

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

**SCHEDULE TO  
TENDER OFFER STATEMENT UNDER SECTION 14(D)(1) OR 13(E)(1)  
OF THE SECURITIES EXCHANGE ACT OF 1934**

**AKCEA THERAPEUTICS, INC.**

(Name of Subject Company (Issuer))

**AVALANCHE MERGER SUB, INC.**

a wholly owned subsidiary of

**IONIS PHARMACEUTICALS, INC.**

(Names of Filing Persons (Offeror))

**Common Stock, Par Value \$0.001 Per Share**

(Title of Class of Securities)

**00972L 107**

(Cusip Number of Class of Securities)

**Brett Monia**

**Chief Executive Officer**

**Ionis Pharmaceuticals, Inc.**

**2855 Gazelle Court**

**Carlsbad, CA 92010**

**(760) 931-9200**

(Name, Address and Telephone Number of Person Authorized to  
Receive Notices and Communications on Behalf of Filing Persons)

Copies to:

**Graham Robinson**

**Laura Knoll**

**Skadden, Arps, Slate, Meagher & Flom LLP**

**500 Boylston Street**

**Boston, MA 02116**

**(617) 573-4850**

**CALCULATION OF FILING FEE**

Transaction Valuation*	Amount of Filing Fee**
\$ 535,900,072	\$ 69,559.83

\* Estimated for purposes of calculating the filing fee only. The transaction valuation was calculated as the sum of (i) 24,665,090 outstanding shares, which is the difference between 101,759,772, the number of shares of common stock of Akcea Therapeutics, Inc., par value \$0.001 per share ("Shares"), outstanding as of September 8, 2020, and 77,094,682, the number of Shares beneficially owned by Ionis Pharmaceuticals, Inc. or its affiliates, multiplied by \$18.15, (ii) 5,881,651 Shares issuable pursuant to outstanding options with an exercise price less than \$18.15 per Share, multiplied by \$4.52 (which is the offer price of \$18.15 minus the weighted average exercise price for such options of \$13.63 per share), and (iii) 1,521,514 Shares subject to issuance pursuant to outstanding Akcea restricted stock units multiplied by \$18.15 and (iv) 1,874,829 Shares reserved for issuance pursuant to Akcea's employee stock purchase plan multiplied by the offer price of \$18.15. The calculation of the filing fee is based on information provided by Akcea as of September 8, 2020.

\*\* The filing fee was calculated in accordance with Rule 0-11 under the Securities Exchange Act of 1934, as amended, and Fee Rate Advisory No. 1 for Fiscal Year 2020, by multiplying the transaction value by 0.0001298.

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

Amount Previously Paid: None Filing Party: Not applicable  
Form or Registration No.: Not applicable Date Filed: Not applicable

Check the box if the filing relates solely to preliminary communications made before the commencement of a tender offer.

Check the appropriate boxes below to designate any transactions to which the statement relates:

third-party tender offer subject to Rule 14d-1.

issuer tender offer subject to Rule 13e-4.

going-private transaction subject to Rule 13e-3.

amendment to Schedule 13D under Rule 13d-2.

Check the following box if the filing is a final amendment reporting the results of the tender offer.

**Item 1 through 9, Item 11 and Item 13.**

This Tender Offer Statement on Schedule TO (this “Schedule TO”) relates to the offer by Avalanche Merger Sub, Inc., a Delaware corporation (“Purchaser”) and a wholly owned subsidiary of Ionis Pharmaceuticals, Inc., a Delaware corporation (“Parent”), to purchase all outstanding shares of common stock, \$0.001 par value per share (“Shares”), of Akcea Therapeutics, Inc., a Delaware corporation (“Akcea”), not owned by Parent at a price of \$18.15 per Share, net to the seller in cash, without interest and subject to any withholding of taxes, upon the terms and subject to the conditions described in the Offer to Purchase dated September 14, 2020 (together with any amendments or supplements thereto, the “Offer to Purchase”) and in the accompanying Letter of Transmittal (together with any amendments or supplements thereto and with the Offer to Purchase, the “Offer”).

The information set forth in the Offer to Purchase, including all schedules thereto, is hereby expressly incorporated by reference in response to all of the items of this Schedule TO, including, without limitation, all of the information required by Schedule 13E-3 that is not included in or covered by the items in Schedule TO, and is supplemented by the information specifically provided herein, except as otherwise set forth below.

**Item 10. Financial Statements.**

Not applicable.

**Item 12. Exhibits.****Index No.**

(a)(1)(i)*	Offer to Purchase, dated September 14, 2020.
(a)(1)(ii)*	Form of Letter of Transmittal.
(a)(1)(iii)*	Form of Notice of Guaranteed Delivery.
(a)(1)(iv)*	Form of Letter to Brokers, Dealers, Commercial Banks, Trust Companies and Other Nominees.
(a)(1)(v)*	Form of Letter to Clients for Use by Brokers, Dealers, Commercial Banks, Trust Companies and Other Nominees.
(a)(1)(vi)*	Form of Summary Advertisement, published September 14, 2020, in <i>The New York Times</i> .
(a)(5)(i)	Joint Press Release, dated August 31, 2020 (incorporated by reference to Exhibit 99.1 to the Current Report on Form 8-K filed by Parent with the Securities and Exchange Commission on August 31, 2020).
(a)(5)(ii)	Ionis Employee FAQ, dated August 31, 2020 (incorporated by reference to Exhibit 99.2 to Tender Offer Statement on Schedule TO-C filed by Parent with the Securities and Exchange Commission on August 31, 2020).
(a)(5)(iii)	Ionis Investor Talking Points, dated August 31, 2020 (incorporated by reference to Exhibit 99.3 to Tender Offer Statement on Schedule TO-C filed by Parent with the Securities and Exchange Commission on August 31, 2020).
(a)(5)(iv)	Ionis “bpm Update” transcript, for information session published on the Ionis intranet on August 31, 2020 (incorporated by reference to Exhibit 99.4 to Tender Offer Statement on Schedule TO-C filed by Parent with the Securities and Exchange Commission on August 31, 2020).
(a)(5)(v)	Ionis social media content, published on August 31, 2020 (incorporated by reference to Exhibit 99.5 to Tender Offer Statement on Schedule TO-C filed by Parent with the Securities and Exchange Commission on August 31, 2020).
(a)(5)(vi)	Email to Ionis Pharmaceuticals, Inc. investors, first used on August 31, 2020 (incorporated by reference to Exhibit 99.1 to Tender Offer Statement on Schedule TO-C filed by Parent with the Securities and Exchange Commission on September 1, 2020).
(a)(5)(vii)	Letter, dated August 31, 2020, from Damien McDevitt, Akcea’s Chief Executive Officer, and B. Lynne Parshall, Chair of Akcea’s Board of Directors, to Akcea Employees (incorporated by reference to Exhibit 99.2 to Solicitation/Recommendation Statement on Schedule 14D-9C filed by Akcea with the Securities and Exchange Commission on August 31, 2020).
(a)(5)(viii)	Postings on Twitter and LinkedIn made by Akcea (incorporated by reference to Exhibit 99.3 to Solicitation/Recommendation Statement on Schedule 14D-9C filed by Akcea with the Securities and Exchange Commission on August 31, 2020).
(a)(5)(ix)	Internal Employee FAQ, dated September 1, 2020 (incorporated by reference to Exhibit 99.1 to Solicitation/Recommendation Statement on Schedule 14D-9C filed by Akcea with the Securities and Exchange Commission on September 1, 2020).
(c)(i)*†	Presentation titled “Finance Committee Update — Supporting Analysis”, dated August 7, 2020, of Goldman Sachs & Co. LLC and Stifel, Nicolaus & Company, Incorporated to the Finance Committee of the Board of Directors of Parent.

- (c)(ii)\*† Presentation titled “Discussion Materials for Islanders’ Board of Directors”, dated August 30, 2020, of Goldman Sachs & Co. LLC and Stifel, Nicolaus & Company, Incorporated to the Board of Directors of Parent.
- (d)(i) Agreement and Plan of Merger, dated August 30, 2020, among Akcea Therapeutics, Inc., Ionis Pharmaceuticals, Inc. and Avalanche Merger Sub, Inc. (incorporated by reference to Exhibit 2.1 to the Current Report on Form 8-K filed by Parent with the Securities and Exchange Commission on August 31, 2020).
- (d)(ii) Confidentiality Agreement, dated July 17, 2020, between Akcea Therapeutics, Inc. and Ionis Pharmaceuticals, Inc. (incorporated by reference to Exhibit (e)(2) to the Schedule 14D-9 filed by Akcea with the Securities and Exchange Commission on September 14, 2020).
- (d)(iii) Development, Commercialization, Collaboration, and License Agreement, by and between Akcea Therapeutics, Inc. and Ionis Pharmaceuticals, Inc., dated March 14, 2018 (incorporated by reference to Exhibit 10.1 to Akcea’s Current Report on Form 8-K filed by Akcea with the Securities and Exchange Commission on March 15, 2018).
- (d)(iv) Stock Purchase Agreement by and between Akcea Therapeutics, Inc. and Ionis Pharmaceuticals, Inc., dated March 14, 2018 (incorporated by reference to Exhibit 10.2 to Akcea’s Current Report on Form 8-K filed by Akcea with the Securities and Exchange Commission on March 15, 2018).
- (d)(v) Development, Commercialization and License Agreement by and among Akcea Therapeutics, Inc. and Ionis Pharmaceuticals, Inc., dated December 18, 2015 (incorporated by reference to Exhibit 10.4 to Akcea’s Registration Statement on Form S-1 filed by Akcea with the Securities and Exchange Commission on March 27, 2017).
- (d)(vi) Strategic Collaboration, Option and License Agreement by and among Akcea Therapeutics, Inc. and Novartis Pharma AG, dated January 5, 2017 (incorporated by reference to Exhibit 10.7 to Akcea’s Registration Statement on Form S-1 filed by Akcea with the Securities and Exchange Commission on March 27, 2017).
- (d)(vii) Letter Agreement regarding Development, Commercialization and License Agreement between Akcea Therapeutics, Inc. and Ionis Pharmaceuticals, Inc., dated January 18, 2017 (incorporated by reference to Exhibit 10.15 to Akcea’s Registration Statement on Form S-1 filed by Akcea with the Securities and Exchange Commission on March 27, 2017).
- (d)(viii) Stock Purchase Agreement by and among Akcea Therapeutics, Inc., Ionis Pharmaceuticals, Inc. and Novartis Pharma AG, dated January 5, 2017 (incorporated by reference to Exhibit 10.8 to Akcea’s Registration Statement on Form S-1 filed by Akcea with the Securities and Exchange Commission on March 27, 2017).
- (d)(ix) License Agreement by and among Akcea Therapeutics, Inc. and Pfizer Inc. dated October 4, 2019 (incorporated by reference to Exhibit 10.15 to Akcea’s Annual Report on Form 10-K filed by Akcea with the Securities and Exchange Commission on March 2, 2020).
- (d)(x) Collaboration and License Agreement by and among Akcea Therapeutics, Inc. and PTC Therapeutics International Limited, dated August 1, 2018 (incorporated by reference to Exhibit 10.1 on Akcea’s Quarterly Report on Form 10-Q filed by Akcea with the Securities and Exchange Commission on November 6, 2018).
- (d)(xi) Amended and Restated Services Agreement by and among Akcea Therapeutics, Inc. and Ionis Pharmaceuticals, Inc., dated March 14, 2018 (incorporated by reference to Exhibit 10.3 to Akcea’s Current Report on Form 8-K filed by Akcea with the Securities and Exchange Commission on March 15, 2018).
- (d)(xii) Amended and Restated Investor Rights Agreement by and among Akcea Therapeutics, Inc. and Ionis Pharmaceuticals, Inc., dated March 14, 2018 (incorporated by reference to exhibit 4.1 to Akcea’s Current Report on Form 8-K filed by Akcea with the Securities and Exchange Commission on March 15, 2018).
- (d)(xiii) Operating Sublease Agreement by and among Akcea Therapeutics, Inc. and Ionis Pharmaceuticals, Inc., dated November 12, 2018 (incorporated by reference to Exhibit 10.3 to Akcea’s Annual Report on Form 10-K filed by Akcea with the Securities and Exchange Commission March 1, 2019).
- (d)(xiv) Strategic Advisory Services Agreement, by and between Akcea Therapeutics, Inc. and B. Lynne Parshall, dated January 8, 2020 (incorporated by reference to Exhibit 10.4 to Akcea’s Quarterly Report on Form 10-Q filed by Akcea with the Securities and Exchange Commission on May 6, 2020).
- (e) Not applicable.
- (f) Section 262 of the Delaware General Corporation Law (included as Schedule B to the Offer to Purchase filed herewith as Exhibit (a)(1)(i)).
- (g) Not applicable.
- (h) Not applicable.

\* Filed herewith.

† Certain portions of this exhibit have been redacted and separately filed with the Securities and Exchange Commission pursuant to a request for confidential treatment.

**SIGNATURE**

After due inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

Dated: September 14, 2020

By: /s/ Brett Monia  
Name: Brett Monia, Ph.D.  
Title: *Chief Executive Officer of Ionis Pharmaceuticals, Inc.*

By: /s/ Brett Monia  
Name: Brett Monia, Ph.D.  
Title: *President of Avalanche Merger Sub., Inc.*



**Offer to Purchase  
All Outstanding Shares of Common Stock  
of**

**AKCEA THERAPEUTICS, INC.**

at  
**\$18.15 Net Per Share in Cash**  
by

**AVALANCHE MERGER SUB, INC.**

a wholly owned subsidiary of

**IONIS PHARMACEUTICALS, INC.**

**THE OFFER AND WITHDRAWAL RIGHTS WILL EXPIRE AT ONE MINUTE AFTER  
11:59 P.M., EASTERN TIME, ON OCTOBER 9, 2020,  
UNLESS THE OFFER IS EXTENDED OR EARLIER TERMINATED.**

Avalanche Merger Sub. Inc., a Delaware corporation (“Purchaser”), is offering to purchase (the “Offer”) all outstanding shares of common stock, par value \$0.001 per share (“Shares”), of Akcea Therapeutics, Inc., a Delaware corporation (“Akcea”), at a price per Share of \$18.15, net to the seller in cash, without interest (the “Offer Price”), and subject to any withholding of taxes, upon the terms and subject to the conditions described in this Offer to Purchase (together with any amendments or supplements hereto, this “Offer to Purchase”) and in the related Letter of Transmittal (together with any amendments or supplements thereto, the “Letter of Transmittal”). Purchaser is a wholly owned subsidiary of Ionis Pharmaceuticals, Inc. (“Parent”), a Delaware corporation. The Offer is being made in connection with the Agreement and Plan of Merger, dated as of August 30, 2020 (together with any amendments or supplements thereto, the “Merger Agreement”), among Akcea, Parent and Purchaser, pursuant to which, after the completion of the Offer and the satisfaction or waiver of certain conditions, Purchaser will be merged with and into Akcea, without a meeting or vote of the Akcea stockholders in accordance with Section 251(h) of the General Corporation Law of the State of Delaware (the “DGCL”), and Akcea will be the surviving corporation and a wholly owned subsidiary of Parent (such corporation, the “Surviving Corporation” and such merger, the “Merger”). At the effective time of the Merger, each Share (other than Shares held by Akcea, Parent, Purchaser, any wholly owned subsidiary of Parent or Purchaser, or by stockholders of Akcea who have perfected their statutory rights of appraisal under DGCL) will be converted into the right to receive an amount in cash equal to the Offer Price, without any interest thereon and subject to any withholding of taxes.

After careful consideration, the Akcea board of directors, acting on the unanimous recommendation of an affiliated transactions committee comprised solely of independent directors, has: (i) determined that the Merger Agreement and the transactions contemplated thereby (the “Transactions”), including the Offer and the Merger, are fair to and in the best interest of Akcea and its stockholders (other than Parent, its affiliates, their respective directors and executive officers and Damien McDevitt, Akcea’s chief executive officer (the “Excluded Holders”)), (ii) declared it advisable to enter into the Merger Agreement, (iii) approved the execution, delivery and performance by Akcea of the Merger Agreement and the consummation of the Transactions, including the Offer and the Merger, (iv) resolved that the Merger shall be effected under Section 251(h) of the DGCL and (v) resolved to recommend that the stockholders of Akcea (other than the Excluded Holders) tender their Shares pursuant to the Offer.

There is no financing condition to the Offer. The Offer is subject to various conditions, including, among others, the non-waivable condition that there shall have been validly tendered and not validly withdrawn Shares that, excluding the Shares beneficially owned by the Excluded Holders, represent at least one more Share than 50% of the Shares not beneficially owned by the Excluded Holders outstanding at the time of the expiration of the Offer. See Section 22—“Conditions of the Offer.” A summary of the principal terms of the Offer appears on pages 1 through 6 of this Offer to Purchase. You should read this entire document carefully before deciding whether to tender your Shares.

September 14, 2020

**IMPORTANT**

If you desire to tender all or any portion of your Shares to us pursuant to the Offer, you should either (i) if you hold your Shares directly as the registered owner, complete and sign the Letter of Transmittal for the Offer, which is enclosed with this Offer to Purchase, in accordance with the instructions contained in the Letter of Transmittal, mail or deliver the Letter of Transmittal and any other required documents to American Stock Transfer & Trust Company, LLC (the “Depository”), and either deliver the certificates for your Shares to the Depository along with the Letter of Transmittal or tender your Shares by book-entry transfer by following the procedures described in Section 13—“Procedures for Tendering Shares” of this Offer to Purchase, in each case prior to the expiration of the Offer, or (ii) if you hold your Shares in street name, request that your broker, dealer, commercial bank, trust company or other nominee effect the transaction for you. If you hold Shares registered in the name of a broker, dealer, commercial bank, trust company or other nominee you must contact that institution in order to tender your Shares to us pursuant to the Offer.

If you desire to tender your Shares to us pursuant to the Offer and the certificates representing your Shares are not immediately available, or you cannot comply in a timely manner with the procedures for tendering your Shares by book-entry transfer, or you cannot deliver all required documents to the Depository prior to the expiration of the Offer, you may tender your Shares to us pursuant to the Offer by following the procedures for guaranteed delivery described in Section 13—“Procedures for Tendering Shares” of this Offer to Purchase.

\* \* \*

Questions and requests for assistance may be directed to Alliance Advisors, LLC (the “Information Agent”) at its address and telephone number set forth on the back cover of this Offer to Purchase. Requests for additional copies of this Offer to Purchase, the Letter of Transmittal, the Notice of Guaranteed Delivery and other tender offer materials may be directed to the Information Agent. You may also contact your broker, dealer, commercial bank, trust company or other nominee for assistance.

This Offer to Purchase and the Letter of Transmittal contain important information, and you should read both carefully and in their entirety before making any decision with respect to the Offer.

