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**SECURITIES AND EXCHANGE COMMISSION**  
Washington, D.C. 20549

**FORM 8-K**

**CURRENT REPORT**  
**PURSUANT TO SECTION 13 OR 15(d) OF THE**  
**SECURITIES EXCHANGE ACT OF 1934**

Date of report (Date of earliest event reported): April 16, 2018

**Akcea Therapeutics, Inc.**

(Exact Name of Registrant as Specified in Charter)

**Delaware**

(State or Other Jurisdiction of Incorporation)

**001-38137**  
(Commission File No.)

**47-2608175**  
(IRS Employer Identification No.)

**55 Cambridge Parkway**  
**Suite 100**  
**Cambridge, Massachusetts 02142**  
(Address of Principal Executive Offices and Zip Code)

Registrant's telephone number, including area code: **(617) 207-0202**

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Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (Section 230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (Section 240.12b-2 of this chapter).

Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

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## **Item 2.01 Completion of Acquisition or Disposition of Assets.**

On April 17, 2018, Akcea Therapeutics, Inc. (the “*Company*”) completed its previously announced transaction with an affiliate of the Company, Ionis Pharmaceuticals, Inc. (“*Ionis*”), pursuant to which the Company entered into a development, commercialization, collaboration and license agreement (“*License Agreement*”) and a stock purchase agreement (“*Stock Purchase Agreement*”), each dated March 14, 2018, with Ionis. The Company was initially formed as a commercial subsidiary of Ionis to commercialize products developed by Ionis.

In accordance with the terms and provisions of the License Agreement, the Company received 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-LR<sub>x</sub>, and perform other non-commercial activities with respect to AKCEA-TTR-LR<sub>x</sub>;
- commercialize AKCEA-TTR-LR<sub>x</sub>, following receipt of regulatory approval, in accordance with a global strategic plan;
- share in profits of sales of, and losses incurred with respect to, inotersen and AKCEA-TTR-LR<sub>x</sub>; and
- manufacture (including through a third party) each product following receipt of regulatory approval for such product.

Upon the closing of the transaction, the Company issued (i) 8,000,000 shares of its common stock, par value \$0.001 per share, to Ionis as an upfront licensing fee for the licenses granted pursuant to the License Agreement and (ii) 10,666,666 shares of its common stock, par value \$0.001 per share, to Ionis for an aggregate value of \$200 million to support the Company’s efforts to commercialize inotersen and AKCEA-TTR-LR<sub>x</sub>. Further, pursuant to the License Agreement, the Company is obligated to make certain payments (the “*Milestone Payments*”) to Ionis in connection with the achievement of certain development, regulatory and commercialization events (the “*Milestone Events*”). The Company may elect to pay each initial Milestone Payment in cash or shares of common stock (and notwithstanding this election, Ionis may require payment in shares of common stock); provided that if the Company achieves the Milestone Event for aggregate worldwide annual net sales of the products of \$750 million, all subsequent Milestone Payments must be paid in cash (collectively, the “*Payment Election*”). If the Company achieves the Milestone Events payable in shares of common stock and makes such Milestone Payments in shares of common stock, pursuant to the Payment Election, it would be required to issue additional shares of common stock to Ionis with an aggregate value of \$380 million.

The foregoing description of the License Agreement and the Stock Purchase Agreement does not purport to be complete and is qualified in its entirety by the full text of the License Agreement and the Stock Purchase Agreement, copies of which are filed as Exhibits 10.1 and 10.2, respectively, to the Company’s Current Report on Form 8-K filed March 15, 2018, both of which are incorporated into this Item 2.01 by reference herein.

## **Item 5.02 Departure of Directors or Certain Officers; Election of Directors; Appointment of Certain Officers; Compensatory Arrangements of Certain Officers.**

On March 15, 2018, the Company announced the appointment of Sarah Boyce as a director and President of the Company, subject to the closing of a transaction with Ionis, which became effective on April 17, 2018. Ms. Boyce will report to Paula Soteropoulos, who will remain the Company’s Chief Executive Officer.

