SCHEDULE 14C INFORMATION

Information Statement Pursuant to Section 14(c) of the Securities Exchange Act of 1934

Check the appropriate box:

☐ Preliminary Information Statement

☐ Confidential, for Use of the Commission Only (as permitted by Rule 14c-5(d)(2))

☒ Definitive Information Statement

Akcea Therapeutics, Inc.

(Name of Registrant as Specified In Its Charter)

Payment of Filing Fee (Check the appropriate box)

☒ No fee required.

☐ Fee computed on table below per Exchange Act Rules 14c-5(g) 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 Statement No.:

(3) Filing Party:

(4) Proposed maximum aggregate value of transaction:

(5) Total fee paid:

AKCEA THERAPEUTICS, INC.
55 Cambridge Parkway, Suite 100
Cambridge, MA 02142

NOTICE OF
2018 ANNUAL MEETING OF STOCKHOLDERS

AND

INFORMATION STATEMENT
PURSUANT TO SECTION 14 OF THE SECURITIES EXCHANGE ACT OF 1934
AND REGULATION 14C PURSUANT THERETO

WE ARE NOT ASKING YOU FOR A PROXY
AND YOU ARE REQUESTED NOT TO SEND US A PROXY

Dear Stockholders,

I am pleased to invite you to the 2018 Annual Meeting of Stockholders of Akcea Therapeutics, Inc. (the "***Company***") on Friday, June 1, 2018 at 2:00 p.m. Eastern Time. The Annual Meeting will be a virtual meeting, which will be conducted via a live audio webcast. You will be able to attend the Annual Meeting by visiting www.virtualshareholdermeeting.com/AKCA.

This notice and the accompanying Information Statement is also being furnished to you to provide notice of an action by written consent of the Company's majority stockholder approving the following resolutions:

1. Electing the Board's nominees for director, Christopher Gabrieli, Sarah Boyce, Stanley T. Crooke, M.D., Ph.D., Edward M. Fitzgerald, Elaine Hochberg, B. Lynne Parshall, J.D., Sandford D. Smith, and Paula Soteropoulos, to the Board of Directors to serve until the next annual meeting or, in each case, until his or her successor is duly elected and qualified, or until his or her earlier death, resignation or removal.
2. Approving an amendment to the Company's 2015 Equity Incentive Plan, as amended (the "***2015 Plan***") to increase the number of shares of Common Stock available for issuance under the 2015 Plan by 5,000,000 shares, for an aggregate total of 13,500,000 shares authorized thereunder (the "***Plan Amendment***").
3. Ratifying the selection by the Audit Committee of the Board of Directors of Ernst & Young LLP as the independent registered public accounting firm of the Company for its fiscal year ending December 31, 2018.

The Company obtained approval on April 17, 2018 of the foregoing actions from its majority stockholder, who holds 45,447,879 shares of the Company's Common Stock, representing approximately 68.02% of the voting rights of the stockholders entitled to vote on April 9, 2018 (the "***Record Date***"). Pursuant to Rule 14c-2 under the Securities Exchange Act of 1934, as amended (the "***Exchange Act***"), the foregoing actions will not become effective until forty days from the date that the accompanying Information Statement is first made available to our stockholders.

Your vote or consent is not requested or required, and the Board is not soliciting your proxy. In compliance with the Delaware General Corporation Code and the Company's Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws, the written consent of a majority of the outstanding shares of the Company's Common Stock is sufficient to approve the matters listed above. The accompanying Information Statement is being furnished to you to inform the Company's stockholders of the matters described herein, in accordance with the requirements of the Exchange Act and Delaware law.

This notice is being mailed on or about April 20, 2018 to stockholders of record at the close of business on the Record Date.

By Order of the Board of Directors,

/s/ Paula Soteropoulos
Paula Soteropoulos

Chief Executive Officer

INFORMATION STATEMENT
PURSUANT TO SECTION 14 OF THE SECURITIES EXCHANGE ACT OF 1934
AND REGULATION 14C PURSUANT THERETO

AKCEA THERAPEUTICS, INC.
55 Cambridge Parkway, Suite 100
Cambridge, MA 02142

WE ARE NOT ASKING YOU FOR A PROXY AND
YOU ARE REQUESTED NOT TO SEND US A PROXY.

This Information Statement is being made available on or about April 20, 2018 to the holders of record of the outstanding common stock, par value $0.001 ("***Common Stock***"), of Akcea Therapeutics, Inc. as of the close of business on April 9, 2018 (the "***Record Date***"). This Information Statement is distributed to (i) invite our stockholders to attend the 2018 Annual Meeting of Stockholders that will be held as a virtual meeting on Friday, June 1, 2018, which will be conducted via a live audio webcast at 2:00 p.m. Eastern Time and (ii) inform our stockholders of actions taken without a meeting by the written consent of our majority stockholder. Except as otherwise indicated by the context, references in this Information Statement to the "Company," "Akcea," "we," "us," or "our" are references to Akcea Therapeutics, Inc.

On March 9, 2018, our Board of Directors (the "***Board***") adopted resolutions (i) nominating and recommending the election of Christopher Gabrieli, Stanley T. Crooke, M.D., Ph.D., Edward M. Fitzgerald, Elaine Hochberg, B. Lynne Parshall, J.D., Sandford D. Smith, and Paula Soteropoulos as Directors of the Company; (ii) approving an amendment to the Company's 2015 Equity Incentive Plan, as amended (the "***2015 Plan***") to increase the number of shares of Common Stock available for issuance under the 2015 Plan by 5,000,000 shares, for an aggregate of 13,500,000 shares authorized thereunder (the "***Plan Amendment***") and recommending that the stockholders approve the Plan Amendment; and (iii) selecting Ernst & Young LLP as the Company's independent registered public accounting firm for the fiscal year ending December 31, 2018. Effective April 17, 2018, our Board adopted resolutions nominating and recommending the election of Sarah Boyce as a Director of the Company in connection with our annual meeting of stockholders. Our Board of Directors had previously appointed Ms. Boyce as a Director effective as of the closing of a development, commercialization, collaboration and license agreement and a related stock purchase agreement with Ionis Pharmaceuticals, Inc. ("***Ionis***"), which closing occurred on April 17, 2018 (such transaction, the "***Inotersen Transaction***"). By written consent in lieu of an annual meeting of stockholders (the "***Written Consent***"), on April 17, 2018, Ionis, the holder of 68.02% of the Company's outstanding Common Stock (the "***Majority Stockholder***"), (a) elected all of the Board's nominees to the Board of Directors to serve until our 2019 annual meeting of stockholders or, in each case, until his or her successor is elected and has qualified, or until his or her earlier death, resignation or removal, (b) approved the Plan Amendment and (c) ratified the selection of Ernst & Young LLP as the independent registered public accounting firm of the Company for the fiscal year ending December 31, 2018 (collectively, the "***Stockholder Actions***"). A copy of the Written Consent is attached to this Information Statement as Exhibit A. A copy of the 2015 Plan, as amended by the Plan Amendment, is attached to this Information Statement as Exhibit B.

No action is required by you. We prepared this Information Statement to inform our stockholders who did not execute the Written Consent of the actions taken, in accordance with the requirements of the Securities and Exchange Commission's rules and regulations and the Delaware General Corporation Law (the "DGCL"). The Stockholder Actions will be deemed effective forty days after this Information Statement is made available to our stockholders.

VOTING AND VOTE REQUIRED

Under Section 228 of the Delaware General Corporation Law and the provisions of our Amended and Restated Certificate of Incorporation (our "***Certificate of Incorporation***") and Amended and Restated Bylaws (our "***Bylaws***"), stockholders of the Company may take action without a meeting upon the written consent of the holders of outstanding shares of voting common stock, having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares entitled to vote thereon were present and voted. All corporate approvals required to effectuate the Stockholder Actions have been obtained and we are not seeking a consent, approval, authorization or proxy from our remaining stockholders.

As of the close of business on the Record Date, 66,818,766 shares of the Company's Common Stock were outstanding. Each holder of our Common Stock on that date was entitled to cast one vote for each share of Common Stock registered in such holder's name.

The stockholders of the Company do not have dissenter's rights of appraisal in connection with the matters described in this Information Statement.

The cost of preparing, printing and mailing this Information Statement will be borne by the Company.

NOTICE PURSUANT TO SECTION 228 OF THE DELAWARE GENERAL CORPORATION LAW

We are required to provide prompt notice of the taking of corporate action by written consent to our stockholders who have not consented in writing to such action. This Information Statement serves as the notice required by Section 228 of the DGCL.

AKCEA THERAPEUTICS, INC.
INFORMATION STATEMENT

QUESTIONS AND ANSWERS ABOUT THE ANNUAL MEETING AND THIS INFORMATION STATEMENT

Why did I receive a Notice Regarding the Availability of the Information Statement on the Internet?

We are distributing our Notice of Annual Meeting and Information Statement (the "***Notice***") by mail using the Notice and Access procedures established by the United States Securities and Exchange Commission (the "***SEC***"). The Notice is important because it contains a control number and instructions that will allow you to access our Information Statement through the Internet or to request printed materials. All stockholders will have the ability to access the materials on the website referred to in the Notice or request to receive a printed set of the materials. You can find instructions on how to access the materials over the Internet or to request a printed copy in the Notice.

We intend to mail the Notice on or about April 20, 2018 to all stockholders of record as of the Record Date.

Where and when is the Annual Meeting and how do I attend?

The Annual Meeting will be a virtual meeting on Friday, June 1, 2018, which will be conducted via a live audio webcast at 2:00 p.m. Eastern Time. You will be able to attend the Annual Meeting by visiting www.virtualshareholdermeeting.com/AKCA.

If you cannot attend, please note that we will make a webcast of the presentation that follows the Annual Meeting available on the day of the meeting and for a limited time following the meeting at http://ir.akceatx.com/media-investors/corporate-governance. Please note that any information that is included on or linked to our website is not part of this Information Statement or any registration statement or report that incorporates this Information Statement by reference.

What items will be voted on at the Annual Meeting?

No items will be voted on by stockholders at the Annual Meeting. As described in this Information Statement, the Majority Stockholder voted in favor of the Stockholder Actions in the Written Consent, which is attached hereto as Exhibit A.

When are stockholder proposals due for next year's Annual Meeting?

To be considered for inclusion in next year's proxy materials, you must submit your proposal, in writing, by December 21, 2018, the date 120 days prior to the anniversary of the mailing date of this Information Statement, to our Corporate Secretary at 55 Cambridge Parkway, Suite 100, Cambridge, MA 02142, and you must comply with all applicable requirements of Rule 14a-8 promulgated under the Securities Exchange Act of 1934, as amended (the "***Exchange Act***").

If you wish to submit a proposal or Director nomination at the meeting that is not to be included in next year's proxy materials, you must also do so no later than December 21, 2018. However, if our 2019 Annual Meeting of Stockholders is not held between May 2, 2019 and July 1, 2019, to be timely, notice by the stockholder must be received not later than the one hundred twentieth (120th) day prior to such annual meeting or the tenth (10th) day following the day on which public announcement of the date of such meeting is first made. Stockholders should also review our Bylaws, which contain additional requirements with respect to advance notice of stockholder proposals and Director nominations.

How can I elect to receive materials for future Annual Meetings electronically?

We are pleased to offer to our stockholders the benefits and convenience of electronic delivery of Annual Meeting materials, including:

- delivering the Information Statement and Annual Report on Form 10-K, and related materials by email to our stockholders;
- helping the environment by decreasing the use of paper documents;
- reducing the amount of bulky documents stockholders receive; and
- reducing our printing and mailing costs associated with more traditional delivery methods.

We encourage you to conserve natural resources and to reduce printing and mailing costs by signing up for electronic delivery of our stockholder communications at www.materialnotice.com.

ELECTION OF DIRECTORS

Information about our Board

The Board consists of eight directors. Pursuant to the Written Consent, the Majority Stockholder elected eight directors to serve until our 2019 Annual Meeting of Stockholders or, in each case, until his or her successor is duly elected and qualified, or until his or her earlier death, resignation or removal. Each of the directors described below was a member of the Board of Directors on the date of the Written Consent and each of them has consented to serve as a director.

Information about the 2018 Election of Directors

The Board of Directors has nominated Christopher Gabrieli, Stanley T. Crooke, M.D., Ph.D., Edward M. Fitzgerald, Elaine Hochberg, B. Lynne Parshall, J.D., Sandford D. Smith, Paula Soteropoulos and Sarah Boyce to be elected as Directors by the Company's stockholders.

On April 17, 2018, after the closing of the Inotersen Transaction, the Majority Stockholder executed the Written Consent electing the eight directors to serve until our 2019 Annual Meeting of Stockholders or, in each case, until his or her successor is duly elected and qualified, or until his or her earlier death, resignation or removal. The election will become effective on May 30, 2018, the date forty days following the date we first made this Information Statement available to our stockholders. We provide below a short biography for each director elected to our Board pursuant to the Written Consent.

Biographies of the Directors Elected

Paula Soteropoulos, age 50, joined Akcea as President and Chief Executive Officer and as a member of our board of directors in January 2015. In connection with the Inotersen Transaction, Ms. Soteropoulos resigned from the position of President in April 2018, but remains our Chief Executive Officer. Prior to joining Akcea, Ms. Soteropoulos was a member of the executive leadership team of Moderna Therapeutics Inc., a private biotechnology company, serving as the Cardiometabolic Business Unit General Manager and Senior Vice President of Strategic Alliances from July 2013 to December 2014. Prior to Moderna, Ms. Soteropoulos spent 21 years at Genzyme Corporation in various leadership positions driving strategy, sales and marketing, business development, manufacturing process development, strategic capacity planning, and supply chain development. Since July 2013, Ms. Soteropoulos has served on the supervisory board of uniQure N.V., a public biotechnology company. Ms. Soteropoulos also serves on the advisory board of the Tufts University Chemical and Biological Engineering Department. Our board of directors believes that Ms. Soteropoulos is uniquely suited to serve on our board of directors because of her experience in the biotechnology industry and her daily insight into corporate matters as our Chief Executive Officer.

Sarah Boyce, age 46, joined Akcea as President and as a member of our board of directors in April 2018 in connection with the Inotersen Transaction. Prior to joining Akcea, Ms. Boyce was Chief Business Officer of Ionis from January 2015 to April 2018. Prior to joining Ionis, Ms. Boyce was Vice President, Head of International Business Strategy and Operations at Forest Laboratories, Inc. from 2012 to 2014. She was Vice President, Global Head Nephrology Therapeutics Area of Alexion Pharmaceuticals from 2010 to 2011. She held various positions at Novartis Group AG, including Vice President, Global Program Head, Pediatric and Specialty from 2000 to 2010. Prior to that, Ms. Boyce held positions at Bayer Pharmaceuticals and Roche. Our board of directors believes that Ms. Boyce is uniquely suited to serve on our board of directors because of her experience in the biotechnology industry and her daily insight into corporate matters as our President.

Christopher Gabrieli, age 58, has served as a member of our board of directors since April 2016. Since June 2014, Mr. Gabrieli has served as Chief Executive Officer of Empower Schools, a non-profit education innovation organization, and since May 2014, Mr. Gabrieli has served as a Partner Emeritus at Bessemer Venture Partners, a venture capital fund. Previously, from 1987 to April 2014, Mr. Gabrieli was a Partner at Bessemer, where he led their life sciences practice and made a founding investment in Ionis. Mr. Gabrieli served on Ionis' board of directors from 1989 to 2006. During his time at Bessemer, he invested in over thirty life science and health care companies, including several that became publicly traded. Mr. Gabrieli is also the Chairman of the Massachusetts Board of Higher Education and a part-time Lecturer at the Harvard Graduate School of Education. Our board of directors believes that Mr. Gabrieli is uniquely suited to serve on our board of directors because of his substantial experience as an investor in the life sciences industry.

Stanley T. Crooke, M.D., Ph.D., age 73, has served as a member of our board of directors since January 2015. Dr. Crooke is a founder of Ionis and has been Chief Executive Officer and a Director since January 1989. He was elected Chairman of Ionis' board of directors in February 1991. Prior to founding Ionis, from 1980 until January 1989, Dr. Crooke was employed by SmithKline Beckman Corporation, a pharmaceutical company, where his titles included President of Research and Development of SmithKline and French Laboratories. He is currently a member of the board of directors of BIO, a biotechnology industry association. He is the named inventor on some of the key patents in the field of RNA-targeted therapeutics, and has over 31 years of drug discovery and development experience. Our board of directors believes Dr. Crooke is uniquely suited to serve on our board of directors primarily because, as the Chief Executive Officer and founder of Ionis, he has dedicated over 26 years to discovering and developing Ionis' antisense technology platform.

Edward Fitzgerald, age 63, has served as a member of our board of directors since May 2017. He has been an independent business advisor since April 2016. From June 2010 to April 2016, Mr. Fitzgerald served as Executive Vice President, Chief Financial Officer and Treasurer of ARIAD Pharmaceuticals, Inc., an international biopharmaceutical company, and was its Senior Vice President, Chief Financial Officer and Treasurer from May 2002 to June 2010. He was Senior Vice President, Chief Financial Officer and Secretary of AltaRex, Inc., a development stage biotechnology company, from 1998 to April 2002. He held management positions at BankBoston Corporation from 1992 to 1997 in its Mergers & Acquisitions Group and its Consumer Lending Group. He was a partner in the Audit and Business Advisory Practice of Arthur Andersen & Co. from 1989 to 1992. Our board of directors believes that Mr. Fitzgerald is uniquely suited to serve on our board of directors because of his background and extensive experience in executive management and financial accounting and reporting, particularly in the biotechnology and pharmaceutical industry.

Elaine Hochberg, age 61, has served as a member of our board of directors since March 2017. Currently, Ms. Hochberg serves on the boards of Egalet Corporation and Valhalla IP, and is a managing partner of Elaran, LLC, a business strategy and management firm, and is a business development manager for IWD, LLC, a wine importing business. Ms. Hochberg served in various senior leadership positions at Forest Laboratories, Inc. from June 1997 to June 2014 when the company was sold to Actavis. Her positions included Executive Vice President, International, Strategic Planning and Government Affairs from December 2013 to June 2014, Executive Vice President, US Sales and Marketing, Chief Commercial Officer from 2010 to November 2013, Senior Vice President, Marketing, Chief Commercial Officer, from 2007 to 2010, Senior Vice President, Marketing from 1999 to 2007 and Vice President, Marketing from 1997 to 1999. Ms. Hochberg began her pharmaceutical career in July of 1985 at Sandoz Pharmaceuticals (now Novartis). In April of 1991, she joined Wyeth-Ayerst Laboratories (now Pfizer) where she held several positions of increasing responsibility, ultimately serving as Assistant Vice-President, Marketing of the company's Vaccines and Pediatrics division. She also serves on the boards of several nonprofit organizations in the New York City area. Our board of directors believes that Ms. Hochberg is uniquely suited to serve on our board of directors because of her over 30 years of experience leading commercial organizations for life science companies.

B. Lynne Parshall, J.D., age 64, has served as a member of our board of directors since January 2015. Ms. Parshall has served as a Director of Ionis since September 2000. She has served as Senior Strategic Advisor to Ionis since January 2018, served as Ionis' Chief Operating Officer from December 2007 to January 2018, and previously served as the Chief Financial Officer from June 1994 to December 2012. She also served as the Ionis Corporate Secretary through 2014 and has served in various executive roles since November 1991. Prior to joining Ionis, Ms. Parshall practiced law at Cooley LLP, outside counsel to Ionis and Akcea, where she was a partner from 1986 to 1991. Ms. Parshall is currently a member of the board of directors of Cytokinetics Inc., a public biopharmaceutical company. She was a member of the board of directors of Regulus Therapeutics Inc., a public biopharmaceutical company, from January 2009 to June 2015. She is also a member of the American, California and San Diego bar associations. In addition, Ms. Parshall has over 25 years of experience structuring and negotiating strategic licensing and financing transactions in the life sciences field. Our board of directors believes Ms. Parshall is uniquely suited to serve on our board of directors primarily because, as the Chief Operating Officer and an executive of Ionis for over 20 years, she has valuable experience and expertise.

Sandford ("Sandy") D. Smith, age 71, has served as a member of our board of directors since March 2017. For the past 20 years, he has focused on drugs and therapies for rare genetic diseases. Since December 2011, Mr. Smith has served as Founder and Chairman of Global Biolink Partners, a consulting firm advising public biopharmaceutical companies on commercial strategy and international business models. From July 2015 to January 2016, Mr. Smith served as interim Chief Executive Officer of Aegerion Pharmaceuticals, Inc., a biotechnology company, and following Aegerion's merger with Novelion Therapeutics, Inc., he served as Novelion's Vice Chair until March 2017. From 1996 to 2011, Mr. Smith held various positions at Sanofi-Genzyme (formerly Genzyme Corporation), most recently leading the integration of Genzyme's international business into Sanofi's global organization. Prior to that, he served as Executive Vice President of Genzyme Corporation, and President of Genzyme International. From 1986 to 1996, Mr. Smith was President, Chief Executive Officer and a member of the Board of Directors of RepliGen Corporation. From 1977 to 1985, Mr. Smith held various positions at Bristol-Myers Squibb, most recently serving as Vice President of Business Development and Strategic Planning for the Pharmaceutical and Nutritional Division. He currently serves on the boards of Cytokinetics Inc., Apricus Biosciences and Neuralstem Inc., each a publicly traded biopharmaceutical company. Our board of directors believes that Mr. Smith is uniquely suited to serve on our board of directors because of his substantial experience in strategic executive roles for publicly traded life sciences companies.

INFORMATION REGARDING THE BOARD AND CORPORATE GOVERNANCE

Controlled Company; Director Independence

The Company meets the definition of a "controlled company" under Nasdaq Marketplace Rule 5615(c)(1) because Ionis beneficially owns more than 50% of the voting power of our common stock. As a result, the Company may rely on exemptions from certain independence requirements of the Nasdaq rules, including the requirement to maintain a majority of independent directors on the Company's Board as well as the requirement to maintain a nominating and corporate governance committee and compensation committee composed entirely of independent directors.