**This transaction has not been approved or disapproved by the U.S. Securities and Exchange Commission (the “SEC”) or any state securities commission nor has the SEC or any state securities commission passed upon the fairness or merits of this transaction or upon the accuracy or adequacy of the information contained in this Offer to Purchase or the Letter of Transmittal. Any representation to the contrary is unlawful.**

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## SUMMARY TERM SHEET

Avalanche Merger Sub, Inc., a recently formed Delaware corporation (“Purchaser”) and a wholly owned subsidiary of Ionis Pharmaceuticals, Inc., a Delaware corporation (“Parent”), is offering to purchase (the “Offer”) all outstanding shares of common stock, par value \$0.001 per share (the “Shares”), of Akcea Therapeutics, Inc., a Delaware corporation (“Akcea”), at a price per Share of \$18.15, net to the seller in cash, without interest (the “Offer Price”), and subject to any withholding of taxes, upon terms and subject to the conditions set forth in this Offer to Purchase (together with any amendments or supplements hereto, this “Offer to Purchase”) and in the related Letter of Transmittal (together with any amendments or supplements thereto, the “Letter of Transmittal”). The following are some questions you, as a stockholder of Akcea, may have and answers to those questions. This Summary Term Sheet highlights selected information from this Offer to Purchase, and may not contain all of the information that is important to you and is qualified in its entirety by the more detailed descriptions and explanations contained in this Offer to Purchase and the related Letter of Transmittal. To better understand the Offer and for a complete description of the legal terms of the Offer, you should read this Offer to Purchase and the related Letter of Transmittal carefully and in their entirety. Questions or requests for assistance may be directed to Alliance Advisors, LLC (the “Information Agent”) at its address and telephone number, as set forth on the back cover of this Offer to Purchase. Unless otherwise indicated in this Offer to Purchase or the context otherwise requires, all references in this Offer to Purchase to “we,” “our,” or “us” refer to Purchaser or Parent, as the context requires.

### WHO IS OFFERING TO BUY MY SECURITIES?

- Purchaser is offering to buy your securities. Purchaser was organized in connection with this Offer and has not carried on any activities other than entering into the Agreement and Plan of Merger, dated as of August 30, 2020 (together with any amendments or supplements thereto, the “Merger Agreement”), among Akcea, Parent and Purchaser, relating to, and activities in connection with, the Offer. See Section 19—“Certain Information Concerning Parent and Purchaser.”
- Parent is a leader in RNA-targeted drug discovery and development and has created an efficient, broadly applicable drug discovery platform called antisense technology that can treat diseases where no other therapeutic approaches have proven effective. Parent sets its sights on all the patients it has yet to reach with a pipeline of more than 40 novel medicines designed to potentially treat a broad range of diseases, including neurological, cardio-renal, metabolic, infectious, and pulmonary diseases. See Section 19—“Certain Information Concerning Parent and Purchaser.”
- Parent has agreed pursuant to the Merger Agreement to cause Purchaser to, upon the terms and subject to the conditions in this Offer to Purchase and the related Letter of Transmittal, accept and pay for Shares tendered and not validly withdrawn in the Offer. See Section 20—“Summary of the Merger Agreement.”

### WHAT ARE THE CLASSES AND AMOUNTS OF SECURITIES SOUGHT IN THE OFFER?

- Purchaser is seeking to purchase all of the outstanding Shares of Akcea. See the Introduction and Section 11—“Terms of the Offer.”

### HOW MUCH ARE YOU OFFERING TO PAY AND WHAT IS THE FORM OF PAYMENT? WILL I HAVE TO PAY ANY FEES OR COMMISSIONS?

- Purchaser is offering to pay \$18.15 per Share, net to you in cash, without interest and subject to any withholding of taxes, upon the terms and subject to the conditions contained in this Offer to Purchase and in the related Letter of Transmittal. See Section 11—“Terms of the Offer.”
- If your Shares are registered in your name and you tender your Shares, you will not be obligated to pay brokerage fees or commissions or similar expenses. If you hold your Shares through a broker, dealer, commercial bank, trust company or other nominee and your broker, dealer, commercial bank, trust

company or other nominee tenders your Shares on your behalf, your broker, dealer, commercial bank, trust company or other nominee may charge a fee for doing so. You should consult your broker, dealer, commercial bank, trust company or other nominee to determine whether any charges will apply. Section 13—“Procedures for Tendering Shares.”

**WHY IS PURCHASER MAKING THE OFFER?**

- Purchaser is making the Offer because Parent wishes to acquire the entire equity interest in Akcea. Parent currently owns approximately 76% of all outstanding Shares of Akcea. See Section 3—“Purpose of the Offer and Plans for Akcea,” Section 11—“Terms of the Offer” and Section 20—“Summary of the Merger Agreement.”

**WHAT ARE THE MOST SIGNIFICANT CONDITIONS OF THE OFFER?**

- The Offer is subject to, among others, the following conditions:
  - there shall have been validly tendered and not validly withdrawn Shares that, excluding the Shares beneficially owned by Parent, its affiliates, their respective directors and executive officers and Damien McDevitt, Akcea’s chief executive officer, represent at least one more Share than 50% of the Shares not beneficially owned by such entities and persons outstanding at the time of the expiration of the Offer (the “Minimum Condition”);
  - there shall not have been issued by any governmental body of competent jurisdiction and remain in effect any temporary restraining order, preliminary or permanent injunction or other order preventing the acquisition of or payment for Shares pursuant to the Offer or the consummation of the Merger (as defined below), and there shall not have been any final and nonappealable law, rule, regulation or other requirement promulgated, enacted, issued or deemed applicable to the Offer or the Merger by any governmental body which prohibits or makes illegal the acquisition or acceptance for payment of Shares pursuant to the Offer or the consummation of the Merger (the “Governmental Impediment Condition”);
  - since the date of the Merger Agreement, there shall not have occurred any event, occurrence, circumstance, change or effect which, individually or in the aggregate, has had, or would reasonably be expected to have, a Material Adverse Effect (as defined in Section 20—“Summary of the Merger Agreement”); and
  - the Merger Agreement shall not have been terminated in accordance with its terms (the “Termination Condition”).
- Parent and Purchaser reserve the right to waive certain of the conditions to the Offer in their sole discretion; provided that (i) Parent and Purchaser may not waive the Minimum Condition and (ii) Parent and Purchaser may not waive the Termination Condition or the Governmental Impediment Condition without the consent of Akcea.
- The Offer is subject to other conditions in addition to those set forth above. A more detailed discussion of the conditions to consummation of the Offer is contained in the Introduction, Section 11—“Terms of the Offer” and Section 22—“Conditions of the Offer.”

**IS THERE AN AGREEMENT GOVERNING THE OFFER?**

- Yes. Akcea, Parent and Purchaser have entered into the Merger Agreement. The Merger Agreement provides, among other things, for the terms and conditions of the Offer and, following consummation of the Offer, the Merger. See Section 20—“Summary of the Merger Agreement.”

**DO YOU HAVE FINANCIAL RESOURCES TO MAKE PAYMENTS IN THE OFFER?**

- Yes. Parent is a publicly traded company with an equity market capitalization of approximately \$7.26 billion (based upon the closing price of Parent shares on the Nasdaq Stock Market (“Nasdaq”) on September 11, 2020) and has sufficient funds to purchase the Shares in the Offer. The Offer is not conditioned upon entering into any financing arrangements. See Section 21—“Source and Amount of Funds.”

**SHOULD PURCHASER’S FINANCIAL CONDITION BE RELEVANT TO MY DECISION TO TENDER IN THE OFFER?**

- No. Parent has sufficient funds which will be used to provide Purchaser with the funds necessary to purchase the Shares in the Offer. The funds to pay for all Shares accepted for payment in the Offer and the consideration in connection with the Merger are expected to come from Parent’s available cash and cash equivalents on hand.
- Purchaser was organized solely in connection with the Merger Agreement and this Offer and has not carried on any activities other than in connection with the Merger Agreement and this Offer. Because the form of payment consists solely of cash that will be provided to Purchaser by Parent and because of the lack of any relevant historical information concerning Purchaser, our financial condition is not relevant to your decision to tender in the Offer. See Section 21—“Source and Amount of Funds.”

**HOW LONG DO I HAVE TO DECIDE WHETHER TO TENDER IN THE OFFER?**

- You will have until October 9, 2020, to tender your Shares in the Offer, unless Purchaser extends the Offer, in which event you will have until the expiration date of the Offer as so extended. If you cannot deliver everything that is required in order to make a valid tender by that time, you may be able to use a guaranteed delivery procedure which is described in Section 13—“Procedures for Tendering Shares.” See also Section 11—“Terms of the Offer.”

**CAN THE OFFER BE EXTENDED, AND UNDER WHAT CIRCUMSTANCES?**

- If, as of the then-scheduled expiration date, any of the conditions to the Offer is not satisfied and has not been waived by Parent or Purchaser, Parent and Purchaser may in their sole discretion extend the Offer, and are required to extend the Offer if requested by Akcea, on one or more occasions, for an additional period of up to 10 business days per extension, to permit such condition to the Offer to be satisfied.
- In addition, Purchaser has agreed to extend the Offer for any period required by any law, rule, regulation, interpretation or position of the U.S. Securities and Exchange Commission (the “SEC”) or Nasdaq applicable to the Offer.
- However, Parent and Purchaser are not required to extend the Offer on more than 2 occasions in consecutive periods of 10 business days if the Minimum Condition is the only condition to the Offer that is not satisfied or waived as of the then-scheduled expiration date (other than conditions which by their nature are to be satisfied at the expiration of the Offer) and none of the tender offer documents is still being reviewed or commented on by the SEC.
- In no event will Parent and Purchaser be required to extend the Offer beyond the earlier to occur of the valid termination of the Merger Agreement or December 30, 2020. See Section 11—“Terms of the Offer” and Section 20—“Summary of the Merger Agreement.”

**HOW WILL I BE NOTIFIED IF THE OFFER IS EXTENDED?**

- If Purchaser extends the Offer, we will inform American Stock Transfer & Trust Company, LLC, the Depository for this Offer (the “Depository”), of that fact and will issue a press release giving the new

expiration date no later than 9:00 a.m., Eastern Time, on the next business day after the day on which the Offer was previously scheduled to expire. See Section 11—“Terms of the Offer.”

#### **HOW DO I TENDER MY SHARES?**

- If you hold your Shares directly as the registered owner, you can (i) tender your Shares in the Offer by delivering the certificates representing your Shares, together with a completed Letter of Transmittal and any other documents required by the Letter of Transmittal, to the Depository or (ii) tender your Shares by following the procedure for book-entry set forth in Section 13—“Procedures for Tendering Shares” not later than the expiration of the Offer. If you are unable to deliver any required document or instrument to the Depository by the expiration of the Offer, you may gain some extra time by having a broker, a bank or other fiduciary that is an eligible guarantor institution guarantee that the missing items will be received by the Depository by using the enclosed Notice of Guaranteed Delivery. For the tender to be valid, however, the Depository must receive the missing items within two trading days after the date of execution of such Notice of Guaranteed Delivery. See Section 13—“Procedures for Tendering Shares.” The Letter of Transmittal is enclosed with this Offer to Purchase.
- If you hold your Shares in street name (i.e., through a broker, dealer, commercial bank, trust company or other nominee), you must contact the institution that holds your Shares and give instructions that your Shares be tendered. You should contact the institution that holds your Shares for more details.
- In all cases, payment for tendered Shares will be made only after timely receipt by the Depository of certificates for such Shares (or of a confirmation of a book-entry transfer of such Shares as described in Section 13—“Procedures for Tendering Shares”) and a properly completed and duly executed Letter of Transmittal and any other required documents for such Shares. See also Section 12—“Acceptance for Payment and Payment for Shares.”

#### **UNTIL WHAT TIME CAN I WITHDRAW PREVIOUSLY TENDERED SHARES?**

- You may withdraw previously tendered Shares any time prior to one minute after 11:59 p.m., Eastern Time, on October 9, 2020, unless Purchaser extends the Offer. In addition, pursuant to Section 14(d)(5) of the Securities Exchange Act of 1934, as amended, Shares may be withdrawn at any time after November 12, 2020, which is the 60th day after the date of the commencement of the Offer, unless prior to that date Purchaser has accepted for payment the Shares validly tendered in the Offer. See Section 14—“Withdrawal Rights.”

#### **HOW DO I WITHDRAW PREVIOUSLY TENDERED SHARES?**

- To withdraw previously tendered Shares, you must deliver a written or facsimile notice of withdrawal with the required information to the Depository while you still have the right to withdraw. If you tendered Shares by giving instructions to a broker, dealer, commercial bank, trust company or other nominee, you must instruct the broker, dealer, commercial bank, trust company or other nominee to arrange for the withdrawal of your Shares. See Section 14—“Withdrawal Rights.”

#### **WHAT DOES AKCEA’S BOARD OF DIRECTORS THINK OF THE OFFER?**

- Akcea’s board of directors (the “Akcea Board”) formed an Affiliate Transactions Committee, comprised solely of independent directors (the “Affiliate Transactions Committee”), to review, evaluate, negotiate, recommend or not recommend the Offer and the Merger. The Affiliate Transactions Committee has unanimously recommended to the Akcea Board the execution, delivery and performance by Akcea of the Merger Agreement and the consummation of the Transactions, including the Offer and the Merger.

- Acting on the unanimous recommendation of the Affiliate Transactions Committee, the Akcea Board has recommended that you accept the Offer and tender your Shares pursuant to the Offer.
- Akcea’s full statement on the Offer is set forth in its Schedule 14D-9, which it filed with the SEC substantially concurrently with the filing of our Schedule TO dated September 14, 2020. See also the Introduction, Section 2— “Position of Parent Regarding the Fairness of the Transaction” and Section 9— “Recommendation by the Affiliated Transactions Committee and the Board of Directors of Akcea.”

**WILL THE TENDER OFFER BE FOLLOWED BY A MERGER IF ALL THE SHARES ARE NOT TENDERED?**

- If we accept for payment a majority of the Shares not beneficially owned by Parent, its affiliates, their respective directors and executive officers and Damien McDevitt, Akcea’s chief executive officer, outstanding at the time of the expiration of the Offer, and the other conditions to the Merger are satisfied or waived, we will effect a merger of Purchaser with and into Akcea (the “Merger”), with Akcea being the surviving corporation (the “Surviving Corporation”) and without a vote or meeting of the stockholders of Akcea, pursuant to Section 251(h) of the General Corporation Law of the State of Delaware (the “DGCL”).
- If the Merger occurs, Akcea will become a wholly owned subsidiary of Parent and each issued and then outstanding Share (other than Shares held by Akcea, Parent, Purchaser, any wholly owned subsidiary of Parent or Purchaser, or by stockholders of Akcea who have perfected their statutory rights of appraisal under the DGCL) will be converted into the right to receive \$18.15 in cash, without any interest thereon and subject to any withholding of taxes. See the Introduction.
- Because the Merger will be governed by Section 251(h) of the DGCL, no stockholder vote will be required to consummate the Merger. As required by Section 251(h) of the DGCL, the Merger Agreement provides that the Merger shall be effected as soon as practicable following the consummation of the Offer. See Section 20—“Summary of the Merger Agreement” and Section 24—“Certain Legal Matters; Regulatory Approvals.”

**IF THE OFFER IS COMPLETED, WILL AKCEA CONTINUE AS A PUBLIC COMPANY?**

- No. Immediately following consummation of the Offer and satisfaction or waiver (to the extent permitted by applicable law) of the conditions to the Merger, we expect to complete the Merger pursuant to applicable provisions of the DGCL, after which the Surviving Corporation will be a wholly owned subsidiary of Parent and the Shares will no longer be publicly traded. Even if the Merger does not occur, if Purchaser purchases all Shares that have been tendered, there may be so few remaining stockholders and publicly held Shares that the Shares may no longer be eligible to be traded through Nasdaq or any other securities market, there may not be a public trading market for the Shares, and Akcea may cease to make filings with the SEC or otherwise cease to be required to comply with the SEC’s rules relating to publicly held companies. See Section 17—“Possible Effects of the Offer on the Market for the Shares; Nasdaq Listing; Exchange Act Registration and Margin Regulations.”

**IF I DECIDE NOT TO TENDER, HOW WILL THE OFFER AFFECT MY SHARES?**

- If you decide not to tender your Shares in the Offer and the Merger occurs as described above, you will receive in the Merger the right to receive the same amount of cash per Share as if you had tendered your Shares in the Offer.
- If you decide not to tender your Shares in the Offer and the Merger does not occur, and Purchaser purchases Shares which have been tendered, you will remain a stockholder of Akcea, but there may be so few remaining stockholders and publicly held Shares that the Shares will no longer be eligible to be



traded through Nasdaq or any other securities market, there may not be a public trading market for the Shares, and Akcea may cease making filings with the SEC or otherwise cease being required to comply with the SEC rules relating to publicly held companies. Subject to limited conditions, if we purchase Shares in the Offer, we are obligated under the Merger Agreement to cause the Merger to occur. See Section 17—“Possible Effects of the Offer on the Market for the Shares; Nasdaq Listing; Exchange Act Registration and Margin Regulations.”

- Following the Offer, the Shares may no longer constitute “margin securities” for purposes of the margin regulations of the Federal Reserve Board, in which case your Shares may no longer be used as collateral for loans made by brokers. Section 17—“Possible Effects of the Offer on the Market for the Shares; Nasdaq Listing; Exchange Act Registration and Margin Regulations.”

**WHAT IS THE MARKET VALUE OF MY SHARES AS OF A RECENT DATE?**

- On August 28, 2020, the last full trading day before we announced our intention to make an Offer for all of the outstanding Shares, the last reported closing price per Share reported on Nasdaq was \$11.38. See Section 16—“Price Range of Shares; Dividends.”
- On September 11, 2020, the last full trading day before we commenced the Offer, the last reported closing price per Share reported on Nasdaq was \$18.14. See Section 16—“Price Range of Shares; Dividends.”

**IF I ACCEPT THE OFFER, WHEN AND HOW WILL I GET PAID?**

- If Purchaser consummates the Offer and accepts your Shares for payment, we will pay you a dollar amount equal to the number of Shares you tendered multiplied by \$18.15 in cash, without interest and subject to any withholding of taxes, promptly following the time at which Purchaser accepts for payment Shares tendered in the Offer. See Section 11—“Terms of the Offer” and Section 12—“Acceptance for Payment and Payment for Shares.”