Prior to joining the Company, Ms. Boyce, age 46, was Chief Business Officer at Ionis, an affiliate of the Company, where she was responsible for business development, alliance management, investor relations, corporate communications, competitive intelligence and patient advocacy. Prior to joining Ionis in January 2015, Ms. Boyce served as Vice President, Head of International Business Strategy and Operations at Forest Laboratories. Prior to that, Ms. Boyce held multiple executive level roles at other large pharmaceutical and biotechnology companies including Alexion Pharmaceuticals, Novartis Oncology and Roche. Ms. Boyce received her Bachelor of Science degree in microbiology from the University of Manchester, England.

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In connection with Ms. Boyce's appointment as the Company's President, the Company entered into a written offer letter, dated April 17, 2018 (the "**Offer Letter**"), with Ms. Boyce. Pursuant to the Offer Letter, Ms. Boyce is entitled to receive:

- An annual base salary of \$485,000, and is eligible to receive an annual performance bonus, with a target bonus amount equal to 45% of her base salary under the Company's Management by Objectives program, prorated to her start date;
- A stock option exercisable for up to 1,000,000 shares of the Company's common stock, vesting over a four-year period, under the Company's 2015 Equity Incentive Plan;
- A restricted stock unit ("**RSU**") award for 20,894 shares of the Company's common stock; and
- Eligibility to participate in the Company's employee benefit plans, subject to the terms of those plans.

The foregoing description of the Offer Letter does not purport to be complete and is qualified in its entirety by reference to the copy of such document filed as Exhibit 10.1 to this Current Report on Form 8-K.

On April 17, 2018, the Company and Ms. Boyce also entered into a severance benefit agreement (the "**Severance Benefit Agreement**"). Ms. Boyce will be eligible to receive medical benefit continuation, and a lump sum severance payment equal to (i) 12 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 the Company, 12 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 her 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 her 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 agreement will remain in effect as long as Ms. Boyce continues to be employed by Akcea. As a condition to receiving payments under the Severance Benefit Agreement, Ms. Boyce is required to return all of the Company's property and sign an agreement releasing the Company from liability. The foregoing description of the Severance Benefit Agreement does not purport to be complete and is qualified in its entirety by the full text of such document, the form of which is filed as Exhibit 10.1 to the Company's Current Report on Form 8-K filed November 30, 2017, which is incorporated into this Item 5.02 by reference herein.

Ms. Boyce will also be entitled to enter into the Company's standard form of indemnification agreement.

There are no arrangements or understandings between Ms. Boyce and any other persons pursuant to which Ms. Boyce was selected as an officer. There are no family relationships between Ms. Boyce and any director or executive officer of the Company, and Ms. Boyce is not a party to any transaction required to be disclosed pursuant to Item 404(a) of Regulation S-K.

The foregoing descriptions of the 2015 Equity Incentive Plan and form of indemnification agreement do not purport to be complete and are qualified in their entirety by the full text of the 2015 Equity Incentive Plan and form of indemnification agreement, copies of which are filed as Exhibits 10.2 and 10.3, respectively, to the Company's Current Report on Form 8-K filed September 5, 2017, both of which are incorporated by into this Item 5.02 by reference herein.

#### **Item 5.03 Amendment to Articles of Incorporation or Bylaws; Change in Fiscal Year.**

On April 16, 2018, the stockholders of the Company approved an amendment to the Company's Amended and Restated Articles of Incorporation to increase the number of authorized shares of common stock from 100,000,000 shares to 125,000,000 shares (the "Certificate Amendment"). The Company filed the Certificate Amendment, which was effective upon filing, with the Secretary of State of the State of Delaware on April 16, 2018. The foregoing description of the Certificate Amendment is qualified in its entirety by reference to the full text of the Certificate Amendment, a copy of which is attached as Exhibit 3.1 to this Current Report on Form 8-K and is incorporated by reference herein.