The Company has currently elected to rely on the "controlled company" exemption from the Nasdaq requirement to maintain a majority of independent directors on the Company's Board. Notwithstanding the availability of this exemption, our Board has undertaken a review of the independence of our directors and considered whether any director has a material relationship with us that could compromise his or her ability to exercise independent judgment in carrying out his or her responsibilities. Based upon information requested from and provided by each director concerning such director's background, employment and affiliations, including family relationships, our Board has determined that four of our directors, Mr. Fitzgerald, Mr. Gabrieli, Mr. Smith and Ms. Hochberg, are independent as defined by Rule 5605(a)(2) of the Nasdaq Marketplace Rules. In making these determinations, our Board considered the current and prior relationships that each non-employee director has with our company and all other facts and circumstances that our Board deemed relevant in determining their independence, including the beneficial ownership of our capital stock by each non-employee director and the transactions involving them described below in "Certain Relationships and Related Transactions."

There are no family relationships among any of our directors or executive officers.

Information Regarding the Board and its Committees

Leadership Structure

The Board of Directors of the Company has an independent chair, Mr. Gabrieli, who has authority, among other things, to call and preside over Board meetings, including meetings of the independent directors, to set meeting agendas and to determine materials to be distributed to the Board. Accordingly, the Board Chair has substantial ability to shape the work of the Board. The Company believes that separation of the positions of Board Chair and Chief Executive Officer reinforces the independence of the Board in its oversight of the business and affairs of the Company. In addition, the Company believes that having an independent Board Chair creates an environment that is more conducive to objective evaluation and oversight of management's performance, increasing management accountability and improving the ability of the Board to monitor whether management's actions are in the best interests of the Company and its stockholders. As a result, the Company believes that having an independent Board Chair can enhance the effectiveness of the Board as a whole.

Risk Oversight

Our Board administers its risk oversight function directly and through both its Audit Committee and its Nominating, Governance and Review Committee. The Audit Committee oversees management of financial risks and related party transactions. The Nominating, Governance and Review Committee manages risks associated with the independence of the Board and potential conflicts of interests at the Board level, and periodically reviews our policies and procedures and makes recommendations when appropriate. We provide a complete description of each of these committees and its respective roles and responsibilities below. While each of these committees is responsible for evaluating certain risks and overseeing how we manage risk, these committees regularly inform the entire Board about such risks through committee reports.

In addition to the formal compliance program, the Board, the Audit Committee and the Nominating, Governance and Review Committee encourage management to promote a corporate culture that understands risk management and incorporates it into the overall corporate strategy and day-to-day business operations. Our risk management structure also includes an ongoing effort to assess and analyze the most likely areas of future risk for Akcea. As a result, the Board, the Audit Committee and the Nominating, Governance and Review Committee periodically ask our executives to discuss the most likely sources of material future risks and how we are addressing any significant potential vulnerability.

Meetings and Attendance; Committee Members

The Board met four times in 2017. During 2017, all Directors attended 100% of the meetings of the Board and the committees on which they served. We encourage, but do not require, each member of the Board to attend the Annual Meeting of Stockholders.

Board Committee Members

The table below identifies our current Board and committee members.

Name	Audit	Compensation	Nominating, Governance and Review
Ms. Paula Soteropoulos	—	—	—
Ms. Sarah Boyce(1)	—	—	—
Mr. Christopher Gabrieli	X	—	X
Dr. Stanley T. Crooke	—	X	—
Mr. Edward M. Fitzgerald	X*	—	—
Ms. Elaine Hochberg	—	X	—
Ms. B. Lynne Parshall	X	—	X*
Mr. Sandford D. Smith	—	X*	X

* Committee Chairperson

(1) Ms. Boyce joined our Board on April 17, 2018.

The Board has three committees: an Audit Committee, a Compensation Committee and a Nominating, Governance and Review Committee. Below is a description of each committee of our Board.

Audit Committee

The Audit Committee of the Board oversees our corporate accounting and financial reporting process, including audits of our financial statements. For this purpose, the Audit Committee performs several functions.

The Audit Committee:

- reviews the annual and quarterly financial statements and oversees the annual and quarterly financial reporting processes, including sessions with the auditors in which Akcea's employees and management are not present;
- selects and hires our independent registered public accounting firm;
- oversees the independence of our independent registered public accounting firm;
- evaluates our independent registered public accounting firm's performance; and
- has the authority to hire its own outside consultants and advisors, if necessary.

In addition to the responsibilities listed above, the Audit Committee has the following functions:

- reviewing our annual budget with management and, if acceptable, recommending the budget to the Board for approval;
- setting and approving changes to our investment policy;
- receiving and considering our independent registered public accounting firm's comments as to the audit of the financial statements and internal controls, adequacy of staff and management performance and procedures in connection with internal controls;
- reviewing and, if appropriate, approving related party transactions;
- establishing and enforcing procedures for the receipt, retention and treatment of complaints regarding accounting or auditing improprieties; and
- pre-approving all audit and non-audit services provided by our independent registered public accounting firm that are not prohibited by law.

As noted above, our Audit Committee is composed of Mr. Fitzgerald, Mr. Gabrieli and Ms. Parshall. The Board has determined that each of Messrs. Fitzgerald and Gabrieli is an independent director under Nasdaq Marketplace Rules and under Rule 10A-3 under the Exchange Act. The Board has determined that Ms. Parshall should not be considered an independent director given her membership on the Board of Ionis. Under Rule 10A-3, we are permitted to phase in our compliance with the independent audit committee requirements set forth in Nasdaq Marketplace Rule 5605(c) and Rule 10A-3 as follows: (1) one independent member at the time of listing, (2) a majority of independent members within 90 days of listing and (3) all independent members within one year of listing. The Board does not believe that the reliance upon this exemption materially adversely affects the ability of the Audit Committee to act independently and to satisfy the other requirements of Rule 10A-3. Within one year of our listing on the Nasdaq Global Select Market, we expect that Ms. Parshall will have resigned from our Audit Committee and that any new directors added to the Audit Committee will be independent under Nasdaq Marketplace Rules and Rule 10A-3.

In addition, all Audit Committee members must be financially literate and at least one member must be an "audit committee financial expert," as defined by SEC regulations. The Board has determined that Mr. Fitzgerald and Ms. Parshall are both "audit committee financial experts".

In 2017, the Audit Committee met two times. The Board has adopted a written Audit Committee charter, which you can find on our corporate website at http://ir.akceatx.com/media-investors/corporate-governance.

Compensation Committee

The primary function of the Compensation Committee of the Board is to review, modify (as needed) and approve our overall compensation strategy and policies and approve the compensation and other terms of employment of our executive officers, including our Chief Executive Officer. The charter of the Compensation Committee grants the Compensation Committee full access to all of our books, records, facilities and personnel, and authority to obtain, at our expense, advice and assistance from internal and external legal, accounting or other advisors and consultants and other external resources that the Compensation Committee considers necessary or appropriate in the performance of its duties. In particular, the Compensation Committee has the sole authority to retain independent compensation consultants to help the Compensation Committee evaluate executive and Director compensation, including the authority to approve the consultants' reasonable fees and other retention terms. We also have a Non-Management Stock Option Committee that, as delegated by the Compensation Committee, may award stock options and other share awards to employees who are below director level in accordance with guidelines adopted by the Compensation Committee. The purpose of this delegation of authority is to enhance the flexibility of option administration within the Company and to facilitate the timely grant of options to non-management employees, particularly new employees, within specified limits approved by the Compensation Committee. The Non-Management Stock Option Committee has one member, Ms. Soteropoulos.

The Compensation Committee met three times in 2017 and acted by unanimous written consent six times. The Board has adopted a written Compensation Committee charter, which you can find on our corporate website at http://ir.akceatx.com/media-investors/corporate-governance.

As noted above, our Compensation Committee is composed of Mr. Smith, Ms. Hochberg and Dr. Crooke. The Board has determined that each of Ms. Hochberg and Mr. Smith is an independent director under Nasdaq Marketplace

Rules, a non-employee director as defined in Rule 16b-3 under the Exchange Act or an outside director as that term is defined in Section 162(m) of the Internal Revenue Code of 1986, as amended, or the Code. The Board has determined that Dr. Crooke should not be considered an independent director under Nasdaq Marketplace Rules, a non-employee director as defined in Rule 16b-3 under the Exchange Act and an outside director as that term is defined in Section 162(m) of the Code, given his employment by Ionis.

As a "controlled company," we are not required to maintain a Compensation Committee composed exclusively of independent directors. However, we currently believe that Dr. Crooke will resign from our Compensation Committee within one year of our listing on the Nasdaq Global Select Market, and that any new directors added to the Compensation Committee will be independent under Nasdaq Marketplace Rules, as well as non-employee directors as defined in Rule 16b-3 under the Exchange Act.

Compensation Committee Processes and Procedures

Typically, the Compensation Committee meets quarterly and with greater frequency if necessary. The agenda for each meeting is usually developed by the Chair of the Compensation Committee, in consultation with the Chief Executive Officer. The Compensation Committee meets regularly in executive session. However, from time to time, various members of management and other employees as well as outside advisors or consultants may be invited by the Compensation Committee to make presentations, to provide financial or other background information or advice or to otherwise participate in Compensation Committee meetings. The Chief Executive Officer may not participate in, or be present during, any deliberations or determinations of the Compensation Committee regarding her compensation. Under the charter, the Compensation Committee may select, or receive advice from, a compensation consultant, legal counsel or other adviser to the compensation committee, other than in-house legal counsel and certain other types of advisers, only after taking into consideration six factors, prescribed by the SEC and Nasdaq, that bear upon the adviser's independence; however, there is no requirement that any adviser be independent.

After taking into consideration the six factors prescribed by the SEC and Nasdaq, the Compensation Committee has engaged Radford (the "Consultant"), a compensation consulting firm, as a compensation consultant. The Compensation Committee has assessed the Consultant's independence and determined that the Consultant has no conflicts of interest in connection with its provision of services to the Compensation Committee. Specifically, the Compensation Committee has engaged the Consultant to suggest a peer company group composed of public companies comparable to us and conduct an executive compensation assessment analyzing the current cash and equity compensation of our executive officers against compensation for similarly situated executives at our peer group companies. Our management does not have the ability to direct the Consultant's work.

Historically, the Compensation Committee has made most of the significant adjustments to annual compensation, determined bonus and equity awards and established new performance objectives at one or more meetings held during the first quarter of the year. However, the Compensation Committee also considers matters related to individual compensation, such as compensation for new executive hires, as well as high-level strategic issues, such as the efficacy of the Company's compensation strategy, potential modifications to that strategy and new trends, plans or approaches to compensation, at various meetings throughout the year. Generally, the Compensation Committee's process comprises two related elements: the determination of compensation levels and the establishment of performance objectives for the current year. For executives other than the Chief Executive Officer, the Compensation Committee solicits and considers evaluations and recommendations submitted to the Compensation Committee by the Chief Executive Officer. In the case of the Chief Executive Officer, the evaluation of her performance is conducted by the Compensation Committee, which determines any adjustments to her compensation as well as awards to be granted.

Nominating, Governance and Review Committee

The Nominating, Governance and Review Committee of the Board is responsible for:

- interviewing, evaluating, nominating and recommending individuals for membership on our Board, and considering proposed changes to the Board for approval;
- managing risks associated with the independence of the Board and potential conflicts of interests at the Board level, and periodically reviewing our policies and procedures and making recommendations when appropriate; and
- performing such other functions as may be necessary or convenient for the efficient discharge of the foregoing.

The Nominating, Governance and Review Committee met one time during 2017. You can find our Nominating, Governance and Review Committee charter on our corporate website at http://ir.akceatx.com/media-investors/corporate-governance.

As noted above, our Nominating, Governance and Review Committee is composed of Ms. Parshall and Messrs. Gabrieli and Smith. The Board has determined that each of Messrs. Gabrieli and Smith are independent directors under Nasdaq Marketplace Rules. The Board has determined that Ms. Parshall should not be considered an independent director given her membership on the Board of Ionis. As a "controlled company," we are not required to maintain a nominating committee composed exclusively of independent directors. However, we currently believe that Ms. Parshall will resign from our Nominating, Governance and Review Committee within one year of our listing on the Nasdaq Global Select Market, and that any new directors added to the Nominating, Governance and Review Committee will be independent under Nasdaq Marketplace Rules.

Director Nominations - Quality Standards

The Nominating, Governance and Review Committee believes that candidates for director should have certain minimum qualifications, including the ability to read and understand basic financial statements, being over 21 years of age and having the highest personal integrity and ethics. The Nominating, Governance and Review Committee also intends to consider such factors as possessing relevant expertise upon which to be able to offer advice and guidance to management, having sufficient time to devote to the affairs of the Company, demonstrated excellence in his or her field, having the ability to exercise sound business judgment and having the commitment to rigorously represent the long-term interests of the Company's stockholders. However, the Nominating, Governance and Review Committee retains the right to modify these qualifications from time to time. Candidates for director nominees are reviewed in the context of the current composition of the Board, the operating requirements of the Company and the long-term interests of stockholders. In conducting this assessment, the Nominating, Governance and Review Committee typically considers diversity, age, skills and such other factors as it deems appropriate, given the current needs of the Board and the Company, to maintain a balance of knowledge, experience and capability.

Director Nominations - Process

In the case of incumbent directors, the Nominating, Governance and Review Committee reviews these directors' overall service to the Company during their terms, including the number of meetings attended, level of participation, quality of performance and any other relationships and transactions that might impair the directors' independence. The Committee also takes into account the results of the Board's annual self-evaluation. In the case of new director candidates, the Nominating, Governance and Review Committee also determines whether the nominee is independent for Nasdaq purposes, which determination is based upon applicable Nasdaq listing standards, applicable SEC rules and regulations and the advice of counsel, if necessary. The Nominating, Governance and Review Committee then uses its network of contacts to compile a list of potential candidates, but may also engage, if it deems appropriate, a professional search firm. The Nominating, Governance and Review Committee conducts any appropriate and necessary inquiries into the backgrounds and qualifications of possible candidates after considering the function and needs of the Board. The Nominating, Governance and Review Committee meets to discuss and consider the candidates' qualifications and then selects a nominee for recommendation to the Board.

Stockholder Recommendations for Directors

Stockholders who wish to recommend individuals for consideration by the Nominating, Governance and Review Committee to become nominees for election to the Board may do so by delivering a written recommendation to Akcea's Corporate Secretary at the following address: 55 Cambridge Parkway, Suite 100, Cambridge, MA 02142, not later than the close of business on the one hundred twentieth (120th) day prior to the first anniversary of the preceding year's annual meeting. Submissions must include (i) the name, age, business address and residence address of such nominee, (ii) the principal occupation or employment of such nominee, (iii) set forth the class and number of shares of each class of capital stock of the corporation which are owned of record and beneficially by such nominee, (iv) set forth the date or dates on which such shares were acquired and the investment intent of such acquisition, (v) with respect to each proposed nominee, include a completed and signed questionnaire, and (vi) such other information as is required by our Bylaws, and must otherwise comply with the information requirements and other procedures set forth in our Bylaws.

Stockholder Communications with the Board

We make every effort to ensure that our Board or individual Directors, as applicable, hear our stockholders' views, and provide appropriate responses to stockholders in a timely manner. Stockholders who wish to communicate with the Board, or individual Directors, may do so by sending written communications addressed to Akcea's Corporate Secretary at 55 Cambridge Parkway, Suite 100, Cambridge, MA 02142. If you wish to communicate with the independent Directors about your concerns or issues, you may address correspondence to a particular Director or to the independent Directors generally. If you do not name a particular Director, depending on the subject matter, we will forward the letter to the Chair of the Audit, Compensation, or Nominating, Governance and Review Committee. One or more of our employees designated by the Board will review these communications and will determine whether to present the materials to the Board. The purpose of this screening is to allow the Board to avoid having to consider irrelevant or inappropriate communications, such as advertisements, commercial solicitations and hostile communications. All communications directed to the Audit Committee in accordance with our Code of Ethics policy that relate to questionable accounting or auditing matters involving Akcea will be promptly and directly forwarded to the Audit Committee. Other than the processes described above, our Board has not adopted a formal written process for stockholder communications with the Board. We believe our Board's responsiveness to stockholder communications has been excellent.

Code of Ethics and Business Conduct

We have adopted a Code of Ethics and Business Conduct that applies to all officers, Directors and employees. We have posted our Code of Ethics and Business Conduct on our website. If we make any substantive amendments to the Code of Ethics and Business Conduct or grant any waiver from a provision of the Code of Ethics and Business Conduct to any executive officer or Director, we will promptly disclose the nature of the amendment or waiver on our website at http://ir.akceatx.com/media-investors/corporate-governance.

APPROVAL OF AN AMENDMENT TO OUR 2015 EQUITY INCENTIVE PLAN

In December 2015, the Board and stockholders adopted the Akcea Therapeutics, Inc. 2015 Equity Incentive Plan, which was subsequently amended in May 2017 and June 2017 (the "***2015 Plan***"). In December 2017 the Board and in April 2018 the Majority Stockholder pursuant to the Written Consent, approved an amendment to the 2015 Plan to increase the aggregate number of shares of common stock authorized for issuance under the 2015 Plan by 5,000,000 to an aggregate of 13,500,000 shares (the "***Plan Amendment***"). Because the aggregate maximum number of shares of common stock that may be issued pursuant to the exercise of incentive stock options, or ISOs (within the meaning of Section 422 of the Code), under the 2015 Plan, or the ISO limit, is based on the share reserve, the Plan Amendment results in an automatic increase to the ISO limit, as further described below. We refer to the 2015 Plan as amended by the Plan Amendment as the "***Amended 2015 Plan.***"

Our management, Board and Compensation Committee believe that stock options and restricted stock units ("***RSUs***") are a key aspect of our ability to attract and retain qualified personnel in the face of intense competition for experienced scientists and other personnel among many pharmaceutical and health care companies. The Board, upon the recommendation of the Compensation Committee, approved the increase in the aggregate number of shares of common stock authorized for issuance under the 2015 Plan by 5,000,000 to an aggregate of 13,500,000 shares, to ensure that for a period of approximately two years, based on our current business plans, we can continue to grant stock options and RSUs to employees, directors and consultants at appropriate levels as determined by the Compensation Committee.

INTEREST OF CERTAIN PERSONS IN THE MATTER TO BE ACTED UPON

Our executive officers and directors have received and will be eligible to receive awards and grants under the Amended 2015 Plan in such amounts and at such times as determined by our Board or the compensation committee of our Board.

DESCRIPTION OF THE AMENDED 2015 PLAN

Below is a high-level summary of the terms of the Amended 2015 Plan. This summary is qualified in its entirety by reference to the complete text of the Amended 2015 Plan. We encourage our stockholders to read the actual text of the Amended 2015 Plan in its entirety, a copy of which is included as Exhibit B to the Information Statement we filed with the SEC.

As of April 9, 2018, options to purchase 9,283,061 shares of common stock were outstanding (which includes options to purchase 1,076,995 shares of common stock that were granted contingent upon the effectiveness of the Written Consent), no shares of common stock remained available for grant, and 261,405 options had been exercised. As of April 9, 2018, the outstanding options were exercisable at a weighted average exercise price of $6.97609 per share.

Share reserve. Currently, the aggregate number of shares of common stock that may be issued pursuant to stock awards under the 2015 Plan is 8,500,000 shares. Upon the effectiveness of the Written Consent, the aggregate number of shares of common stock that may be issued pursuant to stock awards under the Amended 2015 Plan shall increase to 13,500,000 shares. The ISO limit is equal to two multiplied by the aggregate number of shares of common stock that may be issued pursuant to stock awards under the 2015 Plan. Thus, upon the effectiveness of the Written Consent, the ISO limit shall automatically increase to two multiplied by 13,500,000 shares, or 27,000,000 shares, under the Amended 2015 Plan.

If a stock award granted under the Amended 2015 Plan expires or otherwise terminates without being exercised in full or is settled in cash, the shares of our common stock not acquired pursuant to the stock award again become available for subsequent issuance under the Amended 2015 Plan. In addition, the following types of shares under the Amended 2015 Plan may become available for the grant of new stock awards under the Amended 2015 Plan: (a) shares that are forfeited to us because of a failure to meet a contingency or condition required to vest such shares; (b) shares withheld to satisfy income or employment withholding taxes; and (c) shares used as consideration to exercise an option.

Administration. Our Board, or a duly authorized committee thereof, has the authority to administer the Amended 2015 Plan. Our Board has delegated its authority to administer the Amended 2015 Plan to our compensation committee under the terms of the compensation committee's charter. Our Board may also delegate to one or more of our officers the authority to (1) designate officers and employees to be recipients of options, and (2) determine the

number of shares of common stock to be subject to such stock awards. Subject to the terms of the Amended 2015 Plan, our Board or the authorized committee, referred to herein as the plan administrator, determines recipients, dates of grant, the numbers and types of stock awards to be granted and the terms and conditions of the stock awards, including the period of their exercisability and vesting schedule applicable to a stock award. Subject to the limitations set forth below, the plan administrator will also determine the exercise price, strike price or purchase price of awards granted and the types of consideration to be paid for the award. Subject to the terms of the Amended 2015 Plan, the plan administrator has the authority to reduce the exercise price of any outstanding option; cancel any outstanding option in exchange for new stock awards, cash and/or other consideration; or take any other action that is treated as a repricing under generally accepted accounting principles, with the consent of any adversely affected optionholder.

Types of awards. The Amended 2015 Plan provides for the grant of ISOs, nonstatutory stock options, or NSOs, stock appreciation rights, restricted stock awards and restricted stock unit awards, or collectively, stock awards. Each award is set forth in a separate award agreement that indicates the type, terms and conditions of the award.

Eligibility. ISOs may be granted only to employees, including employees of a parent company or subsidiary. All other stock awards may be granted to employees, including officers, and to non-employee directors and consultants.

Stock options. Stock options are granted pursuant to stock option agreements. The exercise price for an option cannot be less than 100% of the fair market value of the common stock subject to the option on the date of grant. Options granted under the Amended 2015 Plan will vest at the rate specified in the option agreement. A stock option agreement may provide for early exercise, rights of repurchase, and rights of first refusal. We may repurchase unvested shares of our common stock issued in connection with an early exercise.

The plan administrator will determine acceptable consideration for the purchase of common stock issued upon the exercise of a stock option, which may include (1) cash, check, bank draft or money order, (2) a broker-assisted cashless exercise, (3) the tender of shares of our common stock previously owned by the optionee, (4) a net exercise arrangement, (5) deferred payment arrangement and (6) other legal consideration approved by the plan administrator.

Generally, an optionee may not transfer a stock option other than by will or the laws of descent and distribution or a domestic relations order. An optionee may, however, designate a beneficiary who may exercise the option following the optionee's death.