**IF I AM AN EMPLOYEE OF AKCEA, HOW WILL MY OUTSTANDING EQUITY AWARDS BE TREATED IN THE OFFER AND THE MERGER?**

- The Offer is being made for all outstanding Shares, but not for options to purchase Shares (each, a “Company Option”) or restricted stock units (each, a “Company RSU”). If you wish to tender Shares underlying Company Options, you must first exercise your Company Options (to the extent exercisable) in accordance with their terms in sufficient time to tender the Shares received into the Offer.
- Pursuant to the Merger Agreement, at the effective time of the Merger, each Company Option with an exercise price less than \$18.15 and each Company RSU, in each case whether or not vested, will be cancelled, and the holder thereof will be entitled to receive the Offer Price (less any applicable exercise price in the case of a Company Option) pursuant to the terms set forth in the Merger Agreement. Each Company Option with an exercise price equal to or greater than \$18.15, whether or not vested, will be cancelled with no consideration payable. See Section 20—“Summary of the Merger Agreement.”

**WHAT ARE THE PRINCIPAL U.S. FEDERAL INCOME TAX CONSEQUENCES OF TENDERING MY SHARES IN THE OFFER OR HAVING MY SHARES EXCHANGED FOR CASH PURSUANT TO THE MERGER?**

- Generally, the receipt of cash in exchange for your Shares pursuant to the Offer or the Merger will be a taxable transaction for U.S. federal income tax purposes if you are a U.S. Holder (as defined in Section 15—“Certain U.S. Federal Income Tax Consequences of the Offer and the Merger”). In

addition, in certain circumstances, the receipt of cash in exchange for your Shares pursuant to the Offer or the Merger could be treated as a dividend in an amount up to the amount of the cash consideration received pursuant to the Offer or Merger. As a result of the possibility of such deemed dividend treatment, a Non-U.S. Holder (as defined in Section 15—“Certain U.S. Federal Income Tax Consequences of the Offer and the Merger”) may be subject to U.S. withholding tax at a rate of 30% (or such lower rate as may be specified by an applicable income tax treaty) with respect to the cash consideration received in the Offer or Merger.

- We urge you to consult your own tax advisor as to the particular tax consequences to you of the Offer and the Merger (including the application and effect of any state, local or non-U.S. income and other tax laws). See Section 15—“Certain U.S. Federal Income Tax Consequences of the Offer and the Merger” for a more detailed discussion of certain U.S. federal income tax consequences of the Offer and the Merger.

#### **WILL I HAVE THE RIGHT TO HAVE MY SHARES APPRAISED?**

- No appraisal rights are available to the holders of Shares in connection with the Offer. However, if the Offer is successful and the Merger is consummated, stockholders of Akcea who (i) did not tender their Shares in the Offer, (ii) otherwise comply with the applicable requirements and procedures of Section 262 of the DGCL and (iii) do not thereafter withdraw their demand for appraisal of such Shares or otherwise lose their appraisal rights, in each case in accordance with the DGCL, will be entitled to demand appraisal of their Shares and receive in lieu of the consideration payable in the Offer a cash payment equal to the “fair value” of their Shares, as determined by the Delaware Court of Chancery, in accordance with Section 262 of the DGCL. Any such judicial determination of the fair value of the Shares could be based upon considerations other than or in addition to the price paid in the Offer and the market value of the Shares. Stockholders should recognize that the value so determined could be higher or lower than the per Share price to be paid in the Offer or the per Share price to be paid in the Merger. If any stockholder of Akcea who demands appraisal under Section 262 of the DGCL fails to properly demand or perfect such rights, or effectively withdraws or loses his or her right to appraisal, as provided in the DGCL, each of the Shares of such holder will be converted into the right to receive an amount equal to the Offer Price.
- The foregoing summary of the rights of dissenting stockholders under the DGCL does not purport to be a complete statement of the procedures to be followed by Akcea’s stockholders desiring to exercise any available appraisal rights, and is qualified in its entirety by reference to Delaware law, including without limitation, Section 262 of the DGCL, a copy of which is included as Schedule B hereto. See Section 24—“Certain Legal Matters; Regulatory Approvals.”

#### **WITH WHOM MAY I TALK IF I HAVE QUESTIONS ABOUT THE OFFER?**

- You can call Alliance Advisors, LLC, the Information Agent, at (833) 934-2735. See the back cover of this Offer to Purchase.

Except as otherwise set forth in this Offer to Purchase, references to “dollars” and “\$” shall be to United States dollars.

To All Holders of Common Stock of Akcea Therapeutics, Inc.:

## INTRODUCTION

Avalanche Merger Sub, Inc., a Delaware corporation (“Purchaser”), is offering to purchase (the “Offer”) all outstanding shares of common stock, par value \$0.001 per share (the “Shares”), of Akcea Therapeutics, Inc., a Delaware corporation (“Akcea”), at a price per Share of \$18.15, net to the seller in cash, without interest (the “Offer Price”), and subject to any withholding of taxes, upon the terms and subject to the conditions described in this Offer to Purchase (together with any amendments or supplements hereto, this “Offer to Purchase”) and in the related Letter of Transmittal (together with any amendments or supplements thereto, the “Letter of Transmittal”). Purchaser is a wholly owned subsidiary of Ionis Pharmaceuticals, Inc. (“Parent”).

The Offer is being made in connection with the Agreement and Plan of Merger, dated as of August 30, 2020 (together with any amendments or supplements thereto, the “Merger Agreement”), among Akcea, Parent and Purchaser, pursuant to which, after the completion of the Offer and the satisfaction or waiver of certain conditions, Purchaser will be merged with and into Akcea, and Akcea will be the surviving corporation and a wholly owned subsidiary of Parent (such surviving corporation, the “Surviving Corporation” and such merger, the “Merger”).

If your Shares are registered in your name and you tender directly to American Stock Transfer & Trust Company, LLC, the Depository for the Offer (the “Depository”), you will not be obligated to pay brokerage fees or commissions or, except as otherwise provided in Instruction 6 of the Letter of Transmittal, transfer taxes on the purchase of Shares by Purchaser pursuant to the Offer. If you hold your Shares through a broker, dealer, commercial bank, trust company or other nominee you should check with such institution as to whether they charge any service fees or commissions.

In addition, if you do not complete and sign the Internal Revenue Service (“IRS”) Form W-9 that is provided with the Letter of Transmittal, or an IRS Form W-8BEN or other IRS Form W-8, as applicable, or otherwise establish an exemption, you may be subject to U.S. federal backup withholding (at a rate currently equal to 24%) on the gross proceeds payable to you pursuant to the Offer or the Merger. Backup withholding is not an additional tax and any amounts withheld under the backup withholding rules may be refunded or credited against your U.S. federal income tax liability, provided the required information is timely furnished in the appropriate manner to the IRS. All stockholders should review the discussion in Section 13—“Procedures for Tendering Shares” and Section 15—“Certain U.S. Federal Income Tax Consequences of the Offer and the Merger.”

Parent will pay all charges and expenses of the Depository and Alliance Advisors, LLC, the information agent for the Offer (the “Information Agent”).

**The Offer is not subject to any financing condition. The Offer is subject to the conditions, among others, that:**

- there shall have been validly tendered and not validly withdrawn Shares that, excluding the Shares beneficially owned by Parent, its affiliates, their respective directors and executive officers and Damien McDevitt, Akcea’s chief executive officer, represent at least one more Share than 50% of the Shares not beneficially owned by such entities and persons outstanding at the time of the expiration of the Offer (the “Minimum Condition”);
- there shall not have been issued by any governmental body of competent jurisdiction and remain in effect any temporary restraining order, preliminary or permanent injunction or other order preventing the acquisition of or payment for Shares pursuant to the Offer or the consummation of the Merger (as defined below), and there shall not have been any final and nonappealable law, rule, regulation or other

requirement promulgated, enacted, issued or deemed applicable to the Offer or the Merger by any governmental body which prohibits or makes illegal the acquisition or acceptance for payment of Shares pursuant to the Offer or the consummation of the Merger (the “Governmental Impediment Condition”);

- since the date of the Merger Agreement, there shall not have occurred any event, occurrence, circumstance, change or effect which, individually or in the aggregate, has had, or would reasonably be expected to have, a Material Adverse Effect (as defined in the Merger Agreement); and
- the Merger Agreement shall not have been terminated in accordance with its terms (the “Termination Condition”).

**Parent and Purchaser have the right to waive certain of the conditions to the Offer in their sole discretion; provided that (i) Parent and Purchaser may not waive the Minimum Condition and (ii) Parent and Purchaser may not waive the Termination Condition or the Governmental Impediment Condition without the consent of Akcea.**

**The Offer is subject to other conditions in addition to those set forth above. A more detailed discussion of the conditions to consummation of the Offer is contained in the Introduction, Section 11—“Terms of the Offer” and Section 22—“Conditions of the Offer.”**

**The Offer will expire at one minute after 11:59 p.m., Eastern Time, on October 9, 2020, unless the Offer is extended. See Section 11—“Terms of the Offer;” Section 22—“Conditions of the Offer” and Section 24—“Certain Legal Matters; Regulatory Approvals.”**

**After careful consideration, the Akcea board of directors (the “Akcea Board”), acting on the unanimous recommendation of the Affiliate Transactions Committee, comprised solely of independent, disinterested directors of the Akcea Board (the “Affiliate Transactions Committee”), has: (i) determined that the Merger Agreement and the transactions contemplated thereby (the “Transactions”), including the Offer and the Merger, are fair to and in the best interest of Akcea and its stockholders (other than Parent, its affiliates, their respective directors and executive officers and Damien McDevitt, Akcea’s chief executive officer (the “Excluded Holders”)), (ii) declared it advisable to enter into the Merger Agreement, (iii) approved the execution, delivery and performance by Akcea of the Merger Agreement and the consummation of the Transactions, including the Offer and the Merger, (iv) resolved that the Merger shall be effected under Section 251(h) of the DGCL and (v) resolved to recommend that the stockholders of Akcea (other than the Excluded Holders) tender their Shares pursuant to the Offer.**

For factors considered by the Akcea Board and the Affiliate Transactions Committee, see Akcea’s Solicitation/Recommendation Statement on Schedule 14D-9 (the “Schedule 14D-9”) filed with the U.S. Securities and Exchange Commission (the “SEC”) in connection with the Offer, a copy of which (without certain exhibits) is being furnished to stockholders concurrently herewith.

The Offer is being made in connection with the Merger Agreement, pursuant to which, after the completion of the Offer and the satisfaction or waiver of certain conditions, the Merger will be effected. The Merger shall become effective when a certificate of merger is filed with the Secretary of State of the State of Delaware (or at such subsequent date and time as may be agreed by Akcea, Parent and Purchaser and specified in the certificate of merger) (the “Effective Time”).

At the Effective Time, each Share (other than Shares held by Akcea, Parent, Purchaser, any wholly owned subsidiary of Parent or Purchaser, or by stockholders of Akcea who have perfected their statutory rights of appraisal under DGCL) will be converted into the right to receive \$18.15 in cash, without any interest thereon and subject to any withholding of taxes, upon surrender of the certificate that formerly evidenced such Share or, with respect to uncertificated Shares, upon the receipt by the Depository of an Agent’s Message (as defined below) relating to such Shares.

The Merger Agreement is more fully described in Section 20—“Summary of the Merger Agreement,” which also contains a discussion of the treatment of Akcea stock options and restricted stock units in the Merger. Section 15—“Certain U.S. Federal Income Tax Consequences of the Offer and the Merger” below describes certain U.S. federal income tax consequences generally applicable to Akcea stockholders whose Shares are tendered and accepted for purchase pursuant to the Offer or whose Shares are converted into the right to receive cash in the Merger.

Because the Merger will be consummated in accordance with Section 251(h) of the DGCL, approval of the Merger will not require a vote of Akcea’s stockholders. Section 251(h) of the DGCL provides that if following consummation of a tender offer for any and all shares of a Delaware corporation whose shares are listed on a national securities exchange or held of record by more than 2,000 holders immediately prior to the execution of the applicable agreement of merger by such corporation, the acquiring entity holds (together with any stock owned by any entity that (i) owns, directly or indirectly, all of the outstanding stock of such acquiring entity or (ii) is a direct or indirect wholly owned subsidiary of such acquiring entity or of any person referred to in the preceding clause (i)) at least the amount of shares of each class of stock of the target corporation that would otherwise be required for the stockholders of the target corporation to adopt a merger agreement with the acquiring entity, and each share of each class or series of stock of the target corporation not irrevocably accepted for purchase in the offer is converted into the right to receive the same consideration as was payable in the tender offer, the target corporation can effect a merger without the vote of the stockholders of the target corporation. Immediately prior to the Offer, Parent owned approximately 76% of all outstanding Shares of Akcea. Therefore, the parties have agreed, and the Merger Agreement requires, that subject to the conditions specified in the Merger Agreement, the Merger will become effective as soon as practicable after the consummation of the Offer, without a vote of Akcea’s stockholders and in accordance with Section 251(h) of the DGCL. As a result of the Merger, Akcea will cease to be a publicly traded company and will become a wholly owned subsidiary of Parent. See Section 20—“Summary of the Merger Agreement.”

**This Offer to Purchase and the related Letter of Transmittal contain important information and both documents should be read carefully and in their entirety before any decision is made with respect to the Offer.**

## SPECIAL FACTORS

### 1. Background of the Offer; Contacts with Akcea.

The information set forth below regarding Akcea was provided by Akcea, and none of Parent, Purchaser or any of their affiliates or representatives takes any responsibility for the accuracy or completeness of any information regarding meetings or discussions in which Parent or its affiliates or representatives did not participate. The following contains a description of material contacts between representatives of Parent or Purchaser and representatives of Akcea that resulted in the execution of the Merger Agreement and the agreements related to the Offer. For a review of Akcea’s activities relating to these contacts, please refer to the Schedule 14D-9 that will be filed with the SEC and mailed to all Akcea stockholders with this Offer to Purchase.

In December 2014, Parent formed Akcea as a wholly owned subsidiary. Akcea was created in order to develop and commercialize drugs for the treatment of lipid disorders.

In December 2015, Akcea entered into the Cardiometabolic License Agreement (as defined below) with Parent, pursuant to which Parent granted exclusive rights to Akcea to develop and commercialize certain of Parent’s product candidates for the treatment of lipid disorders. Concurrently with the Cardiometabolic License Agreement, Akcea and Parent entered into a services agreement and an investor rights agreement. For more on these agreements see Section 6—“Related Party Transactions.”

Akcea remained wholly owned by Parent until July 2017. At that time, Akcea completed its initial public offering. Since the completion of Akcea’s initial public offering, Parent has retained a majority ownership

position in Akcea and Akcea has engaged in various transactions with Parent, which are described further below as well as in Section 6—“Related Party Transactions.” In addition, throughout the life of Akcea certain directors of Parent have served on the Akcea Board. At present, two members of the Akcea Board also serve on Parent’s board of directors (the “Parent Board”): Joseph Klein, III (director of Akcea since September 20, 2019) and B. Lynne Parshall (director of Akcea since its formation and executive chairperson of the Akcea Board since December 16, 2019). Ms. Parshall also serves as a Senior Strategic Advisor to Akcea and a Senior Strategic Advisor to Parent and was Parent’s Chief Operating Officer until January 2018. In addition, Stanley Crooke, who currently serves as executive chairperson of the Parent Board, previously served on the Akcea Board while serving as a member of the Parent Board and as the Chief Executive Officer of Parent. Parent’s current chief executive officer is an Akcea Board observer.

In January 2017, Akcea entered into the Novartis Agreement (as defined below) with Novartis Pharma AG (“Novartis”) for the development and commercialization of certain drugs. Akcea received a \$75.0 million upfront payment from Novartis in this transaction, and, pursuant to the terms of its existing agreements with Parent, paid Parent a sublicense fee of \$15.0 million.

On March 14, 2018, Akcea entered into the TTR License Agreement (as defined below) with Parent. Under the TTR License Agreement, Akcea licensed additional drug candidates from Parent. In connection with the TTR License Agreement, Parent and Akcea also amended and restated the Services Agreement and the Investor Rights Agreement (both as defined below). In addition, Akcea and Parent entered into the Parent SPA (as defined below), pursuant to which Parent purchased \$200.0 million of Akcea’s common stock at approximately \$18.75 per Share. The TTR License Agreement, the Parent SPA, and the amended and restated Services Agreement and Investor Rights Agreement, and the consummation of the transactions contemplated thereunder, were all approved by a special transaction committee and a majority of Akcea’s stockholders that were unaffiliated with Parent at a special meeting of Akcea’s stockholders held on April 16, 2018. For further information on these agreements, see Section 6—“Related Party Transactions.”

On October 5, 2018, Parent and Akcea announced the receipt of FDA approval for TEGSEDI for the treatment of the polyneuropathy of hereditary transthyretin-mediated amyloidosis in adults. As a result of the receipt of FDA approval, on October 17, 2018, Akcea issued 1,671,849 shares to Parent as payment of a \$50 million milestone under the TTR License Agreement.

In February 2019, Akcea earned a \$150.0 million license fee when Novartis exercised its option to license one of Akcea’s products pursuant to the Novartis Agreement. As a result of this option exercise, on March 26, 2019, Akcea issued 2,837,373 shares to Parent as payment of a \$75.0 million sublicense fee under the Cardiometabolic License Agreement.

In October 2019, Akcea entered into the Pfizer Agreement (as defined below) for the development and commercialization of AKCEA-ANGPTL3-LRx. On November 19, 2019, under the terms of the Pfizer Agreement, Akcea received a license fee of \$250.0 million and Akcea issued 6,873,344 Shares on December 17, 2019 to Parent as payment of a \$125.0 million sublicense fee under the Cardiometabolic License Agreement.

On June 22, 2020, the Parent Board held a telephonic meeting, which included certain members of Parent’s management. Members of Parent management recommended that, as a result of challenges faced by Akcea and the impact of those challenges on Parent, Parent should seek to determine whether a potential acquisition of all Shares of Akcea not held by Parent would be desirable or available to the Parent on desirable terms. The Parent Board authorized the existing finance committee of the Parent Board (the “Finance Committee”), which consisted of Frederick Muto, Peter Reikes, Joseph Wender and B. Lynne Parshall, to (i) work with Parent’s management in the review, evaluation and negotiation to determine whether a transaction involving the acquisition of all shares of Akcea not held by Parent would be desirable or available to Parent on desirable terms and, (ii) if such a transaction were determined to be desirable and available to Parent on desirable terms, make a recommendation to the Parent Board with regard to such a transaction. The Parent Board emphasized that any

such transaction would require the review and approval of the Parent Board. The Parent Board did not discuss the terms of any potential transaction involving Akcea. Members of Parent management discussed with the Parent Board that as Parent moved forward with exploring whether a potential acquisition of all shares of Akcea not held by Parent would be desirable or available to Parent on desirable terms, prior to any discussion of the terms of such a transaction with Akcea, a letter would be sent to the Akcea Board undertaking the review and approval conditions set forth in the Initial Letter (as defined below). Mr. Klein and Ms. Parshall were in attendance at this meeting.