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**Item 5.07 Submission of Matters to a Vote of Security Holders.**

On April 16, 2018, the Company held a special meeting of stockholders to consider and vote on the proposals set forth in the definitive proxy statement filed by the Company on March 26, 2018. The following is a summary of the matters voted on by the Company's stockholders at that meeting:

**Proposal 1 – Approval of the Agreements:** The stockholders other than Ionis, its affiliates, and the Company's directors and officers voted to adopt the License Agreement, the Stock Purchase Agreement, the Amended and Restated Services Agreement and the Amended and Restated Investor Rights Agreement, each dated as of March 14, 2018 by and between the Company and Ionis, and the consummation of the transaction contemplated thereunder. The number of shares cast in favor and against, and the number of abstentions and broker non-votes were as follows:

<u>Votes For</u>	<u>Votes Against</u>	<u>Abstain</u>	<u>Broker Non-Votes</u>
19,623,402	176,281	365	0

**Proposal 2 – Issuance of Common Stock:** The stockholders voted to adopt the issuance of shares of common stock to Ionis pursuant to the License Agreement and Stock Purchase Agreement as required by and in accordance with Nasdaq Listing Rule 5635, which was conditioned upon the approval of proposal no. 1. The number of shares cast in favor and against, and the number of abstentions and broker non-votes were as follows:

<u>Votes For</u>	<u>Votes Against</u>	<u>Abstain</u>	<u>Broker Non-Votes</u>
65,072,431	177,936	360	0

**Proposal 3 – Increase Authorized Common Stock:** The stockholders voted to amend Article IV of the Amended and Restated Certificate of Incorporation to increase the Company's authorized common stock from 100,000,000 shares to 125,000,000 shares, which was conditioned upon the approval of proposal no. 1. The number of shares cast in favor and against, and the number of abstentions and broker non-votes were as follows:

<u>Votes For</u>	<u>Votes Against</u>	<u>Abstain</u>	<u>Broker Non-Votes</u>
65,071,034	179,588	105	0

**Proposal 4 – Adjournment of Special Meeting:** The stockholders voted to approve the adjournment of the special meeting, if necessary or appropriate, to permit solicitation of additional proxies in favor of the above proposals. In light of the voting results reported under item (1) above, it was not necessary to adjourn the special meeting. The number of shares cast in favor and against, and the number of abstentions and broker non-votes were as follows:

<u>Votes For</u>	<u>Votes Against</u>	<u>Abstain</u>	<u>Broker Non-Votes</u>
64,826,463	411,375	12,899	0

**Item 7.01 Regulation FD Disclosure.**

On April 17, 2018, the Company and Ionis issued a joint press release announcing the closing of the previously announced transaction with Ionis regarding inotersen and AKCEA-TTR-LRx and the results of the special meeting of stockholders, a copy of which is furnished as Exhibit 99.1 hereto.

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The foregoing information (including Exhibit 99.1) is furnished pursuant to Item 7.01 of Form 8-K and shall not be deemed to be “filed” for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, or otherwise subject to the liabilities of that Section, nor shall it be deemed to be incorporated by reference in any filing under the Securities Act, except as may be expressly set forth by specific reference in such filing.

**Item 9.01. Financial Statements and Exhibits.**

(d) Exhibits.

- 3.1 Certificate Amendment of Akcea Therapeutics, Inc., dated April 16, 2018.
  - 10.1 Offer Letter, dated April 17, 2018, between the Company and Sarah Boyce.
  - 99.1 Press Release issued by the Company and Ionis on April 17, 2018.
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**SIGNATURE**

Pursuant to the requirements of the Securities Exchange Act of 1934, as amended, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

**Akcea Therapeutics, Inc.**

Dated: April 17, 2018

By: /s/ Paula Soteropoulos

**Paula Soteropoulos**

Chief Executive Officer

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## INDEX TO EXHIBITS

- [3.1](#) Certificate Amendment of Akcea Therapeutics, Inc., dated April 16, 2018.
  - [10.1](#) Offer Letter, dated April 17, 2018, between the Company and Sarah Boyce.
  - [99.1](#) Press Release issued by the Company and Ionis on April 17, 2018.
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CERTIFICATE OF AMENDMENT  
TO THE  
AMENDED AND RESTATED CERTIFICATE OF INCORPORATION  
OF  
AKCEA THERAPEUTICS, INC.

