burn rate, at the time the Board approved the share increase under the 2012 Incentive Plan, was approximately 1%. The Company's overhang as of December 31, 2017 was 5%. If the share increase under the Amended and Restated 2012 Incentive Plan is approved, the Company's overhang would increase to 17%.

The following table sets forth information regarding outstanding equity awards and shares available for future equity awards under the 2012 Incentive Plan as of December 31, 2017 (without giving effect to approval of the share increase under the Amended and Restated 2012 Incentive Plan):

| | |
|--|-----------|
| Total shares underlying outstanding stock options | 50,156 |
| Weighted average exercise price of outstanding stock options | \$ 192.30 |
| Weighted average remaining contractual life of outstanding stock options (in years) | 6.62 |
| Total shares underlying outstanding unvested restricted stock and restricted stock unit awards | — |
| Total shares remaining available for issuance | 74,824 |
| Total shares of common stock outstanding as of December 31, 2017 | 2,429,993 |

Promotion of Good Corporate Governance Practices

The Amended and Restated 2012 Incentive Plan provides for the following:

- Awards subject to exercise, including stock options and stock appreciation rights, may not have a term in excess of ten years and may not be granted at a discount to the fair market value of our common stock on the grant date;
- Awards may not be repriced without stockholder approval;
- Non-employee directors may not receive awards during a single calendar year with a grant date value that, when taken together with any cash fees paid during the year, exceeds \$250,000; and
- The administrator may “claw back” awards previously realized in the event of certain misconduct by a participant and/or overpayment due to inaccurate financial data.

Plan Summary

The following summary of the material terms of the Amended and Restated 2012 Incentive Plan is qualified in its entirety by reference to the complete text of the Amended and Restated 2012 Incentive Plan which is set forth in Appendix A to this Proxy Statement. Stockholders are encouraged to read the text of the Amended and Restated 2012 Incentive Plan in its entirety. All references below to the 2012 Incentive Plan are references to the Amended and Restated version of the 2012 Incentive Plan unless the context requires otherwise.

Purpose. The 2012 Incentive Plan was established to advance the interests of the Company by providing for the grant to eligible participants of stock-based and other incentive awards.

Administration; Amendment and Termination. Our Compensation Committee currently acts as the administrator of our 2012 Incentive Plan. The administrator has the power to select participants from among the key employees, officers, directors and other key persons of the Company, establish the terms, conditions and vesting schedule, if applicable, of each award and to accelerate vesting or exercisability of any award. The administrator has the power to do all things necessary to carry out the purposes of the 2012 Incentive Plan. The administrator may at any time modify or amend the 2012 Incentive Plan or any award made thereunder in any respect, except where a participant’s approval is required by law or where such termination or modification or amendment affects materially and adversely the rights of a participant under a previously granted award and such participant’s consent has not been obtained. Amendments to the 2012 Incentive Plan require stockholder approval only if (i) stockholder approval is required under the rules of the applicable stock exchange on which the stock is admitted to trading, and (ii) it would reduce the exercise price of any stock option previously granted under the 2012 Incentive Plan or otherwise constitute a repricing. In addition, the administrator may at any time terminate the 2012 Incentive Plan. The administrator has the power under the 2012 Incentive Plan to grant a variety of types of awards, as described more fully below.

Eligible Participants. Any person who is an employee or director of, or consultant or advisor to, the Company or its affiliates may be chosen by the administrator to receive awards under the 2012 Incentive Plan. As of April 16, 2018, approximately 15 employees and 5 non-employee directors were eligible to participate in the 2012

Incentive Plan. Options intending to qualify as “incentive stock options” (“*Incentive Stock Options*” or “*ISOs*”) within the meaning of Section 422 of the Code may only be granted to employees of the Company or any affiliate.

Available Shares. Subject to stockholder approval of this proposal, the maximum number of shares of common stock of the Company that may be delivered upon satisfaction of equity awards under the 2012 Incentive Plan is equal to 750,000 shares of common stock. Up to the total number of shares of common stock set forth in the preceding sentence may be issued in satisfaction of ISOs. The number of shares of common stock delivered in satisfaction of equity awards is determined net of shares of common stock withheld by the Company in payment of the exercise price of an award or in satisfaction of tax withholding requirements with respect to an award and without including any shares of common stock underlying awards settled in cash or which otherwise expire or become unexercisable without having been exercised or that are forfeited to or repurchased by the Company due to failure to vest. The share limits set forth in the 2012 Incentive Plan will be construed to comply with Section 422. To the extent consistent with the requirements of Section 422 and with other applicable legal requirements (including applicable stock exchange requirements, if any), common stock issued under Substitute Awards (as defined in the 2012 Incentive Plan) will not reduce the number of shares available for awards under the 2012 Incentive Plan. The shares which may be delivered under Substitute Awards are in addition to the limitations set forth in 2012 Incentive Plan on the number of shares available for issuance under the 2012 Incentive Plan. The shares of common stock delivered by the Company under the 2012 Incentive Plan may be authorized but unissued common stock or previously issued common stock acquired by the Company. No fractional shares of common stock may be delivered under the 2012 Incentive Plan.

Non-Employee Director Limit. The maximum number of shares of common stock subject to equity awards granted during a single calendar year to any director of the Company who is not an employee, taken together with any cash fees paid during the year to such individual in respect of his or her service as a member of the Board (including service as a member or chair of any committees of the Board), may not exceed \$250,000 based on the grant date fair value of the equity awards for financial reporting purposes.

Awards. The 2012 Incentive Plan permits the grant of stock options, stock appreciation rights, restricted stock, unrestricted stock, stock units, including restricted stock units, cash awards, and other stock-based awards, any of which may be subject to the achievement of performance criteria.

Stock Options. Stock options give a participant the right to purchase shares of stock within a specified period of time at an exercise price determined by the administrator. The administrator may require that a participant satisfy time- and/or performance-based vesting requirements before being able to exercise the stock option. Two types of stock options may be awarded under the Plan: ISOs and non-qualified options (“*NQSOs*”). ISOs are subject to special tax rules as described below. Except with respect to Substitute Awards, the exercise price per share of common stock subject to an option granted under the 2012 Incentive Plan must equal or exceed 100% of the fair market value of such common stock on the date the option is granted, except that the exercise price of an ISO granted to an individual owning more than 10% of the combined voting power of all classes of Company stock must equal or exceed 110% of the fair market value of such common stock on the date of grant. The maximum term of stock options granted under the 2012 Incentive Plan generally will not exceed ten (10) years from the date of grant (or five (5) years from the date of grant in the case of an ISO granted to an individual owning more than 10% of the combined voting power of all classes of Company stock).

Stock Appreciation Rights (“SARs”). A SAR entitles a participant to receive stock or cash equal in value to the excess of the fair market value of the shares of common stock subject to the SAR on the date of exercise over the fair market value of those shares on the date of grant. The administrator may require that a participant satisfies time- and/or performance-based vesting requirements before being able to exercise the SAR. Whether a SAR is settled in shares of stock or in cash (or a combination) will be determined by the terms of the award. In the case of stock-settled SARs, cash will be paid in lieu of any fractional shares. Except with respect to Substitute Awards, the exercise price per share of common stock subject to a SAR granted under the 2012 Incentive Plan

must equal or exceed 100% of the fair market value of such common stock on the date the SAR is granted. The maximum term of SARs granted under the 2012 Incentive Plan generally will not exceed ten (10) years from the date of grant.

Restricted Stock. The term “restricted stock” refers to stock that is awarded in connection with services and that, while it is restricted, may not be transferred or pledged and may be required to be forfeited to the Company or sold back to the Company for less than fair market value if specified conditions are not satisfied (for example, time- or performance-based vesting requirements). A participant who is awarded restricted stock may be required to pay a purchase price for the shares or may be awarded the shares free of charge. The date or dates on which or the circumstances in which the award vests will be determined by the administrator and will be specified in the award unless the administrator accelerates vesting. A participant receiving a restricted stock award becomes the owner of the shares at the time of grant, even though the shares may be required to be forfeited if the vesting conditions are not satisfied.

Unrestricted Stock. The term “unrestricted stock” as used in the 2012 Incentive Plan refers to stock that is awarded for past services or other lawful consideration. Unrestricted stock is not subject to vesting conditions or forfeiture.

Restricted Stock Units (“RSUs”). An RSU is a conditional promise to deliver shares of common stock or a cash amount of equivalent value in the future. Vesting and delivery of common stock or cash in lieu of common stock are subject to the satisfaction of conditions (for example, time- or performance-based vesting requirements) specified in the award.

Performance Awards. The term “performance award” is used in the 2012 Incentive Plan to describe any award that is subject to the satisfaction of specified performance criteria in addition to other conditions that may be imposed by the administrator. For example, the term “performance award” would apply to an award under which a participant earns the right to a payout in stock or cash only if specified earnings targets are met. The performance criteria used in connection with a particular performance award will be determined by the administrator and specified in the award. The administrator determines whether the performance targets or goals that have been specified for a particular award have been satisfied. For purposes of the 2012 Incentive Plan, a performance criterion may include an objectively determinable measure of performance relating to any or any combination of the following (measured either absolutely or by reference to an index or indices or on an individual basis and determined either on a consolidated basis or, as the context permits, on a divisional, subsidiary, line of business, project or geographical basis or in combinations thereof): sales; revenues; assets; expenses; earnings before or after deduction for all or any portion of interest, taxes, depreciation, or amortization, whether or not on a continuing operations or an aggregate or per share basis; return on equity, investment, capital or assets; one or more operating ratios; borrowing levels, leverage ratios or credit rating; market share; capital expenditures; cash flow; stock price; stockholder return; sales of particular products or services; customer acquisition or retention; acquisitions and divestitures (in whole or in part); joint ventures and strategic alliances; spin-offs, split-ups and the like; reorganizations; or recapitalizations, restructurings, financings (issuance of debt or equity) or refinancings; and any other objective or subjective measure or metric as the Administrator deems appropriate. A performance criterion and any targets with respect thereto determined by the administrator need not be based upon an increase, a positive or improved result or avoidance of loss.

Cash Awards. A cash award entitles a participant to a payment, if any, under the award only if all conditions to payment have been satisfied in accordance with the terms of the award and the 2012 Incentive Plan. The administrator will determine the actual payment, if any, under each cash award. The administrator may, in its absolute discretion, after determining the amount that would otherwise be payable under a cash award that is subject to performance criteria, adjust (including to zero) the payment, if any, to be made under such award.

Transferability. Neither ISOs nor other Awards may be transferred other than by will or by the laws of descent and distribution, and during a participant's lifetime ISOs any other awards may be exercised only by the participant; provided, however, that the administrator may permit equity awards other than ISOs to be transferred by gift, subject to applicable securities and other laws and such limitations as the administrator may impose.

Mergers and Similar Transactions. In the event of a change of control in which there is an acquiring or surviving entity, the administrator may provide for the assumption or substitution of some or all of the outstanding awards by the acquiror or survivor. In the absence of an assumption or substitution, the administrator may provide that each award will become fully vested and exercisable, if applicable, prior to the transaction on a basis that gives the holder of such award, as applicable, a reasonable opportunity to participate as a stockholder in the transaction following exercise, and the award will terminate upon consummation of the transaction.

Adjustment Provisions. In the event of certain changes in the Company's capitalization, the administrator will make appropriate adjustments to the maximum number of shares that may be delivered under the 2012 Incentive Plan, and will also make appropriate adjustments to the number and kind of shares of stock or securities subject to equity awards then outstanding or subsequently granted, any exercise prices relating to equity awards and any other provision of awards affected by such change.

Termination of Service. Upon termination of employment of an employee, the unvested portion of any stock option generally, and with exceptions, will terminate and the balance, to the extent exercisable, will remain exercisable for the lesser of (i) a period of three months or (ii) the period ending on the latest date on which such stock option could have been exercised.

Effective Date and Termination of the Plan. The Board originally adopted the 2012 Incentive Plan on January 23, 2012 and it will remain available for the grant of awards until the tenth anniversary thereof.

Certain U.S. Federal Income Tax Consequences

The following discussion of the federal income tax consequences of the 2012 Incentive Plan is intended to be a summary of applicable federal law as currently in effect. It should not be taken as tax advice by participants, who are urged to consult their individual tax advisors.

Stock Options. ISOs and NQSOs are treated differently for federal income tax purposes. ISOs are intended to comply with the requirements of Section 422 of the Code. NQSOs do not comply with such requirements. An optionee is not taxed on the grant or exercise of an ISO. The difference between the exercise price and the fair market value of the shares on the exercise date will, however, be a preference item for purposes of the alternative minimum tax. If an optionee holds the shares acquired upon exercise of an ISO for at least two years following the option grant date and at least one year following exercise, the optionee's gain, if any, upon a subsequent disposition of such shares is long term capital gain. The measure of the gain is the difference between the proceeds received on disposition and the optionee's basis in the shares (which generally equals the exercise price). If an optionee disposes of stock acquired pursuant to the exercise of an ISO before satisfying these holding periods, the optionee will recognize both ordinary income and capital gain in the year of disposition. The Company is not entitled to an income tax deduction on the grant or exercise of an ISO or on the optionee's disposition of the shares after satisfying the holding period requirement described above. If the holding periods are not satisfied, the Company will be entitled to a deduction in the year the optionee disposes of the shares in an amount equal to the ordinary income recognized by the optionee.

In order for an option to qualify for ISO tax treatment, the grant of the option must satisfy various other conditions more fully described in the Code. The Company does not guarantee that any option will qualify for ISO tax treatment even if the option is intended to qualify for such treatment. In the event an option intended to be an ISO fails to so qualify, it will be taxed as an NQSO as described below.

An optionee is not taxed on the grant of an NQSO. On exercise, the optionee recognizes ordinary income equal to the difference between the exercise price and the fair market value of the shares acquired on the date of exercise. The Company is entitled to an income tax deduction in the year of exercise in the amount recognized by the optionee as ordinary income. The optionee's gain (or loss) on a subsequent disposition of the shares is long term capital gain (or loss) if the shares are held for at least one year following exercise. The Company does not receive a deduction for this gain.

SARs. An optionee is not taxed on the grant of a SAR. On exercise, the optionee recognizes ordinary income equal to the cash or the fair market value of any shares received. The Company is entitled to an income tax deduction in the year of exercise in the amount recognized by the optionee as ordinary income.

Restricted Stock and Restricted Stock Units. Grantees of restricted stock or restricted stock units do not recognize income at the time of the grant. When the award vests or is paid, grantees generally recognize ordinary income in an amount equal to the fair market value of the stock or units at such time, and the Company will receive a corresponding deduction. However, no later than 30 days after a participant receives an award of restricted stock, the participant may elect to recognize taxable ordinary income in an amount equal to the fair market value of the shares at the time of receipt. Provided that the election is made in a timely manner, when the restrictions on the shares lapse, the participant will not recognize any additional income. If the participant forfeits the shares to the Company (e.g., upon the participant's termination prior to vesting), the participant may not claim a deduction with respect to the income recognized as a result of the election. Dividends paid with respect to unvested shares of restricted stock generally will be taxable as ordinary income to the participant at the time the dividends are received.

Unrestricted Stock. If a participant is awarded or purchases shares of unrestricted stock, the participant will have ordinary income equal to the excess of the fair market value of the shares over the purchase price, if any, at the time the participant acquires the shares. For purposes of determining capital gain or loss on a sale of the stock, the participant's holding period in the shares begins at the time you acquire the shares. A participant's tax basis in the shares equals the amount paid for the shares (if anything) plus any income realized with respect to the transfer.