The plan administrator determines the term of stock options granted under the Amended 2015 Plan, up to a maximum of 10 years. Unless the terms of an optionee's stock option agreement provides otherwise, if an optionee's service relationship with us, or any of our affiliates, ceases for any reason other than disability or death, the optionee may generally exercise any vested options for a period of three months following the cessation of service. The option term may be extended if exercise of the option following such a termination of service is prohibited by applicable securities laws. If an optionee's service relationship with us, or any of our affiliates, ceases due to disability or death, or an optionee dies within a certain period following cessation of service, the optionee or a beneficiary may generally exercise any vested options for a period of 12 months in case of disability and 18 months in case of death. In no event may an option be exercised beyond the expiration of its term.

Tax limitations on incentive stock options. The aggregate fair market value, determined at the time of grant, of our common stock with respect to ISOs that are exercisable for the first time by an optionee during any calendar year under all of our stock plans may not exceed $100,000. Options or portions thereof that exceed such limit will generally be treated as NSOs. No ISO may be granted to any person who, at the time of the grant, owns or is deemed to own stock possessing more than 10% of our total combined voting power or that of any of our affiliates unless (1) the option exercise price is at least 110% of the fair market value of the stock subject to the option on the date of grant, and (2) the term of the ISO does not exceed five years from the date of grant.

Restricted stock awards. Restricted stock awards are granted pursuant to restricted stock award agreements adopted by the plan administrator. Restricted stock awards may be granted in consideration for (1) services rendered to us or our affiliates or (2) any other form of legal consideration. Common stock acquired under a restricted stock award may, but need not, be subject to a share repurchase option in our favor in accordance with a vesting schedule to be determined by the plan administrator. Rights to acquire shares under a restricted stock award may be transferred only upon such terms and conditions as set by the plan administrator.

Restricted stock unit awards. Restricted stock unit awards are granted pursuant to restricted stock unit award agreements adopted by the plan administrator. We may grant restricted stock unit awards in consideration for any form of legal consideration. We may settle a restricted stock unit award by cash, delivery of stock, a combination of

cash and stock, or in any other form of consideration the stock plan administrator deems appropriate or that is set forth in the restricted stock unit award agreement. Additionally, dividend equivalents may be credited in respect of shares covered by a restricted stock unit award. Except as otherwise provided in the applicable award agreement, restricted stock units that have not vested will be forfeited upon the participant's cessation of continuous service for any reason.

Stock appreciation rights. Stock appreciation rights are granted pursuant to stock appreciation grant agreements adopted by the plan administrator. The plan administrator determines the strike price for a stock appreciation unit, which generally cannot be less than 100% of the fair market value of our common stock on the date of grant. Upon the exercise of a stock appreciation unit, we will pay the participant an amount equal to the product of (1) the excess of the per share fair market value of our common stock on the date of exercise over the strike price, multiplied by (2) the number of shares of common stock with respect to which the stock appreciation unit is exercised. A stock appreciation unit granted under the Amended 2015 Plan vests at the rate specified in the stock appreciation grant agreement as determined by the plan administrator.

The plan administrator determines the term of stock appreciation rights granted under the Amended 2015 Plan, up to a maximum of 10 years. Unless the terms of a participant's stock appreciation grant agreement provides otherwise, stock appreciation rights granted under the Amended 2015 Plan are generally subject to the same term and termination provisions as stock options granted under the Amended 2015 Plan.

Corporate transactions If a corporate transaction occurs where the acquiring or surviving corporation does not assume, continue or substitute stock awards granted under the Amended 2015 Plan, outstanding stock awards under the Amended 2015 Plan and held by participants whose continuous service with us has not terminated prior to such transaction will be subject to accelerated vesting such that 100% of such award will become vested and exercisable or payable, as applicable, prior to the effective time of the corporate transaction and such outstanding stock awards under the Amended 2015 Plan will be terminated if not exercised (if applicable) prior to the effective time of the corporate transaction. However, the plan administrator may provide that if a stock award will terminate if not exercised prior to a corporate transaction, the participant will receive a payment in lieu of exercise equal to the value of the excess, if any, of (i) the value of the property the participant would have received upon exercise of the stock award over (ii) any exercise price payable in connection with such exercise.

Under the Amended 2015 Plan, a corporate transaction is generally the consummation of (i) a sale or other disposition of all or substantially all of our consolidated assets, (ii) a sale or other disposition of at least 90% of our outstanding securities (other than a distribution of the shares by Ionis to the Ionis stockholders), (iii) a merger, consolidation or similar transaction following which we are not the surviving corporation, or (iv) a merger, consolidation or similar transaction following which we are the surviving corporation but the shares of our common stock outstanding immediately prior to such transaction are converted or exchanged into other property by virtue of the transaction.

Under the Amended 2015 Plan, a stock award may be subject to additional acceleration of vesting and exercisability upon or after a change in control transaction as may be provided in the stock award agreement or other written agreement with the participant, but in the absence of such provision, no such acceleration will occur.

Amendment and termination of the Amended 2015 Plan. Our Board has the authority to amend or terminate the Amended 2015 Plan at any time. However, except as otherwise provided in the Amended 2015 Plan, no amendment or termination of the Amended 2015 Plan may impair any rights under awards already granted to a participant except with the written consent of the affected participant. We will obtain stockholder approval of any amendment to the Amended 2015 Plan as required by applicable law and listing requirements. If not terminated earlier by the Board, the Amended 2015 Plan will terminate on December 15, 2025.

Shares Available for Awards

Upon the effectiveness of the Written Consent, there will be a total of 13,500,000 shares of our common stock authorized for issuance under the Amended 2015 Plan.

The following table summarizes the equity awards granted over the last three years, and through March 31, 2018, to our employees under our equity plans. We grant most of our equity awards for each year in January of such year as part of the annual merit compensation process. We have not attempted to forecast our future grant activity due to the number of assumptions that would be necessary to do so and the potential unpredictability of such underlying assumptions and estimates.

Equity Award Grant History Under Employee Equity Plans[1]

	2015	2016	2017	2018 (through March 31)
Shares subject to equity awards granted	2,905,006	2,158,579	2,923,846	1,810,092
Shares subject to equity awards canceled	0	0	48,493	172,035
Net shares subject to equity awards[2]	2,905,006	2,158,579	2,875,353	1,638,057

(1) Amounts shown reflect grants under our 2015 Plan, including options to purchase 1,076,995 shares of common stock that were granted contingent upon the effectiveness of the Written Consent.

(2) Shares subject to equity awards that are canceled or expire become available for re-issuance under our 2015 Plan. Therefore, net shares for any year is the total shares subject to awards granted in that year less the shares subject to awards canceled in such year.

Eligibility

All of our approximately 135 employees, 6 non-employee directors and 58 consultants as of March 31, 2018 are eligible to participate in the Amended 2015 Plan and may receive all types of awards available under the Amended 2015 Plan, except that incentive stock options may only be granted to our employees (including officers) and employees of our affiliates. To date, we have not granted any stock options to our consultants.

U.S. Federal Income Tax Consequences

The following is a summary of the principal United States federal income tax consequences to participants and us with respect to participation in the Amended 2015 Plan. This summary is not intended to be exhaustive and does not discuss the income tax laws of any local, state or foreign jurisdiction in which a participant may reside. The information is based upon current federal income tax rules and therefore is subject to change when those rules change. Because the tax consequences to any participant may depend on his or her particular situation, each participant should consult the participant's tax adviser regarding the federal, state, local and other tax consequences of the grant or exercise of an award or the disposition of stock acquired under the Amended 2015 Plan. The Amended 2015 Plan is not qualified under the provisions of Section 401(a) of the Code and is not subject to any of the provisions of the Employee Retirement Income Security Act of 1974. Our ability to realize the benefit of any tax deductions described below depends on our generation of taxable income as well as the requirement of reasonableness, the provisions of Section 162(m) of the Code and the satisfaction of our tax reporting obligations.

Nonstatutory Stock Options. Generally, there is no taxation upon the grant of an NSO if the stock option is granted with an exercise price equal to the fair market value of the underlying stock on the grant date. Upon exercise, a participant will recognize ordinary income equal to the excess, if any, of the fair market value of the underlying stock on the date of exercise of the stock option over the exercise price. If the participant is employed by us or one of our affiliates, that income will be subject to withholding taxes. The participant's tax basis in those shares will be equal to his or her fair market value on the date of exercise of the stock option, and the participant's capital gain holding period for those shares will begin on that date.

Subject to the requirement of reasonableness, the provisions of Section 162(m) of the Code and the satisfaction of our tax reporting obligation, we will generally be entitled to a tax deduction equal to the taxable ordinary income realized by the participant.

Incentive Stock Options. The Amended 2015 Plan provides for the grant of stock options that are intended to qualify as "incentive stock options," as defined in Section 422 of the Code. Under the Code, a participant generally is not subject to ordinary income tax upon the grant or exercise of an ISO. If the participant holds a share received upon exercise of an ISO for more than two years from the date the stock option was granted and more than one year from the date the stock option was exercised, which is referred to as the required holding period, the difference, if any, between the amount realized on a sale or other taxable disposition of that share and the participant's tax basis in that share will be long-term capital gain or loss.

If, however, a participant disposes of a share acquired upon exercise of an ISO before the end of the required holding period, which is referred to as a disqualifying disposition, the participant generally will recognize ordinary income in the year of the disqualifying disposition equal to the excess, if any, of the fair market value of the share on the date of exercise of the stock option over the exercise price. However, if the sales proceeds are less than the fair market value of the share on the date of exercise of the stock option, the amount of ordinary income recognized by the participant will not exceed the gain, if any, realized on the sale. If the amount realized on a disqualifying disposition exceeds the fair market value of the share on the date of exercise of the stock option, that excess will be short-term or long-term capital gain, depending on whether the holding period for the share exceeds one year.

For purposes of the alternative minimum tax, the amount by which the fair market value of a share of stock acquired upon exercise of an ISO exceeds the exercise price of the stock option generally will be an adjustment included in the participant's alternative minimum taxable income for the year in which the stock option is exercised. If, however, there is a disqualifying disposition of the share in the year in which the stock option is exercised, there will be no adjustment for alternative minimum tax purposes with respect to that share. In computing alternative minimum taxable income, the tax basis of a share acquired upon exercise of an ISO is increased by the amount of the adjustment taken into account with respect to that share for alternative minimum tax purposes in the year the stock option is exercised.

We are not allowed a tax deduction with respect to the grant or exercise of an ISO or the disposition of a share acquired upon exercise of an ISO after the required holding period. If there is a disqualifying disposition of a share, however, we will generally be entitled to a tax deduction equal to the taxable ordinary income realized by the participant, subject to the requirement of reasonableness and the provisions of Section 162(m) of the Code, and provided that either the employee includes that amount in income or we timely satisfy our reporting requirements with respect to that amount.

Restricted Stock Awards. Generally, the recipient of a restricted stock award will recognize ordinary income at the time the stock is received equal to the excess, if any, of the fair market value of the stock received over any amount paid by the recipient in exchange for the stock. If, however, the stock is not vested when it is received (for example, if the employee is required to work for a period of time in order to have the right to sell the stock), the recipient generally will not recognize income until the stock becomes vested, at which time the recipient will recognize ordinary income equal to the excess, if any, of the fair market value of the stock on the date it becomes vested over any amount paid by the recipient in exchange for the stock. A recipient may, however, file an election with the Internal Revenue Service, within 30 days following his or her receipt of the stock award, to recognize ordinary income, as of the date the recipient receives the award, equal to the excess, if any, of the fair market value of the stock on the date the award is granted over any amount paid by the recipient for the stock.

The recipient's basis for the determination of gain or loss upon the subsequent disposition of shares acquired from a restricted stock award will be the amount paid for such shares plus any ordinary income recognized either when the stock is received or when the stock becomes vested.

Subject to the requirement of reasonableness, the provisions of Section 162(m) of the Code and the satisfaction of a tax reporting obligation, we will generally be entitled to a tax deduction equal to the taxable ordinary income realized by the recipient of the restricted stock award.

Restricted Stock Unit Awards. Generally, the recipient of a restricted stock unit award structured to comply with the requirements of Section 409A of the Code or an exemption to Section 409A of the Code will recognize ordinary income at the time the stock is delivered equal to the excess, if any, of the fair market value of the stock received over any amount paid by the recipient in exchange for the stock. To comply with the requirements of Section 409A of the Code, the stock subject to a restricted stock unit award may generally only be delivered upon one of the following events: a fixed calendar date (or dates), separation from service, death, disability or a change in control. If delivery occurs on another date, unless the restricted stock unit award otherwise complies with or qualifies for an exemption to the requirements of Section 409A of the Code, in addition to the tax treatment described above, the recipient will owe an additional 20% federal tax and interest on any taxes owed.

The recipient's basis for the determination of gain or loss upon the subsequent disposition of shares acquired from a restricted stock unit award will be the amount paid for such shares plus any ordinary income recognized when the stock is delivered.

Subject to the requirement of reasonableness, the provisions of Section 162(m) of the Code and the satisfaction of our tax reporting obligation, we will generally be entitled to a tax deduction equal to the taxable ordinary income realized by the recipient of the restricted stock unit award.

Stock Appreciation Rights. Generally, if a stock appreciation right is granted with an exercise price equal to the fair market value of the underlying stock on the grant date, the recipient will recognize ordinary income equal to the fair market value of the stock or cash received upon such exercise. Subject to the requirement of reasonableness, the provisions of Section 162(m) of the Code, and the satisfaction of our tax reporting obligation, we will generally be entitled to a tax deduction equal to the taxable ordinary income realized by the recipient of the stock appreciation right.

Section 162(m) Limitations. Section 162(m) of the Code disallows a deduction to any publicly held corporation and its affiliates for certain compensation paid to "covered employees" in a taxable year to the extent that compensation paid to a covered employee exceeds $1 million. As a result, compensation (including compensation pursuant to awards granted under the Amended 2015 Plan) paid to any of our "covered employees" under Section 162(m) of the Code in excess of $1 million per taxable year generally will not be deductible.

New Plan Benefits Table

The following table presents certain information with respect to stock options granted in January 2018 for the recipient's 2017 performance, as well as additional stock options granted in February 2018 and March 2018 and additional stock options and RSUs granted in April 2018 to (a) each executive officer named in the Summary Compensation Table under "Executive Compensation--Compensation of Executive Officers", (b) all executive officers as a group, (c) all non-employee Directors as a group and (d) all non-executive officer employees as a group. This information regarding such grants is for illustration only and may not be indicative of grants that are made in the future under the 2015 Plan.

Except with respect to awards shown in the table below, future awards under the 2015 Plan are subject to the discretion of the Compensation Committee. Therefore, we cannot determine future benefits for any other awards under the 2015 Plan at this time.

NEW PLAN BENEFITS
2015 PLAN

Name and Position	Number of Shares Underlying RSUs	Number of Shares Underlying Stock Options[1]
Paula Soteropoulos Chief Executive Officer and Director	0	275,000
Michael MacLean Chief Financial Officer	0	0
Louis St. L. O'Dea Chief Medical Officer	0	27,719
All Current Executive Officers as a Group	0	1,622,719
All Current Non-Executive Directors as a Group	0	0[2]
All Employees as a Group (including all current officers who are not executive officers)	20,894	2,396,995

(1) Awards granted under the Amended 2015 Plan to our executive officers and other employees are discretionary and are not subject to set benefits or amounts under the terms of the Amended 2015 Plan. However, in January 2018, February 2018, March 2018 and April 2018, our Board granted a number of stock options to certain employees (including our executive officers and certain members of the Board) under the Amended 2015 Plan, subject to effectiveness of the Written Consent, as reflected in this column.

(2) Awards granted under the Amended 2015 Plan to our non-employee directors are discretionary and not subject to set benefits or amounts under the terms of the Amended 2015 Plan. However, pursuant to the terms of our compensation policy for non-employee directors, each of our current non-employee directors is eligible to receive an option to purchase 26,418 shares of our common stock on the date of each annual meeting of our stockholders and such options will be granted under the Amended 2015 Plan after the effectiveness of the Written Consent. For additional information regarding our compensation policy for non-employee directors, see the "Director Compensation" section below.

Plan Benefits Table

The following table sets forth, for each of the individuals and groups indicated, the total number of shares of our common stock subject to awards that have been granted (even if not currently outstanding) under the 2015 Plan and through December 31, 2017.

2015 PLAN

Name and Position	Number of Shares
Paula Soteropoulos Chief Executive Officer and Director	2,227,983
Michael MacLean Chief Financial Officer	332,708
Louis St. L. O'Dea Chief Medical Officer	810,175
All Current Executive Officers as a Group	3,867,538
All Current Non-Executive Directors as a Group	211,348
Each Nominee for Director	
Christopher Gabrieli	52,837
Stanley T. Crooke	0
Edward M. Fitzgerald	52,837
Elaine Hochberg	52,837
B. Lynne Parshall	0
Sandford D. Smith	52,837
Paula Soteropoulos	2,227,983
Sarah Boyce	0
Each Associate of Any Director, Executive Officer or Nominee	0
Each Other Current 5% Holder or Future 5% Recipient	0
All Employees as a Group (including all current non-executive officers)	7,776,079

RATIFICATION OF SELECTION OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Audit Committee of the Board has selected Ernst & Young LLP as our independent registered public accounting firm for our 2018 fiscal year, and requested management to ask for stockholder ratification. Pursuant to the Written Consent, the Majority Stockholder ratified this selection. Ernst & Young LLP has audited our financial statements since we were founded in 2015. We do not expect representatives of Ernst & Young LLP to attend our 2018 Annual Meeting.

Although our bylaws do not require stockholders to ratify our independent registered public accounting firm, the Audit Committee of the Board requested our stockholders' opinion as a matter of good corporate practice. Even though the Majority Stockholder ratified the selection, the Audit Committee of the Board may choose to appoint a different independent accounting firm at any time during the year if it believes that a change would be in the best interests of our stockholders and Akcea.

As of December 31, 2017, none of our finance or accounting employees had been employed by Ernst & Young LLP during the past five years.

Independent Registered Public Accounting Firm's Fees

The Audit Committee has adopted a policy and procedure for the pre-approval of audit and permissible non-audit services rendered by our independent registered public accounting firm, Ernst & Young LLP. The policy generally pre-approves specific services in the defined categories of audit services, audit-related services, and tax services up to pre-determined amounts. The Audit Committee may pre-approve services as part of its approval of the scope of the engagement of the independent registered public accounting firm or on an individual explicit case-by-case basis before the Audit Committee engages the independent registered public accounting firm to provide each service. As an additional measure to ensure independence of the registered public accounting firm, we do not use Ernst & Young LLP as our primary tax advisor. The Audit Committee pre-approved all of the fees described below.

Audit Fees

For the fiscal years ended December 31, 2017 and 2016, Ernst & Young LLP billed us approximately $0.6 million and approximately $0.8 million, respectively, for each year, primarily related to the audit of our financial statements and reviews of our interim financial statements. In addition, Ernst & Young LLP billed us approximately $0.2 million in 2017 related to corporate transactions and did not bill us for fees related to corporate transactions in 2016.

Audit Related Fees

For the fiscal years ended December 31, 2017 and 2016, there were no audit related fees billed by Ernst & Young LLP.

Tax Fees

For the fiscal year ended December 31, 2017, Ernst & Young LLP billed us approximately $0.2 million for professional services rendered for international tax planning and state and local tax consulting projects. Ernst & Young LLP did not bill us for any tax planning or projects for the fiscal year ended December 31, 2016.

All Other Fees

There were no other fees billed by Ernst & Young for the fiscal years ended December 31, 2017 and 2016. The Audit Committee has determined that the rendering of all non-audit services by Ernst & Young LLP is compatible with maintaining the independence of the independent registered public accounting firm. During the fiscal year ended December 31, 2017, none of the total hours expended on our financial audit by Ernst & Young LLP were provided by persons other than Ernst & Young LLP's employees.

EXECUTIVE OFFICERS

The following sets forth certain information regarding our executive officers as of the date of this Information Statement:

Name	Age	Position
Paula Soteropoulos	50	Chief Executive Officer
Sarah Boyce	46	President
Michael MacLean	52	Chief Financial Officer
Jeffrey M. Goldberg	45	Chief Operating Officer
Louis St. L. O'Dea	67	Chief Medical Officer

Paula Soteropoulos. Biographical information for Ms. Soteropoulos is included above with the director biographies under the caption "Biographies of the Directors Elected."

Sarah Boyce. Biographical information for Ms. Boyce is included above with the director biographies under the caption "Biographies of the Directors Elected."

Michael MacLean. Mr. MacLean has served as Chief Financial Officer of Akcea since August 2017. Prior to joining Akcea, from September 2015 to August 2017, Mr. MacLean was Chief Financial Officer and Executive Vice President for PureTech Health, an advanced, clinical-stage, public biopharmaceutical company focusing on diseases caused by dysfunctions in the nervous, gastrointestinal and immune systems. Previously, Mr. MacLean served as Senior Vice President of Finance and Chief Accounting Officer of Biogen Inc. where he led the Company's worldwide finance organization.

Jeffrey M. Goldberg. Mr. Goldberg joined Akcea as Chief Operating Officer in January 2015. Prior to joining Akcea, from December 2012 to September 2014, Mr. Goldberg was a member of the executive leadership team at Proteostasis Therapeutics, Inc., a now public biotechnology company focusing on neurology and orphan diseases, where he served as Vice President of Business Operations. Prior to that, Mr. Goldberg spent over 11 years in positions of increasing responsibility with Genzyme and Sanofi S.A., most recently as Associate Vice President, Project Head, within Sanofi Oncology.

Louis St. L. O'Dea. Dr. O'Dea joined Akcea as Chief Medical Officer in January 2016. Prior to joining Akcea, Dr. O'Dea was Chief Medical Officer at Oxford Immunotec Global PLC, a private diagnostics company, from June 2014 to January 2016, overseeing medical affairs and clinical development. Prior to Oxford, Dr. O'Dea was Chief Medical Officer and Head of Regulatory Affairs at Moderna from January 2012 to June 2014. Before Moderna, Dr. O'Dea held positions including Chief Medical Officer at Radius Health, Inc., a public biopharmaceuticals company, an academic position at McGill University, and worldwide Head of Clinical Development for Endocrine and Metabolic products at Serono.

SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

This following table sets forth the beneficial ownership of common stock as of April 9, 2018 for:

- each person, or group of affiliated persons, who is known by the Company to beneficially own more than 5% of the common stock;
- each of the Company's named executive officers;
- each of the Company's directors; and
- all of the Company's executive officers and directors in a group.