In the days following the Parent Board's meeting on June 22, 2020, a representative of Parent discussed with each of Mr. Klein and Ms. Parshall that given their status as a director of Parent and of Akcea, they would not be involved in or informed with respect to the consideration of any potential transaction with Akcea. As a result, Ms. Parshall did not attend or participate in any meetings of the Finance Committee regarding the transaction, and neither Mr. Klein nor Ms. Parshall attended the August 30, 2020 meeting of the Parent Board with respect to the review and approval of a Potential Transaction (as defined below) (which was the only meeting of the Parent Board with respect to a Potential Transaction).

On July 10, 2020, the Finance Committee held an initial telephonic meeting, which also included members of management and representatives of Skadden, Arps, Slate, Meagher & Flom LLP ("Skadden"), Parent's legal advisor, Goldman Sachs & Co. LLC ("Goldman Sachs") and Stifel, Nicolaus & Company, Incorporated ("Stifel"), Parent's financial advisors. The Finance Committee instructed Parent's management to send the Initial Letter to the Akcea Board. Members of management discussed with the Finance Committee the upcoming process for reviewing a Potential Transaction with assistance of Parent's advisors. The Finance Committee made no determination as to whether a Potential Transaction was desirable or whether any proposal to acquire Akcea would in fact be submitted to Akcea.

Also on July 10, 2020, Parent sent a letter to the Akcea Board (the "Initial Letter") stating that Parent was considering a potential transaction that would result in the acquisition of the outstanding Shares not owned by Parent (with subsequent modifications as described below, the "Potential Transaction"). The Initial Letter stated that, if Parent determined to move forward with a Potential Transaction following internal review, Parent expected to submit a non-binding proposal on a confidential basis to Akcea in the coming weeks. It also indicated that Parent was considering whether to offer Parent stock as consideration in a Potential Transaction. The Initial Letter also stated that Parent would engage in any Potential Transaction only if (i) a fully empowered special committee of independent directors was appointed by the Akcea Board to consider (and had the ability to reject) any proposal by Parent regarding a Potential Transaction with the assistance of its own legal and financial advisors, (ii) such special committee approved a Potential Transaction and (iii), in addition to any other vote required, any Potential Transaction negotiated and approved by the special committee was subject to a non-waivable condition requiring approval of a majority of the Shares not owned by Parent or its affiliates, and such approval were obtained prior to the consummation of the Potential Transaction. The Initial Letter also stated that, in its capacity as a stockholder of Akcea, Parent was only interested in participating in a transaction to acquire Shares that it did not currently own and that Parent had no interest in, and would not expect to vote in favor of, any alternative sale, merger or similar transaction involving Akcea. In addition, the Initial Letter indicated that if the special committee did not approve, or the stockholders of Akcea did not approve, a Potential Transaction, such determination would not adversely affect Parent's future relationship with Akcea, and Parent's current intention would be to remain as a long-term stockholder of Akcea in the absence of a Potential Transaction.

On July 10, 2020, after sending the Initial Letter to the Akcea Board, Dr. Brett Monia, CEO of Parent, had separate calls with Ms. Parshall and Damien McDevitt, CEO of Akcea, confirming the Akcea Board's receipt of the Initial Letter and that the Akcea Board would be meeting to consider the Initial Letter.

On July 11, 2020, representatives of Skadden contacted representatives of Ropes & Gray LLP ("Ropes & Gray"), the legal advisor of the Affiliate Transactions Committee of the Akcea Board (the "Affiliate Transactions

Committee”), and informed them Parent wished to seek consent to use information concerning Akcea that Parent had previously received in the course of the parties’ business interactions or contractual relationships, for the purpose of evaluating a Potential Transaction. Representatives of Ropes & Gray indicated that the Affiliate Transactions Committee would consider this request.

On July 13, 2020, a representative of Ropes & Gray communicated to Skadden that the Affiliate Transactions Committee would be amenable to authorizing Parent to use information concerning Akcea that Parent had previously received in the course of the parties’ business interactions or contractual relationships, for the purpose of evaluating a Potential Transaction, but only in the context of a consensually negotiated transaction and pursuant to a confidentiality agreement.

On July 17, 2020, Akcea and Parent entered into the Confidentiality Agreement (as defined below) in connection with the Potential Transaction.

On July 22, 2020, representatives of Cowen and Company, LLC (“Cowen”), the Affiliate Transactions Committee’s financial advisor, spoke with representatives of Goldman Sachs and Stifel, to inform them of the Affiliate Transactions Committee’s determination to engage a third-party consulting firm with respect to aspects of the financial projections to be used by the Affiliate Transactions Committee in valuing Akcea in connection with the Potential Transaction (the “Akcea Projections”) and the associated timing for its review.

On July 29, 2020, Skadden provided Ropes & Gray with Parent’s initial request list for due diligence on Akcea.

On several occasions in late July and early to mid August, in addition to the occasions described above, representatives of Cowen spoke with representatives of Goldman Sachs and Stifel, and representatives of Ropes & Gray spoke with representatives of Skadden. These discussions focused on the process regarding the Potential Transaction. They did not involve any proposal for a Potential Transaction or discussion of valuation of Akcea.

On August 6, 2020, Skadden sent Ropes & Gray an updated request list for due diligence on Akcea.

On August 7, 2020 the Finance Committee held a telephonic meeting, which included members of management and representatives from Goldman Sachs, Stifel and Skadden, during which the Finance Committee reviewed a presentation from Goldman Sachs and Stifel and discussed the possibility of submitting an initial conditional, non-binding proposal within a potential range of \$15.00 to \$16.00, which proposal would be subject to the Parent Board’s approval, negotiation of a mutually acceptable merger agreement and Parent’s due diligence of Akcea. The timing for such a proposal was also discussed given that Goldman Sachs and Stifel had been informed by Cowen that a third-party consulting firm had been engaged to assist the Affiliate Transactions Committee with respect to the Akcea Projections.

On August 19, 2020, Parent delivered a conditional, non-binding proposal (the “Initial Proposal”) to the Affiliate Transactions Committee. The Initial Proposal proposed a purchase price of \$16.00 per Share based on available information, payable in cash, to acquire 100% of Akcea’s outstanding Shares, representing a premium of 42% to Akcea’s August 18, 2020 closing stock price. The Initial Proposal also stated that Parent was prepared to work expeditiously to negotiate a definitive agreement. The Initial Proposal stated that the proposal remained subject to due diligence review based on the requests previously provided to Ropes & Gray and was subject to the approval of the Parent Board. Concurrently with the Initial Proposal, Parent sent a proposed draft Merger Agreement.

On August 21, 2020, Skadden confirmed to Ropes & Gray that Parent was interested in pursuing only an all-cash transaction.



On August 24, 2020, representatives of Cowen, Goldman Sachs and Stifel discussed the Initial Proposal. Cowen informed Goldman Sachs and Stifel that the Initial Proposal was not sufficient to reflect Akcea's intrinsic value. Goldman Sachs and Stifel requested through Cowen that the Affiliate Transactions Committee provide Parent with additional insight regarding the financial projections on which it was basing its valuation position (the "Additional Projections Information Request").

On August 25, 2020, the Finance Committee held a telephonic meeting, with members of management and representatives from Goldman Sachs, Stifel and Skadden. The Finance Committee discussed the timing and strategies of a revised conditional, non-binding proposal in light of Akcea's response to the Initial Proposal. The Finance Committee noted that any revised proposal submitted to Akcea would continue to be subject to the review and approval of the Parent Board.

Following the Finance Committee meeting on August 25, 2020, Cowen responded to the Additional Projections Information Request by providing additional information to Goldman Sachs and Stifel, which consisted of certain peak product net sales information and high level assumptions that are included in the Akcea Projections disclosed under "—Certain Prospective Financial Information," in the Schedule 14D-9.

On August 25, 2020, Parent submitted a revised conditional, non-binding proposal of \$17.00 per Share, representing a premium of 41% to Akcea's August 25, 2020 closing stock price, which remained subject to the recommendation of the Finance Committee and the subsequent approval of the full Parent Board.

On August 27, 2020, Parent submitted a revised conditional, non-binding proposal of \$17.75, representing a premium of 54% to Akcea's August 26, 2020 closing stock price, which remained subject to the recommendation of the Finance Committee and the subsequent approval of the full Parent Board (the "Second Revised Proposal"). In connection with the Second Revised Proposal, Parent's advisors communicated to Cowen that Parent desired to seek to negotiate and finalize a merger agreement in order to execute the transaction over the upcoming weekend and publicly announce it the following Monday morning and that the increase reflected in the Second Revised Proposal was based on that timeline.

On August 28, 2020, at the request of the Affiliate Transactions Committee, Skadden received a markup of the initial draft Merger Agreement and an initial draft of the disclosure schedules.

After discussion between Cowen, Goldman Sachs and Stifel on the evening of August 28, 2020, the Affiliate Transactions Committee agreed to proceed with respect to a Potential Transaction with Parent based on a price of \$18.15 per Share.

On August 29, 2020, Parent and its representatives were provided access to Akcea's virtual data room containing the due diligence information previously requested and which Parent had indicated in its Initial Proposal would be necessary for its review of a Potential Transaction. After being granted access to the data room, Parent and its advisors reviewed the information in the data room over the course of August 29, 2020 and August 30, 2020, for the purpose of confirming whether or not the information contained in the data room affected Parent's view on whether a transaction would be desirable on the proposed terms.

Over August 29, 2020 and August 30, 2020 Ropes & Gray and Skadden exchanged multiple drafts of the Merger Agreement and engaged in both email correspondence and telephonic conferences on various issues related thereto. Disclosure schedules were also separately negotiated, including the \$5 million retention pool for Akcea employees disclosed under "—Arrangements between the Company, Ionis and Certain of its Affiliates" in the Schedule 14D-9.

On August 30, 2020, the Parent Board held a telephonic meeting, which included members of management and representatives from Goldman Sachs, Stifel and Skadden. Mr. Klein and Ms. Parshall did not attend the meeting. The Parent Board discussed the proposed financial terms for the transaction with members of

management, Goldman Sachs and Stifel and reviewed a presentation from Goldman Sachs and Stifel. Representatives of Skadden reviewed the material terms of the merger agreement with the Parent Board. The Finance Committee recommended that the Parent Board approve the transaction. The Parent Board (other than Mr. Klein and Ms. Parshall), unanimously approved the terms of the transaction and the Merger Agreement, including that the Merger would be effected pursuant to Section 251(h) of the DGCL.

Following the meeting of the Parent Board, on the evening of August 30, 2020, Akcea and Parent executed the Merger Agreement.

On the morning of August 31, 2020, Akcea and Parent issued a joint press release announcing the transaction.

On September 14, 2020, Purchaser commenced the offer and filed the Tender Offer Statement on Schedule TO (the "Schedule TO").

## **2. Position of Parent Regarding the Fairness of the Transaction.**

The rules of the SEC require Parent to express its belief to security holders of Akcea who are unaffiliated with Akcea as to the fairness of the transaction. We believe that the transactions contemplated by the Merger Agreement, including the Offer and the Merger, and the Offer Price to be received by security holders of Akcea who are unaffiliated with Akcea pursuant to the Offer and the Merger, are fair to such security holders.

Parent believes that the price to be paid in the Offer is fair to security holders of Akcea who are unaffiliated with Akcea. Parent bases its belief on the following factors, each of which, in our judgment, supports our view as to the fairness of the transaction:

- The Affiliate Transactions Committee (as defined below) determined the Merger Agreement and the Transactions, including the Offer and the Merger, to be advisable and fair to, and in the best interests of, Akcea and its stockholders (other than Parent, its affiliates, their respective directors and executive officers and Damien McDevitt, Akcea's chief executive officer).
- In connection with taking the foregoing actions, the Affiliate Transactions Committee was advised by its own advisors, including Ropes & Gray, its independent legal counsel, and Cowen, its independent financial advisor. A copy of the fairness opinion of Cowen, dated August 30, 2020, which was rendered to the Affiliate Transactions Committee, is attached as Annex B to the Schedule 14D-9.
- The Offer Price represents a premium of approximately:
  - 59.5% to the closing price of the Shares on August 28, 2020, the last trading day prior to the date of the announcement of the transaction;
  - 55.4% to the trailing 30-trading-day volume weighted average price of Shares through August 28, 2020, the last trading day prior to the date of the announcement of the transaction;
  - 34.9% to the trailing 60-trading-day volume weighted average price of Shares through August 28, 2020, the last trading day prior to the date of the announcement of the transaction;
  - 29.0% to the trailing 90-trading-day volume weighted average price of Shares through August 28, 2020, the last trading day prior to the date of the announcement of the transaction;
  - 17.1% to the trailing 180-trading-day volume weighted average price of Shares through August 28, 2020, the last trading day prior to the date of the announcement of the transaction; and
  - 126.9% to Akcea's IPO price of \$8.00 per Share.
- Neither the Offer nor the Merger is subject to any financing condition.

- The Offer provides Akcea’s security holders with the certainty of receiving cash for their Shares and removes the risk of any decrease in the value of Akcea.

In addition, Parent believes that the Offer is procedurally fair to security holders of Akcea who are unaffiliated with Akcea, based on the following factors:

- Each of such security holders will be able to decide voluntarily whether or not to tender Shares in the Offer.
- The Offer cannot be consummated unless Shares representing at least one more Share than 50% of the Shares not beneficially owned by Parent, its affiliates, their respective directors and executive officers and Damien McDevitt, Akcea’s chief executive officer, outstanding at the time of the expiration of the Offer are tendered.
- Such security holders will have sufficient time to make a decision whether or not to tender since the Offer will remain open for a minimum of 20 business days.
- If the Merger is completed, security holders at that time who perfected their statutory rights of appraisal will be entitled to receive the “fair value” of their Shares, as determined by a court, by following the appraisal procedures under the DGCL.

Parent also considered the following factors, each of which Parent considered negative in its considerations concerning the fairness of the terms of the transaction:

- Any security holder that tenders all its Shares in the Offer or has its Shares converted into cash in a subsequent Merger would cease to participate in the future earnings or growth, if any, of Akcea or benefit from increases, if any, in the value of Akcea.
- The sale of Shares in the Offer is generally taxable to the selling security holders.
- Parent’s current ownership of approximately 76% in Akcea may preclude competing offers from third parties.
- Certain directors and officers of Akcea have actual or potential conflicts of interest in connection with the Offer and the Merger. See Section 4—“Interests of Certain Persons in the Offer,” Section 5—“Transactions and Arrangements Concerning the Shares” and Schedule A.

Parent did not find it practicable to assign, nor did it assign, relative weights to the individual factors considered in reaching its conclusion as to fairness. Parent’s financial advisors, Goldman Sachs & Co. LLC and Stifel, Nicolaus & Company, Incorporated, were not asked to and have not delivered a fairness opinion to the board of directors of Parent or to any other affiliate of Parent in connection with the Offer.

In reaching its conclusion as to fairness, Parent did not consider the liquidation value or net book value of Akcea. The liquidation value was not considered because Akcea is a viable going concern and Parent has no plans to liquidate Akcea. Therefore, Parent believes that the liquidation value of Akcea is irrelevant to a determination as to whether the Offer is fair to unaffiliated stockholders. Further, Parent did not consider net book value, which is an accounting concept, as a factor because it believes that net book value is not a material indicator of the value of Akcea as a going concern but rather is indicative of historical costs. Except as otherwise disclosed in this Offer to Purchase, and other than the contacts between Akcea and “Party A” as described in the Schedule 14D-9 under the heading “Background of the Offer and the Merger,” Parent is not aware of any firm offers made by a third party to acquire Akcea during the past two years and in any event has no intention of selling the Shares it owns. Parent did not consider third-party offers in reaching its conclusion as to fairness.

The foregoing discussion of the information and factors considered and given weight by Parent is not intended to be exhaustive, but includes the factors considered by Parent that it believes to be material. Parent’s view as to the fairness of the transaction to stockholders of Akcea that are unaffiliated with Parent should not be construed as a recommendation to any stockholder as to whether that stockholder should tender in the Offer.

**3. Purpose of the Offer and Plans for Akcea.**

**Purpose of the Offer.** The purpose of the Offer and the Merger is for Parent, through Purchaser, to acquire the entire equity interest in Akcea. Pursuant to the Merger, Parent will acquire all of the stock of Akcea not purchased pursuant to the Offer or otherwise. Stockholders of Akcea who sell their Shares in the Offer will cease to have any equity interest in Akcea or any right to participate in its earnings and future growth.

Parent believes that a number of benefits would follow from Akcea becoming a wholly owned subsidiary of Parent at this time, including the benefits of aligning the strategic priorities of Parent and Akcea under a single leadership team; enabling Parent to generate additional value from Akcea's pipeline and commercial products in order to facilitate future investments and support Parent's long-term capital allocation strategy; and realizing potential cost synergies associated with the acquisition.

Parent and Purchaser did not consider any alternative structures for the proposed transaction. Parent and Purchaser believe that the tender offer and second step merger structure was preferable to a one-step merger because they believe that this structure can provide a faster and more efficient process for completing the transaction than structures which require calling a special meeting of Parent's stockholders.

**Effects of the Offer.** If the Offer is consummated, the interest of Parent in Akcea's net book value and net earnings would increase in proportion to the number of Shares acquired in the Offer. If a merger is consummated, Parent's indirect interest in such items would increase to 100%, and Parent would be entitled to all benefits resulting from that interest, including all income generated by Akcea's operations and any future increase in Akcea's value. Former stockholders would thereafter have no opportunity to participate in the earnings and growth of Akcea and would not have any right to vote on corporate matters. Similarly, after any such merger, Parent would also bear the entire risk of losses generated by Akcea's operations and any decrease in the value of Akcea, and former stockholders would not face the risk of losses generated by Akcea's operations or decline in the value of Akcea.

According to Akcea's Annual Report on Form 10-K for the fiscal year ending December 31, 2019 (the "Akcea 10-K"), as of December 31, 2019, Akcea had federal and state tax net operating loss carry forwards on a separate basis of \$99.5 million and \$1.4 million, respectively. Such net operating losses may be available to offset taxable income (if any) generated by Akcea or Parent's U.S. consolidated tax group (which may include Akcea after the closing), and thereby reduce the amount of taxes owed by Parent and its subsidiaries. The timing and amount of the tax savings will depend on a number of factors, including the overall amount of Akcea's net operating losses through the closing (which has yet to be calculated), whether Akcea or Parent generates U.S. federal taxable income after the closing (and when and in what amount) and the tax rates in effect at the time net operating losses are utilized.