Cash Awards. A participant will have taxable income at the time a cash award becomes payable, and, if the participant has timely elected deferral to a later date, such later date. At that time, the participant will recognize ordinary income equal to the value of the amount then payable.

Company Deduction and Section 162(m). The 2012 Incentive Plan was originally designed to allow awards made under it to qualify as "performance-based compensation" within the meaning of Section 162(m) of the Code. In general, Section 162(m) of the Code limits a publicly traded company's federal income tax deduction for compensation in excess of \$1 million paid to its Chief Executive Officer, Chief Financial Officer and the next three highest-paid executive officers. Prior to the Tax Cuts and Jobs Act that was signed into law on December 22, 2017, compensation that satisfied conditions set forth under Section 162(m) to qualify as "performance-based compensation" was not subject to the limitation, and the limitation did not apply to compensation paid to the Chief Financial Officer. The Tax Cuts and Jobs Act eliminated the performance-based compensation exception beginning January 1, 2018, but provided a transition rule with respect to remuneration provided pursuant to a written binding contract, which was in effect on November 2, 2017 and not materially modified after that date. The Compensation Committee intends to administer any awards granted prior to November 2, 2017, which qualify as "performance-based compensation" under Section 162(m), as amended by the Tax Cuts and Jobs Act, including certain awards made under the 2012 Incentive Plan that are intended to qualify as performance-based compensation, in accordance with the transition rules applicable to binding contracts in effect on November 2, 2017, however there can be no guarantee that amounts payable under the 2012 Incentive Plan will be treated as qualified "performance-based" compensation under Section 162(m). Further, with the elimination of the exemption for performance-based compensation, we expect that we will be unable to deduct all compensation in excess of \$1 million paid to our Chief Executive Officer, Chief Financial

Officer and the next three highest-paid executive officers, other than previously granted awards that are subject to the transition rules.

Withholding Taxes. The Company will generally be required to withhold applicable taxes with respect to any ordinary income recognized by a participant in connection with awards made under the 2012 Incentive Plan. Whether or not such withholding is required, the Company will make such information reports to the Internal Revenue Service as may be required with respect to any income (whether or not that of an employee) attributable to transactions involving awards.

New Plan Benefits

The benefits that will be awarded or paid in the future under the 2012 Incentive Plan are not currently determinable. Such awards are within the discretion of the Compensation Committee, and the Compensation Committee has not determined future awards or who might receive them. As of April 16, 2018, the closing price of a share of the Company's common stock was \$.

Recommendation

The Board of Directors recommends a vote "FOR" approval of the Amended and Restated 2012 Incentive Plan, including the share increase thereunder.

Vote Required

This proposal must be approved by a majority of the votes cast on the matter affirmatively or negatively. As a result, abstentions and broker non-votes will be entirely excluded from the vote and will have no effect on its outcome.

THE BOARD OF DIRECTORS RECOMMENDS A VOTE "FOR" PROPOSAL NO. 3.

PROPOSAL NO. 4
APPROVAL OF AN INCREASE IN THE NUMBER OF SHARES AVAILABLE FOR ISSUANCE UNDER THE RXI PHARMACEUTICALS CORPORATION EMPLOYEE STOCK PURCHASE PLAN

Our Board believes that the Company's RXI Pharmaceuticals Corporation Employee Stock Purchase Plan (as amended, the "*ESPP*") is in the best interest of stockholders, as it enhances broad-based employee stock ownership, enables the Company to attract, motivate and retain the best employees with a market-competitive benefit and does so at a reasonable cost to stockholders. Our Board believes that the Company's interests are best advanced by aligning stockholder and employee interests.

Background

The purpose of the Company's ESPP is to enable eligible employees of the Company to use payroll deductions to purchase shares of our common stock and thereby acquire an ownership interest in the Company. The ESPP was originally adopted by our Board on June 7, 2013 and approved by our stockholders on June 2, 2014. Since then, the ESPP has been amended by our Board with the approval of our stockholders to increase the maximum number of shares of common stock available for issuance under the ESPP from 500 originally to 51,133 at present.

As of April 16, 2018, there were _____ shares of common stock subject available for issuance under the ESPP. In order to continue to provide new and current employees with this benefit, the Board has authorized an amendment and restatement of the ESPP, subject to stockholder approval. The amended and restated ESPP will increase the number of shares of common stock reserved for issuance under the ESPP by 400,000 to a total of 451,133 shares, which represents approximately _____ % of the total outstanding shares of our common stock as of April 16, 2018. The Board currently intends that the additional 400,000 shares under the ESPP will be sufficient to fund the Company's equity compensation needs for approximately 5 to 8 years. The Board believes that this is a reasonable amount of potential dilution and generally in line with that of our public peer companies.

We monitor our long-term dilution as a result of the ESPP by tracking the number of shares actually purchased and issued under the ESPP on an annual basis, expressed as a percentage of total shares outstanding and referred to as burn rate. Burn rate is another measure of dilution that shows how rapidly a company is depleting its shares reserved for equity compensation plans. Our burn rate under the ESPP for fiscal 2017 was less than 1%.

Plan Summary

The following description of the Amended and Restated ESPP is a summary of its principal provisions and is qualified in its entirety by reference to the complete text of the Amended and Restated ESPP which is set forth in Appendix B to this Proxy Statement. Stockholders are encouraged to read the text of the Amended and Restated ESPP in its entirety. All references below to the ESPP are references to the Amended and Restated version of the ESPP unless the context requires otherwise.

Purpose. The purpose of the ESPP is to provide our employees with a convenient means of acquiring an equity interest in the Company through payroll deductions, to enhance such employees' sense of participation in our affairs and to provide these employees an incentive for continued employment. The ESPP is intended to qualify as an employee stock purchase plan under Section 423 of the Internal Revenue Code (the "*Code*").

Amendment/Termination. The Board can suspend or terminate the ESPP at any time and may amend the ESPP at any time, provided that any amendment that would be treated as the adoption of a new plan for purposes of Section 423 of the Code and the regulations thereunder must be approved by stockholders.

Eligibility. Employees of the Company and its designated subsidiaries are eligible to participate in the ESPP on or after the first day of the month following such employee's date of hire with respect to a purchase period beginning on or after such date; provided, however, that any employee who immediately after the grant of a stock right under the ESPP would own stock possessing 5% or more of the total combined voting power or value of all

classes of stock of the Company or of its parent or any subsidiary is not eligible to receive a stock right under the ESPP. Further, no employee's right to purchase common stock under the ESPP may accrue at a rate which exceeds \$25,000 per year. As of April 16, 2017, approximately employees were eligible to participate in the ESPP.

Administration. The ESPP is administered by the Compensation Committee, which has the right to determine any questions which may arise regarding the interpretation and application of the provisions of the ESPP and to make, administer, and interpret such rules and regulations as it deems necessary or advisable.

Number of Shares of Common Stock Available under the ESPP. If this proposal is approved, the maximum number of shares of common stock available for issuance pursuant to the ESPP will equal 451,133 shares. The shares to be delivered under the ESPP may be either shares of authorized but unissued common stock or shares of reacquired common stock, as the Board may determine. If any stock right granted under the ESPP expires or terminates for any reason without having been exercised in full or ceases for any reason to be exercisable in whole or in part, the unpurchased common stock subject to such stock right will again be available for issuance under the ESPP.

Purchase Periods. Unless otherwise determined by the Compensation Committee, there are two semi-annual six-month purchase periods (each, a "**Purchase Period**") under the ESPP running from January 1 to June 30 and from July 1 to December 31 of each year. Each employee participating in the ESPP on the first day of a Purchase Period is granted a right to acquire shares of common stock during that Purchase Period.

Payroll Deductions. Generally, all regular employees, including executive officers, employed by us or by any subsidiary designated by the Board may participate in the ESPP and may contribute, through payroll deductions, up to the maximum percentage of their total compensation established by the Compensation Committee for the relevant Purchase Period. A participant may not change his or her withholding rate during a Purchase Period but may change his or her withholding rate for future Purchase Periods by filing a new payroll deduction authorization form on or before the enrollment deadline for the Purchase Period for which the change is to be effective.

Purchase Price. Common stock will be purchased for accounts of employees participating in the ESPP at a price per share equal to 90% of the fair market value per share on either (a) the date of grant of a purchase right under the ESPP or (b) the date on which the purchase right is deemed exercised, whichever is less.

Cancellation and Withdrawal. A participant may at any time prior to the exercise date of a given Purchase Period cancel all (but not less than all) of his or her stock right by delivering written notice to the Company. Upon such cancellation, the balance in the participant's withholding account will be returned to the participant. A participant may also terminate his or her payroll deduction authorization as of any date by written notice delivered to the Company and will cease to be a participant as of such date.

Termination of Employment. Generally, upon the termination of a participant's employment, such participant will cease to be a participant under the ESPP and any stock right held under the ESPP will be deemed canceled and the balance of his or her withholding account will be returned.

Non-Transferability. The rights and privileges of a participant under any stock right granted under the ESPP will be exercisable during the participant's lifetime only by him or her and generally may not be sold, pledged, assigned or transferred in any manner.

Changes to Capital Structure. In the event that there is a specified type of change in our capital structure, such as a stock split, the number of shares reserved under the ESPP and the number of shares and purchase price of all outstanding purchase rights will be appropriately adjusted.

Corporate Transactions. In the event of certain significant corporate transactions in which the Company is not the surviving corporation or which results in the acquisition of the Company by another person, the Board will (a) if the Company is merged with or acquired by another corporation, provide that the then-outstanding rights to purchase our stock under the ESPP will be assumed, continued or substituted for by any surviving or acquiring entity (or a parent or subsidiary of such entity), (b) cancel each purchase right and return the balances in participants' withholding accounts to the participants, or (c) end the Purchase Period on or before the date of the proposed transaction.

Certain U.S. Federal Income Tax Consequences

The rules concerning the federal income tax consequences with respect to the purchase of shares under the ESPP are quite technical. Moreover, the applicable statutory provisions are subject to change, as are their interpretations and applications, which may vary in individual circumstances. Therefore, the following is designed to provide a general understanding of the U.S. federal income tax consequences as of the date hereof with respect to such purchases. In addition, the following discussion does not set forth any gift, estate, social security or state or local tax consequences that may be applicable and is limited to the U.S. federal income tax consequences to individuals who are citizens or residents of the United States, other than those individuals who are taxed on a residence basis in a foreign country.

The ESPP, and the right of participants to make purchases thereunder, is intended to qualify under the provisions of Section 423 of the Code. Under these provisions, no income generally will be taxable to a participant until the shares purchased under the ESPP are sold or otherwise disposed of. Upon sale or other disposition of the shares, the participant will generally be subject to tax in an amount that depends upon how long the shares have been held by the participant. If the shares are sold or otherwise disposed of more than two years after the first day of the applicable Purchase Period in which such shares were acquired and more than one year after the applicable date of purchase, the participant will recognize ordinary income equal to the lesser of (1) the excess of the fair market value of the shares at the time of such sale or disposition over the purchase price, or (2) an amount equal to 10% (or such other discount as the Compensation Committee may establish) of the fair market value of the shares as of the first day of the applicable Purchase Period in which such shares were acquired. Any additional gain will be treated as long-term capital gain. If the shares are sold or otherwise disposed of before the expiration of the aforementioned periods (a "*disqualifying disposition*"), the participant will recognize ordinary income equal to the excess of (1) the fair market value of the shares on the date the shares are purchased over (2) the purchase price. Any additional gain or loss on such sale or disposition will be capital gain or loss, which will be long-term if the shares are held for more than one year. The Company generally is not entitled to a deduction for amounts taxed as ordinary income or capital gain to a participant except to the extent of ordinary income recognized by participants upon a disqualifying disposition.

New Plan Benefits

The actual number of shares that may be purchased by any individual under the ESPP is not currently determinable because the number is determined, in part, based on future contribution elections of individual participants and the purchase price of the shares, which is not determined until the last day of each Purchase Period. During the year ended December 31, 2017, 372 shares of our common stock were purchased by employees under the ESPP. As of April 16, 2018, the closing price of a share of our common stock was \$.

Recommendation

The Board of Directors recommends a vote "FOR" approval of the share increase under the Amended and Restated Employee Stock Purchase Plan.

Vote Required

This proposal must be approved by a majority of the votes cast on the matter affirmatively or negatively. As a result, abstentions and broker non-votes will be entirely excluded from the vote and will have no effect on its outcome.

THE BOARD OF DIRECTORS RECOMMENDS A VOTE “FOR” PROPOSAL NO. 4.

**PROPOSAL NO. 5
THE NASDAQ PROPOSAL**

General

On August 8, 2017, the Company entered into a purchase agreement (the “*Purchase Agreement*”) and a registration rights agreement (the “*Registration Rights Agreement*”) with Lincoln Park Capital Fund, LLC (“*LPC*”), pursuant to which the Company has the right to sell to LPC up to \$15,000,000 in shares of common stock, subject to certain limitations and conditions set forth in the Purchase Agreement.

Under the Purchase Agreement, the Company has the right, from time to time at its sole discretion and subject to certain conditions, to direct LPC to purchase up to 15,000 shares of common stock on any business day, provided that one business day has passed since the most recent purchase. The purchase price of shares of common stock pursuant to the Purchase Agreement will be based on the market prices of the common stock at the time of such purchases as set forth in the Purchase Agreement. Such sales of common stock by the Company, if any, may occur from time to time, at the Company’s option, over the 30-month period commenced on August 31, 2017, the date all Commencement conditions under the Purchase Agreement were satisfied.

The Company may increase the amount which it directs LPC to purchase, up to a maximum of 50,000 shares of common stock, if on the date of the purchase the closing sale price of the common stock is not below certain threshold prices, as set forth in the Purchase Agreement, subject in each case to \$1,000,000 in total purchase proceeds per purchase date. In addition to regular purchases, the Company may also direct LPC to purchase additional amounts as accelerated purchases or as additional purchases if the closing sale price of the common stock is not below certain threshold prices, as set forth in the Purchase Agreement. In all instances, the Company may not sell shares of its common stock to LPC under the Purchase Agreement if it would result in LPC beneficially owning more than 9.99% of the common stock.

Why the Company Needs Stockholder Approval

As a result of our listing on The Nasdaq Capital Market, issuances of our common stock are subject to the Nasdaq Marketplace Rules, including Rule 5635(d), which requires us to obtain stockholder approval prior to the issuance of securities in connection with a transaction, other than a public offering, involving the sale, issuance or potential issuance by us of shares of our common stock (or securities convertible into or exercisable for shares of our common stock) at a price less than the greater of book or market value if such issuance would represent 20% or more of our common stock or voting power of the Corporation outstanding before the issuance (the “*Nasdaq 20% Rule*”). In order to comply with the Nasdaq 20% Rule and to satisfy conditions under the Purchase Agreement, we are seeking stockholder approval to permit issuance of more than 20% of our common stock.

Effect of Failure to Obtain Stockholder Approval

If the stockholders do not approve Proposal No. 5, the Company will be unable to issue additional shares of common stock to LPC.

Effect of Approval

If the stockholders approve Proposal No. 5, 1,871,060 shares of common stock would be available for issuable under the Purchase Agreement. The issuance of such shares could result in significant dilution to our stockholders, and could substantially reduce our stockholders’ percentage interest in the voting power of the Company.

Recommendation

The Board recommends a vote “FOR” approval of the issuance of shares of common stock pursuant to the Purchase Agreement and in accordance with the stockholder approval requirements of Nasdaq Listing Rule 5635(d).