Akcea Therapeutics, Inc., a corporation organized and existing under the laws of the state of Delaware (the "Corporation") hereby certifies that:

1. The name of the Corporation is Akcea Therapeutics, Inc.
2. The original Certificate of Incorporation of the Corporation was filed with the Secretary of State of the State of Delaware on December 22, 2014. The Certificate of Incorporation of the Corporation was amended and restated on July 19, 2017.
3. The first paragraph of Article IV of the Amended and Restated Certificate of Incorporation of the Corporation is hereby amended in its entirety to read as follows:  

"A. The Company is authorized to issue two classes of stock to be designated, respectively, "**Common Stock**" and "**Preferred Stock**." The total number of shares which the Company is authorized to issue is 135,000,000 shares. 125,000,000 shares shall be Common Stock, each having a par value of \$0.001. 10,000,000 shares shall be Preferred Stock, each having a par value of \$0.001."
4. This Certificate of Amendment has been duly adopted in accordance with Section 242 of the General Corporation Law of the State of Delaware (the "DGCL").

*[Remainder of Page Intentionally Left Blank]*



IN WITNESS WHEREOF, the Corporation has caused this Certificate of Amendment to be executed by the officer below, as of April 16, 2018.

By: /s/ Paula Soteropoulos  
Name: Paula Soteropoulos  
Title: Chief Executive Officer

*[Signature Page to Certificate of Amendment]*

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55 Cambridge Parkway, Suite 100  
Cambridge, MA 02142  
www.akceatx.com

April 17, 2018

Sarah Boyce  
55 Cambridge Parkway, Suite 100  
Cambridge, MA 02142

Dear Sarah,

It is my great pleasure to extend to you an offer to join Akcea Therapeutics, Inc., as President, reporting to me. In this position, you will receive an annual salary of \$485,000.00 and be eligible for an annual increase to your base salary in accordance with our annual merit process. You are also eligible for an incentive bonus targeted at 45% of your base salary under our current Management by Objectives (MBO) program. Employees who join the company after October 1st of any given year will be eligible to participate in the MBO program the following calendar year.

I am also pleased to advise you that the Akcea Board of Directors has approved awarding to you 1,000,000 Akcea Stock Options and \$500,000 in Akcea RSUs. These Akcea Options and RSUs will be granted and vest in accordance with your Grant Notice Agreement.

You also have the opportunity to participate in our employee benefits program. Please feel free to contact Martha Bradford at 617-207-0199 if you have any questions.

This offer is contingent on your signing in the space provided below, and signing the *attached Employee Confidential Information, Inventions Assignment, Non-Competition and Non-Solicitation Agreement*.

We are very pleased that you will be joining us, and we look forward to working with you! We anticipate a start date as set forth below your signature.

Sincerely,

*/s/ Paula Soteropoulos*

Paula Soteropoulos  
Chief Executive Officer

Accepted and agreed:     /s/ Sarah Boyce    

Date Accepted:     April 17, 2018    

Start Date:     April 17, 2018



**Akcea and Ionis Complete Licensing Transaction to Commercialize Inotersen for hATTR**

*Akcea shareholders approved the transaction on April 16 at a Special Meeting of Stockholders*

*Ionis licenses Akcea worldwide rights to inotersen and AKCEA-TTR-LRx*

CAMBRIDGE, Mass. and CARLSBAD, Calif., April 17, 2018 – Akcea Therapeutics, Inc. (NASDAQ: AKCA), an affiliate of Ionis Pharmaceuticals, Inc., and Ionis Pharmaceuticals, Inc. (NASDAQ: IONS) today announced the two companies have completed a previously announced transaction licensing the exclusive, worldwide rights from Ionis to Akcea for inotersen and AKCEA-TTR-LRx, formerly IONIS-TTR-LRx.

Inotersen is under regulatory review in the U.S. and EU with approvals planned for mid-2018 for the treatment of hereditary transthyretin amyloidosis, or hATTR. hATTR is a systemic, progressive and fatal disease. Akcea and Ionis are also developing AKCEA-TTR-LRx for hereditary and wild-type forms of ATTR and plan to commence clinical studies for AKCEA-TTR-LR in 2018.