**Merger Without a Stockholder Vote.** If the Offer is consummated, we do not anticipate seeking the approval of Akcea's remaining public stockholders before effecting the Merger. Section 251(h) of the DGCL provides that following consummation of a successful tender offer for a public corporation, and subject to certain statutory provisions, if the acquiring corporation owns at least the amount of shares of each class of stock of the target corporation that would otherwise be required to adopt a merger agreement for the target corporation, and the other stockholders receive the same consideration for their stock in the merger as was payable in the tender offer, the acquiring corporation can effect a merger without the action of the other stockholders of the target corporation. Accordingly, if we consummate the Offer, we intend to effect the closing of the Merger (the "Closing") without a vote of the stockholders of Akcea in accordance with Section 251(h) of the DGCL, upon the terms and subject to the satisfaction or waiver of the conditions to the Merger, as soon as practicable after the consummation of the Offer. Accordingly, we do not expect there to be a significant period of time between the consummation of the Offer and the consummation of the Merger.

**Plans for Akcea.** At the Effective Time, the certificate of incorporation of Akcea will be amended and restated in its entirety pursuant to the terms of the Merger Agreement. As of the Effective Time, the bylaws of

the Surviving Corporation will be amended and restated to conform to the bylaws of Purchaser as in effect immediately prior to the Effective Time, except that references to the name of Purchaser will be replaced by references to the name of the Surviving Corporation. Purchaser's directors and officers immediately prior to the Effective Time will be the initial directors and officers of the Surviving Corporation until their respective successors are duly elected and qualified, or their earlier death, resignation or removal. See Section 20— "Summary of the Merger Agreement—Board of Directors and Officers."

Parent is conducting a detailed review of Akcea and its assets, corporate structure, capitalization, operations, properties, policies, management and personnel, and will consider which changes would be desirable in light of the circumstances that exist upon completion of the Offer and the Merger. Parent will continue to evaluate the business and operations of Akcea during the pendency of the Offer and after the consummation of the Offer and the Merger and will take such actions as they deem appropriate under the circumstances then existing. Thereafter, Parent intends to review such information as part of a comprehensive review of Akcea's business, operations, capitalization and management with a view to optimizing development of Akcea's potential in conjunction with Akcea's or Parent's existing businesses. Possible changes could include changes in Akcea's business, corporate structure, certificate of incorporation, bylaws, capitalization, board of directors and management. Plans may change based on further analysis and Parent, Purchaser and, after completion of the Offer and the Merger, the reconstituted Akcea Board reserves the right to change their plans and intentions at any time, as deemed appropriate.

Except as disclosed in this Offer to Purchase, Parent and Purchaser do not have any present plan or proposal that would result in the acquisition by any person of additional securities of Akcea, the disposition of securities of Akcea, an extraordinary corporate transaction, such as a merger, reorganization or liquidation, involving Akcea or the sale or transfer of a material amount of assets of Akcea.

#### **4. Interests of Certain Persons in the Offer.**

**Financial Interests.** The financial interests of Parent with regard to the Offer Price are generally adverse to the financial interests of the stockholders being asked to tender their Shares because Parent has an interest in acquiring the Shares as inexpensively as possible and the stockholders being asked to tender their Shares have an interest in selling their Shares for the highest possible price.

**Executive Officers and Directors of Akcea.** The stockholders being asked to tender their Shares should be aware that the executive officers and certain directors of Akcea have interests in connection with the Offer and the Merger that present them with actual or potential conflicts of interest. A description of these interests, including the information required to be disclosed pursuant to Item 402(t) of Regulation S-K, is included in the Schedule 14D-9 under the heading "Arrangements with the Company's Directors and Executive Officers," which description and information is incorporated herein by reference.

**Conflicts of Interest.** In considering the fairness of the consideration to be received in the Offer, stockholders should be aware that Parent has certain current actual or potential conflicts of interest in connection with the Offer and the Merger. As a result of Parent's current ownership of approximately 76% of the outstanding Shares, Parent may be deemed to control Akcea. In addition, certain of Parent's directors are also directors of Akcea, and one of Parent's directors is party to a strategic advisory services agreement with Akcea under which she is entitled to receive compensation, in each case as described in the Schedule 14D-9 under the heading "Arrangements with the Company's Directors and Executive Officers." We note that the Akcea Board, based on the unanimous recommendation of the Affiliate Transactions Committee, comprised solely of independent, disinterested directors who are unaffiliated with Parent, approved the Merger Agreement and determined that the Offer is fair to, and in the best interests of, Akcea and its stockholders (other than Parent, its affiliates, their respective directors and executive officers and Damien McDevitt, Akcea's chief executive officer).

**5. Transactions and Arrangements Concerning the Shares.**

Except as set forth elsewhere in this Offer to Purchase or Schedule A to this Offer to Purchase: (i) none of Purchaser, Parent or, to Purchaser's and Parent's knowledge, the persons listed in Schedule A to this Offer to Purchase or any associate or majority owned subsidiary of Parent, Purchaser or of any of the persons so listed, beneficially owns or has a right to acquire any Shares or any other equity securities of Akcea; (ii) none of Purchaser, Parent or, to Purchaser's and Parent's knowledge, the persons or entities referred to in clause (i) above has effected any transaction in the Shares or any other equity securities of Akcea during the past 60 days; (iii) none of Purchaser, Parent or, to Purchaser's, and Parent's knowledge, the persons listed in Schedule A to this Offer to Purchase, has any contract, arrangement, understanding or relationship with any other person with respect to any securities of Akcea (including, but not limited to, any contract, arrangement, understanding or relationship concerning the transfer or the voting of any such securities, joint ventures, loan or option arrangements, puts or calls, guaranties of loans, guaranties against loss or the giving or withholding of proxies, consents or authorizations); (iv) during the two years before the date of this Offer to Purchase, there have been no transactions between Purchaser, Parent, their respective subsidiaries or, to Purchaser's and Parent's knowledge, any of the persons listed in Schedule A to this Offer to Purchase, on the one hand, and Akcea or any of its executive officers, directors or affiliates, on the other hand, that would require reporting under SEC rules and regulations; (v) during the two years before the date of this Offer to Purchase, there have been no contacts, negotiations or transactions between Purchaser, Parent, their respective subsidiaries or, to Purchaser's and Parent's knowledge, any of the persons listed in Schedule A to this Offer to Purchase, on the one hand, and Akcea or any of its subsidiaries or affiliates, on the other hand, concerning a merger, consolidation or acquisition, a tender offer or other acquisition of securities, an election of directors or a sale or other transfer of a material amount of assets; (vi) none of Purchaser, Parent or, to Purchaser's and Parent's knowledge, the persons listed in Schedule A to this Offer to Purchase, has been convicted in a criminal proceeding during the past five years (excluding traffic violations or similar misdemeanors); (vii) none of the persons listed on Schedule A of this Offer to Purchase has made a recommendation either in support of or opposed to the Offer or the Merger and (viii) none of Purchaser, Parent or, to Purchaser's and Parent's knowledge, the persons listed in Schedule A to this Offer to Purchase, has been a party to any judicial or administrative proceeding during the past five years that resulted in a judgment, decree or final order enjoining that person from future violations of, or prohibiting activities subject to, federal or state securities laws or a finding of any violation of federal or state securities laws.

Akcea has informed Parent that, to the knowledge of Akcea, each executive officer, director and affiliate (excluding Parent) of Akcea currently intends to tender all Shares held of record or beneficially owned by such person or entity in the Offer. However, there are no agreements requiring them to do so.

**6. Related Party Transactions.**

**Merger Agreement.** The Merger Agreement governs the contractual rights among Akcea, Parent and Purchaser in relation to the Transactions. For additional detail regarding the Merger Agreement, see Section 20—"Summary of the Merger Agreement."

**Non-Disclosure Agreement.** Parent and Akcea are party to a letter agreement, effective as of July 17, 2020, regarding certain confidentiality obligations between Akcea and Parent (the "Confidentiality Agreement"). Under the terms of the Confidentiality Agreement, Akcea and Parent agreed not to (i) use any confidential information of the other party except for and solely to the extent necessary to evaluate, negotiate and consummate the transaction between the parties or (ii) disclose any such confidential information to third parties, in each case subject to certain exceptions. For additional detail regarding the Confidentiality Agreement, see Section 20—"Summary of the Merger Agreement."

**Prior Investments.** Upon the closing of Akcea's initial public offering on July 19, 2017 (the "IPO"), Parent received (i) 28,884,540 Shares upon the conversion of Series A preferred stock of Akcea acquired by Parent prior to the IPO and (ii) 13,438,339 Shares in satisfaction of Akcea's obligations to Parent pursuant to a Senior

Unsecured Line of Credit Agreement, dated as of January 18, 2017, by and between Akcea and Parent. Parent also purchased 3,125,000 Shares in the IPO at a purchase price of \$8.00 per Share.

On April 17, 2018, Parent (i) received 8,000,000 Shares in satisfaction of Akcea's obligations to Parent pursuant to that certain Development, Commercialization, Collaboration, and License Agreement, dated March 14, 2018, between Akcea and Parent (the "TTR License Agreement") and (ii) purchased 10,666,666 Shares pursuant to that certain Stock Purchase Agreement, dated March 14, 2018, between Akcea and Parent (the "Parent SPA") at a purchase price of \$18.75 per Share. For additional detail regarding these transactions, see "—License Agreements."

On August 3, 2018 and October 17, 2018, Parent received 1,597,571 Shares and 1,671,849 Shares, respectively, in satisfaction of certain of Akcea's obligations to Parent pursuant to the TTR License Agreement. For additional detail regarding these transactions, see "—License Agreements".

On March 29, 2019 and December 17, 2019, Parent received 2,837,373 Shares and 6,873,344 Shares, respectively, in satisfaction of certain of Akcea's obligations to Parent pursuant to that certain Development, Commercialization and License Agreement, dated December 18, 2015, between Akcea and Parent (the "Cardiometabolic License Agreement"). For additional detail regarding these transactions, see "—License Agreements". Immediately following Parent's receipt of the Shares on December 17, 2019, Parent and its affiliates collectively beneficially owned approximately 76% of the outstanding Shares.

As of September 8, 2020, Parent and its affiliates collectively beneficially owned 77,094,682 Shares representing approximately 76% of the outstanding Shares.

**License Agreements.** In December 2015, Parent and Akcea entered into the Cardiometabolic License Agreement related to its cardiometabolic franchise and a services agreement. In March 2018, Parent and Akcea entered into the TTR License Agreement related to its TTR franchise. Akcea also has strategic collaborations with Novartis, Pfizer Inc. ("Pfizer") and PTC Therapeutics International Limited ("PTC Therapeutics") pursuant to which Akcea sublicenses certain products licensed to it by Parent. Milestone payments and royalties that Akcea earns on these strategic collaborations are shared with Parent. The following sections summarize these related party agreements with Parent.

*Cardiometabolic Development, Commercialization and License Agreement.* The Cardiometabolic License Agreement granted exclusive rights to Akcea to develop and commercialize WAYLIVRA, AKCEA-APO(a)-LRx, AKCEA-APOCIII-LRx, and AKCEA-ANGPTL3-LRx (collectively, the "Lipid Drugs"). Parent granted Akcea an exclusive license to certain patents and know-how to develop and commercialize products containing the Lipid Drugs. Parent also granted Akcea a non-exclusive license to the Parent antisense platform technology for Akcea to develop and commercialize products containing the Lipid Drugs. Parent also granted Akcea non-exclusive rights to manufacture the Lipid Drugs in Akcea's own facility or at a contract manufacturer. As part of the Cardiometabolic License Agreement, both companies agreed not to work with any other parties to develop or commercialize other RNA-targeting medicines that are designed to inhibit any of the Lipid Drug targets so long as Akcea is developing or commercializing the Lipid Drugs.

Akcea and Parent share development responsibilities for the Lipid Drugs, other than the medicines licensed to Novartis pursuant to the Novartis Agreement (as defined below), and AKCEA-ANGPTL3-LRx, which is licensed to Pfizer pursuant to the Pfizer Agreement (as defined below) (such excluded Lipid Drugs, collectively, the "Excluded Lipid Drugs"). Akcea pays Parent for the research and development expenses it incurs on Akcea's behalf, which include both external and internal expenses. A Joint Steering Committee ("JSC") comprising two senior members from each company sets the development strategy for the Lipid Drugs by mutual agreement. A regulatory subcommittee, established by the JSC and having equal membership from each company, sets 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, the disputed issues are

submitted to a mutually agreed-upon regulatory expert, with the costs of the expert shared between the companies and the expert's decision being binding. At the time of the Cardiometabolic License Agreement, Akcea agreed to the initial membership of a cardiometabolic advisory board that advises the JSC on matters related to the development of the Lipid Drugs. Akcea must notify Parent of all meetings of this advisory board and Parent personnel have the ability to attend these meetings.

As Akcea commercializes each of the Lipid Drugs other than the Excluded Lipid Drugs, it pays Parent royalties from the mid-teens to the mid-twenty percent range on sales related to the Lipid Drugs that it sells. If Akcea sells a Lipid Drug for a Rare Disease Indication (defined in the Cardiometabolic License 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 two years of treatment), it pays a higher royalty rate to Parent than if it sells a Lipid Drug for a Broad Disease Patient Population (defined in the agreement as more than 500,000 patients worldwide or an indication that required a Phase 3 program of 1,000 or more patients and two or more years of treatment). Other than with respect to the Excluded Lipid Drugs, if Akcea's annual sales reach milestones of \$500 million, \$1 billion and \$2 billion, it is obligated to pay Parent in the amount of \$50 million for each sales milestone reached by each Lipid Drug. If and when triggered, Akcea pays Parent each of these sales milestones over the subsequent 12 quarters in equal payments. Akcea shares 50% of payments it receives from Novartis and Pfizer with Parent.

To sublicense one or more Lipid Drugs licensed to it under the Cardiometabolic License Agreement, Akcea needs to mutually agree with Parent on the terms of the sublicense. If Akcea sublicenses any one of the Lipid Drugs to a commercial partner, it is required to share 50% of any revenue from the commercial partner with Parent, excluding (1) money received from its partner specifically designated to fund future research and development costs and (2) money it is obligated to spend in support of commercialization of a Lipid Drug in a co-commercialization arrangement.

Either party may terminate the Cardiometabolic License Agreement if the other party is in material breach of the agreement. In such a circumstance, the party that is in breach has an opportunity to cure the breach prior to the other party terminating the agreement.

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

*TTR Development, Commercialization, Collaboration, and License Agreement.* In March 2018, Parent and Akcea entered into the TTR License Agreement and the Parent SPA, which were both approved by a majority of Akcea's stockholders other than Parent and its affiliates at a special meeting of stockholders held on April 16, 2018, and which both closed on April 17, 2018 (such transaction, the "Inotersen Transaction"). In addition, in connection with the Inotersen Transaction, Akcea entered into an amended and restated services agreement and an amended and restated investor rights agreement with Parent. For additional detail regarding the amended and restated services agreement, see "*Services Agreement*". For additional detail regarding the amended and restated investor rights agreement, see "*Investor Rights Agreement*".

In accordance with the terms and provisions of the TTR License Agreement, Akcea received the rights: (a) to commercialize inotersen and perform certain other non-commercial activities with respect to inotersen, in each case, in accordance with a global strategic plan; (b) to assist in the development, through the completion of



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

Pursuant to the TTR License Agreement, Parent granted to Akcea (i) an exclusive, worldwide license under Parent's patents and know-how (other than manufacturing patents and know-how) to develop and sell inotersen and AKCEA-TTR-LRx and (ii) a non-exclusive, worldwide license under the Parent manufacturing patents and know-how. Akcea may grant sublicenses under the rights granted to it with Parent's prior written consent, not to be unreasonably withheld and with certain exceptions. In addition, the parties agreed to certain exclusivity covenants that prevent (A) each company from clinically developing or commercializing products that use the same mechanism of action as the products under the TTR License Agreement and (B) Akcea from clinically developing or commercializing products that are reasonably expected to decrease the market share for a product under the TTR License Agreement and that treats or is intended to treat transthyretin amyloidosis or any other indication for which a product under the TTR License Agreement is being developed or commercialized, in each case ((A) or (B)) without the other party's consent.

Akcea granted to Parent a fully-paid, royalty-free, irrevocable, worldwide, non-exclusive, sublicensable license under any collaboration technology Akcea develops under the TTR License Agreement to develop, manufacture and commercialize products that include an oligonucleotide as an active pharmaceutical ingredient (other than competing products during the term of the TTR License Agreement).

The TTR License Agreement remains in effect until the expiration of all included payment obligations, unless earlier terminated. The TTR License Agreement may be terminated under certain circumstances, including: (i) by mutual written consent of the parties; (iii) by either party if any applicable law makes the transaction documents illegal or otherwise restrains transaction consummation; (iv) by either party, for the other's uncured material breach under the TTR License Agreement; (v) by Akcea for convenience with written notice to Parent; or (vi) by Parent if Akcea disputes the validity of any Parent patent right licensed to Akcea under the TTR License Agreement. Upon termination, all rights received under the TTR License Agreement will terminate.

Akcea agreed to share inotersen and AKCEA-TTR-LRx profits and losses with Parent as follows: for inotersen, beginning on January 1, 2019, Akcea shares profits and losses from the development and commercialization of inotersen with Parent (A) on a 60/40 basis (60% to Parent and 40% to Akcea) through the end of the quarter in which the first commercial sale of AKCEA-TTR-LRx occurs, and (B) on a 50/50 basis commencing on the first day of the first quarter thereafter; and for AKCEA-TTR-LRx, beginning January 1, 2018, Akcea shares all profits and losses from the development and commercialization of AKCEA-TTR-LRx on a 50/50 basis with Parent.

As consideration for the grant of rights under the TTR License Agreement, Akcea paid an upfront licensing fee of \$150 million, which was paid through the issuance of 8,000,000 Shares under the Parent SPA, priced by reference to a trading average at the time of execution of the Parent SPA. In addition, Akcea is obligated to make milestone payments to Parent in connection with the achievement of certain development, regulatory and commercialization events. Akcea may elect to pay each milestone payment in cash or Shares and Parent may require payment in Shares. Once Akcea has achieved the milestone event for aggregate worldwide annual net sales of \$750 million for products under the TTR License Agreement, all subsequent milestone payments must be paid in cash.

On April 17, 2018, to support the commercialization of TEGSEDI and AKCEA-TTR-LRx, Parent purchased 10,666,666 Shares for \$200 million under the Parent SPA.

On July 11, 2018, Akcea received regulatory approval in the E.U. for the treatment of stage 1 or stage 2 polyneuropathy in adult patients with hereditary transthyretin amyloidosis (“hATTR amyloidosis”). As a result of the regulatory approval in the E.U., on August 3, 2018, Akcea issued 1,597,571 Shares to Parent as payment of the \$40 million regulatory approval milestone for TEGSEDI.

On October 5, 2018, Akcea received regulatory approval for TEGSEDI from the FDA for the treatment of polyneuropathy of hATTR amyloidosis in adults in the U.S. As a result of the regulatory approval in the U.S., on October 17, 2018, Akcea issued 1,671,849 Shares to Parent as payment of the \$50 million regulatory approval milestone for TEGSEDI.