Vote Required

This proposal must be approved by a majority of the votes cast on the matter affirmatively or negatively; provided, however, that the vote of all shares of our common stock issued to LPC pursuant to the Purchase Agreement will not be counted in determining whether or not Proposal No. 5 is approved. As a result, abstentions and broker non-votes will be entirely excluded from the vote and will have no effect on its outcome.

THE BOARD RECOMMENDS A VOTE “FOR” PROPOSAL NO. 5.

CORPORATE GOVERNANCE

Director Independence

We believe that the Company benefits from having a strong and independent Board. For a director to be considered independent, the Board must determine that the director does not have any direct or indirect material relationship with the Company that would affect his or her exercise of independent judgment. On an annual basis, the Board reviews the independence of all directors under the applicable Nasdaq listing standards. The Company also considers each director's affiliations with the Company and members of management, as well as significant holdings of Company securities. This review considers all known relevant facts and circumstances in making an independence determination. Based on this review, the Board has made an affirmative determination that all directors, other than Dr. Cauwenbergh, are independent. It was determined that Dr. Cauwenbergh lacks independence because of his status as the Company's President and Chief Executive Officer.

In addition, Nasdaq listing standards require that, subject to specified exceptions, each member of our Audit, Compensation and Nominating and Governance Committees be independent and that our Audit Committee members also satisfy independence criteria set forth in Rule 10A-3 under the Securities Exchange Act of 1934, as amended (the "*Exchange Act*"). Our Board has determined that Messrs. Brownlie and Dorman and Dr. Freeman, members of the Audit Committee, Messrs. Bitterman and Brownlie and Dr. Lockshin, members of the Compensation Committee, and Drs. Lockshin and Freeman and Messr. Dorman, members of the Nominating and Governance Committee, are independent under the applicable Nasdaq listing standards and the Exchange Act.

Code of Business Conduct and Ethics

We have adopted a Code of Business Conduct and Ethics that applies to all employees, including our principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions. Waivers of our Code of Business Conduct and Ethics may only be granted by the Board or our Nominating and Governance Committee and will be publicly announced promptly in our SEC filings. Our Code of Business Conduct and Ethics, as well as other corporate governance materials, is located on our website at www.rxipharma.com.

Stockholder Communications

Generally, stockholders who have questions or concerns regarding the Company should contact our Investor Relations department at (508) 929-3646. However, any stockholders who wish to address questions regarding the business or affairs of the Company directly with the Board, or any individual director, should direct his or her questions in writing to the Chairman of the Board, RXi Pharmaceuticals Corporation, 257 Simarano Drive, Suite 101, Marlborough, MA 01752. Upon receipt of any such communications, the correspondence will be directed to the appropriate person, including individual directors.

BOARD OF DIRECTORS AND COMMITTEES

During fiscal year 2017, our Board met seven times. With the exception of Dr. Freeman, each director attended 100% of the aggregate of the meetings of the Board and meetings of the committees of which he was a member in our last fiscal year. Dr. Freeman served only part of fiscal 2017, as he was appointed to the Board on June 6, 2017. From the date of his appointment to the Board until the end of fiscal year 2017, Dr. Freeman attended 67% of the aggregate meetings of the Board and meetings of the committees of which he was a member as a result of a schedule conflict due to commitments made prior to his appointment to the Board. The Board has three standing committees: an Audit Committee, a Compensation Committee, and a Nominating and Governance Committee. All members of the Audit, Compensation and Nominating and Governance Committees are non-employee directors who are deemed independent.

Although the Company has no formal policies regarding director attendance at annual meetings, it does expect that all members of the Board will attend the 2018 Annual Meeting. All directors attended the 2017 Annual Meeting of Stockholders.

Board Leadership Structure and Role in Risk Oversight

The positions of Chairman of the Board and Chief Executive Officer are separated, which allows our Chief Executive Officer to focus on our day-to-day business, while allowing the Chairman of the Board to lead the Board in its fundamental role of providing advice to and independent oversight of management. Our Board recognizes the time, effort and energy that the Chief Executive Officer is required to devote to his position in the current business environment, as well as the commitment required to serve as our Chairman. Our Board also believes that this structure ensures a greater role for the independent directors in the oversight of our Company and active participation of the independent directors in setting agendas and establishing priorities and procedures for the work of our Board. Our Board believes its administration of its risk oversight function has not affected its leadership structure.

While our Bylaws do not require that our Chairman and Chief Executive Officer positions be separate, our Board believes that having separate positions and having an independent outside director serve as Chairman is the appropriate leadership structure for us at this time and demonstrates our commitment to good corporate governance. Our separated Chairman and Chief Executive Officer positions are augmented by our independent Board committees that provide appropriate oversight in the areas described below. At executive sessions of independent directors, these directors speak candidly on any matter of interest, which may be with or without the Chief Executive Officer present. The independent directors meet separately in executive session on at least an annual basis to discuss matters relating to the Company and the Board, without members of the management team present. We believe this structure provides consistent and effective oversight of our management and the Company. The Board met in executive session five times in 2017.

The Board has overall responsibility for the oversight of the Company's risk management process, which is designed to support the achievement of organizational objectives, including strategic objectives, to improve long-term organizational performance and enhance stockholder value. Risk management includes not only understanding company-specific risks and the steps management implements to manage those risks, but also what level of risk is acceptable and appropriate for the Company. Management is responsible for establishing our business strategy, identifying and assessing the related risks and implementing appropriate risk management practices. The Board periodically reviews our business strategy and management's assessment of the related risk, and discusses with management the appropriate level of risk for the Company. The Board also delegates oversight to Board committees to oversee selected elements of risk as set forth below.

Board Committees

Audit Committee. As of the Record Date, the Audit Committee was comprised of Messrs. Brownlie (Chairman) and Dorman and Dr. Freeman. The Audit Committee selects the Company's independent registered public accounting firm, approves its compensation, oversees and evaluates the performance of the independent registered public accounting firm, oversees the accounting and financial reporting policies and internal control systems of the Company, reviews the Company's interim and annual financial statements, independent registered public accounting firm reports and management letters and performs other duties, as specified in the Audit Committee Charter. All members of the Audit Committee satisfy the current independence and experience requirements of Rule 10A-3 of the Exchange Act and the current Nasdaq independence standards, and the Board has determined that Mr. Brownlie is an "audit committee financial expert," as the SEC has defined that term in Item 407 of Regulation S-K. The Audit Committee met four times in fiscal year 2017.

Compensation Committee. As of the Record Date, the Compensation Committee was comprised of Messrs. Bitterman (Chairman) and Brownlie and Dr. Lockshin. The Compensation Committee determines compensation

levels for the Company's executive officers and directors, oversees administration of the Company's equity compensation plans and performs other duties regarding compensation for employees and consultants as the Board may delegate from time to time. Our Chief Executive Officer makes recommendations to the Compensation Committee regarding the corporate and individual performance goals and objectives relevant to executive compensation and executives' performance in light of such goals and objectives and recommends other executives' compensation levels to the Compensation Committee based on such evaluations. The Compensation Committee considers these recommendations and then makes an independent decision regarding officer compensation levels and awards. All members of the Compensation Committee satisfy the current Nasdaq independence standards, and each member of the Committee qualifies as an "outside director" and "non-employee director" as defined by Section 162(m) of the Code and Rule 16b-3 of the Exchange Act, respectively. The Compensation Committee met one time in fiscal year 2017.

Nominating and Governance Committee. As of the Record Date, the Nominating and Governance Committee was comprised of Drs. Lockshin (Chairman) and Freeman and Messr. Dorman. The Nominating and Governance Committee reviews potential director nominees, recommends nominees to the Board, oversees the Company's corporate governance principles and develops and implements policies and processes regarding corporate governance matters. Drs. Lockshin and Freeman and Messr. Dorman satisfy the current Nasdaq independence standards. The Nominating and Governance Committee met two times in fiscal year 2017.

A copy of the Company's Audit, Compensation and Nominating and Governance Committee charters are available on the Company's website at www.rxipharma.com.

EXECUTIVE OFFICERS

Our current executive officers and their respective ages and positions as of the Record Date are set forth in the following table. Biographical information regarding each executive officer who is not also a director is set forth following the table. Biographical information for Dr. Cauwenbergh is set forth above under Proposal No. 1 (Election of Directors).

| Name | Age | Position |
|---------------------------------|-----|---|
| Geert Cauwenbergh, Dr. Med. Sc. | 64 | President, Chief Executive Officer and acting Chief Financial Officer |
| Gerrit Dispersyn, Dr. Med. Sc. | 43 | Chief Development Officer |

Gerrit Dispersyn, Dr. Med. Sc. joined the Company in April 2017 as our Chief Development Officer. From 2014 to April 2017, Dr. Dispersyn was the Vice President, Global Head of Affairs at Integra Lifesciences Corporation, a medical technology company dedicated to limiting uncertainty for surgeons so they can concentrate on providing the best patient care. Prior to assuming this role, Dr. Dispersyn held the position of Vice President, Program Management & Clinical Affairs from 2008 to 2014. In these positions, Dr. Dispersyn was responsible for the global strategy and execution of clinical and product development, clinical operations and medical affairs projects. Prior to his roles at Integra Lifesciences Corporation, Dr. Dispersyn was employed by Barrier Therapeutics, Inc. where he held various roles, including Vice President, Product Development & Portfolio Management. With this role at Barrier Therapeutics, Inc. Dr. Dispersyn led the planning and all aspects of R&D operations and strategy, as well as established and built the business development department. He is also the founder of INGRESS LLC, a consultancy company providing R&D and clinical operations support to start-up companies. He received his Doctorate in Medical Sciences from Maastricht University, Faculty of Medicine (Netherlands), a post-graduate degree in Biomedical Imaging and a Master of Science degree in Biochemistry, both from the University of Antwerp, Belgium.

CERTAIN RELATIONSHIPS AND RELATED-PARTY TRANSACTIONS

Our Board has a policy to review and approve all transactions with directors, officers and holders of more than 5% of our voting securities and their affiliates. These policies and procedures are generally not in writing, but are evidenced by longstanding principles adhered to by our Board. The policy provides that, prior to Board consideration of a transaction with such a related party, the material facts as to the related party's relationship or interest in the transaction must be disclosed to the Board, and the transaction will not be considered approved by the Board unless a majority of the directors who are not interested in the transaction (if applicable) approve the transaction. Furthermore, when stockholders are entitled to vote on a transaction with a related party, the material facts of the related party's relationship or interest in the transaction must be disclosed to the stockholders, who must approve the transaction in good faith.

Indemnification Agreements

We have entered into indemnification agreements with each of our executive officers and directors. These agreements provide that, subject to limited exceptions and among other things, we will indemnify each of our executive officers and directors to the fullest extent permitted by law and advance expenses to each indemnitee in connection with any proceeding in which a right to indemnification is available.

Stock Purchase Agreement

On January 6, 2017, the Company entered into a Stock Purchase Agreement (the "**Stock Purchase Agreement**") by and among the Company, RXi Merger Sub, LLC, a Delaware limited liability company and wholly-owned subsidiary of the Company, MirImmune Inc., a Delaware corporation ("**MirImmune**"), the stockholders of MirImmune set forth on the signature pages thereto (each a "**Seller**" and collectively, the "**Sellers**"), and Alexey Wolfson, Ph.D., in his capacity as the Sellers' Representative. Pursuant to the Stock Purchase Agreement, the Company acquired from the Sellers 100% of the issued and outstanding shares of capital stock of MirImmune for an aggregate of 275,036 shares of the Company's common stock and an aggregate of 1,118,224 shares of Series C Convertible Preferred Stock, par value \$0.0001 per share (the "**Series C Convertible Preferred Stock**"). Such consideration represented in the aggregate a number of shares of capital stock equal to approximately 19.99% of the outstanding common stock immediately prior to the execution of the Stock Purchase Agreement, plus approximately 19.99% of the common stock underlying the outstanding Series B Convertible Preferred Stock immediately prior to the execution of the Stock Purchase Agreement, which was previously issued in the Company's registered securities offering pursuant to a registration statement on Form S-1 (File No. 333-214199) (the "**Financing**"). On June 9, 2017, with the approval of the Company's stockholders in accordance with the stockholder approval requirements of Nasdaq Marketplace Rule 5635, every ten shares of the Company's Series C Convertible Preferred Stock outstanding were automatically converted into one share of common stock, such that no shares of Series C Convertible Preferred Stock remained issued or outstanding.

Under the terms of the Stock Purchase Agreement, if certain development or commercial milestones (the "**Milestones**") are achieved within two years of the Closing (as defined therein), the Company will be required to either: (i) issue to the Sellers a number of shares of common stock (the "**Milestone Shares**") equal to the sum of 251,909 shares of common stock (which represents 13% of the outstanding common stock and 13% of the common stock underlying the shares of Series B Convertible Preferred Stock, in each case as of immediately following the closing of the Financing), plus an additional number of shares of common stock equal to 13% of the common stock issued upon exercise of any warrants issued under the Financing, which would result in the issuance of a maximum of 166,111 additional shares of common stock, but only to the extent that such warrants have been exercised prior to the Milestones being achieved; or (ii) pay the equivalent value of the Milestone Shares in cash to the Sellers, subject to certain adjustments set forth in the Stock Purchase Agreement. The Company received stockholder approval in accordance with Rule 5635 of the Nasdaq Marketplace Rules at its 2017 Annual Meeting of Stockholders to issue the Milestone Shares, if necessary.

Pursuant to the Stock Purchase Agreement, we issued 81,781 shares of common stock and 332,499 shares of Series C Convertible Preferred Stock, which were converted into 33,249 shares of common stock, to

Alexey Eliseev, Ph.D., a Seller in the agreement and co-founder of MirImmune. The approximate dollar value of such shares was equal to \$0.8 million. Additionally, Dr. Eliseev is eligible to receive 74,892 Milestone Shares, or the equivalent value in cash, if the Milestones are achieved within two years. The amount of Milestone Shares to be issued may increase as provided above. Assuming no such increase takes place, the approximate dollar value of such Milestone Shares is equal to approximately \$0.4 million (based on an assumed Milestone Share price per common share of \$5.10 which was the closing price of our common stock on March 15, 2018). In connection with the Stock Purchase Agreement Dr. Eliseev also executed and delivered a three-year non-compete agreement with the Company under which Dr. Eliseev agreed to not interfere with the Company's business or solicit the Company's employees or business contacts. Dr. Eliseev was appointed the Chief Business Officer of the Company following the Company's acquisition of MirImmune, but as of September 15, 2017, no longer serves as the Company's Chief Business Officer.

SECTION 16(a) BENEFICIAL OWNERSHIP REPORTING COMPLIANCE

Section 16(a) of the Exchange Act requires our "officers" (as defined in Rule 16a-1(f) under the Exchange Act) and directors, and persons who own more than 10% of a registered class of our equity securities to file reports of beneficial ownership and changes in beneficial ownership with the SEC. Officers, directors and greater-than-10% stockholders (the "**Reporting Persons**") are required by SEC regulations to furnish us with copies of all reports filed under Section 16(a). Based solely on our review of copies of these reports and representations of such Reporting Persons, we believe that during fiscal year 2017, all Reporting Persons satisfied such applicable SEC filing requirements.