In addition, following the close of the transaction, today, Sarah Boyce joined Akcea as president and a member of the Akcea board of directors reporting to Paula Soteropoulos, Akcea's chief executive officer. Ms. Boyce was formerly the chief business officer at Ionis.

The transaction was subject to certain closing conditions, including a non-waivable condition that the stock purchase agreement, the license agreement and related agreements and the transaction be approved by the affirmative vote of holders representing a majority of the issued and outstanding shares of common stock other than Ionis and its affiliates, which excluded a vote of Akcea's directors and officers. This affirmative vote was obtained at a special meeting of Akcea stockholders on April 16, 2018.

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## **TRANSACTION TERMS**

Under the agreement, Akcea paid Ionis an upfront licensing fee of \$150 million through the issuance of 8,000,000 shares of common stock priced at \$18.75 per share. Akcea obtained rights to commercialize inotersen and AKCEA-TTR-L<sub>Rx</sub> globally. To support the incremental resources required for the launch of inotersen and to progress the clinical development program for AKCEA-TTR-L<sub>Rx</sub>, Ionis purchased \$200 million of Akcea common stock, or 10,666,666 shares, priced at \$18.75 per share. Upon closing this transaction, Ionis' ownership in Akcea increased by 7%, from 68% to 75%, totaling 64,114,545 shares. Regulatory approval of inotersen and AKCEA-TTR-L<sub>Rx</sub> in the U.S. and EU will trigger milestone payments to Ionis of \$50 million and \$40 million, respectively, for each drug, with additional milestone payments due upon approval of both programs in various other geographies. The initial milestone payments may be payable in Akcea common stock at fair market value. Commercial profits and losses from inotersen will be split 60% to Ionis and 40% to Akcea until the first commercial sale of AKCEA-TTR-L<sub>Rx</sub>, after which the profits and losses will be shared 50/50. The costs of the development of AKCEA-TTR-L<sub>Rx</sub> and the profits from its commercialization will be shared 50/50. The license for the two drugs also includes various sales milestone payments of up to nearly \$1.3 billion. For this transaction, Ionis was advised by Stifel, Nicolaus & Company, Incorporated and Akcea was advised by Cowen and Company, LLC.

## **ABOUT INOTERSEN**

Inotersen is an antisense drug designed to reduce the production of transthyretin, or TTR protein, to treat TTR amyloidosis (ATTR), a systemic, progressive and fatal disease.

Inotersen is currently under regulatory review for marketing authorization in the U.S. and EU. The U.S. Food and Drug Administration has granted Orphan Drug Designation and Fast Track Status to inotersen and the European Medicines Agency has granted Orphan Drug Designation to inotersen.

## **ABOUT HEREDITARY TRANSTHYRETIN AMYLOIDOSIS (hATTR)**

hATTR is a progressive, systemic, and fatal genetic disease caused by the inappropriate formation and aggregation of TTR amyloid deposits in various tissues and organs throughout the body, including in peripheral nerves, heart, intestinal tract, eyes, kidneys, central nervous system, thyroid and bone marrow. The progressive accumulation of TTR amyloid deposits in these tissues and organs leads to sensory, motor and autonomic dysfunction often having debilitating effects on multiple aspects of a patient's life. Patients with hATTR often present with a mixed phenotype and experience overlapping symptoms of polyneuropathy and cardiomyopathy.

Ultimately, hATTR results in death within three to fifteen years of symptom onset. Therapeutic options for the treatment of patients with hATTR are limited and there are currently no disease-modifying drugs approved for hATTR. There are an estimated 50,000 patients with hATTR worldwide.