*Novartis Agreement.* On January 5, 2017, Parent, Akcea and Novartis entered into a Stock Purchase Agreement (the “Novartis SPA”) in connection with the Strategic Collaboration, Option and License Agreement entered into between Akcea and Novartis (as amended, the “Novartis Agreement”) for the development and commercialization of AKCEA-APO(a)-LRx and AKCEA-APOCIII-LRx. Under the Novartis SPA, in July 2017, Novartis purchased 6,250,000 Shares in a private placement concurrent with the completion of Akcea’s IPO at a price per Share equal to the IPO price.

On January 18, 2017, Parent and Akcea entered into a Letter Agreement regarding the Cardiometabolic License Agreement to reflect the agreed upon payment terms with respect to the upfront option payment that Akcea received from Novartis and to allocate the premium that Novartis paid for Parent’s common stock in connection with Akcea’s strategic collaboration with Novartis.

Under the Novartis Agreement, Akcea received \$75 million in an upfront option payment in February 2017, of which it retained \$60 million and paid Parent a \$15 million sublicense fee, and Novartis purchased \$100 million of Parent’s common stock at a premium. Akcea also received a \$150 million license fee when Novartis exercised its option to license AKCEA-APO(a)-LRx in February 2019, for which Akcea issued 2,837,373 Shares to Parent in March 2019 as payment of a \$75 million sublicense fee.

In addition, Akcea is obligated to share any milestone payments and royalties equally with Parent. Under the Novartis Agreement, Akcea is eligible to receive up to \$675 million in milestone payments from Novartis for AKCEA-APO(a)-LRx, including \$25 million for the achievement of a development milestone, up to \$290 million for the achievement of regulatory milestones and up to \$360 million for the achievement of commercialization milestones. Akcea is also eligible to receive tiered, double-digit royalties in the mid-teens to low twenty percent range on net sales of AKCEA-APO(a)-LRx; these royalties would be reduced upon the expiration of certain patents or if a generic competitor negatively impacts the product in a specific country.

The Novartis Agreement is described more fully in the Schedule 14D-9 under the heading “License Agreements—Strategic Collaboration With Novartis.”

*Pfizer Agreement.* On October 4, 2019, Akcea entered into a License Agreement with Pfizer (the “Pfizer Agreement”), which has a potential aggregate transaction value of up to \$1.6 billion, plus royalties, which Akcea would generally be required to share equally with Parent. Under the Pfizer Agreement, Akcea received a license fee of \$250 million from Pfizer on November 19, 2019, for which Akcea issued 6,873,344 Shares on December 17, 2019, to Parent as payment of a \$125 million sublicense fee.

In addition, Akcea is obligated to share any milestone payments and royalties equally with Parent. Under the Pfizer Agreement, Akcea is eligible to receive up to \$1.3 billion in milestone payments, including up to \$205 million for the achievement of development milestones, up to \$250 million for the achievement of regulatory milestones and up to \$850 million for the achievement of commercialization milestones. Akcea is also eligible to receive tiered, double-digit royalties in the mid-teens to low twenty percent range on net sales of AKCEA-ANGPTL3-LRx; these royalties would be reduced upon the expiration of certain patents or if a generic competitor negatively impacts the product in a specific country.

The Pfizer Agreement is described more fully in the Schedule 14D-9 under the heading “License Agreements—Strategic Collaboration With Pfizer.”

*PTC Agreement.* On August 1, 2018, Akcea entered into a Collaboration and License Agreement (the “PTC Agreement”) with PTC Therapeutics to commercialize TEGSEDI, WAYLIVRA and products containing those compounds (collectively, the “PTC Products”) in Latin America and certain Caribbean countries (the “PTC Territory”). In addition, Akcea has granted to PTC Therapeutics a right of first negotiation to commercialize AKCEA-TTR-LRx, a follow-on product candidate to inotersen, on an exclusive basis in the PTC Territory. Parent is entitled to receive certain percentage of license fees, royalties and milestone payments Akcea receives under the PTC Agreement.

Akcea is entitled to receive royalty payments in the mid-twenty percent range of net sales on a country-by-country and product-by-product basis, commencing on the earlier to occur of (1) 12 months after the first commercial sale of such PTC Product in Brazil or (2) the date when PTC Therapeutics, its affiliates or sublicensees have recognized revenue of \$10 million or more in cumulative net sales for such PTC Product in the PTC Territory. The royalty payments are subject to reduction in certain circumstances as set forth in the PTC Agreement.

In May 2019, Akcea received \$6.0 million from PTC Therapeutics as a result of regulatory approval of WAYLIVRA in Europe, of which Akcea paid Parent \$3.0 million as a sublicense fee under the Cardiometabolic License Agreement. In October 2019, Akcea received \$4.0 million from PTC Therapeutics as a result of regulatory approval of TEGSEDI in Brazil, of which Akcea paid Parent \$2.4 million as a sublicense fee under the TTR License Agreement.

PTC Therapeutics’ obligation to pay royalties to Akcea begins on the earlier of 12 months after the first commercial sale of a product in Brazil or the date that PTC Therapeutics recognizes revenue of at least \$10.0 million in the PTC Territory; these royalties will be reduced upon the expiration of certain patents or if a generic competitor negatively impacts the market share of the product in the PTC Territory. Milestone payments and royalties that Akcea is eligible to receive from PTC Therapeutics for TEGSEDI are split 60% to Parent and 40% to Akcea in accordance with the TTR License Agreement. All WAYLIVRA milestone payments and royalties that Akcea is eligible to receive from PTC Therapeutics are split equally with Parent in accordance with the Cardiometabolic License Agreement. PTC Therapeutics is solely responsible for the commercialization of the products in the PTC Territory at its sole cost and expense, including the pursuit and maintenance of applicable regulatory approvals. Unless earlier terminated, the PTC Agreement will continue in effect until the date on which the royalty term and all payment obligations with respect to all products in all countries in the PTC Territory have expired.

The PTC Agreement is described more fully in the Schedule 14D-9 under the heading “License Agreements—Strategic Collaboration with PTC Therapeutics.”

**Services Agreement.** Parent and Akcea originally entered into a Services Agreement on December 18, 2015, in conjunction with the Cardiometabolic License Agreement. Parent and Akcea entered into an Amended and Restated Services Agreement on March 14, 2018 (the “Services Agreement”) in connection with the Inotersen Transaction. The primary purpose of the Services Agreement is to allow for the expansion of general and administrative services provided by Parent to Akcea to cover the TEGSEDI and AKCEA-TTR-LRx products under terms substantially similar to the prior 2015 services agreement.

Under the Services Agreement, Parent provides Akcea with certain services, including, without limitation, general and administrative support services and development support services. Parent has allocated a certain percentage of personnel to perform the services that it provides to Akcea based on its good faith estimate of the required services. Akcea pays Parent for these allocated costs, which reflect the Parent full-time equivalent (“FTE”) rate for the applicable personnel, plus out-of-pocket expenses, such as occupancy costs, associated with

the FTEs allocated to providing Akcea with these services. Akcea does not pay a mark-up or profit on the external or internal expenses Parent bills to it. Parent invoices Akcea quarterly for all amounts due under the services agreement and payments are due within 30 days of the receipt of an invoice.

In addition, as long as Parent continues to consolidate Akcea's financials, Akcea is obligated to comply with Parent's policies and procedures and internal controls. As long as Akcea is consolidated into Parent's financial statements under U.S. Generally Accepted Accounting Practices ("GAAP"), Akcea may continue to access the following services from Parent:

- 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 services; and
- Chief Operating Officer/Chief Financial Officer/Chief Business Officer oversight.

The Services Agreement provides that, if Akcea desires to provide the foregoing services internally, and doing so would not negatively impact Parent's internal controls and procedures for financial reporting, Akcea has the right to negotiate in good faith with Parent for a reduced scope of services related to the aforementioned services. When Parent determines it should no longer consolidate Akcea's financials, Akcea may mutually agree with Parent in writing to extend the term of this arrangement in six-month increments.

The Services Agreement permits Akcea to establish its own benefits programs or continue to use Parent's benefits programs, in which case, Akcea must provide Parent a minimum advance notice to opt-out of using Parent's benefits programs.

**Investor Rights Agreement.** Akcea originally entered into an Investor Rights Agreement with Parent on December 18, 2015, in conjunction with the Cardiometabolic License Agreement. Akcea entered into an Amended and Restated Investor Rights Agreement with Parent in April 2018 (the "Investor Rights Agreement") in connection with the Inotersen Transaction.

Under the Investor Rights Agreement, as long as Parent owns at least 50% of Akcea's stock, (i) Akcea needs to obtain Parent's approval to issue equity or debt securities in Akcea in a financing valued at over \$10 million, (ii) Akcea needs to obtain Parent's approval to in-license a product, acquire a product or acquire another company and, (iii) subject to certain exceptions, equity issuances by Akcea, including the issuance of common stock, are subject to a right of first refusal by Parent. In addition, for so long as greater than 50% of Akcea's revenue is derived from products licensed from Parent, and subject to the execution of confidentiality agreements, Parent may appoint one non-voting observer to Akcea's audit and compensation committees.

**Real Property Sublease.** On November 12, 2018, Akcea entered into an operating lease agreement with Parent to sublease 4,723 square feet of office space located in Carlsbad, California. The commencement date was March 2018 and the term of the lease is 64 months with a four-month free rent period. There is no extension option for this lease.

**Transactions with Certain Akcea Directors and Officers.** In addition to serving on the Akcea Board, both B. Lynne Parshall and Joseph Klein, III serve on the Parent Board. Ms. Parshall also serves as a Senior Strategic Advisor to Parent. Both Ms. Parshall and Mr. Klein receive cash compensation, stock awards, and option awards

in respect of their roles. Ms. Parshall's total compensation in respect of her roles as a director of Parent and a Senior Strategic Advisor to Parent totaled approximately \$1,552,000 year-to-date in fiscal year 2020, \$2,428,000 in fiscal year 2019 and \$1,845,000 in fiscal year 2018. Mr. Klein's total compensation in respect of his role as a director of Parent totaled approximately \$760,000 year-to-date in fiscal year 2020, \$1,166,000 in fiscal year 2019 and \$635,000 in fiscal year 2018. The foregoing amounts reflect certain assumptions regarding each individual's equity compensation. For a description of the compensation earned by Parent's non-employee directors, reference is made to the subsection "Director Compensation" beginning on page 66 of Parent's Proxy Statement pursuant to Section 14(a) of the Exchange Act, filed April 24, 2020, which is incorporated herein by reference, and qualifies the foregoing in its entirety.

Prior to joining Akcea in September 2019, Damien McDevitt served as Chief Business Officer at Parent. Dr. McDevitt's compensation from Parent totaled approximately \$2,150,000 in fiscal year 2019 and approximately \$2,515,000 in fiscal year 2018. Pursuant to the terms of that certain Offer Letter, dated September 19, 2019, between Dr. McDevitt and Akcea, Dr. McDevitt's outstanding options to purchase shares of Parent common stock and Parent restricted stock units continue to vest while Dr. McDevitt is employed by Akcea.

#### **7. Rule 13e-3.**

Parent currently owns approximately 76% of all the outstanding Shares. Because Purchaser is an affiliate of Akcea, the transactions contemplated by the Merger Agreement constitute a "going private" transaction under Rule 13e-3 under the Securities Exchange Act of 1934, as amended (the "Exchange Act"). Rule 13e-3 requires, among other things, that certain financial information concerning Akcea and certain information relating to the fairness of the Offer, any subsequent merger that may be effected following the consummation of the Offer and the consideration offered to minority stockholders be filed with the SEC and disclosed to minority stockholders prior to consummation of the Offer and such merger. Parent has provided such information in this Offer to Purchase and a Tender Offer Statement on Schedule TO and the exhibits thereto filed with the SEC pursuant to Rule 14d-3 under the Exchange Act. If the purchase of Shares pursuant to the Offer results in fewer than 300 holders of record of Shares, Parent intends to file a Form 15 to evidence the termination of Akcea's duty to file reports pursuant to Section 15(d) of the Exchange Act as soon after the consummation of the Offer as the requirements for deregistration are met.

For a description of certain contacts between Akcea and Purchaser and its affiliates that were related to the Offer, please see Section 1—"Background of the Offer; Contacts with Akcea." Further, please see Section 3—"Purpose of the Offer and Plans for Akcea," Section 20—"Summary of the Merger Agreement" and Section 24—"Certain Legal Matters; Regulatory Approvals" for a description of (i) the purpose the Offer, (ii) our plans for Akcea, (iii) why Parent does not anticipate seeking the approval of Akcea's stockholders who are unaffiliated with Parent and its affiliates and (iv) the availability of appraisal rights in connection with the Offer and the Merger.

#### **8. Conduct of Akcea's Business if the Offer is not Consummated.**

If the Offer is not consummated, we will re-evaluate our options with respect to Akcea. In particular, we may, among other things:

- not take any action at that time, including not purchasing any additional Shares; and/or
- make a new tender offer.

If we were to pursue any of these alternatives, it might take considerably longer for the public stockholders of Akcea to receive any consideration for their Shares (other than through sales in the open market) than if they had tendered their Shares in the Offer. No assurance can be given that any of such alternatives will be pursued or as to the price per Share that may be paid in any such future acquisition of Shares or the effect any such actions could have on trading price of Akcea's common stock.

**9. Recommendation by the Affiliate Transactions Committee and the Board of Directors of Akcea.**

The Akcea Board has established an Affiliate Transactions Committee, comprised solely of independent, disinterested directors who are unaffiliated with Parent and are not officers or employees of Akcea, and delegated to it authority to review, evaluate, negotiate, recommend or not recommend the proposal by Parent with respect to a business combination transaction with Parent.

Akcea has represented to us that, prior to the execution of the Merger Agreement:

- The Affiliate Transactions Committee has unanimously (i) determined that the Merger Agreement and the Transactions, including the Offer and the Merger, are fair to, and in the best interest of, Akcea and its stockholders (other than the “Excluded Holders”), (ii) declared it advisable for Akcea to enter into the Merger Agreement, and (iii) recommended to the Akcea Board the execution, delivery and performance by Akcea of the Merger Agreement and the consummation of the Transactions, including the Offer and the Merger; and
- The Akcea Board, acting on the unanimous recommendation by the Affiliate Transactions Committee, has (i) determined that the Merger Agreement and the transactions contemplated thereby (the “Transactions”), including the Offer and the Merger, are fair to and in the best interest of, Akcea and its stockholders (other than the Excluded Holders), (ii) declared it advisable to enter into the Merger Agreement, (iii) approved the execution, delivery and performance by Akcea of the Merger Agreement and the consummation of the Transactions, including the Offer and the Merger, (iv) resolved that the Merger shall be effected under Section 251(h) of the DGCL and (v) resolved to recommend that the stockholders of Akcea (other than the Excluded Holders) tender their Shares pursuant to the Offer.

B. Lynne Parshall, Joseph Klein, III and Damien McDevitt recused themselves from related meetings and deliberations of the Akcea board, and Sandford D. Smith and Elaine Hochberg abstained from voting at related meetings of the Akcea board, in each case due to actual or potential conflicts as further explained in Section 1—“Background of the Offer; Contacts with Akcea” of the Schedule TO and the section entitled “Background of the Offer and the Merger” of the Schedule 14D-9.

Akcea has agreed to file a Solicitation/Recommendation Statement on Schedule 14D-9 with the SEC indicating the Affiliate Transactions Committee’s recommendation to the Akcea Board, and the Akcea Board’s approval of the Transactions and its recommendation that Akcea’s stockholders tender their Shares in the Offer.

**10. Materials Prepared by Parent’s Financial Advisors.**

Parent engaged Goldman Sachs and Stifel as Parent’s co-financial advisors in connection with its consideration of the acquisition by Parent of the outstanding Shares that were not owned by Parent. Goldman Sachs and Stifel were not requested to provide, and they did not provide, to Parent, Akcea, the holders of common stock of Parent or Akcea, or any other person, any opinion as to the fairness, from a financial point of view or otherwise, of the Transactions or the Offer Price or the Merger Consideration (as defined below) to Parent, Akcea, the holders of common stock of Parent or Akcea, or any other person. Nor did Goldman Sachs or Stifel opine on any other consideration received in connection with the Transactions by the holders of any class of securities, creditors, or other constituencies of Parent or Akcea; or the amount or nature of any compensation to be paid or payable to any of the officers, directors or employees of Parent or Akcea or any class of such persons in connection with the Transactions, whether relative to the Offer Price, the Merger Consideration or otherwise.

Goldman Sachs and Stifel, as co-financial advisors to Parent, made presentations of financial analyses to the Parent Board and to the Finance Committee relating to the acquisition by Parent of the outstanding shares of Akcea common stock that were not owned by Parent (the “Goldman Sachs and Stifel Presentations”). The

Goldman Sachs and Stifel Presentations were provided for the benefit of the Parent Board or the Finance Committee, as applicable, for their information and assistance in connection with their consideration of the Transactions.

Copies of the Goldman Sachs and Stifel Presentations, which are summarized below, have been filed as exhibits to the Schedule TO and are incorporated herein by reference, and will be made available for inspection and copying at Parent's principal executive offices during its regular business hours by any interested Akcea equity holder or its representative who has been so designated in writing. The Schedule TO, including the Goldman Sachs and Stifel Presentations, may be examined at, and copies may be obtained from, the SEC in the manner described in Section 18—"Certain Information Concerning Akcea" under "Available Information." The information in the Goldman Sachs and Stifel Presentations is subject to the assumptions, limitations, qualifications and other conditions contained therein and is necessarily based on economic, monetary, market and other conditions as of, and the information made available to Goldman Sachs or Stifel, as the case may be, in advance of the date of, each such presentation. The Goldman Sachs and Stifel Presentations do not constitute a recommendation to Parent, Akcea or any holder of common stock of Parent or Akcea with respect to the Transactions, or any other matter. The Goldman Sachs and Stifel Presentations do not constitute, and are not intended to represent, any view or opinion as to the fairness, from a financial point of view or otherwise, of the Transactions, or any aspect, term or implication of the Offer Price or the Merger Consideration, to Parent, Akcea, the holders of common stock of Parent or Akcea or any other person.

In connection with the Goldman Sachs and Stifel Presentations, Goldman Sachs and Stifel reviewed, among other things, certain publicly available business and financial information concerning Parent and Akcea; certain internal financial analyses and forecasts for Akcea prepared by its management; and the Projections as described more fully in Section 18—"Certain Information Concerning Akcea—Certain Prospective Financial Information," which are referred to in this Section 10 as the "Forecasts." Additionally, Parent management provided Goldman Sachs and Stifel with, and Parent approved the use by Goldman Sachs and Stifel of, certain projections for cost savings, operating synergies and other assumptions following completion of the Transactions, referred to as the "Synergies." Goldman Sachs and Stifel also held discussions with certain members of the management of Parent regarding their assessment of the strategic and financial rationale for, and the potential benefits of, the Transactions and the past and current business operations, financial condition and future prospects of Parent and Akcea, and each of Goldman Sachs and Stifel considered such other factors, in connection with the preparation of the Goldman Sachs and Stifel Presentations, as it deemed appropriate.