EQUITY COMPENSATION PLAN INFORMATION

The following table sets forth certain information, as of December 31, 2017, about the securities authorized for issuance under our equity compensation plans, which consisted of our 2012 Long Term Incentive Plan and our 2013 Employee Stock Purchase Plan:

| <u>Plan Category</u> | <u>Number of Securities to be Issued Upon Exercise of Outstanding Options, Warrants and Rights</u> | <u>Weighted-Average Exercise Price of Outstanding Options, Warrants and Rights</u> | <u>Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans (Excluding Securities Reflected in First Column)</u> |
|--|--|--|--|
| Equity compensation plans approved by security holders | 50,176 | \$ 192.30 | 124,452 |
| Equity compensation plans not approved by security holders | — | — | — |
| Total | 50,176 | \$ 192.30 | 124,452 |

SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

Based on information available to us and filings with the SEC, the following table sets forth certain information regarding the beneficial ownership (as defined by Rule 13d-3 under the Exchange Act) of our outstanding common stock for (i) each of our directors, (ii) each of our "named executive officers," as defined in the Executive Officers section above, (iii) all of our directors and executive officers as a group and (iv) persons known to us to beneficially own more than 5% of our outstanding common stock. The following information is presented as of April 12, 2018 or such other date as may be reflected below.

Beneficial ownership and percentage ownership are determined in accordance with the rules of the SEC and include voting or investment power with respect to shares of stock. This information does not necessarily indicate beneficial ownership for any other purpose. Under these rules, shares of common stock issuable under stock options or warrants that are exercisable within 60 days of April 12, 2018 are deemed outstanding for the purpose of computing the percentage ownership of the person holding the options or warrants, but are not deemed outstanding for the purpose of computing the percentage ownership of any other person.

Unless otherwise indicated and subject to applicable community property laws, to our knowledge, each stockholder named in the following table possesses sole voting and investment power over their shares of common stock, except for those jointly owned with that person's spouse. Unless otherwise indicated below, the address of each person listed on the table is c/o RXi Pharmaceuticals Corporation, 257 Simarano Drive, Suite 101, Marlborough, MA 01752.

| <u>Name and Address of Beneficial Owner</u> | <u>Shares Beneficially Owned</u> | |
|---|----------------------------------|----------------------------|
| | <u>Number (1)</u> | <u>Percent of Class(2)</u> |
| <i>Greater than 5% Holders</i> | | |
| Sabby Volatility Warrant Master Fund, Ltd.(3) c/o Ogier Fiduciary Services (Cayman) Limited 89 Nexus Way, Camana Bay Grand Cayman KY1-9007 Cayman Islands | 377,652 | 8.87% |
| <i>Directors, Director Nominees, Officers and Named Executive Officers:</i> | | |
| Geert Cauwenbergh, Dr. Med. Sc.(4) | 33,973 | * |
| Gerrit Dispersyn, Dr. Med. Sc. (5) | 2,923 | * |
| Robert J. Bitterman(6) | 1,830 | * |
| Keith L. Brownlie(7) | 1,202 | * |
| H. Paul Dorman(8) | 1,598 | * |
| Jonathan E. Freeman, Ph.D. (9) | 350 | * |
| Curtis A. Lockshin, Ph.D.(10) | 1,225 | * |
| All current directors and executive officers as a group (seven persons) | 43,101 | 1.01% |

* Indicates less than 1%.

- (1) Represents shares of common stock and shares of restricted stock held as of April 12, 2018 plus shares of common stock that may be acquired upon exercise of options, warrants and other securities exercisable or convertible within 60 days of April 12, 2018.
- (2) Based on 4,255,566 shares of the registrant's common stock that were issued and outstanding as of April 12, 2018. The percentage ownership and voting power for each person (or all directors and executive officers as a group) is calculated by assuming the exercise or conversion of all options, warrants and convertible securities exercisable or convertible within 60 days of April 12, 2018 held by such person and the non-exercise and non-conversion of all outstanding warrants, options and convertible securities held by all other persons.
- (3) Based solely on information set forth in a 13G filed with the SEC on April 11, 2018. Voting and dispositive power with respect to the shares is shared with Sabby Management, LLC and Hal Mintz. Sabby Management, LLC serves as the investment manager of Sabby Volatility Warrant Master Fund, Ltd. and Mr. Mintz is the manager of Sabby Management, LLC.
- (4) Consists of (a) 13,978 shares of common stock and (b) 16,261 shares of common stock issuable upon the exercise of options and 3,734 shares of common stock issuable upon the exercise of warrants exercisable within 60 days of April 12, 2018.
- (5) Consists of (a) 350 shares of common stock and (b) 2,573 shares of common stock issuable upon the exercise of options within 60 days of April 12, 2018.

- (6) Consists of (a) 440 shares of common stock and (b) 1,202 shares of common stock issuable upon the exercise of options and 188 shares of common stock issuable upon the exercise of warrants exercisable within 60 days of April 12, 2018.
- (7) Consists of 1,202 shares of common stock issuable upon the exercise of options exercisable within 60 days of April 12, 2018.
- (8) Consists of (a) 375 shares of common stock and (b) 1,035 shares of common stock issuable upon the exercise of options and 188 shares of common stock issuable upon the exercise of warrants exercisable within 60 days of April 12, 2018.
- (9) Consists of 350 shares of common stock issuable upon the exercise of options exercisable within 60 days of April 12, 2018.
- (10) Consists of (a) 130 shares of common stock and (b) 1,035 shares of common stock issuable upon the exercise of options and 60 shares of common stock issuable upon the exercise of warrants exercisable within 60 days of April 12, 2018.

EXECUTIVE COMPENSATION

The following describes the compensation earned in fiscal 2017 and 2016 by each of the executive officers identified below in the Summary Compensation Table, who are referred to collectively as our “named executive officers”. Our named executive officers with respect to the fiscal year that ended on December 31, 2017 are Geert Cauwenbergh, Dr. Med. Sc., President, Chief Executive Officer, acting Chief Financial Officer and Director, and Gerrit Dispersyn, Dr. Med. Sc., Chief Development Officer. Pursuant to SEC rules, we are providing compensation information for Drs. Pavco and Eliseev because they served as our former Chief Development Officer and former Chief Business Officer, respectively, during the year ended December 31, 2017.

Summary Compensation Table

| Name and principal position | Year | Salary (\$) | Option awards (\$)(1) | Non-equity incentive plan compensation (\$)(2) | All other compensation (\$)(3) | Total (\$) |
|---|------|-------------|-----------------------|--|--------------------------------|------------|
| Geert Cauwenbergh, Dr. Med. Sc. | 2017 | 416,000 | 5,928 | — | 599 | 422,527 |
| President, Chief Executive Officer and acting Chief Financial Officer | 2016 | 413,723 | 26,602 | 197,600 | 624 | 638,549 |
| Gerrit Dispersyn, Dr. Med. Sc. | 2017 | 186,346 | 44,555 | — | 275 | 231,176 |
| Chief Development Officer | 2016 | — | — | — | — | — |
| Pamela Pavco, Ph.D. (4) | 2017 | 196,471 | 3,155 | — | 228 | 199,854 |
| Former Chief Development Officer | 2016 | 377,522 | 13,200 | 108,186 | 585 | 499,493 |
| Alexey Eliseev, Ph.D. (5) | 2017 | 215,671 | 91,028 | — | 75,289 | 381,988 |
| Former Chief Business Officer | 2016 | — | — | — | — | — |

- (1) The amounts shown reflect the grant date fair value computed in accordance with Financial Accounting Standards Board (“FASB”) Accounting Standards Codification (“ASC”) 718 for the indicated year, adjusted to disregard the effects of any estimate of forfeitures related to service-based vesting. The assumptions we used in valuing options are described more fully in the “Management’s Discussion and Analysis” section and the notes to the consolidated financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2017.
- (2) The amounts shown reflect the annual cash bonus earned for performance for each respective year under the Company’s Incentive Bonus Program. The annual cash bonus for fiscal year 2016 was paid in February of 2017. The annual cash bonus for fiscal year 2017 is expected to be paid at a date following the filing of this report, but will be forfeited if the executive is not employed as of such date. As such, the fiscal year 2017 bonus has not yet been earned. Assuming continued employment through the payment date, the fiscal year 2017 bonus earned would be \$156,000 for Geert Cauwenbergh and \$44,097 for Gerrit Dispersyn.

- (3) Represents amounts for the dollar value of life insurance premiums paid, except as noted in footnote 5 below.
- (4) Dr. Pavco became our Chief Development Officer effective September 11, 2011. She retired from the Company on May 19, 2017.
- (5) Dr. Eliseev became our Chief Development Officer on January 6, 2017. He left the Company on September 15, 2017. The amount reflected under “All Other Compensation” also includes severance payments made to Dr. Eliseev in connection with his termination consistent with and subject to the conditions set forth in his employment agreement.

Outstanding Equity Awards at Fiscal Year-End

The following table shows information regarding outstanding equity awards as of December 31, 2017 for our named executive officers. None of the named executive officers held any outstanding stock awards as of that date.

| Name | Option Awards | | | |
|------------------------------------|---|---|----------------------------|------------------------|
| | Number of Securities Underlying Unexercised Options Exercisable (#) | Number of Securities Underlying Unexercised Options Unexercisable (#) | Option Exercise Price (\$) | Option Expiration Date |
| Geert Cauwenbergh, Dr. Med. Sc.(1) | 11,386 | — | 255.00 | 06/08/2022 |
| | 1,334 | — | 600.00 | 06/07/2023 |
| | 1,164 | 167 | 285.00 | 06/02/2024 |
| | 832 | 499 | 38.00 | 06/01/2025 |
| | 610 | 721 | 28.60 | 02/10/2026 |
| | — | 1,300 | 6.29 | 02/01/2027 |
| Gerrit Dispersyn, Dr. Med. Sc.(2) | 1,584 | 7,916 | 6.50 | 04/24/2027 |
| Pamela Pavco, Ph.D.(3) | 5,582 | — | 390.00 | 05/04/2022 |
| | 667 | — | 600.00 | 06/07/2023 |
| | 578 | 83 | 285.00 | 06/02/2024 |
| | 414 | 247 | 38.00 | 06/01/2025 |
| | 303 | 358 | 28.60 | 02/10/2026 |
| | 146 | 555 | 6.29 | 02/01/2027 |
| Alexey Eliseev, Ph.D. | — | — | — | — |

- (1) The option awards granted to Dr. Cauwenbergh vest as to 25% of the award on the first anniversary of the grant date and as to the remaining 75% of the option in equal monthly installments over a three-year period thereafter. Each option award was granted ten years prior to the option expiration date.
- (2) The option awards granted to Dr. Dispersyn vest in equal monthly installments over a four-year period. Each option award was granted ten years prior to the option expiration date.
- (3) The option awards granted to Dr. Pavco vest in equal monthly installments over a four-year period. So long as Dr. Pavco remains on the Company’s Scientific Advisory Board, options granted to her during her employment with the Company will continue to vest after her retirement. Each option award was granted ten years prior to the option expiration date.

Nonqualified Deferred Compensation Earnings

We do not have any nonqualified deferred compensation plans.

Employment and Change of Control Agreements

Geert Cauwenbergh, Dr. Med. Sc.

Dr. Cauwenbergh was appointed Chief Executive Officer pursuant to an employment agreement, dated April 27, 2012, pursuant to which he is entitled to receive an initial base salary of \$360,000 per annum, as well as a performance bonus of up to 50% of his base salary, subject to the achievement of performance goals to be established annually. On June 8, 2012, Dr. Cauwenbergh received an option entitling him to purchase 11,386 shares of Company common stock at an exercise price equal to the fair value of the underlying common stock on the date of grant. The option vested with respect to one quarter of the underlying shares on April 27, 2013, and then vested on a ratable basis monthly thereafter over the next three years such that the option became fully vested and exercisable on April 27, 2016.

Dr. Cauwenbergh's employment agreement provides that, upon termination of Dr. Cauwenbergh's employment without "cause" (as defined therein) by us or by Dr. Cauwenbergh for "good reason" (as defined therein), he will be entitled to payment of: (1) any accrued but unpaid salary, business expenses and unused vacation as of the date of his termination as well as any unpaid bonus compensation awarded for the prior year; (2) six months of salary from the date of termination; and (3) continued participation, at our expense, during the applicable six-month severance period in our sponsored group medical and dental plans. In the event his employment is terminated within twelve months following a "change of control" of RXi, he will be entitled to: (x) twelve months of salary from the date of termination; (y) accelerated vesting of any unvested RXi stock options held by him; and (z) continued participation, at our expense, during the twelve-month severance period in our sponsored group medical and dental plans.

Gerrit Dispersyn, Dr. Med. Sc.

Dr. Dispersyn was appointed Chief Development Officer pursuant to an employment agreement, dated April 24, 2017, pursuant to which he is entitled to receive an initial base salary of \$285,000 per annum, as well as a performance bonus of up to 30% of his base salary, subject to the achievement of performance goals to be established annually. On April 24, 2017, Dr. Dispersyn received an option entitling him to purchase 9,500 shares of Company common stock at an exercise price equal to the fair value of the underlying common stock on the date of grant. The option vests in equal monthly installments over four years such that the option will become fully vested and exercisable on April 24, 2021.

Dr. Dispersyn's employment agreement provides that, upon termination of Dr. Dispersyn's employment without "cause" (as defined therein) by us or by Dr. Dispersyn for "good reason" (as defined therein), he will be entitled to payment of: (1) any accrued but unpaid salary and unused vacation as of the date of his termination; (2) six months of salary from the date of termination; and (3) continued participation, at our expense, during the applicable six-month severance period in our sponsored group medical and dental plans. In the event his employment is terminated within twelve months following a "change of control" of RXi, he will be entitled to: (x) twelve months of salary from the date of termination; (y) accelerated vesting of any unvested RXi stock options held by him as to 50% of the unvested option shares or the portion of the unvested option shares that would have vested over the following twenty-four months, whichever is greater; and (z) continued participation, at our expense, during the twelve-month severance period in our sponsored group medical and dental plans.

Pamela Pavco, Ph.D.

We previously entered into an employment agreement, dated September 24, 2011, with Dr. Pavco. She served as the Company's Chief Development Officer until her retirement on May 19, 2017. Dr. Pavco was entitled to receive an initial annual salary of \$300,000. Pursuant to the employment agreement, she received an option to purchase up to 5,582 shares of common stock at an exercise price equal to the fair value of the underlying common stock on the date of grant. The option vested in equal monthly installments over four years, beginning on October 24, 2011, such that the option became fully vested and exercisable on September 24, 2015. No

retirement benefits were owed to Dr. Pavco by the Company upon her retirement. On May 22, 2017, Dr. Pavco was appointed to our Scientific Advisory Board. So long as she serves in that role, options awarded to her during her employment with the Company will continue to vest according to their terms.

Alexey Eliseev, Ph.D.

We previously entered into an employment agreement, dated January 6, 2017, with Dr. Eliseev. He served as the Company’s Chief Business Officer until his termination on September 15, 2017. Dr. Eliseev was entitled to receive an initial salary of \$300,000. Pursuant to the employment agreement, he received an option to purchase 17,439 shares of common stock at an exercise price equal to the fair value of the underlying common stock on the date of grant. The option vests and becomes exercisable in equal monthly installments beginning on February 6, 2017, provided, in each case, that Dr. Eliseev remains in our continuous employ through such vesting date.