The Company has determined beneficial ownership in accordance with the rules of the SEC. These rules generally attribute beneficial ownership of securities to persons who possess sole or shared voting power or investment power with respect to those securities. In addition, the rules take into account shares of common stock issuable pursuant to the exercise of stock options that are either immediately exercisable or exercisable within 60 days of April 9, 2018. These shares are deemed to be outstanding and beneficially owned by the person holding those shares for the purpose of computing the percentage ownership of that person, but not for the purpose of computing the percentage ownership of any other person. Unless otherwise indicated, the persons or entities identified in this table have sole voting and investment power with respect to all shares shown as beneficially owned by them, subject to applicable community property laws.

Except as otherwise noted below, the address for persons listed in the table is c/o Akcea Therapeutics, Inc., 55 Cambridge Parkway, Suite 100, Cambridge, Massachusetts 02142

	Beneficial Ownership[1]	
Beneficial Owner	**Number of Shares**	**Percent of Total**
5% Stockholders		
Ionis Pharmaceuticals, Inc.[2]	45,447,879	68.02%
Novartis Pharma AG[3]	6,250,000	9.35%
FMR LLC[4]	9,981,244	14.94%
Directors and Named Executive Officers		
Stanley T. Crooke, M.D., Ph.D.[5]	0	0%
B. Lynne Parshall, J.D.[5]	0	0%
Edward Fitzgerald[6]	13,210	*
Christopher Gabrieli	26,419	*
Elaine Hochberg	13,210	*
Sandford D. Smith	13,210	*
Paula Soteropoulos[7]	1,704,779	2.55%
Sarah Boyce[8]	0	0%
Michael F. MacLean	0	0%
Louis St. L. O'Dea MB BCh BAO. FRCP (C)[7]	447,467	*
All executive officers and directors as a group (11 persons)[5][6][7]	2,594,211	3.88%

* Represents beneficial ownership of less than 1%.

(1) We base this table upon information supplied by officers, Directors, principal stockholders and Form 3s, Form 4s, Form 5s, Schedules 13D and 13G filed with the SEC. Unless otherwise indicated in the footnotes to this table and subject to community property laws where applicable, we believe that each of the stockholders named in this table has sole voting and investment power with respect to the shares indicated as beneficially owned.

(2) The address of Ionis is 2855 Gazelle Court Carlsbad, California 92010.

(3) The address of Novartis is Lichtstrasse 35, 4002, Basel, Switzerland.

(4) The address of FMR LLC is 245 Summer Street, Boston, Massachusetts, 02110. Abigail P. Johnson is a Director, the Vice Chairman, the Chief Executive Officer and the President of FMR LLC. Members of the Johnson family, including Abigail P. Johnson, are the predominant owners, directly or through trusts, of Series B voting common shares of FMR LLC, representing 49% of the voting power of FMR LLC. The Johnson family group and all other Series B shareholders have entered into a shareholders' voting agreement under which all Series B voting common shares will be voted in accordance with the majority vote of Series B voting common shares. Accordingly, through their ownership of voting common shares and the execution of the shareholders' voting agreement, members of the Johnson family may be deemed, under the Investment Company Act of 1940, to form a controlling group with respect to FMR LLC. Neither FMR LLC nor Abigail P. Johnson has the sole power to vote or direct the voting of the shares owned directly by the various investment companies registered under the Investment Company Act ("Fidelity Funds") advised by Fidelity Management & Research Company ("FMR Co"), a wholly owned

subsidiary of FMR LLC, which power resides with the Fidelity Funds' Boards of Trustees. Fidelity Management & Research Company carries out the voting of the shares under written guidelines established by the Fidelity Funds' Boards of Trustees.

(5) Dr. Crooke and Ms. Parshall are directors and executive officers of Ionis. Each of these individuals may influence voting and disposition of the shares of common stock held by Ionis.

(6) Mr. Fitzgerald joined our Board in May 2017.

(7) Represents shares of common stock issuable upon the exercise of options.

(8) Ms. Boyce joined our Board in April 2018.

Section 16(a) Beneficial Ownership Reporting Compliance

Section 16(a) of the Exchange Act requires our Directors, executive officers, and persons who own more than ten percent of a registered class of our equity securities, to file with the SEC initial reports of ownership and reports of changes in ownership of our common stock and other equity securities. Officers, Directors and greater than ten percent stockholders are required by SEC regulation to furnish us with copies of all Section 16(a) forms they file.

To our knowledge, based solely on a review of the copies of such reports furnished to us and written representations that no other reports were required, during the fiscal year ended December 31, 2017, all Section 16(a) filing requirements applicable to our officers, Directors and greater than ten percent beneficial owners were complied with.

Securities Authorized for Issuance Under Equity Compensation Plans

The following table sets forth information regarding outstanding options and shares reserved for future issuance under our equity compensation plans as of December 31, 2017.

EQUITY COMPENSATION PLAN INFORMATION

Plan Category	Number of securities to be issued upon exercise of outstanding options, warrants and rights (a)	Weighted-average exercise price of outstanding options, warrants and rights (b)	Number of securities remaining available for issuance under equity compensation plans (excluding securities reflected in column (a)) (c)
Equity compensation plans approved by security holders:			
2015 Equity Incentive Plan	7,905,110	$ 6.48	561,062
2017 Employee Stock Purchase Plan(1)	0	$ 0.00	500,000
Equity compensation plans not approved by security holders	—	—	—
Total	7,905,110	$ 6.48	1,061,062

(1) Of these shares, 500,000 remained available for purchase under the ESPP as of December 31, 2017. The ESPP incorporates an evergreen formula pursuant to which on January 1 of each year, we automatically increase the aggregate number of shares reserved for issuance under the plan by an amount equal to the lesser of (i) 1% of the total number of shares of Common Stock outstanding on December 31st of the preceding calendar year, and (ii) 500,000 shares of Common Stock shares.

EXECUTIVE COMPENSATION

Compensation of Executive Officers

The following table shows for the fiscal years ended December 31, 2017 and 2016, compensation awarded to or paid to, or earned by, our Chief Executive Officer and our two other most highly compensated executive officers at December 31, 2017, our "named executive officers."

Summary Compensation Table

Name and Principal Position	Year	Salary ($)	Bonus[1] ($)	Option Awards[2] ($)	All Other Compensation[3] ($)	Total ($)
Paula Soteropoulos, Chief Executive Officer	2017	$ 436,324	$ 351,545	$ 2,586,922	$ 16,971	$3,391,762
	2016	$ 412,600	$ 340,395	$ 2,630,877	$ 25,555	$3,409,427
Michael MacLean, Chief Financial Officer[4]	2017	$ 127,154	$ 118,970	$ 4,274,715	$ 477	$4,521,316
	2016	—	—	—	—	—
Dr. Louis St. L. O'Dea, Chief Medical Officer[5]	2017	$ 437,231	$ 303,750	$ 886,875	$ 36,102	$1,663,958
	2016	$ 397,708	$ 286,350	$ 2,835,661	$ 24,554	$3,544,273

(1) We present bonuses in the years they were earned, not in the year paid. Bonuses represent compensation for achievements and are not necessarily paid in the year they are earned; for example, in January 2018 we paid bonuses for 2017 performance.

(2) Amounts represent the aggregate expense recognized for financial statement reporting purposes in accordance with ASC 718 for stock and option awards granted to our named executive officers. ASC 718 expense for the option awards is based on the fair value of the awards on the date of grant using an option-pricing model. For more information, please see Note 6 of the consolidated financial statements in our Annual Report on Form 10-K for the year ended December 31, 2017 regarding assumptions underlying valuation of equity awards.

(3) Includes accidental death and dismemberment, basic life, medical, dental and vision insurance, parking and transportation reimbursement and 401(k) matching contributions, each of which are available to all employees.

(4) Mr. MacLean joined the Company on August 31, 2017. Mr. MacLean's bonus for 2017 includes a $50,000 sign on bonus paid in August 2017.

(5) Dr. O'Dea's bonus for 2016 includes a $40,000 sign on bonus paid in January 2016.

Grants of Plan-Based Awards

The following table shows for the fiscal year ended December 31, 2017, certain information regarding grants of plan-based awards to our named executive officers:

Grants of Plan-Based Awards in Fiscal 2017

Name	Grant Date	All Other Stock Awards: Number of Shares of Stock or Units (#)	All Other Option Awards: Number of Securities Underlying Options (#)	Exercise or Base Price of Option Awards ($/Sh)	Grant Date Fair Value of Stock and Option Awards[1] ($)
Paula Soteropoulos	6/5/2017	0	308,219	12.21	$ 2,586,922
Michael MacLean	8/31/2017	0	332,708	18.65	$ 4,274,715
Dr. Louis St. L. O'Dea	6/5/2017	0	105,675	12.21	$ 886,875

(1) Amounts represent the aggregate expense recognized for financial statement reporting purposes in accordance with FASB Topic ASC 718 ("ASC 718") for stock and option awards granted to our named executive Officers. ASC 718 expense for the option awards is based on the fair value of the awards on the date of grant using an option-pricing model. For more information, please see Note 6, *Stockholders' Equity (Deficit),* of the consolidated financial statements in our Annual Report on Form 10-K for the year ended December 31, 2017 regarding assumptions underlying valuation of equity awards.

Narrative to Summary Compensation Table

Offer Letters with Our Named Executive Officers

Below are written descriptions of our offer letter agreements with each of Ms. Soteropoulos, Mr. MacLean and Dr. O'Dea. Each of our named executive officers' employment is "at will" and may be terminated at any time.

Paula Soteropoulos. We entered into an offer letter agreement with Ms. Soteropoulos effective January 1, 2015 for the position of President and Chief Executive Officer. In connection with the Inotersen Transaction, Ms. Soteropoulos resigned from the position of President but remains our Chief Executive Officer. Ms. Soteropoulos currently receives a base salary of $515,000, which is subject to annual adjustment. Pursuant to her agreement, Ms. Soteropoulos was also entitled to a stock option grant as described under "—Outstanding Equity Awards at Fiscal Year-End" below. Ms. Soteropoulos is also eligible to participate in our employee benefit plans, subject to the terms of those plans.

Michael MacLean. We entered into an offer letter agreement with Mr. MacLean effective July 17, 2017 for the position of Chief Financial Officer. Mr. MacLean currently receives a base salary of $380,000, which is subject to annual adjustment. Pursuant to his agreement, Mr. MacLean was also entitled to a stock option grant as described under "—Outstanding Equity Awards at Fiscal Year-End" below. Mr. MacLean is also eligible to participate in our employee benefit plans, subject to the terms of those plans.

Dr. Louis St. L. O'Dea. We entered into an offer letter agreement with Dr. O'Dea effective January 18, 2016 for the position of Chief Medical Officer. Dr. O'Dea currently receives a base salary of $468,000, which is subject to annual adjustment. Pursuant to his agreement, Dr. O'Dea was also entitled to a stock option grant as described under "—Outstanding Equity Awards at Fiscal Year-End" below. Dr. O'Dea is also eligible to participate in our employee benefit plans, subject to the terms of those plans.

Bonus Opportunity

A component of an executive officer's compensation, as well as the compensation of our employees at the director level and above, is a discretionary performance-based cash payment through our Performance MBO program. Our Performance MBO program rewards employees for reaching specific objectives and for the judgment they use in making decisions, while an employee's base salary compensates the employee for his or her continued service and performance. We do not guarantee a Performance MBO as compensation. It is totally at risk. As such, a Performance MBO represents an opportunity for reward based upon the individual's level of accountability and depends on the relative success of both Akcea and the individual.

We calculate the actual amount of each executive officer's respective Performance MBO based on the following formula:

Base Salary (x) Target MBO % (x) Company Performance Factor (x) Individual Performance Factor = Performance MBO Amount

The multipliers in this formula create a structure where we award bonuses based on both Akcea's performance and individual performance. Performance MBOs are limited by a maximum Company Performance Factor, maximum Individual Performance Factor and Target MBO Percentage.

For 2016, the Target MBO percentages were: 50% for Ms. Soteropoulos and 40% for Dr. O'Dea. For 2016, the maximum potential Company Performance Factor was 200% and the maximum potential Individual Performance Factor was 160%. The actual Company Performance Factor for 2016 was 150%.

For 2017, the Target MBO percentages were: 50% for Ms. Soteropoulos, 40% for Mr. MacLean and 40% for Dr. O'Dea. For 2017, the maximum potential Company Performance Factor was 200% and the maximum potential Individual Performance Factor was 160%. The actual Company Performance Factor for 2017 was 125%.

Since we were a wholly owned subsidiary of Ionis in 2016, Ionis' Compensation Committee set the Company Performance Factor based on the following process:

- Ionis' achievement of the approved corporate objectives for the year, which included specific objectives for Akcea. At the end of 2016, the Ionis Compensation Committee met to evaluate Ionis' overall performance. Ionis' Compensation Committee measured Ionis' performance based upon the achievement of goals that were set at the beginning of the year and agreed upon by our Board and upper management.
- Ionis' Compensation Committee reviewed the Company Performance Factor history for Ionis from the prior ten years to form a comparison for Ionis' current year's successes and/or failures.

Next, the members of our Board approved each executive officer's Individual Performance Factor based on the individual's performance.

Once the elements of the formula above have been determined, we use that formula to calculate each executive officer's Performance MBO.

Equity-based Incentive Awards

We use stock options to give all employees, including our executive officers, an economic interest in the long-term appreciation of our common stock. We believe awarding stock options provides a way to align employee interests with those of upper management and our stockholders because as our stock price increases, so too does the employee's compensation.

We grant existing employees options upon commencement of employment with us and new options annually to provide a continuing financial incentive in our long-term success. We set the size of the equity awards based on individual and company performance during the previous year.

The stock option vesting schedule is typically over a 4-year period at the rate of 25% at the end of the first year and then at the rate of approximately 2.08% per month for 36 months thereafter during the optionee's employment.

The Compensation Committee granted merit non-statutory stock options to the executive officers on January 2, 2018. All of these stock options were granted out of our 2015 Plan. The options have a term of ten years and vest at the rate of 25% for the first year and then at the rate of 2.08% per month for 36 months thereafter during the optionee's employment.

For additional information regarding awards granted to our named executive officers in 2017, see "—Outstanding Equity Awards at Fiscal Year-End" below.

Outstanding Equity Awards at Fiscal Year-End – Executive Officers.

The following table shows for the fiscal year ended December 31, 2017, certain information regarding outstanding equity awards at fiscal year-end for our named executive officers. Other than the equity awards described in the table below, there were no equity incentive plan awards outstanding for our named executive officers at December 31, 2017.

Outstanding Equity Awards at Fiscal Year-End

		OPTION AWARDS[1]			
NAME	GRANT DATE	NUMBER OF SECURITIES UNDERLYING UNEXERCISED OPTIONS (#) EXERCISABLE	NUMBER OF SECURITIES UNDERLYING UNEXERCISED OPTIONS (#) UNEXERCISABLE	OPTION EXERCISE PRICE ($)[2]	OPTION EXPIRATION DATE
Paula Soteropoulos	12/16/2015[3]	1,284,245	477,077	$ 6.48	12/15/2025
	02/17/2016[4]	75,955	82,557	$ 6.48	02/16/2026
	06/05/2017[5]	—	308,219	$ 12.21	06/04/2027
Michael F. MacLean	08/31/2017[6]	—	332,708	$ 18.65	08/30/2027
Dr. Louis St. L. O'Dea	02/17/2016[7]	337,572	366,928	$ 6.48	02/16/2026
	06/05/2017[5]	—	105,675	$ 12.21	06/04/2027

(1) All of the option awards were granted under the 2015 Plan.

(2) All of the option awards were granted with a per share exercise price equal to the fair market value of one share of our common stock, on the date of grant, as determined by our Board. Unless otherwise noted, all options granted provide for the following standard vesting schedule: 25% of the shares subject to the option vest on the one-year anniversary of the vesting commencement date and 1/48th of the total shares subject to the option vest on the monthly anniversary of the vesting commencement date over the next three years.

(3) The shares vest according to the standard vesting schedule, measured from January 1, 2015.

(4) The shares vest according to the standard vesting schedule, measured from January 4, 2016.

(5) The shares vest according to the standard vesting schedule, measured from January 3, 2017.

(6) The shares vest according to the standard vesting schedule, measured from August 31, 2018.

(7) The shares vest according to the standard vesting schedule, measured from January 18, 2016.

Potential Payments Upon Termination or Change-of-Control

On November 28, 2017, we entered severance agreements with Paula Soteropoulos, Michael MacLean and Louis St. L. O'Dea, which provide the following severance benefits:

- Ms. Soteropoulos will be eligible to receive medical benefit continuation, and a lump sum severance payment equal to (i) 15 months of her then-current base salary if her employment is terminated without cause or by her for good reason, or (ii) if, as a result of a change in control (as defined in the severance benefit agreement) of Akcea, her employment is terminated without cause or by her for good reason, 21 months of her then-current base salary plus an amount equal to her target annual cash performance bonus for the year of termination multiplied by a fraction set forth in the severance benefit agreement. In addition, if, in connection with a change in control, an equity award granted to Ms. Soteropoulos is assumed or continued by the acquirer entity but her employment is terminated without cause or by her for good reason, or an equity award granted to Ms. Soteropoulos is not assumed or continued by the acquirer entity (or substituted for a similar award of the acquirer entity), then any unvested portion of the equity award will become vested effective immediately prior to the consummation of such change in controls; and
- Mr. MacLean and Dr. O'Dea will each be eligible to receive medical benefit continuation, and a lump sum severance payment equal to (i) 12 months of his then-current base salary if his employment is terminated without cause or by him for good reason, or (ii) if, as a result of a change in control (as defined in the severance benefit agreement) of Akcea, 12 months of his then-current base salary plus an amount equal to his target annual cash performance bonus for the year of termination multiplied by a fraction set forth in the severance benefit agreement. In addition, if, in connection with a change in control, an equity award granted to him is assumed or continued by the acquirer entity but his employment is terminated without cause or by him for good reason, or an equity award granted to him is not assumed or continued by the acquirer entity (or substituted for a similar award of the acquirer entity), then any unvested portion of the equity award will become vested effective immediately prior to the consummation of such change in control.

The following table estimates the lump sum payments that would be required under the agreements described above as of December 31, 2017. This table estimates the lump sum payments based upon either a termination without cause or a termination in connection with a change of control assuming either occurred on December 31, 2017.

	Termination Event	
Name	Termination Without Cause	Termination in a Change of Control
Paula Soteropoulos	$ 643,750	$ 901,250
Michael MacLean	$ 380,000	$ 380,000
Louis St. L. O'Dea	$ 468,000	$ 468,000

Director Compensation

Directors who are also our employees do not receive cash or equity compensation for service on our Board in addition to the compensation payable for their service as our employees. In addition, our non-employee directors who are affiliated with Ionis do not receive cash or equity compensation for service on our Board. In 2015, all of our directors were employed by us or by Ionis, and we therefore did not pay any cash or equity compensation to our directors for Board service. Through December 31, 2016, we paid Mr. Gabrieli $23,400 for his service on our Board and, in October 2016, we granted him an option to purchase up to 52,837 shares of our common stock.

In January 2017, we paid Mr. Gabrieli $8,750 for his service on our Board and, in April 2017, we paid each of Mr. Gabrieli and Ms. Hochberg $8,750 and Mr. Smith $11,664 for his and her respective service on our Board. In June 2017, we granted each of Messrs. Fitzgerald and Smith and Ms. Hochberg an option to purchase up to 52,837 shares of common stock.

Following the completion of our initial public offering, our Board of Directors established a director compensation program for independent, non-employee members of our Board, including Mr. Fitzgerald, Mr. Gabrieli, Mr. Smith and Ms. Hochberg. We refer to the individual non-employee members of our Board who our Compensation Committee determines will receive such compensation as our "Eligible Directors." Following the completion of our initial public offering, Eligible Directors receive the following annual compensation:

Role	Director Compensation
Board Member (Base)	$ 35,000
Chairperson of the Board of Directors	$ 25,000
Committee Chairs (Additional)	
Audit	$ 15,000
Compensation	$ 10,000
Nominating, Governance & Review	$ 7,500
Committee Member (Additional)	
Audit	$ 7,500
Compensation	$ 5,000
Nominating, Governance & Review	$ 3,750

If the Board creates new committees, we anticipate that the non-employee members of such new committee will receive additional compensation for their role on those committees. We also reimburse our non-employee directors for travel, lodging and other reasonable expenses incurred in attending meetings of our Board and committees of the Board.

We expect to grant each new non-employee director an option to purchase 52,837 shares of our common stock on the date of his or her initial election to the Board. In addition, on the date of each annual meeting of our stockholders, each non-employee director is eligible to receive an option to purchase 26,418 shares of our common stock. Such initial and annual options will be issued under our 2015 Plan, will have an exercise price per share equal to the fair market value of our common stock on the date of grant and will vest and become exercisable in equal annual installments over the four years following the date of grant, such that the option is fully vested on the fourth anniversary of the date of grant subject to the Eligible Director continuing to provide services to us through such dates. Further, upon a change of control of our company, vesting of all unvested options held by our Eligible Directors will accelerate in full. The term of each option granted to an Eligible Director will be 10 years.

The following table shows for the fiscal year ended December 31, 2017 certain information with respect to the compensation of all our non-employee Directors:

Director Compensation for Fiscal 2017

Name	Fees Earned or Paid in Cash ($)	Option Awards ($)[1][2]	All Other Compensation ($)	Total ($)
Christopher Gabrieli	$ 53,125	$ 447,719	--	$ 500,844
Stanley T. Crooke[3]	$ --	$ --	--	$ --
Edward Fitzgerald[4]	$ 33,333	$ 447,719	--	$ 481,052
Elaine Hochberg[5]	$ 28,740	$ 447,719	--	$ 476,459
B. Lynne Parshall[6]	$ --	$ --	--	$ --
Sandford D. Smith[7]	$ 36,039	$ 447,719	--	$ 483,758

(1) Amounts represent the aggregate expense recognized for financial statement reporting purposes in accordance with ASC 718 for option awards granted to the Directors. ASC 718 expense for the option awards is based on the fair value of the awards on the date of grant using an option-pricing model. For more information, please see Note 6, *Stockholders' Equity (Deficit),* of the consolidated financial statements in our Annual Report on Form 10-K for the year ended December 31, 2017 regarding assumptions underlying valuation of equity awards.