For purposes of the Goldman Sachs and Stifel Presentations, each of Goldman Sachs and Stifel, with Parent's consent, relied upon and assumed the accuracy and completeness of all of the financial, legal, regulatory, tax, accounting and other information provided to, discussed with or reviewed by, it, without assuming any responsibility for independent verification thereof. In that regard, each of Goldman Sachs and Stifel assumed with Parent's consent that the Forecasts, including the Synergies, were reasonably prepared on a basis reflecting the best currently available estimates and judgments of the management of Parent. Neither Goldman Sachs nor Stifel made an independent evaluation or appraisal of the assets and liabilities (including any contingent, derivative or other off-balance-sheet assets and liabilities) of Parent or Akcea or any of their respective subsidiaries and neither Goldman Sachs nor Stifel was furnished with any such evaluation or appraisal. Each of Goldman Sachs and Stifel assumed that all governmental, regulatory or other consents and approvals necessary for the consummation of the Transactions would be obtained without any adverse effect on Parent or Akcea or on the expected benefits of the Transactions in any way meaningful to its analyses included in the Goldman Sachs and Stifel Presentations. Goldman Sachs and Stifel had also assumed that the Transactions would be consummated on the terms set forth in the Merger Agreement, without the waiver or modification of any term or condition the effect of which would be in any way meaningful to their analyses included in the Goldman Sachs and Stifel Presentations.

Neither Goldman Sachs nor Stifel addressed the underlying business decision of Parent to engage in the Transactions or the relative merits of such transactions as compared to any strategic alternatives that may be

available to Parent; nor did either Goldman Sachs or Stifel address any legal, regulatory, tax or accounting matters. The Goldman Sachs and Stifel Presentations were necessarily based on economic, monetary market and other conditions as of, and the information made available to Goldman Sachs or Stifel, as the case may be, in advance of, the relevant presentation. Goldman Sachs and Stifel assumed no responsibility for updating, revising or reaffirming the analyses in any of the Goldman Sachs and Stifel Presentations based on circumstances, developments or events occurring after the date thereof. In addition, Goldman Sachs and Stifel did not express any opinion as to the prices at which shares of Parent or Akcea common stock would trade at any time, as to the potential effects of volatility in the credit, financial and stock markets on Parent or Akcea or the Transactions, or as to the impact of the Transactions on the solvency or viability of Parent or Akcea or the ability of Parent or Akcea to pay their respective obligations when they come due.

The following is a summary of the material financial analyses contained in the Goldman Sachs and Stifel Presentations. The following summary, however, does not purport to be a complete description of the financial analyses performed by Goldman Sachs or Stifel, nor does the order of analyses described represent relative importance or weight given to those analyses by Goldman Sachs or Stifel. Except as otherwise noted, the following quantitative information, to the extent that it is based on market data, is based on market data as it existed on or before August 28, 2020 (in the case of the August 30, 2020 Presentation) or on or before August 6, 2020 (in the case of the August 7, 2020 Presentation) and in all cases is not necessarily indicative of current market conditions.

**The August 30 Presentation.** On August 30, 2020, Goldman Sachs and Stifel presented the following analyses to the Parent Board.

*Historical Trading Analysis and Analyst Price Targets.* Goldman Sachs and Stifel reviewed the historical trading prices and volumes for the Shares for the one-year period ended August 28, 2020. In addition, Goldman Sachs and Stifel analyzed the \$18.15 in cash consideration to be paid to holders of Shares pursuant to the Merger Agreement in relation to the closing price on August 28, 2020, in relation to the volume weighted average price (VWAP) per share at which shares of Akcea common stock traded over the 30, 60, 90 and 180 days ending on August 28, 2020, and in relation to the price per Share in the IPO.

This analysis indicated that the price per share to be paid to Akcea stockholders pursuant to the Merger Agreement represented:

- a premium of 59.5 % based on the August 28, 2020 closing price of \$11.38 per Share;
- a premium of 55.4% based on the 30-day VWAP of \$11.68 per Share;
- a premium of 34.9% based on the 60-day VWAP of \$13.46 per Share;
- a premium of 29.0% based on the 90-day VWAP of \$14.07 per Share;
- a premium of 17.1 % based on the 180-day VWAP of \$15.51 per Share; and
- a premium of 126.9% based on the IPO price of \$8.00 per Share.

In addition, Goldman Sachs and Stifel noted, for reference purposes, that publicly available research analyst target prices per Share ranged from \$16.00 to \$41.00 and that the 52-week trading range for Akcea common stock was \$10.84 to \$22.47 per Share.



*Premia Analysis.* Goldman Sachs and Stifel reviewed and analyzed, using publicly available information, the acquisition premia for selected transactions announced during the time period from January 2008 through August 2020 across all sectors, excluding banks and utilities, where a majority stockholder of a public company in the United States acquired all of the shares of such target company that such majority stockholder did not already own and where the aggregate consideration exceeded \$200,000,000. These were the transactions that were analyzed:

Date	Target	Acquiror
11/27/19	AVX	Kyocera
04/24/19	Speedway Motorsports	Sonic Financial
11/16/18	EMC Insurance	Employers Mutual Casualty
11/09/18	International Speedway	NASCAR
06/18/18	Foundation Medicine	Roche
01/09/18	AmTrust Financial Services	Evergreen Parent
03/07/16	National Interstate	Great American Insurance
02/29/16	Federal-Mogul	Icahn Enterprises
12/13/12	Clearwire	Sprint Nextel
11/28/12	Sauer-Danfoss	Danfoss
10/31/10	CNA Surety	CNA Financial
08/26/10	Wesco Financial	Berkshire Hathaway
04/04/10	Terra Industries	CF Industries
09/03/09	Odyssey Re	Fairfax Financial
07/21/08	Genentech	Roche
03/09/08	Nationwide Financial Services	Nationwide Mutual Insurance

For the entire period, using publicly available information, Goldman Sachs and Stifel calculated premia of the final prices paid in the transactions relative to the target's last undisturbed closing stock price prior to announcement of the transaction. This analysis indicated a low premium of 15.2% and a high premium of 100.8% across the period. Using this analysis, Goldman Sachs and Stifel applied a reference range of illustrative premiums of 15.2% to 100.8% to the closing price per Share of \$11.38 as of August 28, 2020 and calculated a range of implied equity values per Share of \$13.11 to \$22.85.

*Additional Financial Analyses by Goldman Sachs.*

*Discounted Cash Flow Sum of the Parts—Akcea Standalone.* Using the Forecasts for Akcea on a stand-alone basis, Goldman Sachs performed an illustrative discounted cash flow analysis on each of the parts of Akcea. Using discount rates ranging from 8% to 10%, reflecting estimates of the weighted average cost of capital of Akcea on a stand-alone basis, Goldman Sachs discounted to present value as of June 30, 2020 estimates of unlevered free cash flow for Akcea on a stand-alone basis through 2040 as reflected in the Forecasts. Goldman Sachs derived such discount rates by application of the Capital Asset Pricing Model, which requires certain company-specific inputs, including the company's target capital structure weightings, the cost of long-term debt, after-tax yield on permanent excess cash, if any, future applicable marginal cash tax rate and a beta for the company, as well as certain financial metrics for the United States financial markets generally. Goldman Sachs derived a range of illustrative enterprise values for Akcea by adding the ranges of present values it derived above for each of the parts. Goldman Sachs then added to the range of illustrative enterprise values it derived for Akcea an estimate of net cash for Akcea, as provided by the management of Parent, to derive a range of illustrative equity values for Akcea on a stand-alone basis. Goldman Sachs then divided the range of illustrative equity values it derived by the number of fully diluted outstanding shares of Akcea (which includes outstanding restricted stock units and stock options on a treasury stock method basis), as provided by the management of Parent, to derive a range of illustrative present values per Share ranging from \$14.44 to \$17.89.

*Discounted Cash Flow Sum of the Parts—Akcea Under Parent Control.* Using the Forecasts for Akcea under Parent control and, at the direction of Parent, using a limited set of upside and downside sensitivities

reflected in these Forecasts for Akcea under Parent control, Goldman Sachs performed an illustrative discounted cash flow analysis on each of the parts of Akcea. Using discount rates ranging from 8% to 10%, reflecting estimates of the weighted average cost of capital of Akcea under Parent control, Goldman Sachs discounted to present value as of June 30, 2020 estimates of unlevered free cash flow for Akcea under Parent control through 2040 as reflected in the Forecasts. Goldman Sachs derived such discount rates by application of the Capital Asset Pricing Model, which requires certain company-specific inputs, including the company's target capital structure weightings, the cost of long-term debt, after-tax yield on permanent excess cash, if any, future applicable marginal cash tax rate and a beta for the company, as well as certain financial metrics for the United States financial markets generally. Goldman Sachs derived a range of illustrative enterprise values for Akcea by adding the ranges of present values it derived above for each of the parts. Goldman Sachs then added to the range of illustrative enterprise values it derived for Akcea an estimate of net cash for Akcea, as provided by the management of Parent, to derive a range of illustrative equity values for Akcea under Parent control. Goldman Sachs then divided the range of illustrative equity values it derived by the number of fully diluted outstanding shares of Akcea (which includes outstanding restricted stock units and stock options on a treasury stock method basis), as provided by the management of Parent, to derive a range of illustrative present values per Share ranging from \$19.32 to \$23.87.

*Additional Financial Analyses by Stifel.*

*Discounted Cash Flow Sum of the Parts—Akcea Standalone.* Using the Forecasts for Akcea on a stand-alone basis, Stifel performed an illustrative discounted cash flow analysis on each of the parts of Akcea. Using discount rates ranging from 9% to 12%, reflecting estimates of the weighted average cost of capital of Akcea on a stand-alone basis, Stifel discounted to present value as of October 31, 2020 estimates of unlevered free cash flow for Akcea on a stand-alone basis through 2040 as reflected in the Forecasts. Stifel derived such discount rates by application of the Capital Asset Pricing Model, which requires certain company-specific inputs, including the company's target capital structure weightings, the cost of long-term debt, after-tax yield on permanent excess cash, if any, future applicable marginal cash tax rate, a beta and size premium for the company, as well as certain financial metrics for the United States financial markets generally. To derive beta, Stifel analyzed the two-year weekly betas of selected publicly traded biotechnology companies. Stifel derived a range of illustrative enterprise values for Akcea by adding the ranges of present values it derived above for each of the parts. Stifel then added to the range of illustrative enterprise values it derived for Akcea an estimate of net cash for Akcea, as provided in the Forecasts, to derive a range of illustrative equity values for Akcea on a stand-alone basis. Stifel then divided the range of illustrative equity values it derived by the number of fully diluted outstanding shares of Akcea, which includes outstanding restricted stock units and stock options, valuing them on a treasury stock method basis, as provided by the management of Parent, to derive a range of illustrative present values per Share ranging from \$11.59 to \$15.78.

*Discounted Cash Flow Sum of the Parts—Akcea Under Parent Control.* Using the Forecasts for Akcea under Parent control, Stifel performed an illustrative discounted cash flow analysis on each of the parts of Akcea. Using discount rates ranging from 7.5% to 9.5%, reflecting estimates of the weighted average cost of capital of Akcea under Parent control, Stifel discounted to present value as of October 31, 2020 estimates of unlevered free cash flow for Akcea under Parent control through 2040 as reflected in the Forecasts, including the net cumulative effect of selected Synergies provided by the management of Parent at the time of analysis. Stifel derived such discount rates by application of the Capital Asset Pricing Model, which requires certain company-specific inputs, including the company's target capital structure weightings, the cost of long-term debt, after-tax yield on permanent excess cash, if any, future applicable marginal cash tax rate, a beta and size premium for the company, as well as certain financial metrics for the United States financial markets generally. To derive beta, Stifel analyzed the two-year weekly betas of selected publicly traded biotechnology companies. Stifel derived a range of illustrative enterprise values for Akcea by adding the ranges of present values it derived above for each of the parts. Stifel then added to the range of illustrative enterprise values it derived for Akcea an estimate of net cash for Akcea, as provided in the Forecasts, to derive a range of illustrative equity values for Akcea under Parent control. Stifel then divided the range of illustrative equity values it derived by the number of fully diluted

outstanding shares of Akcea, which includes outstanding restricted stock units and stock options, valuing them on a treasury stock method basis, as provided by the management of Parent, to derive a range of illustrative present values per Share ranging from \$21.16 to \$26.00.

**The August 7, 2020 Presentation.** On August 7, 2020, Goldman Sachs and Stifel presented the following analyses to the Finance Committee.

*Historical Trading Analysis and Analyst Price Targets.* Goldman Sachs and Stifel reviewed the historical trading prices and volumes for the Shares for the period from January 1, 2020 through August 6, 2020. In addition, Goldman Sachs and Stifel analyzed an illustrative range of consideration to be paid to holders of Akcea common stock in relation to the closing price on August 6, 2020, in relation to the VWAP per share at which Shares traded over the 30, 60, 90 and 180 days and year ending on August 6, 2020, in relation to the high and low trading prices for the 52 weeks ending on August 6, 2020, in relation to the median target price published by Wall Street research analysts, and in relation to the price per Share in the IPO.

A summary of this analysis is presented in the table below:

	Price per share	Range of Premia/Discounts relative to \$11.47 to \$22.00
Closing price on August 6, 2020	\$ 11.47	0 – 91.8%
30-day VWAP	\$ 13.00	(11.8%) – 69.2%
60-day VWAP	\$ 13.93	(17.7%) – 57.9%
90-day VWAP	\$ 14.47	(20.7%) – 52.0%
180-day VWAP	\$ 15.96	(28.1%) – 37.9%
LTM VWAP	\$ 16.87	(32.0%) – 30.4%
52-Week High	\$ 22.47	(49.0%) – (2.1%)
52-Week Low	\$ 10.84	5.8% – 103.0%
Median Target Price	\$ 25.50	(55.0%) – (13.7%)
IPO Price	\$ 8.00	43.4% – 175.0%

In addition, Goldman Sachs and Stifel noted, for reference purposes, that publicly available Wall Street research analyst target prices per Share ranged from \$16.00 to \$41.00.

*Premia Analysis.* Goldman Sachs and Stifel reviewed and analyzed, using publicly available information, the acquisition premia for selected transactions announced during the time period from January 2008 through August 2020 across all sectors, excluding banks and utilities, where a majority stockholder of a public company in the United States acquired all of the shares of such target company that such majority stockholder did not already own and where the aggregate consideration exceeded \$200,000,000. These were the transactions that were analyzed:

Date	Target	Acquiror
11/27/19	AVX	Kyocera
04/24/19	Speedway Motorsports	Sonic Financial
11/16/18	EMC Insurance	Employers Mutual Casualty
11/09/18	International Speedway	NASCAR
06/18/18	Foundation Medicine	Roche
01/09/18	AmTrust Financial Services	Evergreen Parent
03/07/16	National Interstate	Great American Insurance
02/29/16	Federal-Mogul	Icahn Enterprises
12/13/12	Clearwire	Sprint Nextel
11/28/12	Sauer-Danfoss	Danfoss
10/31/10	CNA Surety	CNA Financial
08/26/10	Wesco Financial	Berkshire Hathaway
04/04/10	Terra Industries	CF Industries
09/03/09	Odyssey Re	Fairfax Financial
07/21/08	Genentech	Roche
03/09/08	Nationwide Financial Services	Nationwide Mutual Insurance

For the entire period, using publicly available information, Goldman Sachs and Stifel calculated premia of the final prices paid in the transactions relative to the target's last undisturbed closing stock price prior to announcement of the transaction. This analysis indicated a low premium of 15.2% and a high premium of 100.8% across the period. Using this analysis, Goldman Sachs and Stifel applied a reference range of illustrative premia of 28.6% (representing the 25<sup>th</sup> percentile premium over the target's last undisturbed closing stock price prior to announcement of the transaction) and 46.7% (representing the 75<sup>th</sup> percentile premium over the target's last undisturbed closing stock price prior to announcement of the transaction) to the closing price per Share of \$11.47 as of August 6, 2020 and calculated a range of implied equity values per Share of \$14.75 to \$16.83. In addition, Goldman Sachs and Stifel calculated premia of the final prices paid in the transactions relative to the target's high closing stock price for the 52-week period ending with the target's last undisturbed trading day prior to announcement of the transaction. Using this analysis, Goldman Sachs and Stifel applied a reference range of illustrative premia of (4.8)% (representing the 25<sup>th</sup> percentile premium over the target's high closing stock price for the 52-week period ending with the target's last undisturbed trading day prior to announcement of the transaction) and 17.2% (representing the 75<sup>th</sup> percentile premium over the target's high closing stock price for the 52-week period ending with the target's last undisturbed trading day prior to announcement of the transaction) to \$22.47, representing Akcea common stock's high closing price for the 52-week period ending August 6, 2020, and calculated a range of implied equity values per Share of \$21.39 to \$26.33.

*Additional Financial Analyses by Goldman Sachs.*

*Discounted Cash Flow Sum of the Parts—Akcea Standalone.* Using the Forecasts for Akcea on a stand-alone basis, Goldman Sachs performed an illustrative discounted cash flow analysis on each of the parts of Akcea. Using discount rates ranging from 8% to 10%, reflecting estimates of the weighted average cost of capital of Akcea on a stand-alone basis, Goldman Sachs discounted to present value as of June 30, 2020 estimates of unlevered free cash flow for Akcea on a stand-alone basis through 2040 as reflected in the Forecasts. Goldman Sachs derived such discount rates by application of the Capital Asset Pricing Model, which requires certain company-specific inputs, including the company's target capital structure weightings, the cost of long-term debt,

after-tax yield on permanent excess cash, if any, future applicable marginal cash tax rate and a beta for the company, as well as certain financial metrics for the United States financial markets generally. Goldman Sachs derived a range of illustrative enterprise values for Akcea by adding the ranges of present values it derived above for each of the parts. Goldman Sachs then added to the range of illustrative enterprise values it derived for Akcea an estimate of net cash for Akcea, as provided by the management of Parent, to derive a range of illustrative equity values for Akcea on a stand-alone basis. Goldman Sachs then divided the range of illustrative equity values it derived by the number of fully diluted outstanding shares of Akcea (which includes outstanding restricted stock units and stock options on a treasury stock method basis), as provided by the management of Parent, to derive a range of illustrative present values per Share ranging from \$14.46 to \$17.95.