The employment agreement provided that if we were to terminate Dr. Eliseev’s employment without “cause” (as defined in the employment agreement), he would be entitled to payment of (1) any accrued but unpaid salary and unused vacation as of the date of his termination; (2) six months of salary from the date of termination; and (3) continued participation, at our expense, during the applicable six-month severance period in our sponsored group medical and dental plans. Effective September 15, 2017, Dr. Eliseev’s employment with the Company ended and was treated as a termination without “cause”. Dr. Eliseev received severance benefits totaling \$150,000 consistent with and subject to the conditions set forth in the employment agreement.

DIRECTOR COMPENSATION

The following table shows the compensation paid in fiscal year 2017 to the Company’s non-employee directors.

| <u>Name</u> | <u>Fees Earned or Paid in Cash (\$)</u> | <u>Option Awards (\$)(1)(2)</u> | <u>Total (\$)</u> |
|----------------------------|---|---------------------------------|-------------------|
| Robert J. Bitterman | 35,000 | 850 | 35,850 |
| Keith L. Brownlie | 35,000 | 850 | 35,850 |
| H. Paul Dorman | 25,000 | 850 | 25,850 |
| Jonathan E. Freeman, Ph.D. | 14,583 | 1,274 | 15,857 |
| Curtis A. Lockshin, Ph.D. | 30,000 | 850 | 30,850 |

- (1) The amounts shown reflect the grant date fair value computed in accordance with the FASB ASC 718 for the indicated year, adjusted to disregard the effects of any estimate of forfeitures related to service-based vesting. The assumptions we used in valuing options are described more fully in the “Management’s Discussion and Analysis” section and the notes to the consolidated financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2017.
- (2) Since their service on the Board, the aggregate number of shares underlying stock options outstanding at fiscal yearend held by our non-employee directors is as follows: Robert J. Bitterman — 1,202 option awards, Keith L. Brownlie — 1,202 option awards, H. Paul Dorman — 1,035 option awards, Jonathan E. Freeman, Ph.D. — 350 option awards and Curtis A. Lockshin, Ph.D. — 1,035 option awards.

We compensate our non-employee directors for their service as a member of our Board. As our only director who is also an employee, Dr. Cauwenbergh receives no separate compensation for Board service. Dr. Cauwenbergh’s compensation is set forth above in the Summary Compensation Table.

Each non-employee director is entitled to receive an annual cash retainer of \$25,000. The chairs of our Board and Audit Committee are entitled to receive an additional annual cash retainer of \$10,000 and the chair of the Nominating and Governance Committee is entitled to receive an additional annual cash retainer of \$5,000.

Each non-employee director is entitled to receive an option award for 3,500 shares of the Company's common stock, vesting in equal quarterly installments over one year, upon initial election to our Board. In addition, each non-employee director is also entitled to receive an additional annual option award for 2,000 shares of the Company's common stock, vesting in equal quarterly installments over one year.

Non-employee directors are also reimbursed for their travel and reasonable out-of-pocket expenses incurred in connection with attending Board and committee meetings and in attending continuing education seminars, to the extent that attendance is required by the Board or the committee(s) on which that director serves.

The Compensation Committee and the Board reassess the appropriate level of equity compensation for non-employee directors on an annual basis. Future equity compensation payments will be determined on a year-by-year basis for the foreseeable future due to the volatility of the Company's stock price.

REPORT OF THE AUDIT COMMITTEE

The Audit Committee evaluates auditor performance, manages relations with the Company's independent registered public accounting firm, and evaluates policies and procedures relating to internal control systems. The Audit Committee operates under a written Audit Committee Charter that has been adopted by the Board, a copy of which is available on the Company's website at www.rxipharma.com. All members of the Audit Committee currently meet the independence and qualification standards for Audit Committee membership set forth in the listing standards provided by Nasdaq and the SEC.

Other than Mr. Brownlie, the Audit Committee members are not professional accountants or auditors. The members' functions are not intended to duplicate or to certify the activities of management and the independent registered public accounting firm. The Audit Committee serves a Board-level oversight role in which it provides advice, counsel and direction to management and the auditors on the basis of the information it receives, discussions with management and the auditors, and the experience of the Audit Committee's members in business, financial and accounting matters.

The Audit Committee oversees the Company's financial reporting process on behalf of the Board. The Company's management has the primary responsibility for the financial statements and reporting process, including the Company's system of internal controls. In fulfilling its oversight responsibilities, the Audit Committee reviewed with management the audited financial statements included in the Annual Report on Form 10-K for the fiscal year ended December 31, 2017. This review included a discussion of the quality and the acceptability of the Company's financial reporting, including the nature and extent of disclosures in the financial statements and the accompanying notes. The Audit Committee also reviewed the progress and results of the testing of the design and effectiveness of its internal controls over financial reporting pursuant to Section 404 of the Sarbanes-Oxley Act of 2002.

The Audit Committee also reviewed with the Company's independent registered public accounting firm, which is responsible for expressing an opinion on the conformity of the audited financial statements with accounting principles generally accepted in the United States of America, their judgments as to the quality and the acceptability of the Company's financial reporting and such other matters as are required to be discussed with the Committee under generally accepted auditing standards, including the Public Company Accounting Oversight Board Auditing Standard No. 1301, *Communications with Audit Committees*. The Audit Committee has received the written disclosures and the letter from the independent registered public accounting firm required by the Public Company Accounting Oversight Board. The Audit Committee discussed with the independent registered public accounting firm their independence from management and the Company, including the matters required by the applicable rules of the Public Company Accounting Oversight Board.

In addition to the matters specified above, the Audit Committee discussed with the Company's independent registered public accounting firm the overall scope, plans and estimated costs of their audit. The Committee met

with the independent registered public accounting firm periodically, with and without management present, to discuss the results of the independent registered public accounting firm's examinations, the overall quality of the Company's financial reporting and the independent registered public accounting firm's reviews of the quarterly financial statements, and drafts of the quarterly and annual reports.

In reliance on the reviews and discussions referred to above, the Audit Committee recommended to the Board that the Company's audited financial statements should be included in the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2017.

Keith L. Brownlie
H. Paul Dorman
Jonathan E. Freeman, Ph.D.

OTHER BUSINESS

We know of no other matters to be submitted to a vote of stockholders at the Annual Meeting. If any other matter is properly brought before the Annual Meeting or any adjournment thereof, it is the intention of the persons named in the enclosed proxy to vote the shares they represent in accordance with their judgment. In order for any stockholder to nominate a candidate or to submit a proposal for other business to be acted upon at a given annual meeting, he or she must provide timely written notice to our corporate Secretary in the form prescribed by our Bylaws, as described below.

STOCKHOLDER PROPOSALS

Stockholder proposals intended to be included in the 2019 annual meeting proxy materials must be received by the Secretary of the Company no later than February 1, 2019, or otherwise as permitted by applicable law (the "**Proxy Deadline**"). The form and substance of these proposals must satisfy the requirements established by the Company's Bylaws and the SEC, and the timing for the submission of any such proposals may be subject to change as a result of changes in SEC rules and regulations.

Additionally, stockholders who intend to present a stockholder proposal at the 2019 annual meeting must provide the Secretary of the Company with written notice of the proposal not fewer than 90 nor more than 120 days prior to the anniversary date of the 2018 annual meeting, *provided, however*, that if the 2019 annual meeting date is more than 30 days before or after the anniversary date of the 2018 annual meeting, then stockholders must provide notice on or before 10 days after the day on which the date of the 2019 annual meeting is first disclosed in a public announcement. Notice must be tendered in the proper form prescribed by our Bylaws. Proposals not meeting the requirements set forth in our Bylaws will not be entertained at the meeting.

Additionally, any stockholder seeking to recommend a director candidate or any director candidate who wishes to be considered by the Nominating and Governance Committee, the committee that recommends a slate of nominees to the Board for election at each annual meeting, must provide the Secretary of the Company with a completed and signed biographical questionnaire on or before the Proxy Deadline. Stockholders can obtain a copy of this questionnaire from the Secretary of the Company upon written request. The Nominating and Governance Committee is not required to consider director candidates received after this date or without the required questionnaire. The Nominating and Governance Committee will consider all director candidates who comply with these requirements and will evaluate these candidates using the criteria described above under the caption, "Nomination of Directors." Director candidates who are then approved by the Board will be included in the Company's proxy statement for that annual meeting.

DELIVERY OF PROXY MATERIALS

Our Annual Report to stockholders for the fiscal year ended December 31, 2017, including audited financial statements and the notes thereto, accompanies this Proxy Statement. **Copies of our Annual Report on Form 10-K for fiscal 2017 and the exhibits thereto are available from the Company without charge upon written request of a stockholder.** Copies of these materials are also available online through the SEC at www.sec.gov. The Company may satisfy SEC rules regarding delivery of proxy materials, including the Proxy Statement, Annual Report and Notice, by delivering a single Notice and, if applicable, a single set of proxy materials to an address shared by two or more Company stockholders. This delivery method can result in meaningful cost savings for the Company. In order to take advantage of this opportunity, the Company may deliver only one Notice and, if applicable, a single set of proxy materials to multiple stockholders who share an address, unless contrary instructions are received prior to the mailing date. Similarly, if you share an address with another stockholder and have received multiple copies of our Notice and/or other proxy materials, you may write or call us at the address and phone number below to request delivery of a single copy of the Notice and, if applicable, other proxy materials in the future. We undertake to deliver promptly upon written or oral request a separate copy of the Notice and, if applicable, other proxy materials, as requested, to a stockholder at a shared address to which a single copy of the Notice and/or other proxy materials was delivered. If you hold stock as a record stockholder and prefer to receive separate copies of a Notice and, if applicable, other proxy materials either now or in the future, please contact the Company's Investor Relations department at 257 Simarano Drive, Suite 101, Marlborough, MA 01752 or by telephone at (508) 929-3646. If your stock is held through a brokerage firm or bank and you prefer to receive separate copies of a Notice and, if applicable, other proxy materials either now or in the future, please contact your brokerage firm or bank.

EACH STOCKHOLDER IS URGED TO COMPLETE, DATE, SIGN AND PROMPTLY RETURN THE ENCLOSED PROXY.

Appendix A

RXi Pharmaceuticals Corporation 2012 LONG TERM INCENTIVE PLAN

1. DEFINED TERMS

Exhibit A, which is incorporated by reference, defines the terms used in the Plan and sets forth certain operational rules related to those terms.

2. PURPOSE

The Plan has been established to advance the interests of the Company by providing for the grant to Participants of Stock-based incentive Awards and other Awards.

3. ADMINISTRATION

The Administrator has discretionary authority, subject only to the express provisions of the Plan, to interpret the Plan; determine eligibility for and grant Awards; determine, modify or waive the terms and conditions of any Award; prescribe forms, rules and procedures; and otherwise do all things necessary to carry out the purposes of the Plan. Determinations of the Administrator made under the Plan will be conclusive and will bind all parties.

4. LIMITS ON AWARDS UNDER THE PLAN

(a) Number of Shares. The maximum number of shares of Stock that may be delivered upon satisfaction of Equity Awards under the Plan shall be 750,000 shares of Stock. Up to the total number of shares of Stock set forth in the preceding sentence may be issued in satisfaction of ISOs, but nothing in this Section 4(a) shall be construed as requiring that any, or any fixed number of, ISOs be awarded under the Plan. The number of shares of Stock delivered in satisfaction of Equity Awards shall, for purposes of this Section 4(a), be determined net of shares of Stock withheld by the Company in payment of the exercise price of the Award or in satisfaction of tax withholding requirements with respect to the Award and, for the avoidance of doubt, without including any shares of Stock underlying Awards settled in cash or which otherwise expire or become unexercisable without having been exercised or are forfeited to or repurchased by the Company due to failure to vest. The limits set forth in this Section 4(a) shall be construed to comply with Section 422. To the extent consistent with the requirements of Section 422 and with other applicable legal requirements (including applicable stock exchange requirements, if any), Stock issued under Substitute Awards shall not reduce the number of shares available for Awards under the Plan. The shares which may be delivered under Substitute Awards shall be in addition to the limitations set forth in this Section 4(a) on the number of shares available for issuance under the Plan.

(b) Type of Shares. Shares of Stock delivered by the Company under the Plan may be authorized but unissued Stock or previously issued Stock acquired by the Company. No fractional shares of Stock will be delivered under the Plan.

(c) Non-Employee Director Limit. The maximum number of shares of Stock subject to Equity Awards granted during a single calendar year to any director of the Company who is not an Employee, taken together with any cash fees paid during the fiscal year to such individual in respect of his or her service as a member of the Board during such year (including service as a member or chair of any committees of the Board), shall not exceed \$250,000 in total value (calculating the value of any such Equity Awards based on the grant date fair value of such Equity Awards for financial reporting purposes).

5. ELIGIBILITY AND PARTICIPATION

The Administrator will select Participants from among those key Employees and directors of, and consultants and advisors to, the Company or its Affiliates who, in the opinion of the Administrator, are in a position to make

a significant contribution to the success of the Company and its Affiliates; *provided*, that, subject to such express exceptions, if any, as the Administrator may establish, eligibility for Equity Awards shall be further limited to those persons as to whom the use of a Form S-8 registration statement is permissible. Eligibility for ISOs is limited to employees of the Company or of a “parent corporation” or “subsidiary corporation” of the Company as those terms are defined in Section 424 of the Code. Eligibility for Stock Options other than ISOs is limited to individuals described in the first sentence of this Section 5 who are providing direct services on the date of grant of the Stock Option to the Company or to a subsidiary of the Company that would be described in the first sentence of Treas. Regs. § 1.409A-1(b)(5)(iii)(E).

6. RULES APPLICABLE TO AWARDS

(a) In General

(1) Award Provisions. The Administrator will determine the terms of all Awards, subject to the limitations provided herein. By accepting (or, under such rules as the Administrator may prescribe, being deemed to have accepted) an Award, the Participant agrees to the terms of the Award and the Plan. The Administrator will determine whether Equity Awards are settled in shares of Stock or cash or whether the settlement or payment of Awards shall be subject to deferral. Notwithstanding any provision of this Plan to the contrary, Substitute Awards may contain terms and conditions that are inconsistent with the terms and conditions specified herein, as determined by the Administrator.

(2) Term of Plan. No Awards may be made after the tenth anniversary of the date that this Plan is first adopted by the Board of Directors of the Company, but previously granted Awards may continue beyond that date in accordance with their terms.

(3) Transferability. Neither ISOs nor, except as the Administrator otherwise expressly provides in accordance with the second sentence of this Section 6(a)(3), other Awards may be transferred other than by will or by the laws of descent and distribution, and during a Participant’s lifetime ISOs (and, except as the Administrator otherwise expressly provides in accordance with the second sentence of this Section 6(a)(3), other Equity Awards requiring exercise) may be exercised only by the Participant. The Administrator may permit Equity Awards other than ISOs to be transferred by gift, subject to applicable securities and other laws and such limitations as the Administrator may impose.