(2) The table below shows the aggregate number of option awards outstanding for each of our non-employee directors as of December 31, 2017:

Name	Option Awards (#)
Christopher Gabrieli	52,837
Stanley T. Crooke	0
Edward Fitzgerald	52,837
Elaine Hochberg	52,837
B. Lynne Parshall	0
Sandford D. Smith	52,837

(3) Mr. Crooke and Ms. Parshall do not receive compensation for their board service because of their affiliation with Ionis. Mr. Crooke receives compensation from Ionis in connection with his service as Ionis' Chief Executive Officer. Since January 2018, Ms. Parshall receives compensation from Ionis in connection with her service as Senior Strategic Advisor to Ionis. During the fiscal year ended December 31, 2017, Ms. Parshall received compensation from Ionis in connection with her service as Ionis' Chief Operating Officer.

(4) Mr. Fitzgerald has served as a member of our Board since May 2017.

(5) Ms. Hochberg has served as a member of our Board since March 2017.

(6) Mr. Smith has served as a member of our Board since March 2017.

Certain Relationships and Related Transactions

Except as described below, there have been no transactions since January 1, 2017 in which we have been a participant in which the amount involved exceeded or will exceed $120,000, and in which any of our directors, executive officers or holders of more than 5% of our common stock, or any members of their immediate family, had or will have a direct or indirect material interest, other than compensation arrangements which are described under "Executive Compensation" and "Director Compensation."

Development, commercialization and license agreement with Ionis

In December 2015, we entered into a development, commercialization and license agreement with Ionis in which Ionis granted exclusive rights to us to develop and commercialize volanesorsen, AKCEA-APOCIII-L$_{Rx}$, AKCEA-APO(a)$_{Rx}$, AKCEA-APO(a)-L$_{Rx}$, AKCEA-ANGPTL3$_{Rx}$ and AKCEA-ANGPTL3-L$_{Rx}$, which are collectively referred to as the Lipid Drugs. As a part of the grant to us from Ionis, Ionis has granted an exclusive license to certain patents to develop and commercialize products containing the Lipid Drugs. Ionis also granted us a non-exclusive license to the Ionis antisense platform technology, including its LICA technology, for us to develop and commercialize products containing the Lipid Drugs. Ionis also granted us non-exclusive rights under its manufacturing technology to manufacture the Lipid Drugs in our own facility, or at a contract manufacturer. As a part of this agreement both companies agreed not to work with any other parties to develop or commercialize other drugs that are designed to inhibit any of the Lipid Drug targets so long as we are developing or commercializing the Lipid Drugs.

We and Ionis share development responsibilities for the Lipid Drugs. We pay Ionis for the research and development expenses it incurs on our behalf, which include both external and internal expenses. A Joint Steering Committee, or JSC, comprising two senior members from each company, sets the development strategy for the Lipid Drugs by mutual agreement. A regulatory sub-committee, established by the JSC and having equal membership from each company, will set the regulatory strategy for each of the Lipid Drugs by mutual agreement. If the regulatory sub-committee cannot agree on an issue related to the regulatory strategy for any one of the Lipid Drugs, we will submit the disputed issues to a mutually agreed-upon regulatory expert, we will share the costs of the expert and the expert's decision will be binding. At the time of this agreement, we agreed to the initial membership of a cardiometabolic advisory board that will advise the JSC on matters related to the development of the Lipid Drugs. We will provide Ionis notice of all meetings of this advisory board and Ionis personnel will have the ability to attend these meetings.

As we commercialize each of the Lipid Drugs, we will pay Ionis royalties ranging from the mid-teens to the mid-twenties on sales related to the Lipid Drugs that we sell. If we sell a Lipid Drug for a Rare Disease Indication (defined in our agreement as less than 500,000 patients worldwide or an indication that required a Phase 3 program of less than 1,000 patients and less than 2 years of treatment), we will pay a higher royalty rate to Ionis than we do if we sell a Lipid Drug for a Broad Disease Patient Population (defined in our agreement as more than 500,000 patients worldwide or an indication that required a Phase 3 program of 1,000 or more patients and 2 or more years of treatment). Other than with respect to the drugs licensed to Novartis under the strategic collaboration, option and license agreement, if our annual sales reach $500.0 million, $1.0 billion and $2.0 billion, we will be obligated to pay Ionis sales milestones in the amount of $50.0 million for each sales milestone reached by each Lipid Drug. If and when triggered, we will pay Ionis each of these sales milestones over the subsequent 12 quarters in equal payments.

To sublicense one or more Lipid Drugs licensed to us under this agreement, we will need to mutually agree on the terms of the sublicense with Ionis. If we sublicense any one of the Lipid Drugs to a commercial partner, we will share 50% of any revenue from the commercial partner with Ionis, excluding (i) money received from our partner specifically designated to fund future research and development costs and (ii) money we are obligated to spend in support of commercialization of a Lipid Drug in a co-commercialization arrangement. Regarding our Novartis collaboration, we paid Ionis $15.0 million of the $75.0 million upfront option payment we received from Novartis. We will share with Ionis 50% of any additional payments we receive from Novartis, excluding money received specifically designated to fund future development costs and money we are obligated to spend to co-commercialize a drug.

We may terminate this agreement if Ionis is in material breach of the agreement. Ionis may terminate this agreement if we are in material breach of the agreement. In each circumstance the party that is in breach will have an opportunity to cure the breach prior to the other party terminating this agreement.

In the first quarter of 2017, we entered into letter agreements with Ionis to reflect the agreed upon payment terms with respect to the upfront option payment that we received from Novartis and to allocate the premium that Novartis paid for Ionis' common stock in connection with our strategic collaboration.

In April 2017, Ionis granted us a right of first negotiation with respect to Ionis development candidates that are designed to treat a rare cardiometabolic disease or a rare inherited metabolic disease, where we have the capability and financial and other resources to develop and commercialize the development candidate and Ionis does not have an agreement with a third party that would preclude granting us this right. If we exercise our right of first negation for an eligible development candidate, we and Ionis will negotiate in good faith the terms of an exclusive license for us to develop and commercialize the development candidate. If we and Ionis cannot agree to the terms of such a license, Ionis may grant a license to a third party on terms no more favorable than Ionis last offered to us. This right of first negotiation expires in April 2024.

Services agreement with Ionis

In December 2015, we entered into a services agreement with Ionis. Under the services agreement, Ionis provides us certain services, including, without limitation, general and administrative support services and development support services. Ionis has allocated a certain percentage of personnel to perform the services that it provides to us based on its good faith estimate of the required services. We pay Ionis for these allocated costs, which reflect the Ionis full-time equivalent, or FTE, rate for the applicable personnel, plus out-of-pocket expenses such as occupancy costs associated with the FTEs allocated to providing us these services.

In addition, as long as Ionis continues to consolidate our financials, we will comply with Ionis' policies and procedures and internal controls. As long as we are consolidated into Ionis' financial statements under U.S. GAAP, we may continue to access the following services from Ionis:

- investor relations services,
- human resources and personnel services,
- risk management and insurance services,
- tax related services,
- corporate record keeping services,
- financial and accounting services,
- credit series, and
- COO/CFO/CBO oversight.

However, if we wanted to provide for our own human resources and personnel services, and doing so would not negatively impact Ionis' internal controls and procedures for financial reporting, we can negotiate in good faith with Ionis for a reduced scope of services related to human resources and personnel services. When Ionis determines it should no longer consolidate our financials, we may mutually agree with Ionis in writing to extend the term in six-month increments.

We can establish our own benefits programs or can continue to use Ionis' benefits, however we must provide Ionis a minimum advance notice to opt-out of using Ionis' benefits. We do not currently plan to establish our own benefits program at this time or in the near future.

As of December 31, 2017, we owed Ionis $14.4 million.

Development, commercialization, collaboration and license agreement and related stock purchase agreement with Ionis

In March 2018, we entered into a development, commercialization, collaboration and license agreement (the "***License Agreement***") and a related stock purchase agreement (the "***Stock Purchase Agreement***") with Ionis, which was approved by our stockholders other than Ionis and its affiliates at a special meeting of stockholders held on April 16, 2018 and closed on April 17, 2018. In accordance with the terms and provisions of the License Agreement, we receive the rights to commercialize inotersen and perform certain other non-commercial activities with respect to inotersen, in each case, in accordance with a global strategic plan; assist in the development, through

the completion of all pivotal studies, of a follow-on drug to inotersen, AKCEA-TTR-L_{Rx} and perform other non-commercial activities with respect to AKCEA-TTR-L_{Rx}; commercialize AKCEA-TTR-L_{Rx}, following receipt of regulatory approval in accordance with a global strategic plan; share in profits of sales and losses incurred with respect to inotersen and AKCEA-TTR-L_{Rx}; and manufacture (including through a third party) each product following receipt of regulatory approval for such product.

At closing, as payment for the grant of rights to us under the License Agreement, we paid an upfront licensing fee of $150 million, payable in shares of our common stock priced by reference to a recent trading average. To support our commercialization of inotersen and AKCEA-TTR-LRx, Ionis purchased $200 million of our common stock at the same price per share. We agreed to share inotersen and AKCEA-TTR-L_{Rx} profits and losses with Ionis as follows: for inotersen, beginning on the earlier of (i) the first day of the quarter after receipt of regulatory approval of inotersen in the United States, or (ii) January 1, 2019, we will share profits and losses from the development and commercialization of inotersen with Ionis (A) on a 60/40 basis (60% to Ionis and 40% to us) through the end of the quarter in which the first commercial sale of AKCEA-TTR-L_{Rx} occurs, and (B) on a 50/50 basis commencing on the first day of the first quarter thereafter; and for AKCEA-TTR-L_{Rx}, beginning January 1, 2018, we will share all profits and losses from the development and commercialization of AKCEA-TTR-L_{Rx} on a 50/50 basis with Ionis. In addition, we will be obligated to make milestone payments to Ionis in connection with the achievement of certain development, regulatory and commercialization events. We may elect to pay each milestone payment in cash or shares of our common stock and Ionis may require payment in shares of common stock. Once we have achieved the milestone event for aggregate worldwide annual net sales of $750 million for the products, all subsequent milestone payments must be paid in cash. In connection with the transaction, we amended our Certificate of Incorporation to increase the authorized shares of common stock from 100,000,000 shares to 125,000,000 shares.

Line of credit agreement with Ionis

In January 2017, we entered into a line of credit agreement with Ionis for up to $150.0 million. We had $106.0 million outstanding as of June 30, 2017. We used a portion of the $106.0 million to pay our intercompany expenses. The amounts we borrowed under the line of credit bore interest at an annual interest rate of 4%, compounded monthly. The outstanding principal and accrued interest under our line of credit converted into 13,438,339 shares of our common stock in connection with the closing of our IPO. We no longer have access to this line of credit following the closing of our IPO.

Ionis participation in the IPO

Ionis purchased 3,125,000 shares of common stock in our IPO for an aggregate purchase price of $25.0 million.

Strategic collaboration with Novartis

In January 2017, we initiated a strategic collaboration with Novartis Pharma AG ("Novartis"), the holder of approximately 9.35% of our common stock as of April 9, 2018, for the development and commercialization of AKCEA-APO(a)-L_{Rx} and AKCEA-APOCIII-L_{Rx}. Under the strategic collaboration, option and license agreement, Novartis has an exclusive option to develop and commercialize these drugs. We are responsible for completing a Phase 2 program and conducting an end-of-Phase 2 meeting with the FDA for each drug and delivering API. Following the successful completion of each Phase 2 program, and prior to initiation of the Phase 3 study, Novartis will be able to exercise its option to license and commercialize each drug. Novartis will have 60 days following the end of the applicable end-of-Phase 2 meeting to exercise its option for each of these drugs. If Novartis exercises its option for a drug, Novartis will be responsible, at its expense, to use commercially reasonable efforts to develop and commercialize that drug. We received $75.0 million in an upfront option payment, of which we retained $60.0 million and paid Ionis $15.0 million as a sublicense fee under our license agreement with Ionis. In conjunction with this collaboration, Novartis purchased $100.0 million of Ionis' common stock at a premium. During 2017, we recognized $55.2 million of revenue related to our Novartis collaboration.

If Novartis exercises its option for a drug, Novartis will pay us a license fee equal to $150.0 million for each drug licensed by Novartis. In addition, for AKCEA-APO(a)-L_{Rx}, we are eligible to receive up to $600.0 million in substantive milestone payments, including $25.0 million for the achievement of a development milestone, up to $290.0 million for the achievement of regulatory milestones and up to $285.0 million for the achievement of commercialization milestones. In addition, for AKCEA-APOCIII-L_{Rx}, we are eligible to receive up to $530.0 million in substantive milestone payments, including $25.0 million for the achievement of a development milestone, up to

$240.0 million for the achievement of regulatory milestones and up to $265.0 million for the achievement of commercialization milestones. We will earn the next milestone payment of $25.0 million under this collaboration if Novartis advances the Phase 3 study for either drug. We are also eligible to receive tiered royalties in the mid-teens to low-twenty percent range on net sales of AKCEA-APO(a)-L_{Rx} and AKCEA-APOCIII-L_{Rx}. Novartis will reduce these royalties upon the expiration of certain patents or if a generic competitor negatively impacts the product in a specific country. We will pay 50% of these license fees, milestone payments and royalties to Ionis as a sublicense fee.

For each product Novartis commercializes under this agreement, we will have the right to co-commercialize the product with Novartis in selected markets, through the specialized sales force we are building to commercialize volanesorsen, on terms and conditions that we plan to negotiate with Novartis in the future.

If Novartis does not exercise its option, or stops developing or commercializing after exercising its option with respect to a particular drug, we will have all rights to develop or commercialize the drug (including the right to sublicense these rights to a third party) at our sole expense. If Novartis stops developing or commercializing a drug after exercising its option, and we subsequently commercialize the drug on our own or with another party, we are required to negotiate in good faith and mutually agree with Novartis the terms of a royalty payable to Novartis on the returned drug.

The agreement with Novartis will continue until the earlier of the date that all of Novartis' options to obtain the exclusive licenses under the agreement expire unexercised or, if Novartis exercises its options, until the expiration of all payment obligations under the agreement. In addition, the agreement as a whole or with respect to any drug under the agreement may terminate early under the following situations:

- Novartis may terminate the agreement as a whole or with respect to any drug at any time by providing written notice to us;
- Either we or Novartis may terminate the agreement with respect to any drug by providing written notice to the other party in good faith that we or Novartis have determined that the continued development or commercialization of the drug presents safety concerns that pose an unacceptable risk or threat of harm in humans or would violate any applicable law, ethical principles or principles of scientific integrity;
- Either we or Novartis may terminate the agreement for a drug by providing written notice to the other party upon the other party's uncured failure to perform a material obligation related to the drug under the agreement, or the entire agreement if the other party becomes insolvent; and
- We may terminate the agreement if Novartis disputes or assists a third party to dispute the validity of any of our or Ionis' patents.

Additionally, in January 2017, we and Ionis entered into a stock purchase agreement with Novartis, pursuant to which Novartis purchased $50.0 million of our common stock in a separate private placement concurrent with the completion of our IPO at a price per share equal to the IPO price.

Indemnification

We have entered into indemnity agreements with each of our executive officers and Directors and certain non-executive officers which provide, among other things, that we will indemnify such officer or Director, under the circumstances and to the extent provided for therein, for expenses, damages, judgments, fines and settlements he or she may be required to pay in actions or proceedings which he or she is or may be made a party by reason of his or her position as a Director, officer or other agent of Akcea, and otherwise to the fullest extent permitted under Delaware law and our bylaws. Our bylaws provide that we will indemnify our Directors and executive officers to the fullest extent not prohibited by Delaware law or any other applicable law, except that we will generally not be required to indemnify a Director or executive officer in connection with any proceeding initiated by such Director or executive officer.

Policies and Procedures Regarding Related Party Transactions

Prior to our initial public offering in July 2017, we did not have a formal policy regarding approval of transactions with related parties. We have adopted a related person transaction policy that sets forth our procedures for the identification, review, consideration and approval or ratification of related person transactions. For purposes of our policy only, a related person transaction is a transaction, arrangement or relationship, or any series of similar transactions, arrangements or relationships, in which we and any related person are, were or will be participants in which the amount involved exceeds $120,000. Transactions involving compensation for services provided to us as an employee or director are not covered by this policy. A related person is any executive officer, director or beneficial owner of more than 5% of any class of our voting securities, including any of their immediate family members and any entity owned or controlled by such persons.

Under the policy, if a transaction has been identified as a related person transaction, including any transaction that was not a related person transaction when originally consummated or any transaction that was not initially identified as a related person transaction prior to consummation, our management must present information regarding the related person transaction to our audit committee, or, if audit committee approval would be inappropriate, to another independent body of our board of directors, for review, consideration and approval or ratification. The presentation must include a description of, among other things, the material facts, the interests, direct and indirect, of the related persons, the benefits to us of the transaction and whether the transaction is on terms that are comparable to the terms available to or from, as the case may be, an unrelated third party or to or from employees generally. Under the policy, we will collect information that we deem reasonably necessary from each director, executive officer and, to the extent feasible, significant stockholder to enable us to identify any existing or potential related person transactions and to effectuate the terms of the policy.

In addition, under our Code of Conduct, which we adopted in connection with our initial public offering, our employees and directors will have an affirmative responsibility to disclose any transaction or relationship that reasonably could be expected to give rise to a conflict of interest.

In considering related person transactions, our audit committee, or other independent body of our board of directors, will take into account the relevant available facts and circumstances including, but not limited to: the risks, costs and benefits to us; the impact on a director's independence in the event that the related person is a director, immediate family member of a director or an entity with which a director is affiliated; the availability of other sources for comparable services or products; and the terms available to or from, as the case may be, unrelated third parties or to or from employees generally.

The policy requires that, in determining whether to approve, ratify or reject a related person transaction, our audit committee, or other independent body of our board of directors, must consider, in light of known circumstances, whether the transaction is in, or is not inconsistent with, our best interests and those of our stockholders, as our audit committee, or other independent body of our board of directors, determines in the good faith exercise of its discretion.

Other than the agreements described above under the heading "*Development, commercialization, collaboration and license agreement and related stock purchase agreement with Ionis,"* all of the transactions described above were entered into prior to the adoption of the written policy, but all were approved by our board of directors considering similar factors to those described above.

AUDIT COMMITTEE REPORT*

The Audit Committee oversees our financial reporting process on behalf of the Board of Directors. Management has the primary responsibility for the financial statements and the financial reporting process, including the systems of internal controls. In fulfilling its oversight responsibilities, the Audit Committee reviewed the audited consolidated financial statements in our Annual Report on Form 10-K for the fiscal year ended December 31, 2017 with management, including a discussion of the quality, not just the acceptability, of the accounting principles, the reasonableness of significant judgments, and the clarity of disclosures in the financial statements.

The Audit Committee reviewed with our independent registered public accountants, who are responsible for expressing an opinion on the conformity of our audited consolidated financial statements with generally accepted accounting principles, their judgments as to the quality, not just the acceptability, of our accounting principles and any other matters as are required to be discussed with the Audit Committee under generally accepted auditing standards. In addition, the Audit Committee has discussed with the independent registered public accountants, the independent registered public accountants' independence from management and Akcea, including the matters in the written disclosures required by PCAOB Rule 3526. The Audit Committee received from Ernst & Young LLP written disclosure and the letter regarding its independence as required by applicable requirements of the Public Company Accounting Oversight Board regarding Ernst & Young LLP's communications with the Audit Committee concerning independence. The Audit Committee also discussed with our independent registered public accountants the matters required by the Statement on Auditing Standards No. 1301.

The Audit Committee also reviewed and discussed together with management and the independent registered public accountants the audited consolidated financial statements for the fiscal year ended December 31, 2017, and the results of management's assessment of the effectiveness of the Company's internal control over financial reporting and the independent registered public accountants' audit of internal control over financial reporting.

The Audit Committee discussed with our independent registered public accountants the overall scope and plans for their audit. The Audit Committee met with the independent registered public accountants, with and without management present, to discuss the results of their examinations, their evaluations of our internal controls, including internal control over financial reporting, and the overall quality of our financial reporting.

In reliance on the reviews and discussions referred to above, the Audit Committee recommended to the Board of Directors, and the Board has approved, that the audited financial statements be included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2017 for filing with the SEC. The Audit Committee and the Board have also recommended, subject to stockholder approval, the selection of Ernst & Young LLP as our independent registered public accountants for 2018.

The Audit Committee
Edward M. Fitzgerald, Chairman
Christopher Gabrieli
B. Lynne Parshall

* This Section is not "soliciting material," is not deemed filed with the SEC and is not to be incorporated by reference in any filing of Akcea under the Securities Act or the Exchange Act.

HOUSEHOLDING OF MATERIALS

The SEC has adopted rules that permit companies and intermediaries (e.g. brokers) to satisfy the delivery requirements for Notice Regarding the Availability of Information Statement Materials with respect to two or more stockholders sharing the same address by delivering a single Notice Regarding the Availability of Information Statement Materials addressed to those stockholders. This process, which is commonly referred to as "householding," potentially means extra convenience for stockholders and cost savings for companies.

This year, a number of brokers with account holders who are our stockholders will be "householding" our information statement materials. A single Notice Regarding the Availability of Information Statement Materials will be delivered to multiple stockholders sharing an address unless contrary instructions have been received from the affected stockholders. Once you have been notified by your broker that they will be "householding" communications to your address, "householding" will continue until you are notified otherwise or until you revoke your consent. If, at any time, you no longer wish to participate in "householding" and would prefer to receive a separate Notice Regarding the Availability of Information Statement Materials, please notify your broker and direct your written request to Akcea Therapeutics, Inc., Attn: Corporate Secretary, 55 Cambridge Parkway, Suite 100, Cambridge, Massachusetts 02142, or contact our Corporate Secretary at (617) 207-0202 and we will promptly provide you a separate Notice Regarding the Availability of Information Statement Materials. Stockholders who currently receive multiple copies of the Information Statement or Notice Regarding the Availability of Information Statement Materials at their address and would like to request "householding" of their communications should contact their broker.

Other Matters

The Board of Directors knows of no other matters that will be presented for consideration at the Annual Meeting.

For further information about Akcea Therapeutics, Inc., please request a free copy of our Annual Report on Form 10-K for the year ended December 31, 2017 that we filed with the SEC. Please send written requests to:

Patrick O'Neil, Corporate Secretary
Akcea Therapeutics, Inc.
55 Cambridge Parkway, Suite 100
Cambridge, MA 02142

You may also visit our website (http://ir.akceatx.com/media-investors/corporate-governance) to view our 2017 Annual Report on Form 10-K. The Annual Report on Form 10-K is not incorporated into this Information Statement and is not considered soliciting material.

By Order of the Board of Directors,

Paula Soteropoulos
Chief Executive Officer

April 20, 2018

ACTION BY WRITTEN CONSENT
OF THE STOCKHOLDER OF
AKCEA THERAPEUTICS, INC.