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## **ABOUT IONIS PHARMACEUTICALS, INC.**

Ionis is the leading company in RNA-targeted drug discovery and development focused on developing drugs for patients who have the highest unmet medical needs, such as those patients with severe and rare diseases. Using its proprietary antisense technology, Ionis has created a large pipeline of first-in-class or best-in-class drugs, with over 40 drugs in development. SPINRAZA® (nusinersen) has been approved in global markets for the treatment of spinal muscular atrophy (SMA). Biogen is responsible for commercializing SPINRAZA. Inotersen and volanesorsen are two antisense drugs that Ionis discovered and successfully advanced through Phase 3 studies. Inotersen is under regulatory review for marketing approval in the U.S. and EU for the treatment of patients with hereditary ATTR amyloidosis. Volanesorsen is under regulatory review for marketing approval in the U.S., EU and Canada for the treatment of patients with familial chylomicronemia syndrome, or FCS. Volanesorsen is also in a Phase 3 study in patients with familial partial lipodystrophy, or FPL. Akcea, an affiliate of Ionis focused on developing and commercializing drugs to treat patients with serious and rare diseases, will commercialize inotersen and volanesorsen, if approved. Ionis' patents provide strong and extensive protection for its drugs and technology. Additional information about Ionis is available at [www.ionispharma.com](http://www.ionispharma.com).

## **ABOUT AKCEA THERAPEUTICS**

Akcea Therapeutics, an affiliate of Ionis Pharmaceuticals, Inc. (NASDAQ: IONS), is a biopharmaceutical company focused on developing and commercializing drugs to treat patients with serious and rare diseases. Akcea is advancing a mature pipeline of six novel drugs, including inotersen, volanesorsen, AKCEA-APO(a)-LR<sub>x</sub>, AKCEA-ANGPTL3-LR<sub>x</sub>, AKCEA-APOCIII-LR<sub>x</sub>, and AKCEA-TTR-LR<sub>x</sub>, all with the potential to treat multiple diseases. All six drugs were discovered by and are being co-developed with Ionis, a leader in antisense therapeutics, and are based on Ionis' proprietary antisense technology. Inotersen is under regulatory review in the U.S. and EU for the treatment of hereditary transthyretin amyloidosis (hATTR). Volanesorsen is under regulatory review in the U.S., EU and Canada for the treatment of familial chylomicronemia syndrome, or FCS, and is currently in Phase 3 clinical development for the treatment of familial partial lipodystrophy, or FPL. Akcea is building the infrastructure to commercialize its drugs globally. Akcea is a global company headquartered in Cambridge, Massachusetts. Additional information about Akcea is available at [www.akceatx.com](http://www.akceatx.com).

## **IONIS' AND AKCEA'S FORWARD-LOOKING STATEMENT**

This press release includes forward-looking statements regarding the recently announced transaction between Ionis and Akcea, Ionis' and Akcea's business and the therapeutic and commercial potential of inotersen, AKCEA-TTR-LR<sub>x</sub> and other products in development. Any statement describing Ionis' or Akcea's goals, expectations, financial or other projections, intentions or beliefs, including the commercial potential of inotersen, volanesorsen or other of Ionis' or Akcea's drugs in development is a forward-looking statement and should be considered an at-risk statement. Such statements are subject to certain risks and uncertainties, particularly those inherent in the process of discovering, developing and commercializing drugs that are safe and effective for use as human therapeutics, and in the endeavor of building a business around such drugs. Ionis' and Akcea's forward-looking statements also involve assumptions that, if they never materialize or prove correct, could cause its results to differ materially from those expressed or implied by such forward-looking statements. Although Ionis' and Akcea's forward-looking statements reflect the good faith judgment of its management, these statements are based only on facts and factors currently known by Ionis and Akcea. As a result, you are cautioned not to rely on these forward-looking statements. These and other risks concerning Ionis' and Akcea's programs are described in additional detail in Ionis' and Akcea's annual reports on Form 10-K for the year ended December 31, 2017, which are on file with the SEC. Copies of these and other documents are available from each company.

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In this press release, unless the context requires otherwise, “Ionis”, “Akcea,” “Company,” “Companies” “we,” “our,” and “us” refers to Ionis Pharmaceuticals and/or Akcea Therapeutics.

Ionis Pharmaceuticals™ is a trademark of Ionis Pharmaceuticals, Inc. Akcea Therapeutics™ is a trademark of Akcea Therapeutics, Inc.

**Akcea Media and Investor Contact:**

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**Ionis Media and Investor Contact:**

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Vice President, Corporate Communications and Investor Relations  
760-603-2741

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