(4) Vesting, Etc. The Administrator shall determine the time or times at which an Equity Award will vest or become exercisable and the terms on which an Equity Award requiring exercise will remain exercisable. Without limiting the foregoing, the Administrator may at any time accelerate the vesting or exercisability of an Equity Award, regardless of any adverse or potentially adverse tax or other consequences resulting from such acceleration. Unless the Administrator expressly provides otherwise, however, the following rules will apply if a Participant’s Employment ceases: immediately upon the cessation of the Participant’s Employment, each Award requiring exercise that is then held by the Participant or by the Participant’s permitted transferees, if any, will cease to be exercisable and will terminate, and all other Awards that are then held by the Participant or by the Participant’s permitted transferees, if any, to the extent not already vested will be forfeited, except that:

(A) subject to (B) and (C) below, all Stock Options and SARs held by the Participant or the Participant’s permitted transferees, if any, immediately prior to the cessation of the Participant’s Employment, to the extent then exercisable, will remain exercisable for the lesser of (i) a period of three months or (ii) the period ending on the latest date on which such Stock Option or SAR could have been exercised without regard to this Section 6(a)(4), and will thereupon terminate;

(B) all Stock Options and SARs held by a Participant or the Participant’s permitted transferees, if any, immediately prior to the cessation of Participant’s Employment due to death, to the extent then exercisable, will remain exercisable for the lesser of (i) the one year period ending with the first anniversary of the Participant’s death or (ii) the period ending on the latest date on which such Stock Option or SAR could have been exercised without regard to this Section 6(a)(4), and will thereupon terminate; and

(C) all Stock Options and SARs held by a Participant or the Participant's permitted transferees, if any, immediately prior to the cessation of the Participant's Employment will immediately terminate upon such cessation if the Administrator in its sole discretion determines that such cessation of Employment has resulted for reasons which cast such discredit on the Participant as to justify immediate termination of the Award or are otherwise determined by the Administrator to constitute cause.

(5) Recovery of Compensation; Other Terms

(A) Awards (whether or not vested or exercisable) held by a Participant are subject to forfeiture, termination and rescission, and a Participant will be obligated to return to the Company the value received with respect to Awards (including payments made and/or Stock delivered under an Award, and any gain realized on a subsequent sale or disposition of an Award or Stock delivered under an Award), in each case (i) to the extent provided by the Administrator in an Award agreement in connection with (A) a breach by the Participant of a non-competition, non-solicitation, confidentiality or similar covenant or agreement or (B) an overpayment to the Participant of incentive compensation due to inaccurate financial data, (ii) in accordance with Company policy relating to the recovery of erroneously-paid incentive compensation, as such policy may be amended and in effect from time to time, or (iii) as otherwise required by law or applicable stock exchange listing standards, including, without limitation, the Dodd-Frank Wall Street Reform and Consumer Protection Act.

(B) Each Participant, by accepting an Award pursuant to the Plan, agrees to return the full amount required under this Section 6(a)(5) at such time and in such manner as the Administrator shall determine in its sole discretion and consistent with applicable law. Neither the Administrator nor the Company will be responsible for any adverse tax or other consequences to a Participant that may arise in connection with this Section 6(a)(5). For the avoidance of doubt, in addition to any forfeiture or other restrictions imposed by the terms of an Award agreement, every Award issued under the Plan will be subject to potential forfeiture or "claw back" to the fullest extent called for by applicable federal or state law. In addition, to the extent provided by the Administrator, Shares received upon settlement, vesting or exercise of an Award may be subject to stock ownership guidelines or policies established by the Company with respect to its employees, directors and/or other service providers.

(6) Taxes. The Administrator will make such provision for the withholding of taxes as it deems necessary. The Administrator may, but need not, hold back shares of Stock from an Award or permit a Participant to tender previously owned shares of Stock in satisfaction of tax withholding requirements (but not in excess of the minimum withholding required by law, or, if and when the Company adopts any applicable accounting standard allowing for greater share withholding, up to such withholding rate that will not cause an adverse accounting consequence or cost and is permitted under applicable tax rules).

(7) Dividend Equivalents, Etc. The Administrator may provide for the payment of amounts (on terms and subject to conditions established by the Administrator) in lieu of cash dividends or other cash distributions with respect to Stock subject to an Equity Award. Any entitlement to dividend equivalents or similar entitlements shall be established and administered either consistent with exemption from, or in compliance with, the requirements of Section 409A. In addition, any amounts payable in respect of Restricted Stock (or any other Award subject to any vesting condition) may be subject to such limits or restrictions or alternative terms as the Administrator may impose.

(8) Rights Limited. Nothing in the Plan will be construed as giving any person the right to be granted an Award or to continued employment or service with the Company or its Affiliates, or any rights as a stockholder except as to shares of Stock actually issued under the Plan. The loss of existing or potential profit in Awards will not constitute an element of damages in the event of termination of Employment for any reason, even if the termination is in violation of an obligation of the Company or any Affiliate to the Participant.

(9) Coordination with Other Plans. Awards under the Plan may be granted in tandem with, or in satisfaction of or substitution for, other Awards under the Plan or awards made under other compensatory

plans or programs of the Company or its Affiliates. For example, but without limiting the generality of the foregoing, awards under other compensatory plans or programs of the Company or its Affiliates may be settled in Stock (including, without limitation, Unrestricted Stock) if the Administrator so determines, in which case the shares delivered shall be treated as awarded under the Plan (and shall reduce the number of shares thereafter available under the Plan in accordance with the rules set forth in Section 4).

(10) Section 409A. Each Award shall contain such terms as the Administrator determines, and shall be construed and administered, such that the Award either (i) qualifies for an exemption from the requirements of Section 409A, or (ii) satisfies such requirements.

(11) Fair Market Value. Except as otherwise expressly provided herein, in determining the fair market value of any share of Stock under the Plan, the Administrator shall make the determination in good faith on such basis as it deems appropriate, taking into account the requirements of Section 422 and Section 409A, to the extent applicable; *provided*, that unless otherwise determined by the Administrator, if the Stock is admitted to trading on an established securities exchange, “fair market value” shall be the closing price of a share of Stock on such date (or, if the Stock was not traded on such day, then the next preceding day on which the Stock was traded).

(12) Certain Requirements of Corporate Law. Equity Awards shall be granted and administered consistent with the requirements of applicable Delaware law relating to the issuance of stock and the consideration to be received therefor, and with the applicable requirements of the stock exchanges or other trading systems or national market on which the Stock is listed or entered for trading, in each case as determined by the Administrator.

(b) Awards Requiring Exercise. Equity Awards requiring exercise will be subject to the provisions of this Section 6(b).

(1) Time and Manner of Exercise. Unless the Administrator expressly provides otherwise, an Award requiring exercise by the holder will not be deemed to have been exercised until the Administrator receives a notice of exercise (in form acceptable to the Administrator), which may be an electronic notice, signed (including electronic signature in form acceptable to the Administrator) by the appropriate person and accompanied by any payment required under the Award. If the Award is exercised by any person other than the Participant, the Administrator may require satisfactory evidence that the person exercising the Award has the right to do so.

(2) Exercise Price. The exercise price (or the base value from which appreciation is to be measured) of each Award requiring exercise shall be 100% (in the case of an ISO granted to a ten-percent shareholder within the meaning of subsection (b)(6) of Section 422, 110%) of the fair market value of the Stock (as provided in Section 6(a)(12)) subject to the Award, determined as of the date of grant, or such higher amount as the Administrator may determine in connection with the grant or as otherwise determined by the Administrator with respect to a Substitute Award.

(3) Payment of Exercise Price. Where the exercise of an Award is to be accompanied by payment, payment of the exercise price shall be by cash or check acceptable to the Administrator, or, if so permitted by the Administrator and if legally permissible, (i) through the delivery of unrestricted shares of Stock that have a fair market value equal to the exercise price, subject to such holding requirements, if any, as the Administrator may prescribe, (ii) through a broker-assisted exercise program acceptable to the Administrator, (iii) through the withholding of shares of Stock otherwise to be delivered upon exercise of the Award whose fair market value is equal to the aggregate exercise price of the Award being exercised, (iv) by other means acceptable to the Administrator, or (v) by any combination of the foregoing permissible forms of payment. The delivery of shares in payment of the exercise price under clause (i) above may be accomplished either by actual delivery or by constructive delivery through attestation of ownership, subject to such rules as the Administrator may prescribe.

(4) Maximum Term. Awards requiring exercise will have a maximum term not to exceed ten (10) years from the date of grant (or five (5) years from the date of grant in the case of an ISO granted to a ten-percent

shareholder described in Section 6(b)(2) above); *provided*, that if an Award requiring exercise (other than an ISO) would otherwise expire as a result of expiration of the maximum term of such Award (i.e., ten (10) years from the date of grant or such shorter time period as set forth in an Award agreement), and at such time the Participant holding such Award is prohibited by applicable law or written Company policy applicable to similarly situated employees from engaging in any open-market sales of Stock, the maximum term of such Award will automatically extend to thirty (30) days following the date the Participant is no longer prohibited from engaging in such open-market sales.

(c) Cash Awards

(1) A Participant who is granted a Cash Award shall be entitled to a payment, if any, under the Award only if all conditions to payment have been satisfied in accordance with the Plan and the terms of the Award. The Administrator will determine the actual payment, if any, under each Cash Award. The Administrator may, in its sole and absolute discretion, after determining the amount that would otherwise be payable for a Performance Period with respect to a Cash Award that is a Performance Award, adjust (including to zero) the payment, if any, to be made under such Award.

(2) The Administrator shall determine the payment dates for Cash Awards under the Plan. Except as otherwise determined by the Administrator, no payment shall be made under a Cash Award unless the Participant's Employment continues through the date such Cash Award is paid. Payments hereunder are intended to fall under the short-term deferral exception to Section 409A and shall be construed and administered accordingly. Notwithstanding the foregoing, (i) if the documentation establishing the Cash Award provides a specified and objectively determinable payment date or schedule that satisfies the requirements of Section 409A, payment under an Award may be made in accordance with such date or schedule, and (ii) the Administrator may, but need not, permit a Participant to defer payment of a Cash Award beyond the date that the Award would otherwise be payable, *provided*, that any such deferral shall be made in accordance with and subject to the applicable requirements of Section 409A.

7. EFFECT OF CERTAIN TRANSACTIONS

(a) Mergers, Etc. Except as otherwise provided in an Award, the Administrator shall, in its sole discretion, determine the effect of a Covered Transaction on Awards, which determination may include, but is not limited to, the following actions:

(1) Assumption or Substitution. If the Covered Transaction is one in which there is an acquiring or surviving entity, the Administrator may provide for the assumption or continuation of some or all outstanding Awards or for the grant of new awards in substitution thereof by the acquiror or survivor or an affiliate of the acquiror or survivor.

(2) Cash-Out of Awards. If the Covered Transaction is one in which holders of Stock will receive upon consummation a payment (whether cash, non-cash or a combination of the foregoing), then subject to Section 7(a)(5) below the Administrator may provide for payment (a "cash-out"), with respect to some or all Awards or any portion thereof, equal in the case of each affected Equity Award or portion thereof to the excess, if any, of (A) the fair market value of one share of Stock times the number of shares of Stock subject to the Award or such portion, over (B) the aggregate exercise or purchase price, if any, under the Award or such portion (in the case of an SAR, the aggregate base value above which appreciation is measured), in each case on such payment terms (which need not be the same as the terms of payment to holders of Stock) and other terms, and subject to such conditions, as the Administrator determines; *provided*, that the Administrator shall not exercise its discretion under this Section 7(a)(2) with respect to an Award or portion thereof providing for "nonqualified deferred compensation" subject to Section 409A in a manner that would constitute an extension or acceleration of, or other change in, payment terms if such change would be inconsistent with the applicable requirements of Section 409A.

(3) Acceleration of Certain Awards. If the Covered Transaction (whether or not there is an acquiring or surviving entity) is one in which there is no assumption, continuation, substitution or cash-out, then subject

to Section 7(a)(5) below, the Administrator may provide that each Equity Award requiring exercise will become fully exercisable, and the delivery of any shares of Stock remaining deliverable under each outstanding Award of Stock Units (including Restricted Stock Units and Performance Awards to the extent consisting of Stock Units) will be accelerated and such shares will be delivered, prior to the Covered Transaction, in each case on a basis that gives the holder of the Award a reasonable opportunity, as determined by the Administrator, following exercise of the Award or the delivery of the shares, as the case may be, to participate as a stockholder in the Covered Transaction; *provided*, that to the extent acceleration pursuant to this Section 7(a)(3) of an Award subject to Section 409A would cause the Award to fail to satisfy the requirements of Section 409A, the Award shall not be accelerated and the Administrator in lieu thereof shall take such steps as are necessary to ensure that payment of the Award is made in a medium other than Stock and on terms that as nearly as possible, but taking into account adjustments required or permitted by this Section 7, replicate the prior terms of the Award.

(4) Termination of Awards Upon Consummation of Covered Transaction. Each Award will terminate upon consummation of the Covered Transaction, other than the following: (i) Awards assumed pursuant to Section 7(a)(1) above; (ii) Awards converted pursuant to the proviso in Section 7(a)(3) above into an ongoing right to receive payment other than Stock; (iii) outstanding shares of Restricted Stock (which shall be treated in the same manner as other shares of Stock, subject to Section 7(a)(5) below); and (iv) Cash Awards that by their terms, or as a result of action taken by the Administrator, continue following such Covered Transaction.

(5) Additional Limitations. Any share of Stock and any cash or other property delivered pursuant to Section 7(a)(2) or Section 7(a)(3) above with respect to an Equity Award may, in the discretion of the Administrator, contain such restrictions, if any, as the Administrator deems appropriate to reflect any performance or other vesting conditions to which the Award was subject and that did not lapse (and were not satisfied) in connection with the Covered Transaction. For purposes of the immediately preceding sentence, a cash out under Section 7(a)(2) above or the acceleration of exercisability of an Award under Section 7(a)(3) above shall not, in and of itself, be treated as the lapsing (or satisfaction) of a performance or other vesting condition. In the case of Restricted Stock that does not vest in connection with the Covered Transaction, the Administrator may require that any amounts delivered, exchanged or otherwise paid in respect of such Stock in connection with the Covered Transaction be placed in escrow or otherwise made subject to such restrictions as the Administrator deems appropriate to carry out the intent of the Plan.

(b) Changes in and Distributions With Respect to Stock

(1) Basic Adjustment Provisions. In the event of a stock dividend, stock split or combination of shares (including a reverse stock split), recapitalization or other change in the Company's capital structure that constitutes an equity restructuring within the meaning of FASB ASC Topic 718, the Administrator shall make appropriate adjustments to the maximum number of shares specified in Section 4(a) that may be delivered under the Plan and shall also make appropriate adjustments to the number and kind of shares of stock or securities subject to Equity Awards then outstanding or subsequently granted, any exercise prices relating to Equity Awards and any other provision of Awards affected by such change.

(2) Certain Other Adjustments. The Administrator may also make adjustments of the type described in Section 7(b)(1) above to take into account distributions to stockholders other than those provided for in Section 7(a) and 7(b)(1), or any other event, if the Administrator determines that adjustments are appropriate to avoid distortion in the operation of the Plan and to preserve the value of Awards made hereunder, having due regard for the qualification of ISOs under Section 422 and the requirements of Section 409A, to the extent applicable.

(3) Continuing Application of Plan Terms. References in the Plan to shares of Stock will be construed to include any stock or securities resulting from an adjustment pursuant to this Section 7.

8. LEGAL CONDITIONS ON DELIVERY OF STOCK

The Company will not be obligated to deliver any shares of Stock pursuant to the Plan or to remove any restriction from shares of Stock previously delivered under the Plan until: (i) the Company is satisfied that all legal matters in connection with the issuance and delivery of such shares have been addressed and resolved; (ii) if the outstanding Stock is at the time of delivery listed on any stock exchange or national market system, the shares to be delivered have been listed or authorized to be listed on such exchange or system upon official notice of issuance; and (iii) all conditions of the Award have been satisfied or waived. The Company may require, as a condition to exercise of the Award or delivery of shares of Stock under an Award, such representations or agreements as counsel for the Company may consider appropriate to avoid violation of such the Securities Act of 1933, as amended, or any applicable state or non-U.S. securities law. Any Stock required to be issued to Participants under the Plan will be evidenced in such manner as the Administrator may deem appropriate, including book-entry registration or delivery of stock certificates. In the event that the Administrator determines that stock certificates will be issued to Participants under the Plan, the Administrator may require that certificates evidencing Stock issued under the Plan bear an appropriate legend reflecting any restriction on transfer applicable to such Stock, and the Company may hold the certificates pending lapse of the applicable restrictions.