The undersigned stockholder of **AKCEA THERAPEUTICS, INC.**, a Delaware corporation (the "***Company***"), hereby consents with respect to all shares of the Company's capital stock owned by such stockholder, pursuant to Section 228 of the Delaware General Corporation Law (the "***DGCL***"), to the adoption of the following resolutions and to the taking of the actions referred to in such resolutions:

ELECTION OF DIRECTORS

WHEREAS, in March 2018, the Board of Directors of the Company (the "***Board***") nominated for election as directors of the Company by the Company's stockholders each of Christopher Gabrieli, Stanley T. Crooke, M.D., Ph.D., Edward M. Fitzgerald, Elaine Hochberg, B. Lynne Parshall, J.D., Sandford D. Smith, and Paula Soteropoulos (collectively, the "***Director Nominees***"), and has further recommended that the stockholders of the Company vote in favor of the election of the Director Nominees to serve as directors of the Company until the Company's 2019 Annual Meeting of Stockholders or until his or her successor is duly elected and qualified;

WHEREAS, in April 2018, upon the closing of the transactions contemplated by that certain Development, Commercialization, Collaboration and License Agreement by and between the Company and Ionis Pharmaceuticals, Inc. dated March 14, 2018, the Board appointed Sarah Boyce to serve as a director of the Company and further recommended that the stockholders of the Company vote in favor of the election of Ms. Boyce to serve as a director of the Company until the Company's 2019 Annual Meeting of Stockholders or until her successor is duly elected and qualified;

NOW, THEREFORE, BE IT RESOLVED, that the undersigned hereby votes all of its shares in favor of the election of the following persons, and the following persons are therefore hereby elected, as directors of the Company, each to serve until the Company's 2019 Annual Meeting of Stockholders or until his or her successor is duly elected and qualified, or until his or her earlier death, resignation or removal:

Christopher Gabrieli
Sarah Boyce
Stanley T. Crooke, M.D., Ph.D.
Edward M. Fitzgerald
Elaine Hochberg
B. Lynne Parshall, J.D.
Sandford D. Smith
Paula Soteropoulos

AMENDMENT TO 2015 EQUITY INCENTIVE PLAN

WHEREAS, the Board has previously approved an amendment (the "***Amendment***") to the Company's 2015 Equity Incentive Plan, as amended (the "***2015 Plan,***" as amended by the Amendment, the "***Amended 2015 Plan***"), to increase the number of shares of Common Stock reserved for issuance pursuant to the 2015 Plan by 5,000,000 shares from 8,500,000 shares of Common Stock to 13,500,000 shares of Common Stock; and

WHEREAS, the Board has directed that the Amended 2015 Plan, in substantially the form attached hereto as Exhibit A, be submitted to the stockholders of the Company for their consideration and approval in accordance with applicable law.

NOW, THEREFORE, BE IT RESOLVED, that the Amended 2015 Plan, and all issuances of Common Stock effected pursuant to such increase, be, and such increase and issuances hereby are, ratified, confirmed and approved in all respects; and;

RESOLVED FURTHER, that the officers of the Company be, and each of them hereby is, authorized and directed, for and on behalf of the Company, to take such further action and execute such additional documents as each may deem necessary or appropriate to carry out the foregoing resolutions.

RATIFICATION OF SELECTION OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

WHEREAS, the Audit Committee of the Board has selected Ernst & Young LLP as the Company's independent registered public accounting firm for the Company's 2018 fiscal year, and requested management to ask for stockholder ratification of such selection.

NOW, THEREFORE, BE IT RESOLVED, that the selection by the Audit Committee of the Board of Ernst & Young LLP as the Company's independent registered public accounting firm for the Company's 2018 fiscal year be, and it hereby is, ratified.

GENERAL AUTHORIZING RESOLUTION; EFFECTIVE DATE

RESOLVED, that the officers of the Company be, and each of them hereby is, authorized and directed, for and on behalf of the Company, to take such further actions and execute such further documents, as they deem necessary or appropriate to effectuate the intent of the foregoing resolutions, including without limitation the filing and distribution of any Information Statement required to be filed and distributed in accordance with Regulation 14C of the Securities Exchange Act of 1934, as amended.

RESOLVED FURTHER, that, subject to any waiting period required by applicable law, this Action by Written Consent shall be effective immediately upon delivery of counterparts signed by stockholders having not less than the minimum number of votes that would be necessary to authorize or take the above actions at a meeting at which all shares entitled to vote thereon were present and voted to the Company (the "***Effective Date***").

This Action by Written Consent may be executed and delivered in multiple counterparts (including facsimile, PDF or other electronic counterparts), each of which, when taken together, will constitute one document. This Action by Written Consent shall be filed with the minutes of the proceedings of the stockholders of the Company, and said resolutions shall have the same force and effect as if they were adopted at a meeting at which the undersigned were personally present.

IN WITNESS WHEREOF, the undersigned have executed this **ACTION BY WRITTEN CONSENT OF THE STOCKHOLDER** as of April 17, 2018.

STOCKHOLDER:

IONIS PHARMACEUTICALS, INC.

/s/ Patrick O'Neil
(Signature)

Patrick O'Neil
(Print Name)

SVP Legal
(Title, if applicable)

EXHIBIT A

AMENDED 2015 PLAN

AKCEA THERAPEUTICS, INC.
2015 EQUITY INCENTIVE PLAN

ADOPTED BY THE BOARD OF DIRECTORS: DECEMBER 16, 2015
APPROVED BY THE STOCKHOLDERS: DECEMBER 16, 2015
AMENDED BY THE BOARD OF DIRECTORS: JULY 15, 2016
APPROVED BY THE STOCKHOLDERS: JULY 15, 2016
AMENDED BY THE BOARD OF DIRECTORS: MAY 2, 2017
APPROVED BY THE STOCKHOLDERS: JUNE 19, 2017
AMENDED BY THE BOARD OF DIRECTORS: DECEMBER 5, 2017
APPROVED BY THE STOCKHOLDERS: APRIL 17, 2018
TERMINATION DATE: DECEMBER 15, 2025

1. General.

(a) Eligible Stock Award Recipients. The persons eligible to receive Stock Awards are Employees, Directors and Consultants.

(b) Available Stock Awards. The Plan provides for the grant of the following Stock Awards: (i) Incentive Stock Options, (ii) Nonstatutory Stock Options, (iii) Restricted Stock Awards, (iv) Restricted Stock Unit Awards, and (v) Stock Appreciation Rights.

(c) Purpose. The Company, by means of the Plan, seeks to secure and retain the services of the group of persons eligible to receive Stock Awards as set forth in Section 1(a), to provide incentives for such persons to exert maximum efforts for the success of the Company and any Affiliate, and to provide a means by which such eligible recipients may be given an opportunity to benefit from increases in value of the Common Stock through the granting of Stock Awards.

2. Administration.

(a) Administration by Board. The Board shall administer the Plan unless and until the Board delegates administration of the Plan to a Committee, as provided in Section 2(c).

(b) Powers of Board. The Board shall have the power, subject to, and within the limitations of, the express provisions of the Plan:

(i) To determine from time to time (A) which of the persons eligible under the Plan shall be granted Stock Awards; (B) when and how each Stock Award shall be granted; (C) what type or combination of types of Stock Award shall be granted; (D) the provisions of each Stock Award granted (which need not be identical), including the time or times when a person shall be permitted to receive cash or Common Stock pursuant to a Stock Award; (E) the number of shares of Common Stock with respect to which a Stock Award shall be granted to each such person; and (F) the Fair Market Value applicable to a Stock Award.

(ii) To construe and interpret the Plan and Stock Awards granted under it, and to establish, amend and revoke rules and regulations for administration of the Plan. The Board, in the exercise of this power, may correct any defect, omission or inconsistency in the Plan or in any Stock Award Agreement, in a manner and to the extent it shall deem necessary or expedient to make the Plan or Stock Award fully effective.

(iii) To settle all controversies regarding the Plan and Stock Awards granted under it.

(iv) To accelerate the time at which a Stock Award may first be exercised or the time during which a Stock Award or any part thereof will vest in accordance with the Plan, notwithstanding the provisions in the Stock Award stating the time at which it may first be exercised or the time during which it will vest.

(v) To suspend or terminate the Plan at any time. Suspension or termination of the Plan shall not impair rights and obligations under any Stock Award granted while the Plan is in effect except with the written consent of the affected Participant.

(vi) To amend the Plan in any respect the Board deems necessary or advisable, including, without limitation, relating to Incentive Stock Options and certain nonqualified deferred compensation under Section 409A of the Code and/or to bring the Plan or Stock Awards granted under the Plan into compliance therewith, subject to the limitations, if any, of applicable law. However, except as provided in Section 9(a) relating to Capitalization Adjustments, to the extent required by applicable law, stockholder approval shall be required for any amendment of the Plan that either (i) materially increases the number of shares of Common Stock available for issuance under the Plan, (ii) materially expands the class of individuals eligible to receive Stock Awards under the Plan, (iii) materially increases the benefits accruing to Participants under the Plan or materially reduces the price at which shares of Common Stock may be issued or purchased under the Plan, (iv) materially extends the term of the Plan, or (v) expands the types of Stock Awards available for issuance under the Plan. Except as provided above, rights under any Stock Award granted before amendment of the Plan shall not be impaired by any amendment of the Plan unless (i) the Company requests the consent of the affected Participant, and (ii) such Participant consents in writing.

(vii) To submit any amendment to the Plan for stockholder approval, including, but not limited to, amendments to the Plan intended to satisfy the requirements of Section 422 of the Code regarding Incentive Stock Options.

(viii) To approve forms of Stock Award Agreements for use under the Plan and to amend the terms of any one or more Stock Awards, including, but not limited to, amendments to provide terms more favorable than previously provided in the Stock Award Agreement, subject to any specified limits in the Plan that are not subject to Board discretion; *provided however*, that, the rights under any Stock Award shall not be impaired by any such amendment unless (i) the Company requests the consent of the affected Participant, and (ii) such Participant consents in writing. Notwithstanding the foregoing, subject to the limitations of applicable law, if any, and without the affected Participant's consent, the Board may amend the terms of any one or more Stock Awards if necessary to maintain the qualified status of the Stock Award as an Incentive Stock Option or to bring the Stock Award into compliance with Section 409A of the Code and the related guidance thereunder.

(ix) Generally, to exercise such powers and to perform such acts as the Board deems necessary or expedient to promote the best interests of the Company and that are not in conflict with the provisions of the Plan or Stock Awards.

(x) To adopt such procedures and sub-plans as are necessary or appropriate to permit participation in the Plan by Employees, Directors or Consultants who are foreign nationals or employed outside the United States.

(xi) To effect, at any time and from time to time, with the consent of any adversely affected Optionholder, (1) the reduction of the exercise price of any outstanding Option under the Plan, (2) the cancellation of any outstanding Option under the Plan and the grant in substitution therefor of (A) a new Option under the Plan or another equity plan of the Company covering the same or a different number of shares of Common Stock, (B) a Restricted Stock Award, (C) a Stock Appreciation Right, (D) Restricted Stock Unit, (E) cash and/or (F) other valuable consideration (as determined by the Board, in its sole discretion), or (3) any other action that is treated as a repricing under generally accepted accounting principles; provided, however, that no such reduction or cancellation may be effected if it is determined, in the Company's sole discretion, that such reduction or cancellation would result in any such outstanding Option becoming subject to the requirements of Section 409A of the Code.

(c) Delegation to Committee. The Board may delegate some or all of the administration of the Plan to a Committee or Committees. If administration of the Plan is delegated to a Committee, the Committee shall have, in connection with the administration of the Plan, the powers theretofore possessed by the Board that have been delegated to the Committee, including the power to delegate to a subcommittee of the Committee any of the administrative powers the Committee is authorized to exercise (and references in this Plan to the Board shall thereafter be to the Committee or subcommittee), subject, however, to such resolutions, not

inconsistent with the provisions of the Plan, as may be adopted from time to time by the Board. The Board may retain the authority to concurrently administer the Plan with the Committee and may, at any time, revest in the Board some or all of the powers previously delegated.

(d) Delegation to an Officer. The Board may delegate to one or more Officers of the Company the authority to do one or both of the following: (i) designate Officers (other than Officers of a Vice President level or senior thereto) and Employees of the Company or any of its Subsidiaries to be recipients of Options (and, to the extent permitted by applicable law, other Stock Awards) and the terms thereof, and (ii) determine the number of shares of Common Stock to be subject to such Stock Awards granted to such Officers and Employees; provided, however, that the Board resolutions regarding such delegation shall specify the total number of shares of Common Stock that may be subject to the Stock Awards granted by such Officer and that such Officer may not grant a Stock Award to himself or herself. Notwithstanding the foregoing, the Board may not delegate authority to an Officer to determine the Fair Market Value of the Common Stock pursuant to Section 13(t) below.

(e) Effect of Board's Decision. All determinations, interpretations and constructions made by the Board in good faith shall not be subject to review by any person and shall be final, binding and conclusive on all persons.

(f) Arbitration. Any dispute or claim concerning any Stock Awards granted (or not granted) pursuant to the Plan or any disputes or claims relating to or arising out of the Plan shall be fully, finally and exclusively resolved by binding and confidential arbitration conducted pursuant to the Commercial Arbitration Rules of the American Arbitration Association in San Diego, California. The Company shall pay all arbitration fees. In addition to any other relief, the arbitrator may award to the prevailing party recovery of its attorneys' fees and costs. By accepting a Stock Award, Participants and the Company waive their respective rights to have any such disputes or claims tried by a judge or jury.

3. Shares Subject to the Plan.

(a) Share Reserve. Subject to Section 9(a) relating to Capitalization Adjustments, the aggregate number of shares of Common Stock of the Company that may be issued pursuant to Stock Awards after the Effective Date shall not exceed 13,500,000[1] shares . For clarity, the limitation in this Section 3(a) is a limitation in the number of shares of Common Stock that may be issued pursuant to the Plan. Accordingly, this Section 3(a) does not limit the granting of Stock Awards except as provided in Section 7(a).

(b) Reversion of Shares to the Share Reserve. If any shares of Common Stock issued pursuant to a Stock Award are forfeited back to the Company because of the failure to meet a contingency or condition required to vest such shares in the Participant, then the shares which are forfeited shall revert to and again become available for issuance under the Plan. Also, any shares reacquired by the Company pursuant to Section 8(g) or as consideration for the exercise of an Option shall again become available for issuance under the Plan. Furthermore, if a Stock Award (i) expires or otherwise terminates without having been exercised in full or (ii) is settled in cash (i.e., the holder of the Stock Award receives cash rather than stock), such expiration, termination or settlement shall not reduce (or otherwise offset) the number of shares of Common Stock that may be issued pursuant to the Plan. Notwithstanding the provisions of this Section 3(b), any such shares shall not be subsequently issued pursuant to the exercise of Incentive Stock Options.

(c) Incentive Stock Option Limit. Notwithstanding anything to the contrary in this Section 3(c), subject to the provisions of Section 9(a) relating to Capitalization Adjustments, the aggregate maximum number of shares of Common Stock that may be issued pursuant to the exercise of Incentive Stock Options shall be twice the number of shares that may be issued pursuant to all Stock Awards as set forth in Section 3(a) above.

(d) Source of Shares. The stock issuable under the Plan shall be shares of authorized but unissued or reacquired Common Stock, including shares repurchased by the Company on the open market.

4. Eligibility.

(a) Eligibility for Specific Stock Awards. Incentive Stock Options may be granted only to employees of the

[1] This is the sum of (i) 6,340,508 shares originally approved by the Company's stockholders in December 2015 (adjusted for the reverse stock split in connection with the Company's initial public offering), plus (ii) 2,159,492 shares approved by the Company's stockholders in June 2017, plus (iii) 5,000,000 new shares.

Company or a "parent corporation" or "subsidiary corporation" thereof (as such terms are defined in Sections 424(e) and (f) of the Code). Stock Awards other than Incentive Stock Options may be granted to Employees, Directors and Consultants.

(b) Ten Percent Stockholders. A Ten Percent Stockholder shall not be granted an Incentive Stock Option unless the exercise price of such Option is at least one hundred ten percent (110%) of the Fair Market Value of the Common Stock on the date of grant and the Option is not exercisable after the expiration of five (5) years from the date of grant.

(c) Consultants. A Consultant shall not be eligible for the grant of a Stock Award if, at the time of grant, either the offer or the sale of the Company's securities to such Consultant is not exempt under Rule 701 of the Securities Act ("***Rule 701***") because of the nature of the services that the Consultant is providing to the Company, because the Consultant is not a natural person, or because of any other provision of Rule 701, unless the Company determines that such grant need not comply with the requirements of Rule 701 and will satisfy another exemption under the Securities Act as well as comply with the securities laws of all other relevant jurisdictions.

5. Option Provisions.

Each Option shall be in such form and shall contain such terms and conditions as the Board shall deem appropriate. All Options shall be separately designated Incentive Stock Options or Nonstatutory Stock Options at the time of grant, and, if certificates are issued, a separate certificate or certificates shall be issued for shares of Common Stock purchased on exercise of each type of Option. If an Option is not specifically designated as an Incentive Stock Option, then the Option shall be a Nonstatutory Stock Option. The provisions of separate Options need not be identical; *provided*, *however*, that each Option Agreement shall include (through incorporation of provisions hereof by reference in the Option Agreement or otherwise) the substance of each of the following provisions:

(a) Term. Subject to the provisions of Section 4(b) regarding Ten Percent Stockholders, no Option shall be exercisable after the expiration of ten (10) years from the date of its grant or such shorter period specified in the Option Agreement.

(b) Exercise Price. Subject to the provisions of Section 4(b) regarding Incentive Stock Options granted to Ten Percent Stockholders, the exercise price of each Option shall be not less than one hundred percent (100%) of the Fair Market Value of the Common Stock subject to the Option on the date the Option is granted. Notwithstanding the foregoing, an Option may be granted with an exercise price lower than one hundred percent (100%) of the Fair Market Value of the Common Stock subject to the Option if such Option is granted pursuant to an assumption or substitution for another option in a manner consistent with the provisions of Section 424(a) of the Code (whether or not such options are Incentive Stock Options).

(c) Consideration. The purchase price of Common Stock acquired pursuant to the exercise of an Option shall be paid, to the extent permitted by applicable law and as determined by the Board in its sole discretion, by any combination of the methods of payment set forth below. The Board shall have the authority to grant Options that do not permit all of the following methods of payment (or otherwise restrict the ability to use certain methods) and to grant Options that require the consent of the Company to utilize a particular method of payment. The permitted methods of payment are as follows:

(i) by cash, check, bank draft or money order payable to the Company;

(ii) pursuant to a program developed under Regulation T as promulgated by the Federal Reserve Board that, prior to the issuance of the stock subject to the Option, results in either the receipt of cash (or check) by the Company or the receipt of irrevocable instructions to pay the aggregate exercise price to the Company from the sales proceeds;

(iii) by delivery to the Company (either by actual delivery or attestation) of shares of Common Stock;

(iv) by a "net exercise" arrangement pursuant to which the Company will reduce the number of shares of Common Stock issued upon exercise by the largest whole number of shares with a Fair Market Value that does not exceed the aggregate exercise price; *provided*, *however*, that the Company shall accept a cash or other payment from the Participant to the extent of any remaining balance of the aggregate exercise price not satisfied by such reduction in the number of whole shares to be issued; *provided*, *further*, that shares of Common Stock will no longer be outstanding under an Option and will not be

exercisable thereafter to the extent that (A) shares are used to pay the exercise price pursuant to the "net exercise," (B) shares are delivered to the Participant as a result of such exercise, and (C) shares are withheld to satisfy tax withholding obligations;

(v) according to a deferred payment or similar arrangement approved by the Board between the Company and the Optionholder; *provided*, *however*, that interest shall compound at least annually and shall be charged at the minimum rate of interest necessary to avoid (A) the imputation of interest income to the Company and compensation income to the Optionholder under any applicable provisions of the Code, and (B) the classification of the Option as a liability for financial accounting purposes; or

(vi) in any other form of legal consideration that may be acceptable to the Board.

(d) Transferability of Options. The Board may, in its sole discretion, impose such limitations on the transferability of Options as the Board shall determine. In the absence of such a determination by the Board to the contrary, the following restrictions on the transferability of Options shall apply:

(i) Restrictions on Transfer. An Option shall not be transferable except by will or by the laws of descent and distribution and shall be exercisable during the lifetime of the Optionholder only by the Optionholder; *provided*, *however*, that the Board may, in its sole discretion, permit transfer of the Option to such extent as permitted by Rule 701 of the Securities Act at the time of the grant of the Option and in a manner consistent with applicable tax and securities laws upon the Optionholder's request.

(ii) Domestic Relations Orders. Notwithstanding the foregoing, an Option may be transferred pursuant to a domestic relations order, *provided*, *however*, that an Incentive Stock Option may be deemed to be a Nonstatutory Stock Option as a result of such transfer.

(iii) Beneficiary Designation. Notwithstanding the foregoing, the Optionholder may, by delivering written notice to the Company, in a form provided by or otherwise satisfactory to the Company, designate a third party who, in the event of the death of the Optionholder, shall thereafter be the beneficiary of an Option with the right to exercise the Option and receive the Common Stock or other consideration resulting from the Option exercise.

(e) Vesting of Options Generally. The total number of shares of Common Stock subject to an Option may vest and therefore become exercisable in periodic installments that may or may not be equal. The Option may be subject to such other terms and conditions on the time or times when it may or may not be exercised (which may be based on the satisfaction of performance goals or other criteria) as the Board may deem appropriate. The vesting provisions of individual Options may vary. The provisions of this Section 5(e) are subject to any Option provisions governing the minimum number of shares of Common Stock as to which an Option may be exercised.

(f) Termination of Continuous Service. Except as otherwise provided in the applicable Option Agreement or other agreement between the Optionholder and the Company, in the event that an Optionholder's Continuous Service terminates (other than upon the Optionholder's death or Disability), the Optionholder may exercise his or her Option (to the extent that the Optionholder was entitled to exercise such Option as of the date of termination of Continuous Service) but only within such period of time ending on the earlier of (i) the date three (3) months following the termination of the Optionholder's Continuous Service (or such longer or shorter period specified in the Option Agreement, which period shall not be less than thirty (30) days), or (ii) the expiration of the term of the Option as set forth in the Option Agreement. If, after termination of Continuous Service, the Optionholder does not exercise his or her Option within the time specified herein or in the Option Agreement (as applicable), the Option shall terminate.