9. AMENDMENT AND TERMINATION

The Administrator may at any time or times amend the Plan or any outstanding Award for any purpose which may at the time be permitted by law, and may at any time terminate the Plan as to any future grants of Awards; *provided*, that except as otherwise expressly provided in the Plan the Administrator may not, without the Participant's consent, alter the terms of an Award so as to affect materially and adversely the Participant's rights under the Award, unless the Administrator expressly reserved the right to do so at the time of the Award. Any amendments to the Plan shall be conditioned upon stockholder approval only to the extent, if any, such approval is required by law (including the Code and applicable stock exchange requirements), as determined by the Administrator. For the avoidance of doubt, no amendment to the Plan shall be effective unless approved by stockholders, to the extent stockholder approval is required under the rules of the applicable stock exchange on which the Stock is admitted to trading, if it would reduce the exercise price of any Stock Option previously granted hereunder or otherwise constitute a repricing and, without the receipt of such approval (to the extent so required), the Administrator shall not approve a repurchase by the Company for cash or other property of Stock Options or SARs for which the exercise price or base price, as applicable, exceeds the fair market value of a share of Stock as of the date of such repurchase. For avoidance of doubt, any amendments to the Plan will not modify any Awards granted under the Plan prior to June 5, 2018 to the extent such modification would result in a loss of deductibility under Section 162(m).

10. OTHER COMPENSATION ARRANGEMENTS

The existence of the Plan or the grant of any Award will not in any way affect the Company's right to award a person bonuses or other compensation in addition to Awards under the Plan.

11. MISCELLANEOUS

(a) Waiver of Jury Trial. By accepting an Award under the Plan, each Participant waives any right to a trial by jury in any action, proceeding or counterclaim concerning any rights under the Plan and any Award, or under any amendment, waiver, consent, instrument, document or other agreement delivered or which in the future may be delivered in connection therewith, and agrees that any such action, proceedings or counterclaim shall be tried before a court and not before a jury. By accepting an Award under the Plan, each Participant certifies that no officer, representative, or attorney of the Company has represented, expressly or otherwise, that the Company would not, in the event of any action, proceeding or counterclaim, seek to enforce the foregoing waivers.

(b) Limitation of Liability. Notwithstanding anything to the contrary in the Plan, neither the Company, nor any Affiliate, nor the Administrator, nor any person acting on behalf of the Company, any Affiliate, or the

Administrator, shall be liable to any Participant or to the estate or beneficiary of any Participant or to any other holder of an Award by reason of any acceleration of income, or any additional tax (including any interest and penalties), asserted by reason of the failure of an Award to satisfy the requirements of Section 422 or Section 409A or by reason of Section 4999 of the Code, or otherwise asserted with respect to the Award; *provided*, that nothing in this Section 11(b) shall limit the ability of the Administrator or the Company, in its discretion, to provide by separate express written agreement with a Participant for a gross-up payment or other payment in connection with any such acceleration of income or additional tax.

12. ESTABLISHMENT OF SUB-PLANS

The Board may from time to time establish one or more sub-plans under the Plan for purposes of satisfying applicable blue sky, securities or tax laws of various jurisdictions. The Board will establish such sub-plans by adopting supplements to the Plan setting forth (i) such limitations on the Administrator's discretion under the Plan as the Board deems necessary or desirable and (ii) such additional terms and conditions not otherwise inconsistent with the Plan as the Board deems necessary or desirable. All supplements adopted by the Board will be deemed to be part of the Plan, but each supplement will apply only to Participants within the affected jurisdiction and the Company will not be required to provide copies of any supplement to Participants in any jurisdiction that is not affected.

13. GOVERNING LAW

Except as otherwise provided by the express terms of an Award agreement or under a sub-plan described in Section 12, the provisions of the Plan and of Awards under the Plan and all claims or disputes arising out of or based upon the Plan or any Award under the Plan or relating to the subject matter hereof or thereof will be governed by and construed in accordance with the General Corporation Law of the State of Delaware as to matters within the scope thereof, and as to all other matters shall be governed by and construed in accordance with the domestic substantive laws of the State of Delaware without giving effect to any choice or conflict of laws provision or rule that would cause the application of the domestic substantive laws of any other jurisdiction.

EXHIBIT A

Definition of Terms

The following terms, when used in the Plan, will have the meanings and be subject to the provisions set forth below:

“Administrator”: The Compensation Committee, except that the Compensation Committee may delegate (i) to one or more of its members (or one or more other members of the Board, including the full Board) such of its duties, powers and responsibilities as it may determine; (ii) to one or more officers of the Company the power to grant Awards to the extent permitted by Section 157(c) of the Delaware General Corporation Law; and (iii) to such Employees or other persons as it determines such ministerial tasks as it deems appropriate.

“Affiliate”: Any corporation or other entity that stands in a relationship to the Company that would result in the Company and such corporation or other entity being treated as one employer under Section 414(b) and Section 414(c) of the Code, except that in determining eligibility for the grant of a Stock Option or SAR by reason of service for an Affiliate, Sections 414(b) and 414(c) of the Code shall be applied by substituting “at least 50%” for “at least 80%” under Section 1563(a)(1), (2) and (3) of the Code and Treas. Regs. § 1.414(c)-2; *provided*, that to the extent permitted under Section 409A, “at least 20%” shall be used in lieu of “at least 50%”; *and further provided*, that the lower ownership threshold described in this definition (50% or 20% as the case may be) shall apply only if the same definition of affiliation is used consistently with respect to all compensatory stock options or stock awards (whether under the Plan or another plan). The Company may at any time by amendment provide that different ownership thresholds (consistent with Section 409A) apply but any such change shall not be effective for twelve (12) months.

“Award”: Any or a combination of the following, any of which may be, in the discretion of the Administrator, a Performance Award:

- (i) Stock Options.
- (ii) SARs.
- (iii) Restricted Stock.
- (iv) Unrestricted Stock.
- (v) Stock Units, including Restricted Stock Units.
- (vi) Cash Awards.
- (vii) Awards (other than Awards described in (i) through (vi) above) that are convertible into or otherwise based on Stock.

“Board”: The Board of Directors of the Company; *provided*, however, that if the Company is a direct or indirect subsidiary of a publicly held corporation, it shall mean the Board of Directors of the publicly held corporation.

“Cash Award”: An Award denominated in cash.

“Code”: The U.S. Internal Revenue Code of 1986 as from time to time amended and in effect, or any successor statute as from time to time in effect.

“Compensation Committee”: In the event that the Company is a direct or indirect subsidiary of a publicly held corporation, the Compensation Committee shall mean the Compensation Committee of the Board of the publicly held corporation; otherwise, Compensation Committee shall mean the Compensation Committee of the Board.

“Company”: RXi Pharmaceuticals Corporation.

“Covered Transaction”: Any of (i) a consolidation, merger, or similar transaction or series of related transactions, including a sale or other disposition of stock, in which the Company is not the surviving corporation or which results in the acquisition of all or substantially all of the Company’s then outstanding common stock by a single person or entity or by a group of persons and/or entities acting in concert, (ii) a sale or transfer of all or substantially all the Company’s assets, or (iii) a dissolution or liquidation of the Company. Where a Covered Transaction involves a tender offer that is reasonably expected to be followed by a merger described in clause (i) (as determined by the Administrator), the Covered Transaction shall be deemed to have occurred upon consummation of the tender offer.

“Employee”: Any person who is employed by the Company or an Affiliate.

“Employment”: A Participant’s employment or other service relationship with the Company and its Affiliates. Employment will be deemed to continue, unless the Administrator expressly provides otherwise, so long as the Participant is employed by, or otherwise is providing services in a capacity described in Section 5 to the Company or its Affiliates. If a Participant’s employment or other service relationship is with an Affiliate and that entity ceases to be an Affiliate, the Participant’s Employment will be deemed to have terminated when the entity ceases to be an Affiliate unless the Participant transfers Employment to the Company or its remaining Affiliates. Notwithstanding the foregoing and the definition of “Affiliate” above, in construing the provisions of any Award relating to the payment of “nonqualified deferred compensation” (subject to Section 409A) upon a termination or cessation of Employment, references to termination or cessation of employment, separation from service, retirement or similar or correlative terms shall be construed to require a “separation from service” (as that term is defined in Section 1.409A-1(h) of the Treasury Regulations) from the Company and from all other corporations and trades or businesses, if any, that would be treated as a single “service recipient” with the Company under Section 1.409A-1(h)(3) of the Treasury Regulations. The Company may, but need not, elect in writing, subject to

the applicable limitations under Section 409A, any of the special elective rules prescribed in Section 1.409A-1(h) of the Treasury Regulations for purposes of determining whether a “separation from service” has occurred. Any such written election shall be deemed a part of the Plan.

“Equity Award”: Awards other than Cash Awards.

“ISO”: A Stock Option intended to be an “incentive stock option” within the meaning of Section 422. Each option granted pursuant to the Plan will be treated as providing by its terms that it is to be a non-incentive stock option unless, as of the date of grant, it is expressly designated as an ISO.

“Participant”: A person who is granted an Award under the Plan.

“Performance Award”: An Award subject to Performance Criteria.

“Performance Criteria”: For a Performance Period, specified criteria, other than the mere continuation of Employment or the mere passage of time, the satisfaction of which is a condition for the grant, exercisability, vesting or full enjoyment of an Award. Performance Criteria may include an objectively determinable measure of performance relating to any or any combination of the following (measured either absolutely or by reference to an index or indices or on an individual basis and determined either on a consolidated basis or, as the context permits, on a divisional, subsidiary, line of business, project or geographical basis or in combinations thereof): sales; revenues; assets; expenses; earnings before or after deduction for all or any portion of interest, taxes, depreciation, or amortization, whether or not on a continuing operations or an aggregate or per share basis; return on equity, investment, capital or assets; one or more operating ratios; borrowing levels, leverage ratios or credit rating; market share; capital expenditures; cash flow; stock price; stockholder return; sales of particular products or services; customer acquisition or retention; acquisitions and divestitures (in whole or in part); joint ventures and strategic alliances; spin-offs, split-ups and the like; reorganizations; or recapitalizations, restructurings, financings (issuance of debt or equity) or refinancings; and any other objective or subjective measure or metric as the Administrator deems appropriate. A Performance Criterion and any targets with respect thereto determined by the Administrator need not be based upon an increase, a positive or improved result or avoidance of loss. The Administrator may establish that in the case of any Award intended to qualify for such exception that one or more of the Performance Criteria applicable to such Award will be adjusted to reflect events (for example, the impact of charges for restructurings, discontinued operations, mergers, acquisitions, extraordinary items, and other unusual, infrequently occurring or non-recurring items, the cumulative effects of tax or accounting changes and any other inclusions or exclusions as the Administrator may determine) occurring during the Performance Period that affect the applicable Performance Criterion or Criteria.

“Performance Period”: A period of time, as the may Administrator may select in its discretion, over which the attainment of one or more Performance Criteria will be measured for the purpose of determining a grantee’s right to and the vesting and/or payment of an Award. Performance Periods may be of varying length and of overlapping durations as determined by the Administrator.

“Plan”: The RXi Pharmaceuticals Corporation 2012 Long Term Incentive Plan as from time to time amended and in effect.

“Restricted Stock”: Stock subject to restrictions requiring that it be redelivered or offered for sale to the Company if specified conditions are not satisfied.

“Restricted Stock Unit”: A Stock Unit that is, or as to which the delivery of Stock or cash in lieu of Stock is, subject to the satisfaction of specified performance or other vesting conditions.

“SAR”: A right entitling the holder upon exercise to receive an amount (payable in cash or in shares of Stock of equivalent value) equal to the excess of the fair market value (as defined in Section 6(b)) of the shares of Stock subject to the right over the base value from which appreciation under the SAR is to be measured.

“Section 409A”: Section 409A of the Code.

“Section 422”: Section 422 of the Code.

“Section 162(m)”: Section 162(m) of the Code.

“Stock”: Common stock of the Company, par value \$0.0001 per share.

“Stock Option”: An option entitling the holder to acquire shares of Stock upon payment of the exercise price.

“Stock Unit”: An unfunded and unsecured promise, denominated in shares of Stock, to deliver Stock or cash measured by the value of Stock in the future.

“Substitute Awards”: Awards that are the result of converting, replacing, or adjusting equity awards of an acquired company in connection with the acquisition.

“Unrestricted Stock”: Stock not subject to any restrictions under the terms of the Award.

Appendix B

**RXi PHARMACEUTICALS CORPORATION
EMPLOYEE STOCK PURCHASE PLAN**

SECTION 1. PURPOSE OF PLAN

The RXi Pharmaceuticals Corporation Employee Stock Purchase Plan (the “Plan”) is intended to enable eligible employees of RXi Pharmaceuticals Corporation (“RXi”) and such of its Subsidiaries as the Board of Directors of RXi (the “Board”) may from time to time designate (RXi and such Subsidiaries being hereinafter referred to as the “Company”) to use payroll deductions to purchase shares of common stock, \$0.0001 par value of RXi (such common stock being hereafter referred to as “Stock”), and thereby acquire an interest in the future of RXi. For purposes of the Plan, a “Subsidiary” is any corporation that would be treated as a subsidiary of RXi under Section 424(f) of the Internal Revenue Code of 1986, as amended (the “Code”). The Plan is intended to qualify under Section 423 of the Code and will be construed accordingly.

SECTION 2. RIGHT TO PURCHASE STOCK

Subject to adjustment pursuant to Section 16 of this Plan, the maximum aggregate number of shares of Stock available for sale pursuant to the exercise of options (“Stock Rights”) granted under the Plan to employees of the Company (“Employees”) who meet the eligibility requirements set forth in Section 3 hereof (“Eligible Employees”) is 451,333. The Stock to be delivered upon exercise of Stock Rights under the Plan may be either shares of authorized but unissued Stock or shares of reacquired Stock, as the Board may determine. If any Stock Right granted under the Plan shall expire or terminate for any reason without having been exercised in full or shall cease for any reason to be exercisable in whole or in part, the unpurchased Stock subject to such Stock Right shall again be available for sale pursuant to the exercise of Stock Rights under the Plan.

SECTION 3. ELIGIBLE EMPLOYEES

Subject to the exceptions and limitations set forth below, each Employee will be eligible to participate in the Plan on or after the first day of the month following his or her date of hire with respect to an Purchase Period beginning on or after such date.

(a) Any Employee who immediately after the grant of a Stock Right would own (or pursuant to Section 423(b)(3) of the Code would be deemed to own) stock possessing 5% or more of the total combined voting power or value of all classes of stock of the employer corporation or of its parent or subsidiary corporation, as defined in Section 424 of the Code, will not be eligible to receive a Stock Right to purchase Stock pursuant to the Plan.

(b) No Employee will be granted a Stock Right under the Plan that would permit his or her rights to purchase shares of stock under all employee stock purchase plans of the employer corporation and parent and subsidiary corporations to accrue at a rate that exceeds \$25,000 (or such other maximum as may be prescribed from time to time under Section 423 of the Code or any successor provision) in fair market value of such stock (determined at the time the Stock Right is granted) for any calendar year during which any such Stock Right granted to such Employee is outstanding, as provided in Section 423 of the Code.

SECTION 4. METHOD OF PARTICIPATION

Unless otherwise determined by the Compensation Committee of the Board (the “Committee”), the “Purchase Periods” shall be the six-month periods commencing January 1 and ending June 30 and commencing July 1 and ending December 31 of each year. Except as provided in Section 11, each person who will be an Eligible Employee on the first day of any Purchase Period may elect to participate in the Plan by executing and delivering, by such deadline prior thereto as the Committee may specify (the “Enrollment Deadline”), a payroll

deduction authorization in accordance with Section 5. Such Employee will thereby become a participant (“Participant”) on the first day of such Purchase Period and will remain a Participant until his or her participation is terminated as provided in the Plan.

SECTION 5. PAYROLL DEDUCTION

Each payroll deduction authorization will request withholding at a percentage of Compensation per payroll period within a range specified by the Committee for the applicable Purchase Period. Withholding will be accomplished by means of payroll deductions from payroll periods ending in the Purchase Period. For purposes of the Plan, “Compensation” means wages, tips and other compensation reported on a Participant’s Form W-2, plus compensation that is not currently includible in the Participant’s gross income by reason of the application of Code Sections 125, 132(f)(4), 402(e)(3), 401(k), 402(h)(1)(B), 414(h), 403(b), or 457(b), and excluding reimbursements or other expense allowances, fringe benefits (cash or non-cash), moving expenses, deferred compensation (other than deferrals permitted by reason of one of the Code sections mentioned above), welfare benefits. Compensation shall include only that compensation that is actually paid to the Participant during the applicable Plan Year and while the employee is a Participant in the Plan. A Participant may not change his or her withholding rate once during a Purchase Period. However, a Participant may change his or her withholding rate for subsequent Purchase Periods by filing a new payroll deduction authorization with the Company on or before the Enrollment Deadline for the Purchase Period for which the change is to be effective. In addition, a Participant may cancel his or her participation in a Purchase Period as set forth in Section 11. All amounts withheld in accordance with a Participant’s payroll deduction authorization will be credited to a withholding account maintained in the Participant’s name on the books of the Company. Amounts credited to the withholding account will not be required to be set aside in trust or otherwise segregated from the Company’s general assets.

SECTION 6. GRANT OF STOCK RIGHTS

Each person who is a Participant on the first day of a Purchase Period will be granted, as of such day and for such Purchase Period, a Stock Right entitling the Participant to acquire shares of Stock equal in number to the lesser of:

- (a) the whole number (disregarding any fractional share amount) determined by dividing \$12,500 by the fair market value of one share of Stock on the first day of the Purchase Period; and
- (b) the whole number (disregarding any fractional share amount) determined by dividing (i) the balance credited to the Participant’s withholding account on the last day of the Purchase Period, by (ii) the purchase price per share of the Stock determined under Section 7.

The Committee will reduce, on a substantially proportionate basis, the number of shares of Stock purchasable by each Participant upon exercise of his or her Stock Right for a Purchase Period in the event that the number of shares then available under the Plan is insufficient. Stock Right grants under this Section 6 will be automatic and need not be separately documented.

SECTION 7. PURCHASE PRICE

The purchase price of Stock issued pursuant to the exercise of a Stock Right will be 90% of the fair market value of the Stock on (a) the date of grant of the Stock Right or (b) the date on which the Stock Right is deemed exercised, whichever is less. If the shares of Stock are traded on a national exchange or trading system (including the NASDAQ National Market System and the OTC Markets Group), the fair market value for any day will mean the reported closing price of the Stock for such day; *provided*, that if such day is not a trading day, fair market value will mean the reported closing price of the Stock for the next preceding day which is a trading day. If the shares of Stock are not traded on an exchange or trading system, the fair market value of such Stock on such date will be established in a manner determined in good faith by the Board.

SECTION 8. EXERCISE OF STOCK RIGHTS

If any Employee is a Participant in the Plan on the last day of a Purchase Period, he or she will be deemed to have exercised the Stock Right granted to him or her for that Purchase Period. Upon such exercise, the Company will apply the balance of the Participant's withholding account to the purchase of the number of whole shares of Stock determined under Section 6 and as soon as practicable thereafter will evidence the transfer of shares of Stock or will deliver the shares of Stock to the Participant and will return to him or her the balance, if any, of his or her withholding account in excess of the total purchase price of the shares so issued; *provided*, that if the balance left in the account consists solely of an amount equal to the value of a fractional share it will be retained in the account and carried over to the next Purchase Period.

Notwithstanding anything herein to the contrary, the Company's obligation to issue and deliver shares of Stock under the Plan will be subject to the approval required of any governmental authority in connection with the authorization, issuance, sale or transfer of said shares, to any requirements of any national securities exchange applicable thereto, and to compliance by the Company with other applicable legal requirements in effect from time to time.

SECTION 9. INTEREST

No interest will be payable on withholding accounts.

SECTION 10. TAXES

Payroll deductions are made on an after-tax basis. If the Company determines that the exercise of a Stock Right or the disposition of shares following the exercise of a Stock Right could result in employment tax liability, the Company may, as a condition of exercise, make such provision as it deems necessary to provide for the remittance by the Participant of employment taxes required to be paid in connection with such exercise or disposition of shares.

SECTION 11. CANCELLATION AND WITHDRAWAL

A Participant who holds a Stock Right under the Plan may at any time prior to exercise thereof under Section 8 cancel all (but not less than all) of his or her Stock Right by written notice delivered to the Company. Upon such cancellation, the balance in the Participant's withholding account will be returned to the Participant.

A Participant may terminate his or her payroll deduction authorization as of any date by written notice delivered to the Company and will thereby cease to be a Participant as of such date. Any Participant who voluntarily terminates his or her payroll deduction authorization prior to the last day of a Purchase Period will be deemed to have canceled his or her Stock Right.

A Participant who makes a hardship withdrawal from a Company savings plan qualifying under Section 401(k) of the Code (a "401(k) Plan") will be deemed to have terminated his or her payroll deduction authorization as of the date of such hardship withdrawal, will cease to be a Participant as of such date, and will be deemed to have canceled his or her Stock Right. An Employee who has made a hardship withdrawal from a 401(k) Plan will not be permitted to participate in the Plan until the first Purchase Period that begins six months after the date of his or her hardship withdrawal.

SECTION 12. RESTRICTIONS ON TRANSFER

All shares of Stock purchased under the Plan will be subject to a restriction prohibiting the transfer of such shares of Stock from the account where such shares of Stock are initially held until such shares are sold through the Plan's administrator, custodian, or record keeper. For the avoidance of doubt, this restriction will remain in effect following the termination of a Participant's employment with the Company.

SECTION 13. TERMINATION OF EMPLOYMENT

Except as otherwise provided in Section 14, upon the termination of a Participant's employment with the Company for any reason, he or she will cease to be a Participant, any Stock Right held by him or her under the Plan will be deemed canceled, the balance of his or her withholding account will be returned, and he or she will have no further rights under the Plan.

SECTION 14. DEATH OF PARTICIPANT

A Participant may elect that if death should occur during a Purchase Period the balance, if any, of the Participant's withholding account at the time of death will be applied at the end of the Purchase Period to the exercise of the Participant's Stock Right and the shares thereby purchased under the Stock Right (plus any balance remaining in the Participant's withholding account) will be delivered to the Participant's beneficiary or beneficiaries. Except as otherwise determined by the Committee (which may establish a procedure for the designation of beneficiaries under the Plan), a Participant's beneficiary(ies) for purposes of the Plan will be the Participant's estate.

SECTION 15. EQUAL RIGHTS; PARTICIPANT'S RIGHTS NOT TRANSFERABLE

All Participants granted Stock Rights under the Plan with respect to any Purchase Period will have the same rights and privileges. Each Participant's rights and privileges under any Stock Right granted under the Plan will be exercisable during the Participant's lifetime only by him or her and except as provided in Section 14 above may not be sold, pledged, assigned, or transferred in any manner. In the event any Participant violates or attempts to violate the terms of this Section, any Stock Rights held by him or her may be terminated by the Company and, upon return to the Participant of the balance of his or her withholding account, all of the Participant's rights under the Plan will terminate.

SECTION 16. EMPLOYMENT RIGHTS

Nothing contained in the provisions of the Plan will be construed as giving to any Employee the right to be retained in the employ of the Company or as interfering with the right of the Company to discharge any Employee at any time.

SECTION 17. CHANGE IN CAPITALIZATION, MERGER

In the event of any change in the outstanding Stock of RXi by reason of a stock dividend, split-up, recapitalization, merger, consolidation, reorganization, or other capital change, the aggregate number and type of shares available under the Plan, the number and type of shares under Stock Rights granted but not exercised, the maximum number and type of shares purchasable under a Stock Right, and the Stock Right price will be appropriately adjusted.

In the event of a sale of all or substantially all of the Stock or a sale of all or substantially all of the assets of RXi, or a merger or similar transaction in which RXi is not the surviving corporation or which results in the acquisition of RXi by another person, the Board will (a) if RXi is merged with or acquired by another corporation, provide that each outstanding Stock Right will be assumed or a substitute Stock Right granted by the acquiror or successor corporation or a parent or subsidiary of the acquiror or successor corporation, (b) cancel each Stock Right and return the balances in Participants' withholding accounts to the Participants, or (c) pursuant to Section 19, end the Purchase Period on or before the date of the proposed sale or merger.

SECTION 18. ADMINISTRATION OF PLAN

The Plan will be administered by the Committee, which will have the right to determine any questions which may arise regarding the interpretation and application of the provisions of the Plan and to make, administer, and

interpret such rules and regulations as it will deem necessary or advisable. References in the Plan to the Committee will include the Committee's delegates to the extent of any delegation by the Committee to such delegates of administrative responsibilities hereunder. The Committee may specify the manner in which employees are to provide notices and payroll deduction authorizations. Notwithstanding any requirement of "written notice" herein, the Committee may permit employees to provide notices and payroll deduction authorizations electronically.

SECTION 19. AMENDMENT AND TERMINATION OF PLAN

RXi reserves the right at any time or times to amend the Plan to any extent and in any manner it may deem advisable, by vote of the Board; *provided*, that any amendment that would be treated as the adoption of a new plan for purposes of Section 423 of the Code and the regulations thereunder will have no force or effect unless approved by the stockholders of RXi within twelve months before or after its adoption.

The Plan may be suspended or terminated at any time by the Board. In connection therewith, the Board may either cancel outstanding Stock Rights or continue them and provide that they will be exercisable either at the end of the applicable Purchase Period as determined under Section 4 above or on such earlier date as the Board may specify (in which case such earlier date will be treated as the last day of the applicable Purchase Period).

SECTION 20. APPROVAL OF STOCKHOLDERS

The Plan and the exercisability of Stock Rights granted hereunder will be subject to the approval of the stockholders of RXi obtained within twelve months before or after the date the Plan is adopted by the Board.

RXi Pharmaceuticals Corporation

IMPORTANT ANNUAL MEETING INFORMATION

000004

ENDORSEMENT_LINE _____ SACKPACK _____



MR A SAMPLE
 DESIGNATION (IF ANY)
 ADD 1
 ADD 2
 ADD 3
 ADD 4
 ADD 5
 ADD 6



C123456789

00000000.000000 ext 00000000.000000 ext
 00000000.000000 ext 00000000.000000 ext
 00000000.000000 ext 00000000.000000 ext

Electronic Voting Instructions

Available 24 hours a day, 7 days a week!

Instead of mailing your proxy, you may choose one of the voting methods outlined below to vote your proxy.

VALIDATION DETAILS ARE LOCATED BELOW IN THE TITLE BAR.

Proxies submitted by the Internet or telephone must be received by 11:59 p.m., Eastern Time, on June 4, 2018.



Vote by Internet

- Go to www.envisionreports.com/RXII
- Or scan the QR code with your smartphone
- Follow the steps outlined on the secure website

Vote by telephone

- Call toll free 1-800-652-VOTE (8683) within the USA, US territories & Canada on a touch tone telephone
- Follow the instructions provided by the recorded message

Using a **black ink** pen, mark your votes with an **X** as shown in this example. Please do not write outside the designated areas.



Annual Meeting Proxy Card

1234 5678 9012 345

▼ IF YOU HAVE NOT VOTED VIA THE INTERNET OR TELEPHONE, FOLD ALONG THE PERFORATION, DETACH AND RETURN THE BOTTOM PORTION IN THE ENCLOSED ENVELOPE. ▼

A Proposals — The Board of Directors recommends that you vote FOR the following proposals:

| 1. Election of Directors: | For | Withhold | | For | Withhold | | For | Withhold | |
|--|--------------------------|--------------------------|---------------------------------|--------------------------|--------------------------|--|--------------------------|--------------------------|--------------------------|
| 01 - Geert Cauwenbergh, Dr. Med. Sc. | <input type="checkbox"/> | <input type="checkbox"/> | 02 - Robert J. Bitterman | <input type="checkbox"/> | <input type="checkbox"/> | 03 - Keith L. Brownlie | <input type="checkbox"/> | <input type="checkbox"/> | |
| 04 - H. Paul Dorman | <input type="checkbox"/> | <input type="checkbox"/> | 05 - Jonathan E. Freeman, Ph.D. | <input type="checkbox"/> | <input type="checkbox"/> | 06 - Curtis A. Lockshin, Ph.D. | <input type="checkbox"/> | <input type="checkbox"/> | |
| | | | For | Against | Abstain | | For | Against | Abstain |
| 2. Ratification of BDO USA, LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2018. | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | 3. To approve the 2012 RXi Pharmaceuticals Corporation Long Term Incentive Plan, as amended, including an increase in the number of shares available for issuance thereunder. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. To approve an increase in the number of shares available for issuance under the RXi Pharmaceuticals Corporation Employee Stock Purchase Plan. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | | 5. To approve, for purposes of complying with Nasdaq Listing Rule 5635(d), of the issuance of more than 20% of the Company's issued and outstanding common stock pursuant to the Company's purchase agreement with Lincoln Park Capital Fund, LLC. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

B Non-Voting Items

Change of Address — Please print your new address below.

Comments — Please print your comments below.

Meeting Attendance

Mark the box to the right if you plan to attend the Annual Meeting.

▼ IF YOU HAVE NOT VOTED VIA THE INTERNET OR TELEPHONE, FOLD ALONG THE PERFORATION, DETACH AND RETURN THE
BOTTOM PORTION IN THE ENCLOSED ENVELOPE. ▼

Proxy — RXi PHARMACEUTICALS CORPORATION

Annual Meeting of Stockholders
June 5, 2018 10:00 a.m.

This proxy is solicited by the Board of Directors

The stockholder(s) hereby appoint Geert Cauwenbergh as proxy with the power to appoint his substitute, and hereby authorize him to represent and to vote, as designated on the reverse side of this ballot, all of the shares of Common Stock of RXi Pharmaceuticals Corporation that the stockholder(s) is/are entitled to vote at the 2018 Annual Meeting of Stockholders to be held on June 5, 2018 at 10:00 a.m., local time, at the offices of Gibson, Dunn & Crutcher LLP, located at 200 Park Avenue, New York, New York 10166, and at 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 and in the discretion of the proxy holders on all other matters that may come before the meeting.

Continued and to be signed on reverse side