(g) Extension of Termination Date. Except as otherwise provided in the applicable Option Agreement or other agreement between the Optionholder and the Company, if the exercise of the Option following the termination of the Optionholder's Continuous Service (other than upon the Optionholder's death or Disability) would be prohibited at any time solely because the issuance of shares of Common Stock would violate the registration requirements under the Securities Act, then the Option shall terminate on the earlier of (i) the expiration of a period of three (3) months after the termination of the Optionholder's Continuous Service during which the exercise of the Option would not be in violation of such registration requirements, or (ii) the expiration of the term of the Option as set forth in the Option Agreement.

(h) Disability of Optionholder. Except as otherwise provided in the applicable Option Agreement or other agreement between the Optionholder and the Company, in the event that an Optionholder's Continuous Service terminates as a result of the Optionholder's Disability, the Optionholder may exercise his or her Option (to the extent that the Optionholder was entitled to exercise such Option as of the date of termination of Continuous Service), but only within such period of time ending on the earlier of (i) the date twelve (12) months following such termination of Continuous Service (or such longer or shorter period specified in the Option Agreement, which period shall not be less than six (6) months), or (ii) the expiration of the term of the Option as set forth in the Option Agreement. If, after termination of Continuous Service, the Optionholder does not exercise his or her Option within the time specified herein or in the Option Agreement (as applicable), the Option shall terminate.

(i) Death of Optionholder. Except as otherwise provided in the applicable Option Agreement or other agreement between the Optionholder and the Company, in the event that (i) an Optionholder's Continuous Service terminates as a result of the Optionholder's death, or (ii) the Optionholder dies within the period (if any) specified in the Option Agreement after the termination of the Optionholder's Continuous Service for a reason other than death, then the Option may be exercised (to the extent the Optionholder was entitled to exercise such Option as of the date of death) by the Optionholder's estate, by a person who acquired the right to exercise the Option by bequest or inheritance or by a person designated as the beneficiary of the Option upon the Optionholder's death, but only within the period ending on the earlier of (i) the date eighteen (18) months following the date of death (or such longer or shorter period specified in the Option Agreement, which period shall not be less than six (6) months), or (ii) the expiration of the term of such Option as set forth in the Option Agreement. If, after the Optionholder's death, the Option is not exercised within the time specified herein or in the Option Agreement (as applicable), the Option shall terminate. If the Optionholder designates a third party beneficiary of the Option in accordance with Section 5(d)(iii), then upon the death of the Optionholder such designated beneficiary shall have the sole right to exercise the Option and receive the Common Stock or other consideration resulting from the Option exercise.

(j) Non-Exempt Employees. No Option granted to an Employee that is a non-exempt employee for purposes of the Fair Labor Standards Act of 1938, as amended, shall be first exercisable for any shares of Common Stock until at least six months following the date of grant of the Option. The foregoing provision is intended to operate so that any income derived by a non-exempt employee in connection with the exercise or vesting of an Option will be exempt from his or her regular rate of pay.

(k) Early Exercise. The Option may, but need not, include a provision whereby the Optionholder may elect at any time before the Optionholder's Continuous Service terminates to exercise the Option as to any part or all of the shares of Common Stock subject to the Option prior to the full vesting of the Option. Subject to the "Repurchase Limitation" in Section 8(l), any unvested shares of Common Stock so purchased may be subject to a repurchase option in favor of the Company or to any other restriction the Board determines to be appropriate. Provided that the "Repurchase Limitation" in Section 8(l) is not violated, the Company shall not be required to exercise its repurchase option until at least six (6) months (or such longer or shorter period of time required to avoid classification of the Option as a liability for financial accounting purposes) have elapsed following exercise of the Option unless the Board otherwise specifically provides in the Option Agreement.

(l) Right of Repurchase. Subject to the "***Repurchase Limitation***" in Section 8(l), the Option may include a provision whereby the Company may elect to repurchase all or any part of the vested shares of Common Stock acquired by the Optionholder pursuant to the exercise of the Option.

(m) Right of First Refusal. The Option may include a provision whereby the Company may elect to exercise a right of first refusal following receipt of notice from the Optionholder of the intent to transfer all or any part of the shares of Common Stock received upon the exercise of the Option. Such right of first refusal shall be subject to the "***Repurchase Limitation***" in Section 8(l). Except as expressly provided in this Section 5(n) or in the Option Agreement, such right of first refusal shall otherwise comply with any applicable provisions of the Bylaws of the Company.

6. Provisions of Stock Awards other than Options.

(a) Restricted Stock Awards. Each Restricted Stock Award Agreement shall be in such form and shall contain such terms and conditions as the Board shall deem appropriate. To the extent consistent with the Company's

Bylaws, at the Board's election, shares of Common Stock may be (x) held in book entry form subject to the Company's instructions until any restrictions relating to the Restricted Stock Award lapse; or (y) evidenced by a certificate, which certificate shall be held in such form and manner as determined by the Board. The terms and conditions of Restricted Stock Award Agreements may change from time to time, and the terms and conditions of separate Restricted Stock Award Agreements need not be identical; *provided*, *however*, that each Restricted Stock Award Agreement shall include (through incorporation of the provisions hereof by reference in the agreement or otherwise) the substance of each of the following provisions:

(i) **Consideration**. A Restricted Stock Award may be awarded in consideration for (A) past or future services actually or to be rendered to the Company or an Affiliate, or (B) any other form of legal consideration that may be acceptable to the Board in its sole discretion and permissible under applicable law.

(ii) **Vesting**. Subject to the "Repurchase Limitation" in Section 8(l), shares of Common Stock awarded under the Restricted Stock Award Agreement may be subject to forfeiture to the Company in accordance with a vesting schedule to be determined by the Board.

(iii) **Termination of Participant's Continuous Service**. In the event a Participant's Continuous Service terminates, the Company may receive via a forfeiture condition, any or all of the shares of Common Stock held by the Participant which have not vested as of the date of termination of Continuous Service under the terms of the Restricted Stock Award Agreement.

(iv) **Transferability**. Rights to acquire shares of Common Stock under the Restricted Stock Award Agreement shall be transferable by the Participant only upon such terms and conditions as are set forth in the Restricted Stock Award Agreement, as the Board shall determine in its sole discretion, so long as Common Stock awarded under the Restricted Stock Award Agreement remains subject to the terms of the Restricted Stock Award Agreement.

(b) **Restricted Stock Unit Awards**. Each Restricted Stock Unit Award Agreement shall be in such form and shall contain such terms and conditions as the Board shall deem appropriate. The terms and conditions of Restricted Stock Unit Award Agreements may change from time to time, and the terms and conditions of separate Restricted Stock Unit Award Agreements need not be identical, *provided*, *however*, that each Restricted Stock Unit Award Agreement shall include (through incorporation of the provisions hereof by reference in the Agreement or otherwise) the substance of each of the following provisions:

(i) **Consideration**. At the time of grant of a Restricted Stock Unit Award, the Board will determine the consideration, if any, to be paid by the Participant upon delivery of each share of Common Stock subject to the Restricted Stock Unit Award. The consideration to be paid (if any) by the Participant for each share of Common Stock subject to a Restricted Stock Unit Award may be paid in any form of legal consideration that may be acceptable to the Board in its sole discretion and permissible under applicable law.

(ii) **Vesting**. At the time of the grant of a Restricted Stock Unit Award, the Board may impose such restrictions or conditions to the vesting of the Restricted Stock Unit Award as it, in its sole discretion, deems appropriate.

(iii) **Payment**. A Restricted Stock Unit Award may be settled by the delivery of shares of Common Stock, their cash equivalent, any combination thereof or in any other form of consideration, as determined by the Board and contained in the Restricted Stock Unit Award Agreement.

(iv) **Additional Restrictions**. At the time of the grant of a Restricted Stock Unit Award, the Board, as it deems appropriate, may impose such restrictions or conditions that delay the delivery of the shares of Common Stock (or their cash equivalent) subject to a Restricted Stock Unit Award to a time after the vesting of such Restricted Stock Unit Award.

(v) **Dividend Equivalents**. Dividend equivalents may be credited in respect of shares of Common Stock covered by a Restricted Stock Unit Award, as determined by the Board and contained in the Restricted Stock Unit Award Agreement. At the sole discretion of the Board, such dividend equivalents may be converted into additional shares of Common Stock covered by the Restricted Stock Unit Award in

such manner as determined by the Board. Any additional shares covered by the Restricted Stock Unit Award credited by reason of such dividend equivalents will be subject to all the terms and conditions of the underlying Restricted Stock Unit Award Agreement to which they relate.

(vi) Termination of Participant's Continuous Service. Except as otherwise provided in the applicable Restricted Stock Unit Award Agreement, such portion of the Restricted Stock Unit Award that has not vested will be forfeited upon the Participant's termination of Continuous Service.

(vii) Compliance with Section 409A of the Code. Notwithstanding anything to the contrary set forth herein, any Restricted Stock Unit Award granted under the Plan that is not exempt from the requirements of Section 409A of the Code shall contain such provisions so that such Restricted Stock Unit Award will comply with the requirements of Section 409A of the Code. Such restrictions, if any, shall be determined by the Board and contained in the Restricted Stock Unit Award Agreement evidencing such Restricted Stock Unit Award. For example, such restrictions may include, without limitation, a requirement that any Common Stock that is to be issued in a year following the year in which the Restricted Stock Unit Award vests must be issued in accordance with a fixed pre-determined schedule.

(c) Stock Appreciation Rights. Each Stock Appreciation Right Agreement shall be in such form and shall contain such terms and conditions as the Board shall deem appropriate. Stock Appreciation Rights may be granted as stand-alone Stock Awards or in tandem with other Stock Awards. The terms and conditions of Stock Appreciation Right Agreements may change from time to time, and the terms and conditions of separate Stock Appreciation Right Agreements need not be identical; provided, however, that each Stock Appreciation Right Agreement shall include (through incorporation of the provisions hereof by reference in the agreement or otherwise) the substance of each of the following provisions:

(i) Term. No Stock Appreciation Right shall be exercisable after the expiration of ten (10) years from the date of grant or such shorter period specified in the Stock Appreciation Right Agreement.

(ii) Strike Price. Each Stock Appreciation Right will be denominated in shares of Common Stock equivalents. The strike price of each Stock Appreciation Right granted as a stand-alone or tandem Stock Award shall not be less than one hundred percent (100%) of the Fair Market Value of the Common Stock equivalents subject to the Stock Appreciation Right on the date of grant.

(iii) Calculation of Appreciation. The appreciation distribution payable on the exercise of a Stock Appreciation Right will be not greater than an amount equal to the excess of (A) the aggregate Fair Market Value (on the date of the exercise of the Stock Appreciation Right) of a number of shares of Common Stock equal to the number of shares of Common Stock equivalents in which the Participant is vested under such Stock Appreciation Right, and with respect to which the Participant is exercising the Stock Appreciation Right on such date, over (B) the strike price that will be determined by the Board on the date of grant.

(iv) Vesting. At the time of the grant of a Stock Appreciation Right, the Board may impose such restrictions or conditions to the vesting of such Stock Appreciation Right as it, in its sole discretion, deems appropriate.

(v) Exercise. To exercise any outstanding Stock Appreciation Right, the Participant must provide written notice of exercise to the Company in compliance with the provisions of the Stock Appreciation Right Agreement evidencing such Stock Appreciation Right.

(vi) Non-Exempt Employees. No Stock Appreciation Right granted to an Employee that is a non-exempt employee for purposes of the Fair Labor Standards Act of 1938, as amended, shall be first exercisable for any shares of Common Stock until at least six months following the date of grant of the Stock Appreciation Right. The foregoing provision is intended to operate so that any income derived by a non-exempt employee in connection with the exercise of a Stock Appreciation Right will be exempt from his or her regular rate of pay.

(vii) Payment. The appreciation distribution in respect to a Stock Appreciation Right may be paid in Common Stock, in cash, in any combination of the two or in any other form of consideration, as determined by the Board and contained in the Stock Appreciation Right Agreement evidencing such Stock Appreciation Right.

(viii) Termination of Continuous Service. Except as otherwise provided in the applicable Stock Appreciation Right Agreement or other agreement between the Participant and the Company, in the event that a Participant's Continuous Service terminates (other than upon the Participant's death or Disability), the Participant may exercise his or her Stock Appreciation Right (to the extent that the Participant was entitled to exercise such Stock Appreciation Right as of the date of termination of Continuous Service) but only within such period of time ending on the earlier of (A) the date three (3) months following the termination of the Participant's Continuous Service (or such longer or shorter period specified in the Stock Appreciation Right Agreement, which period shall not be less than thirty (30) days), or (B) the expiration of the term of the Stock Appreciation Right as set forth in the Stock Appreciation Right Agreement. If, after termination of Continuous Service, the Participant does not exercise his or her Stock Appreciation Right within the time specified herein or in the Stock Appreciation Right Agreement (as applicable), the Stock Appreciation Right shall terminate.

(ix) Disability of Participant. Except as otherwise provided in the applicable Stock Appreciation Right Agreement or other agreement between the Participant and the Company, in the event that a Participant's Continuous Service terminates as a result of the Participant's Disability, the Participant may exercise his or her Stock Appreciation Right (to the extent that the Participant was entitled to exercise such Stock Appreciation Right as of the date of termination of Continuous Service), but only within such period of time ending on the earlier of (A) the date twelve (12) months following such termination of Continuous Service (or such longer or shorter period specified in the Stock Appreciation Right Agreement, which period shall not be less than six (6) months), or (B) the expiration of the term of the Stock Appreciation Right as set forth in the Stock Appreciation Right Agreement. If, after termination of Continuous Service, the Participant does not exercise his or her Stock Appreciation Right within the time specified herein or in the Stock Appreciation Right Agreement (as applicable), the Stock Appreciation Right shall terminate.

(x) Death of Participant. Except as otherwise provided in the applicable Stock Appreciation Right Agreement or other agreement between the Participant and the Company, in the event that (i) a Participant's Continuous Service terminates as a result of the Participant's death, or (ii) the Participant dies within the period (if any) specified in the Stock Appreciation Right Agreement after the termination of the Participant's Continuous Service for a reason other than death, then the Stock Appreciation Right may be exercised (to the extent the Participant was entitled to exercise such Stock Appreciation Right as of the date of death) by the Participant's estate, by a person who acquired the right to exercise the Stock Appreciation Right by bequest or inheritance or by a person designated as the beneficiary of the Stock Appreciation Right upon the Participant's death, but only within the period ending on the earlier of (i) the date eighteen (18) months following the date of death (or such longer or shorter period specified in the Stock Appreciation Right Agreement, which period shall not be less than six (6) months), or (ii) the expiration of the term of such Stock Appreciation Right as set forth in the Stock Appreciation Right Agreement. If, after the Participant's death, the Stock Appreciation Right is not exercised within the time specified herein or in the Stock Appreciation Right Agreement (as applicable), the Stock Appreciation Right shall terminate.

(xi) Compliance with Section 409A of the Code. Notwithstanding anything to the contrary set forth herein, any Stock Appreciation Rights granted under the Plan that are not exempt from the requirements of Section 409A of the Code shall contain such provisions so that such Stock Appreciation Rights will comply with the requirements of Section 409A of the Code. Such restrictions, if any, shall be determined by the Board and contained in the Stock Appreciation Right Agreement evidencing such Stock Appreciation Right. For example, such restrictions may include, without limitation, a requirement that a Stock Appreciation Right that is to be paid wholly or partly in cash must be exercised and paid in accordance with a fixed pre-determined schedule.

7. Covenants of the Company.

(a) Availability of Shares. During the terms of the Stock Awards, the Company shall keep available at all times the number of shares of Common Stock reasonably required to satisfy such Stock Awards.

(b) Securities Law Compliance. The Company shall seek to obtain from each regulatory commission or agency having jurisdiction over the Plan such authority as may be required to grant Stock Awards and to issue and sell shares of Common Stock upon exercise of the Stock Awards; *provided*, *however*, that this undertaking shall not require the Company to register under the Securities Act the Plan, any Stock Award or any Common Stock issued or issuable pursuant to any such Stock Award. If, after reasonable efforts, the Company is unable to obtain from any such regulatory commission or agency the authority that counsel for the Company deems necessary for the lawful issuance and sale of Common Stock under the Plan, the Company shall be relieved from any liability for failure to issue and sell Common Stock upon exercise of such Stock Awards unless and until such authority is obtained.

(c) No Obligation to Notify. The Company shall have no duty or obligation to any holder of a Stock Award to advise such holder as to the time or manner of exercising such Stock Award. Furthermore, the Company shall have no duty or obligation to warn or otherwise advise such holder of a pending termination or expiration of a Stock Award or a possible period in which the Stock Award may not be exercised. The Company has no duty or obligation to minimize the tax consequences of a Stock Award to the holder of such Stock Award.

8. Miscellaneous.

(a) Use of Proceeds from Sales of Common Stock. Proceeds from the sale of shares of Common Stock pursuant to Stock Awards shall constitute general funds of the Company.

(b) Corporate Action Constituting Grant of Stock Awards . Corporate action constituting a grant by the Company of a Stock Award to any Participant shall be deemed completed as of the date of such corporate action, unless otherwise determined by the Board, regardless of when the instrument, certificate, or letter evidencing the Stock Award is communicated to, or actually received or accepted by, the Participant.

(c) Stockholder Rights. No Participant shall be deemed to be the holder of, or to have any of the rights of a holder with respect to, any shares of Common Stock subject to such Stock Award unless and until such Participant has satisfied all requirements for exercise of the Stock Award pursuant to its terms and the Participant shall not be deemed to be a stockholder of record until the issuance of the Common Stock pursuant to such exercise has been entered into the books and records of the Company.

(d) No Employment or Other Service Rights. Nothing in the Plan, any Stock Award Agreement or any other instrument executed thereunder or in connection with any Stock Award granted pursuant thereto shall confer upon any Participant any right to continue to serve the Company or an Affiliate in the capacity in effect at the time the Stock Award was granted or shall affect the right of the Company or an Affiliate to terminate (i) the employment of an Employee with or without notice and with or without cause, (ii) the service of a Consultant pursuant to the terms of such Consultant's agreement with the Company or an Affiliate, or (iii) the service of a Director pursuant to the Bylaws of the Company or an Affiliate, and any applicable provisions of the corporate law of the state in which the Company or the Affiliate is incorporated, as the case may be.

(e) Incentive Stock Option $100,000 Limitation. To the extent that the aggregate Fair Market Value (determined at the time of grant) of Common Stock with respect to which Incentive Stock Options are exercisable for the first time by any Optionholder during any calendar year (under all plans of the Company and any Affiliates) exceeds one hundred thousand dollars ($100,000), the Options or portions thereof that exceed such limit (according to the order in which they were granted) shall be treated as Nonstatutory Stock Options, notwithstanding any contrary provision of the applicable Option Agreement(s).

(f) Investment Assurances. The Company may require a Participant, as a condition of exercising or acquiring Common Stock under any Stock Award, (i) to give written assurances satisfactory to the Company as to the Participant's knowledge and experience in financial and business matters and/or to employ a purchaser representative reasonably satisfactory to the Company who is knowledgeable and experienced in financial and business matters and that he or she is capable of evaluating, alone or together with the purchaser representative, the merits and risks of exercising the Stock Award; and (ii) to give written assurances

satisfactory to the Company stating that the Participant is acquiring Common Stock subject to the Stock Award for the Participant's own account and not with any present intention of selling or otherwise distributing the Common Stock. The foregoing requirements, and any assurances given pursuant to such requirements, shall be inoperative if (x) the issuance of the shares upon the exercise or acquisition of Common Stock under the Stock Award has been registered under a then currently effective registration statement under the Securities Act, or (y) as to any particular requirement, a determination is made by counsel for the Company that such requirement need not be met in the circumstances under the then applicable securities laws. The Company may, upon advice of counsel to the Company, place legends on stock certificates issued under the Plan as such counsel deems necessary or appropriate in order to comply with applicable securities laws, including, but not limited to, legends restricting the transfer of the Common Stock.

(g) Withholding Obligations. To the extent provided by the terms of a Stock Award Agreement, the Company may, in its sole discretion, satisfy any federal, state or local tax withholding obligation relating to a Stock Award by any of the following means (in addition to the Company's right to withhold from any compensation paid to the Participant by the Company) or by a combination of such means: (i) causing the Participant to tender a cash payment; (ii) withholding shares of Common Stock from the shares of Common Stock issued or otherwise issuable to the Participant in connection with the Stock Award; *provided*, *however*, that no shares of Common Stock are withheld with a value exceeding the minimum amount of tax required to be withheld by law (or such lower amount as may be necessary to avoid classification of the Stock Award as a liability for financial accounting purposes); (iii) withholding payment from any amounts otherwise payable to the Participant; (iv) withholding cash from a Stock Award settled in cash; or (v) by such other method as may be set forth in the Stock Award Agreement.

(h) Electronic Delivery. Any reference herein to a "written" agreement or document shall include any agreement or document delivered electronically or posted on the Company's intranet.

(i) Deferrals. To the extent permitted by applicable law, the Board, in its sole discretion, may determine that the delivery of Common Stock or the payment of cash, upon the exercise, vesting or settlement of all or a portion of any Stock Award may be deferred and may establish programs and procedures for deferral elections to be made by Participants. Deferrals by Participants will be made in accordance with Section 409A of the Code. Consistent with Section 409A of the Code, the Board may provide for distributions while a Participant is still an employee. The Board is authorized to make deferrals of Stock Awards and determine when, and in what annual percentages, Participants may receive payments, including lump sum payments, following the Participant's termination of employment or retirement, and implement such other terms and conditions consistent with the provisions of the Plan and in accordance with applicable law.

(j) Compliance with Section 409A. To the extent that the Board determines that any Stock Award granted hereunder is subject to Section 409A of the Code, the Stock Award Agreement evidencing such Stock Award shall incorporate the terms and conditions necessary to avoid the consequences specified in Section 409A(a)(1) of the Code. To the extent applicable, the Plan and Stock Award Agreements shall be interpreted in accordance with Section 409A of the Code and Department of Treasury regulations and other interpretive guidance issued thereunder, including without limitation any such regulations or other guidance that may be issued or amended after the Effective Date. Notwithstanding any provision of the Plan to the contrary, in the event that following the Effective Date the Board determines that any Stock Award may be subject to Section 409A of the Code and related Department of Treasury guidance (including such Department of Treasury guidance as may be issued after the Effective Date), the Board may adopt such amendments to the Plan and the applicable Stock Award Agreement or adopt other policies and procedures (including amendments, policies and procedures with retroactive effect), or take any other actions, that the Board determines are necessary or appropriate to (1) exempt the Stock Award from Section 409A of the Code and/or preserve the intended tax treatment of the benefits provided with respect to the Stock Award, or (2) comply with the requirements of Section 409A of the Code and related Department of Treasury guidance.

(k) Compliance with Exemption Provided by Rule 12h-1(f). If: (i) the aggregate of the number of Optionholders and the number of holders of all other outstanding compensatory employee stock options to purchase shares of Common Stock equals or exceeds five hundred (500), and (ii) the assets of the Company at the end of the Company's most recently completed fiscal year exceed $10 million, then the following

restrictions shall apply during any period during which the Company does not have a class of its securities registered under Section 12 of the Exchange Act and is not required to file reports under Section 15(d) of the Exchange Act: (A) the Options and, prior to exercise, the shares of Common Stock acquired upon exercise of the Options may not be transferred until the Company is no longer relying on the exemption provided by Rule 12h-1(f) promulgated under the Exchange Act ("***Rule 12h-1(f)***"), except: (1) as permitted by Rule 701(c) promulgated under the Securities Act, (2) to a guardian upon the disability of the Optionholder, or (3) to an executor upon the death of the Optionholder (collectively, the "***Permitted Transferees***"); *provided*, *however*, the following transfers are permitted: (i) transfers by the Optionholder to the Company, and (ii) transfers in connection with a change of control or other acquisition involving the Company, if following such transaction, the Options no longer remain outstanding and the Company is no longer relying on the exemption provided by Rule 12h-1(f); *provided further*, that any Permitted Transferees may not further transfer the Options; (B) except as otherwise provided in (A) above, the Options and shares of Common Stock acquired upon exercise of the Options are restricted as to any pledge, hypothecation, or other transfer, including any short position, any "put equivalent position" as defined by Rule 16a-1(h) promulgated under the Exchange Act, or any "call equivalent position" as defined by Rule 16a-1(b) promulgated under the Exchange Act by the Optionholder prior to exercise of an Option until the Company is no longer relying on the exemption provided by Rule 12h-1(f); and (C) at any time that the Company is relying on the exemption provided by Rule 12h-1(f), the Company shall deliver to Optionholders (whether by physical or electronic delivery or written notice of the availability of the information on an internet site) the information required by Rule 701(e)(3), (4), and (5) promulgated under the Securities Act every six (6) months, including financial statements that are not more than one hundred eighty (180) days old; *provided*, *however*, that the Company may condition the delivery of such information upon the Optionholder's agreement to maintain its confidentiality.

(l) Repurchase Limitation. The terms of any repurchase option shall be specified in the Stock Award Agreement. The repurchase price for vested shares of Common Stock shall be the Fair Market Value of the shares of Common Stock on the date of repurchase. The repurchase price for unvested shares of Common Stock shall be the lower of (i) the Fair Market Value of the shares of Common Stock on the date of repurchase or (ii) their original purchase price. However, the Company shall not exercise its repurchase option until at least six (6) months (or such longer or shorter period of time necessary to avoid classification of the Stock Award as a liability for financial accounting purposes) have elapsed following delivery of shares of Common Stock subject to the Stock Award, unless otherwise specifically provided by the Board.

9. Adjustments upon Changes in Common Stock; Other Corporate Events.

(a) Capitalization Adjustments. In the event of a Capitalization Adjustment, the Board shall proportionately and appropriately adjust: (i) the class(es) and maximum number of securities subject to the Plan pursuant to Section 3(a), (ii) the class(es) and maximum number of securities that may be issued pursuant to the exercise of Incentive Stock Options pursuant to Section 3(c), and (iii) the class(es) and number of securities and price per share of stock subject to outstanding Stock Awards. The Board shall make such adjustments, and its determination shall be final, binding and conclusive.

(b) Dissolution or Liquidation. Except as otherwise provided in the Stock Award Agreement, in the event of a dissolution or liquidation of the Company, all outstanding Stock Awards (other than Stock Awards consisting of vested and outstanding shares of Common Stock not subject to the Company's right of repurchase) shall terminate immediately prior to the completion of such dissolution or liquidation, and the shares of Common Stock subject to the Company's repurchase option may be repurchased by the Company notwithstanding the fact that the holder of such Stock Award is providing Continuous Service, *provided*, *however*, that the Board may, in its sole discretion, cause some or all Stock Awards to become fully vested, exercisable and/or no longer subject to repurchase or forfeiture (to the extent such Stock Awards have not previously expired or terminated) before the dissolution or liquidation is completed but contingent on its completion.

(c) Corporate Transaction. The following provisions shall apply to Stock Awards in the event of a Corporate Transaction unless otherwise provided in the instrument evidencing the Stock Award or any other written agreement between the Company or any Affiliate and the holder of the Stock Award or unless otherwise expressly provided by the Board at the time of grant of a Stock Award.

(i) Stock Awards May Be Assumed. Except as otherwise stated in the Stock Award Agreement, in the

event of a Corporate Transaction, any surviving corporation or acquiring corporation (or the surviving or acquiring corporation's parent company) may assume or continue any or all Stock Awards outstanding under the Plan or may substitute similar stock awards for Stock Awards outstanding under the Plan (including but not limited to, awards to acquire the same consideration paid to the stockholders of the Company pursuant to the Corporate Transaction), and any reacquisition or repurchase rights held by the Company in respect of Common Stock issued pursuant to Stock Awards may be assigned by the Company to the successor of the Company (or the successor's parent company, if any), in connection with such Corporate Transaction. A surviving corporation or acquiring corporation (or its parent) may choose to assume or continue only a portion of a Stock Award or substitute a similar stock award for only a portion of a Stock Award. The terms of any assumption, continuation or substitution shall be set by the Board in accordance with the provisions of Section 2.

(ii) Stock Awards Held by Current Participants. Except as otherwise stated in the Stock Award Agreement, in the event of a Corporate Transaction in which the surviving corporation or acquiring corporation (or its parent company) does not assume or continue such outstanding Stock Awards or substitute similar stock awards for such outstanding Stock Awards, then with respect to Stock Awards that have not been assumed, continued or substituted and that are held by Participants whose Continuous Service has not terminated prior to the effective time of the Corporate Transaction (referred to as the "***Current Participants***"), the vesting of such Stock Awards (and, if applicable, the time at which such Stock Awards may be exercised) shall (contingent upon the effectiveness of the Corporate Transaction) be accelerated in full to a date prior to the effective time of such Corporate Transaction as the Board shall determine (or, if the Board shall not determine such a date, to the date that is five (5) days prior to the effective time of the Corporate Transaction), and such Stock Awards shall terminate if not exercised (if applicable) at or prior to the effective time of the Corporate Transaction, and any reacquisition or repurchase rights held by the Company with respect to such Stock Awards shall lapse (contingent upon the effectiveness of the Corporate Transaction).

(iii) Stock Awards Held by Persons other than Current Participants. Except as otherwise stated in the Stock Award Agreement, in the event of a Corporate Transaction in which the surviving corporation or acquiring corporation (or its parent company) does not assume or continue such outstanding Stock Awards or substitute similar stock awards for such outstanding Stock Awards, then with respect to Stock Awards that have not been assumed, continued or substituted and that are held by persons other than Current Participants, the vesting of such Stock Awards (and, if applicable, the time at which such Stock Award may be exercised) shall not be accelerated and such Stock Awards (other than a Stock Award consisting of vested and outstanding shares of Common Stock not subject to the Company's right of repurchase) shall terminate if not exercised (if applicable) prior to the effective time of the Corporate Transaction; *provided*, *however*, that any reacquisition or repurchase rights held by the Company with respect to such Stock Awards shall not terminate and may continue to be exercised notwithstanding the Corporate Transaction.

(iv) Payment for Stock Awards in Lieu of Exercise. Notwithstanding the foregoing, in the event a Stock Award will terminate if not exercised prior to the effective time of a Corporate Transaction, the Board may provide, in its sole discretion, that the holder of such Stock Award may not exercise such Stock Award but will receive, in the Board's discretion, such cash consideration (including no consideration) as the Board may consider appropriate, in such form as may be determined by the Board, including a payment equal in value to the excess, if any, of (A) the value of the property the holder of the Stock Award would have received upon the exercise of the Stock Award, over (B) any exercise price payable by such holder in connection with such exercise.

(d) Change in Control. A Stock Award may be subject to additional acceleration of vesting and exercisability upon or after a Change in Control as may be provided in the Stock Award Agreement for such Stock Award or as may be provided in any other written agreement approved by the Board between the Company or any Affiliate and the Participant, but in the absence of such provision, no such acceleration shall occur.

10. Termination or Suspension of the Plan.

(a) Plan Term. The Board may suspend or terminate the Plan at any time. Unless sooner terminated by the Board pursuant to Section 2, the Plan shall automatically terminate on December 15, 2025. No Stock Awards may be granted under the Plan while the Plan is suspended or after it is terminated.

(b) No Impairment of Rights. Suspension or termination of the Plan shall not impair rights and obligations under any Stock Award granted while the Plan is in effect except with the written consent of the affected Participant.

11. Effective Date of Plan.

This Plan shall become effective on the Effective Date.

12. Choice of Law.

The law of the State of Delaware shall govern all questions concerning the construction, validity and interpretation of this Plan, without regard to that state's conflict of laws rules.

13. Definitions. As used in the Plan, the following definitions shall apply to the capitalized terms indicated below:

(a) "***Affiliate***" means, at the time of determination, any "parent" or "majority-owned subsidiary" of the Company, as such terms are defined in Rule 405 of the Securities Act. The Board shall have the authority to determine the time or times at which "parent" or "majority-owned subsidiary" status is determined within the foregoing definition.

(b) "***Board***" means the Board of Directors of the Company.

(c) "***Capitalization Adjustment***" means any change that is made in, or other events that occur with respect to, the Common Stock subject to the Plan or subject to any Stock Award after the Effective Date without the receipt of consideration by the Company (through merger, consolidation, reorganization, recapitalization, reincorporation, stock dividend, dividend in property other than cash, stock split, liquidating dividend, combination of shares, exchange of shares, change in corporate structure or other transaction not involving the receipt of consideration by the Company). Notwithstanding the foregoing, the conversion of any convertible securities of the Company shall not be treated as a transaction "without the receipt of consideration" by the Company.

(d) "***Change in Control***" means the occurrence, in a single transaction or in a series of related transactions, of any one or more of the following events:

(i) any Exchange Act Person becomes the Owner, directly or indirectly, of securities of the Company representing more than fifty percent (50%) of the combined voting power of the Company's then outstanding securities other than by virtue of a merger, consolidation or similar transaction. Notwithstanding the foregoing, a Change in Control shall not be deemed to occur (A) on account of the acquisition of securities of the Company by an investor, any affiliate thereof or any other Exchange Act Person that acquires the Company's securities in a transaction or series of related transactions the primary purpose of which is to obtain financing for the Company through the issuance of equity securities or (B) solely because the level of Ownership held by any Exchange Act Person (the "***Subject Person***") exceeds the designated percentage threshold of the outstanding voting securities as a result of a repurchase or other acquisition of voting securities by the Company reducing the number of shares outstanding, provided that if a Change in Control would occur (but for the operation of this sentence) as a result of the acquisition of voting securities by the Company, and after such share acquisition, the Subject Person becomes the Owner of any additional voting securities that, assuming the repurchase or other acquisition had not occurred, increases the percentage of the then outstanding voting securities Owned by the Subject Person over the designated percentage threshold, then a Change in Control shall be deemed to occur;

(ii) there is consummated a merger, consolidation or similar transaction involving (directly or indirectly) the Company and, immediately after the consummation of such merger, consolidation or similar transaction, the stockholders of the Company immediately prior thereto do not Own, directly or indirectly, either (A) outstanding voting securities representing more than fifty percent (50%) of the combined outstanding voting power of the surviving Entity in such merger, consolidation or similar transaction or (B) more than fifty percent (50%) of the combined outstanding voting power of the parent of the surviving Entity in such merger, consolidation or similar transaction, in each case in substantially the same proportions as their Ownership of the outstanding voting securities of the Company immediately prior to such transaction;

(iii) the stockholders of the Company approve or the Board approves a plan of complete dissolution or liquidation of the Company, or a complete dissolution or liquidation of the Company shall otherwise occur, except for a liquidation into a parent corporation; or

(iv) there is consummated a sale, lease, exclusive license or other disposition of all or substantially all of the consolidated assets of the Company and its Subsidiaries (in each case as determined by the Board in its sole discretion), other than a sale, lease, license or other disposition of all or substantially all of the consolidated assets of the Company and its Subsidiaries to an Entity, more than fifty percent (50%) of the combined voting power of the voting securities of which are Owned by stockholders of the Company in substantially the same proportions as their Ownership of the outstanding voting securities of the Company immediately prior to such sale, lease, license or other disposition.

Notwithstanding the foregoing definition or any other provision of this Plan, (A) the term Change in Control shall not include a sale of assets, merger or other transaction effected exclusively for the purpose of changing the domicile of the Company, and (B) the definition of Change in Control (or any analogous term) in an individual written agreement between the Company or any Affiliate and the Participant shall supersede the foregoing definition with respect to Stock Awards subject to such agreement; provided, however, that if no definition of Change in Control or any analogous term is set forth in such an individual written agreement, the foregoing definition shall apply.

(e) "***Code***" means the Internal Revenue Code of 1986, as amended.

(f) "***Committee***" means a committee of one or more Directors to whom authority has been delegated by the Board in accordance with Section 2(c).

(g) "***Common Stock***" means the common stock of the Company.

(h) "***Company***" means Akcea Therapeutics, Inc., a Delaware corporation.

(i) "***Consultant***" means any person, including an advisor, who is (i) engaged by the Company or an Affiliate to render consulting or advisory services and is compensated for such services, or (ii) serving as a member of the board of directors of an Affiliate and is compensated for such services. However, service solely as a Director, or payment of a fee for such service, shall not cause a Director to be considered a "*Consultant*" for purposes of the Plan.

(j) "**Continuous Service**" means that the Participant's service with the Company or an Affiliate, whether as an Employee, Director or Consultant, is not interrupted or terminated. A change in the capacity in which the Participant renders service to the Company or an Affiliate as an Employee, Director, or Consultant or a change in the Entity for which the Participant renders such service, provided that there is no interruption or termination of the Participant's service with the Company or an Affiliate, shall not terminate a Participant's Continuous Service; provided, however, if the Entity for which a Participant is rendering service ceases to qualify as an Affiliate, as determined by the Board in its sole discretion, such Participant's Continuous Service shall be considered to have terminated on the date such Entity ceases to qualify as an Affiliate. For example, a change in status from an employee of the Company to a consultant of an Affiliate or to a Director shall not constitute an interruption of Continuous Service. To the extent permitted by law, the Board or the chief executive officer of the Company, in that party's sole discretion, may determine whether Continuous Service shall be considered interrupted in the case of any leave of absence approved by that party, including sick leave, military leave or any other personal leave. Notwithstanding the foregoing, a leave of absence shall be treated as Continuous Service for purposes of vesting in a Stock Award only to such extent as may be provided in the Company's leave of absence policy, in the written terms of any leave of absence agreement or policy applicable to the Participant, or as otherwise required by law.

(k) "***Corporate Transaction***" means the occurrence, in a single transaction or in a series of related transactions, of any one or more of the following events:

(i) the consummation of a sale or other disposition of all or substantially all, as determined by the Board in its sole discretion, of the consolidated assets of the Company and its Subsidiaries;

(ii) the consummation of a sale or other disposition of at least ninety percent (90%) of the outstanding securities of the Company (other than a distribution of the shares by Ionis to the Ionis stockholders);

(iii) the consummation of a merger, consolidation or similar transaction following which the Company is not the surviving corporation; or

(iv) the consummation of a merger, consolidation or similar transaction following which the Company is the surviving corporation but the shares of Common Stock outstanding immediately preceding the merger, consolidation or similar transaction are converted or exchanged by virtue of the merger, consolidation or similar transaction into other property, whether in the form of securities, cash or otherwise.

(l) "***Director***" means a member of the Board.

(m) "***Disability***" means the inability of a Participant to engage in any substantially gainful activity by reason of any medically determinable physical or mental impairment which can be expected to result in death or which has lasted or can be expected to last for a continuous period of not less than twelve (12) months, and shall be determined by the Board on the basis of such medical evidence as the Board deems warranted under the circumstances.

(n) "***Effective Date***" means the effective date of this Plan, which is the earlier of (i) the date that this Plan is first approved by the Company's stockholders, or (ii) the date this Plan is adopted by the Board.

(o) "***Employee***" means any person employed by the Company or an Affiliate. However, service solely as a Director, or payment of a fee for such services, shall not cause a Director to be considered an "*Employee*" for purposes of the Plan.

(p) "***Entity***" means a corporation, partnership, limited liability company or other entity.

(q) "***Exchange Act***" means the Securities Exchange Act of 1934, as amended.

(r) "***Exchange Act Person***" means any natural person, Entity or "group" (within the meaning of Section 13(d) or 14(d) of the Exchange Act), except that "*Exchange Act Person*" shall not include (i) the Company or any Subsidiary of the Company, (ii) any employee benefit plan of the Company or any Subsidiary of the Company or any trustee or other fiduciary holding securities under an employee benefit plan of the Company or any Subsidiary of the Company, (iii) an underwriter temporarily holding securities pursuant to an offering of such securities, (iv) an Entity Owned, directly or indirectly, by the stockholders of the Company in substantially the same proportions as their Ownership of stock of the Company; or (v) any natural person, Entity or "group" (within the meaning of Section 13(d) or 14(d) of the Exchange Act) that, as of the Effective Date of the Plan as set forth in Section 11, is the Owner, directly or indirectly, of securities of the Company representing more than fifty percent (50%) of the combined voting power of the Company's then outstanding securities.

(s) "***Fair Market Value***" means, as of any date, the value of the Common Stock determined as follows:

(i) If the Common Stock is listed on any established stock exchange or traded on any established market, the Fair Market Value of a share of Common Stock will be, unless otherwise determined by the Board, the closing sales price for such stock as quoted on such exchange or market (or the exchange or market with the greatest volume of trading in the Common Stock) on the date of determination, as reported in a source the Board deems reliable.

(ii) Unless otherwise provided by the Board, if there is no closing sales price for the Common Stock on the date of determination, then the Fair Market Value will be the closing sales price on the last preceding date for which such quotation exists.

(iii) In the absence of such markets for the Common Stock, the Fair Market Value will be determined by the Board in good faith and in a manner that complies with Sections 409A and 422 of the Code.

(t) "***Incentive Stock Option***" means an Option that qualifies as an "incentive stock option" within the meaning of Section 422 of the Code and the regulations promulgated thereunder.

(u) "***Nonstatutory Stock Option***" means an Option that does not qualify as an Incentive Stock Option.

(v) "***Officer***" means any person designated by the Company as an officer.

(w) "***Option***" means an Incentive Stock Option or a Nonstatutory Stock Option to purchase shares of Common Stock granted pursuant to the Plan.

(x) "***Option Agreement***" means a written agreement between the Company and an Optionholder evidencing the terms and conditions of an Option grant. Each Option Agreement shall be subject to the terms and conditions of the Plan.

(y) "***Optionholder***" means a person to whom an Option is granted pursuant to the Plan or, if applicable, such other person who holds an outstanding Option.

(z) "***Own,***" "***Owned,***" "***Owner,***" "***Ownership***" A person or Entity shall be deemed to "Own," to have "Owned," to be the "Owner" of, or to have acquired "Ownership" of securities if such person or Entity, directly or indirectly, through any contract, arrangement, understanding, relationship or otherwise, has or shares voting power, which includes the power to vote or to direct the voting, with respect to such securities.

(aa) "***Participant****" means a person to whom a Stock Award is granted pursuant to the Plan or, if applicable, such other person who holds an outstanding Stock Award.*

(bb) "***Plan***" means this Akcea Therapeutics, Inc. 2015 Equity Incentive Plan.

(cc) "***Restricted Stock Award***" means an award of shares of Common Stock which is granted pursuant to the terms and conditions of Section 6(a).

(dd) "***Restricted Stock Award Agreement***" means a written agreement between the Company and a holder of a Restricted Stock Award evidencing the terms and conditions of a Restricted Stock Award. Each Restricted Stock Award Agreement shall be subject to the terms and conditions of the Plan.

(ee) "***Restricted Stock Unit Award***" means a right to receive shares of Common Stock which is granted pursuant to the terms and conditions of Section 6(b).

(ff) "***Restricted Stock Unit Award Agreement***" means a written agreement between the Company and a holder of a Restricted Stock Unit Award evidencing the terms and conditions of a Restricted Stock Unit Award grant. Each Restricted Stock Unit Award Agreement shall be subject to the terms and conditions of the Plan.

(gg) "***Securities Act***" means the Securities Act of 1933, as amended.

(hh) "***Stock Appreciation Right***" means a right to receive the appreciation on Common Stock that is granted pursuant to the terms and conditions of Section 6(c).

(ii) "***Stock Appreciation Right Agreement***" means a written agreement between the Company and a holder of a Stock Appreciation Right evidencing the terms and conditions of a Stock Appreciation Right grant. Each Stock Appreciation Right Agreement shall be subject to the terms and conditions of the Plan.

(jj) "***Stock Award***" means any right to receive Common Stock granted under the Plan, including an Incentive Stock Option, a Nonstatutory Stock Option, a Restricted Stock Award, a Restricted Stock Unit Award, or a Stock Appreciation Right.

(kk) "***Stock Award Agreement***" means a written agreement between the Company and a Participant evidencing the terms and conditions of a Stock Award grant. Each Stock Award Agreement shall be subject to the terms and conditions of the Plan.

(ll) "***Subsidiary***" means, with respect to the Company, (i) any corporation of which more than fifty percent (50%) of the outstanding capital stock having ordinary voting power to elect a majority of the board of directors of such corporation (irrespective of whether, at the time, stock of any other class or classes of such corporation shall have or might have voting power by reason of the happening of any contingency) is at the time, directly or indirectly, Owned by the Company, and (ii) any partnership, limited liability company or other entity in which the Company has a direct or indirect interest (whether in the form of voting or participation in profits or capital contribution) of more than fifty percent (50%) .

(mm) "***Ten Percent Stockholder***" means a person who Owns (or is deemed to Own pursuant to Section 424(d) of the Code) stock possessing more than ten percent (10%) of the total combined voting power of all classes of stock of the Company or any Affiliate.