*Discounted Cash Flow Sum of the Parts—Akcea Under Parent Control.* Using the Forecasts for Akcea under Parent control and, at the direction of Parent, using select upside sensitivities reflected in these Forecasts for Akcea under Parent control, Goldman Sachs performed an illustrative discounted cash flow analysis on each of the parts of Akcea. Using discount rates ranging from 8% to 10%, reflecting estimates of the weighted average cost of capital of Akcea under Parent control, Goldman Sachs discounted to present value as of June 30, 2020 estimates of unlevered free cash flow for Akcea under Parent control through 2040 as reflected in the Forecasts. Goldman Sachs derived such discount rates by application of the Capital Asset Pricing Model, which requires certain company-specific inputs, including the company's target capital structure weightings, the cost of long-term debt, after-tax yield on permanent excess cash, if any, future applicable marginal cash tax rate and a beta for the company, as well as certain financial metrics for the United States financial markets generally. Goldman Sachs derived a range of illustrative enterprise values for Akcea by adding the ranges of present values it derived above for each of the parts. Goldman Sachs then added to the range of illustrative enterprise values it derived for Akcea an estimate of net cash for Akcea, as provided by the management of Parent, to derive a range of illustrative equity values for Akcea under Parent control. Goldman Sachs then divided the range of illustrative equity values it derived by the number of fully diluted outstanding shares of Akcea (which includes outstanding restricted stock units and stock options on a treasury stock method basis), as provided by the management of Parent, to derive a range of illustrative present values per Share ranging from \$29.73 to \$36.72.

*Additional Financial Analyses by Stifel.*

*Discounted Cash Flow Sum of the Parts—Akcea Standalone.* Using the Forecasts for Akcea on a stand-alone basis, Stifel performed an illustrative discounted cash flow analysis on each of the parts of Akcea. Using discount rates ranging from 9% to 12%, reflecting estimates of the weighted average cost of capital of Akcea on a stand-alone basis, Stifel discounted to present value as of October 31, 2020 estimates of unlevered free cash flow for Akcea on a stand-alone basis through 2040 as reflected in the Forecasts. Stifel derived such discount rates by application of the Capital Asset Pricing Model, which requires certain company-specific inputs, including the company's target capital structure weightings, the cost of long-term debt, after-tax yield on permanent excess cash, if any, future applicable marginal cash tax rate, a beta and size premium for the company, as well as certain financial metrics for the United States financial markets generally. To derive beta, Stifel analyzed the two-year weekly betas of selected publicly traded biotechnology companies. Stifel derived a range of illustrative enterprise values for Akcea by adding the ranges of present values it derived above for each of the parts. Stifel then added to the range of illustrative enterprise values it derived for Akcea an estimate of net cash for Akcea, as provided in Forecasts, to derive a range of illustrative equity values for Akcea on a stand-alone basis. Stifel then divided the range of illustrative equity values it derived by the number of fully diluted outstanding shares of Akcea, which includes outstanding restricted stock units and stock options, valuing them on a treasury stock method basis, as provided by the management of Parent, to derive a range of illustrative present values per Share ranging from \$11.59 to \$15.79.

*Discounted Cash Flow Sum of the Parts—Akcea Under Parent Control.* Using the Forecasts for Akcea under Parent control, Stifel performed an illustrative discounted cash flow analysis on each of the parts of Akcea. Using discount rates ranging from 7% to 9%, reflecting estimates of the weighted average cost of capital of Akcea under Parent control, Stifel discounted to present value as of October 31, 2020 estimates of unlevered free

cash flow for Akcea under Parent control through 2040, including the net cumulative effect of selected Synergies provided by the management of Parent at the time of analysis, as reflected in the Forecasts. Stifel derived such discount rates by application of the Capital Asset Pricing Model, which requires certain company-specific inputs, including the company's target capital structure weightings, the cost of long-term debt, after-tax yield on permanent excess cash, if any, future applicable marginal cash tax rate, a beta and size premium for the company, as well as certain financial metrics for the United States financial markets generally. To derive beta, Stifel analyzed the two-year weekly betas of selected publicly traded biotechnology companies. Stifel derived a range of illustrative enterprise values for Akcea by adding the ranges of present values it derived above for each of the parts. Stifel then added to the range of illustrative enterprise values it derived for Akcea an estimate of net cash for Akcea, as provided in the Forecasts, to derive a range of illustrative equity values for Akcea under Parent control. Stifel then divided the range of illustrative equity values it derived by the number of fully diluted outstanding shares of Akcea, which includes outstanding restricted stock units and stock options, valuing them on a treasury stock method basis, as provided by the management of Parent, to derive a range of illustrative present values per Share ranging from \$24.53 to \$29.92.

**General.**

Selecting portions of the analyses or of the summary set forth above, without considering the analyses as a whole, could create an incomplete view of the processes underlying the Goldman and Stifel Presentations. In connection with these presentations, each of Goldman Sachs and Stifel considered the results of all of its analyses and did not attribute any particular weight to any factor or analysis considered by it. No company or transaction used in the above analyses as a comparison is directly comparable to Parent or Akcea or the Transactions.

Each of Goldman Sachs and Stifel prepared these analyses for purposes of their presentations to the Parent Board or to the Finance Committee, as applicable. These analyses do not purport to be appraisals, nor do they necessarily reflect the prices at which businesses or securities actually may be sold. Analyses based upon forecasts of future results are not necessarily indicative of actual future results, which may be significantly more or less favorable than suggested by these analyses. Because these analyses are inherently subject to uncertainty, being based upon numerous factors or events beyond the control of the parties or their respective advisors, none of Parent, Akcea, Goldman Sachs, Stifel or any other person assumes responsibility if future results are materially different from those forecasted.

The Offer Price and Merger Consideration were determined through arm's-length negotiations between Parent and the Affiliate Transactions Committee and were approved by each party's board of directors. Goldman Sachs and Stifel provided advice to Parent during these negotiations. Goldman Sachs and Stifel did not, however, recommend any specific amount of consideration to Parent or its board of directors or that any specific amount of consideration constituted the only appropriate consideration for the merger.

The Goldman Sachs and Stifel Presentations were among many factors taken into consideration by the Parent Board in making its determination to approve the Merger Agreement. The foregoing summary does not purport to be a complete description of the analyses performed by Goldman Sachs and Stifel in connection with the Goldman Sachs and Stifel Presentations and is qualified in its entirety by reference to the Goldman Sachs and Stifel Presentations included as exhibits to the Schedule TO.

Goldman Sachs and its affiliates are engaged in advisory, underwriting and financing, principal investing, sales and trading, research, investment management and other financial and non-financial activities and services for various persons and entities. Goldman Sachs and its affiliates and employees, and funds or other entities they manage or in which they invest or have other economic interests or with which they co-invest, may at any time purchase, sell, hold or vote long or short positions and investments in securities, derivatives, loans, commodities, currencies, credit default swaps and other financial instruments of Parent, Akcea, any of their respective affiliates and third parties, or any currency or commodity that may be involved in the transaction contemplated by the merger agreement. Goldman Sachs acted as financial advisor to Parent in connection with, and participated in certain of the negotiations leading to, the Transactions. Goldman Sachs has provided certain financial advisory

and/or underwriting services to Parent and/or its affiliates (other than Akcea and its subsidiaries) from time to time for which the Investment Banking Division of Goldman Sachs has received, and may receive, compensation. During the two-year period ended August 30, 2020, Goldman Sachs has recognized compensation for financial advisory and/or underwriting services provided by its Investment Banking Division to Parent and/or its affiliates (other than Akcea and its subsidiaries) of approximately \$525,000. During the two-year period ended August 30, 2020, the Investment Banking Division of Goldman Sachs has not been engaged by Akcea or its subsidiaries to provide financial advisory or underwriting services for which Goldman Sachs has recognized compensation. We further note that concurrent with the issuance of the Ionis 0.125% Convertible Senior Notes due 2024 (aggregate principal amount of \$548,826,000) (the "Convertible Notes") in December 2019, Ionis entered into convertible note hedge and related warrant transactions with respect to the Convertible Notes with several call spread counterparties, including Goldman Sachs & Co. LLC, each acting as principal for its own account. The convertible note hedge transactions collectively and warrant transactions collectively each cover approximately 6.59 million shares of Ionis common stock, the aggregate number of shares initially underlying the Convertible Notes, and the convertible note hedge and related warrant transactions could be subject to potential adjustment in certain circumstances in connection with the Transactions. Goldman Sachs may also in the future provide financial advisory and/or underwriting services to Parent, Akcea and their respective affiliates for which the Investment Banking Division of Goldman Sachs may receive compensation. In addition, Joseph Wender, an advisory director at Goldman Sachs, serves on the Parent Board.

Stifel and its affiliates are engaged in advisory, underwriting and financing, principal investing, sales and trading, research, investment management and other financial and non-financial activities and services for various persons and entities. Stifel and its affiliates and employees, and funds or other entities they manage or in which they invest or have other economic interests or with which they co-invest, may at any time purchase, sell, hold or vote long or short positions and investments in securities, derivatives, loans, commodities, currencies, credit default swaps and other financial instruments of Parent, Akcea, any of their respective affiliates and third parties, or any currency or commodity that may be involved in the transaction contemplated by the merger agreement. Stifel acted as financial advisor to Parent in connection with, and participated in certain of the negotiations leading to, the transaction contemplated by the Merger Agreement. Stifel has provided certain financial advisory and/or underwriting services to Parent and its affiliates from time to time for which Stifel has received, and may receive, compensation, including having acted as a financial advisor to Parent for the issuance of the Ionis 0.125% Convertible Senior Notes due 2024 (aggregate principal amount of \$548,826,000) (the "Convertible Notes") in December 2019 and a broker to Parent for a 10b5-1 share repurchase plan that was completed in the first quarter of 2020. During the two-year period ended August 30, 2020, Stifel has recognized compensation for financial advisory and/or underwriting services provided by its Investment Banking Division to Parent of approximately \$1,300,000 in the aggregate. During the two-year period ended August 30, 2020, the Investment Banking Division of Stifel has not been engaged by Akcea or its subsidiaries to provide financial advisory or underwriting services for which Stifel has recognized compensation. Stifel may also in the future provide financial advisory and/or underwriting services to Parent, Akcea and their respective affiliates for which the Investment Banking Division of Stifel may receive compensation. In addition, Peter Reikes, Vice Chairman at Stifel, serves on the Parent Board.

Parent selected each of Goldman Sachs and Stifel as its financial advisor because each is an internationally recognized investment banking firm that has substantial experience in transactions similar to the Transactions as well as familiarity with Parent and its business.

Pursuant to a letter agreement dated August 29, 2020, Parent engaged Goldman Sachs to act as its financial advisor in connection with the contemplated transaction. The engagement letter between Parent and Goldman Sachs provides for a transaction fee that is estimated, based on the information available as of the date of announcement, at approximately \$10,000,000, all of which is contingent upon consummation of the Transactions. In addition, Parent has agreed to reimburse Goldman Sachs for certain of its expenses, including attorneys' fees and disbursements, and to indemnify Goldman Sachs and related persons against various liabilities, including certain liabilities under the federal securities laws.

Pursuant to a letter agreement dated August 28, 2020, Parent engaged Stifel to act as its financial advisor in connection with the contemplated transaction. The engagement letter between Parent and Stifel provides for a transaction fee of \$10,000,000, all of which is contingent upon consummation of the Transactions. In addition, Parent has agreed to reimburse Stifel for certain of its expenses, including attorneys' fees and disbursements, and to indemnify Stifel and related persons against various liabilities, including certain liabilities under the federal securities laws.

## THE TENDER OFFER

### 11. Terms of the Offer.

Upon the terms and subject to the prior satisfaction or waiver of the conditions of the Offer (including, if the Offer is extended or amended, the terms and conditions of any extension or amendment), Parent will accept for payment, purchase and pay for all Shares at a purchase price of \$18.15 per Share, net to the seller of such Shares in cash, without interest and subject to any withholding taxes, validly tendered prior to the expiration of the Offer, and not properly withdrawn in accordance with the procedures set forth in Section 14—"Withdrawal Rights." The Offer will expire at one minute after 11:59 p.m. Eastern Time on Friday, October 9, 2020 (the "Expiration Date"), unless Purchaser has extended the Offer in accordance with the terms of the Merger Agreement, in which event the term "Expiration Date" will mean the date to which the initial expiration date of the Offer is so extended.

**The Offer is conditioned upon the satisfaction of the Minimum Condition and the other conditions described in Section 22—"Conditions of the Offer." Purchaser may terminate the Offer without purchasing any Shares if certain events described in Section 20—"Summary of the Merger Agreement—Termination" occur.**

Purchaser expressly reserves the right to (i) increase the Offer Price, (ii) waive any Offer Condition (as defined below) and (iii) make any other changes in the terms and conditions of the Offer that are consistent with the terms of the Merger Agreement, except that Akcea's prior written approval is required for Parent or Purchaser to:

- (1) decrease the Offer Price;
- (2) change the form of consideration payable in the Offer;
- (3) decrease the maximum number of Shares sought to be purchased in the Offer;
- (4) impose conditions to the Offer in addition to the conditions set forth in Section 22—"Conditions of the Offer";
- (5) amend, modify or waive the Termination Condition or the Governmental Impediment Condition;
- (6) otherwise amend or modify any of the other terms of the Offer in any manner that adversely affects, or would reasonably be expected to adversely affect, the holders of Shares (other than Parent and its affiliates) in their capacity as such;
- (7) terminate the Offer or accelerate, extend or otherwise change the Expiration Date except as provided in the Merger Agreement; or
- (8) provide any "subsequent offering period" within the meaning of Rule 14d-11 under the Exchange Act.

None of Parent, Purchaser and Akcea may amend, modify or waive the Minimum Condition.

Upon the terms and subject to the satisfaction or waiver of the conditions of the Offer and the Merger Agreement, Purchaser will (i) immediately after the Expiration Date irrevocably accept for payment all Shares



tendered (and not validly withdrawn) pursuant to the Offer and (ii) promptly thereafter pay for all such Shares. The time at which Purchaser accepts for payment Shares tendered in the Offer is referred to as the “Offer Acceptance Time.”

If, on or before the Expiration Date, Purchaser increases the consideration being paid for Shares accepted for payment in the Offer, such increased consideration will be paid to all stockholders whose Shares are purchased in the Offer, whether or not such Shares were tendered before the announcement of the increase in consideration. Purchaser also expressly reserves the right to modify the terms of the Offer, subject to compliance with the Exchange Act, the Merger Agreement and the restrictions identified above.

The Merger Agreement provides that, if, as of the then-scheduled Expiration Date, any of the conditions to the Offer is not satisfied and has not been waived by Parent or Purchaser, Parent and Purchaser may in their sole discretion extend the Offer, or are required to extend the Offer if requested by Akcea, on one or more occasions, for an additional period of up to 10 business days per extension, to permit such condition to the Offer to be satisfied. In addition, Purchaser has agreed to extend the Offer for any period required by any law, rule, regulation, interpretation or position of the SEC or the Nasdaq Stock Market (“Nasdaq”) applicable to the Offer. However, Parent and Purchaser are not required to extend the Offer if the Minimum Condition is the only condition to the Offer that is not satisfied or waived as of then-scheduled Expiration Date (other than conditions which by their nature are to be satisfied at the expiration of the Offer) and none of the Schedule TO, Schedule 14D-9 and Parent’s and Akcea’s Schedule 13E-3 is still being reviewed or commented on by the SEC. In no event will Parent and Purchaser be required to extend the Offer beyond the earlier to occur of the valid termination of the Merger Agreement or December 30, 2020. See Section 20—“Summary of the Merger Agreement.”

Except as set forth above, there can be no assurance that we will be required under the Merger Agreement to extend the Offer. During any extension of the initial offering period pursuant to the paragraphs above, all Shares previously tendered and not withdrawn will remain subject to the Offer and subject to withdrawal rights. See Section 14—“Withdrawal Rights.”

Without Akcea’s consent, there will not be a subsequent offering period for the Offer.

If, subject to the terms of the Merger Agreement, we make a material change in the terms of the Offer or the information concerning the Offer, or if we waive a material condition of the Offer, we will disseminate additional tender offer materials and extend the Offer if and to the extent required by Rules 14d-3(b)(1), 14d-4(d), 14d-6(c) and 14e-1 under the Exchange Act or otherwise. The minimum period during which a tender offer must remain open following material changes in the terms of the tender offer or the information concerning the tender offer, other than a change in the consideration offered or a change in the percentage of securities sought, will depend upon the facts and circumstances, including the relative materiality of the terms or information changes. With respect to a change in the consideration offered or a change in the percentage of securities sought, a tender offer generally must remain open for a minimum of 10 business days following such change to allow for adequate disclosure to stockholders.

We expressly reserve the right, in our sole discretion, subject to the terms and upon the conditions of the Merger Agreement and the applicable rules and regulations of the SEC, to not accept for payment any Shares if, at the expiration of the Offer, any of the conditions to the Offer set forth in Section 22—“Conditions of the Offer” have not been satisfied. Under certain circumstances, Parent and Purchaser may terminate the Merger Agreement and the Offer.

Any extension, waiver or amendment of the Offer or termination of the Offer will be followed, as promptly as practicable, by public announcement thereof, such announcement in the case of an extension to be issued not later than 9:00 a.m., Eastern Time, on the next business day after the then-scheduled Expiration Date in accordance with the public announcement requirements of Rules 14d-3(b)(1), 14d-4(d), 14d-6(c) and 14e-1(d)

under the Exchange Act. Without limiting our obligation under such rule or the manner in which we may choose to make any public announcement, we currently intend to make announcements by issuing a press release to the PR Newswire (or such other national media outlet or outlets we deem prudent) and making any appropriate filing with the SEC.

Promptly following the purchase of Shares in the Offer, we expect to complete the Merger without a vote of Akcea's stockholders pursuant to Section 251(h) of the DGCL.

Akcea has provided us with its list of stockholders and security position listings for the purpose of disseminating the Offer to holders of Shares. This Offer to Purchase and the related Letter of Transmittal will be mailed to record holders of Shares whose names appear on Akcea's stockholder list and will be furnished to brokers, dealers, commercial banks, trust companies and similar persons whose names, or the names of whose nominees, appear on the stockholder list or, if applicable, who are listed as participants in a clearing agency's security position listing, for subsequent transmittal to beneficial owners of Shares.

## **12. Acceptance for Payment and Payment for Shares.**

Subject to the satisfaction or waiver of all the conditions to the Offer set forth in Section 22—"Conditions of the Offer," we will, immediately after the expiration of the Offer, irrevocably accept for payment all Shares tendered (and not validly withdrawn) pursuant to the Offer and, promptly after the Offer Acceptance Time, pay for such Shares.

In all cases, payment for Shares tendered and accepted for payment pursuant to the Offer will be made only after timely receipt by the Depository of (i) certificates representing such Shares or confirmation of the book-entry transfer of such Shares into the Depository's account at The Depository Trust Company ("DTC") pursuant to the procedures set forth in Section 13—"Procedures for Tendering Shares," (ii) a Letter of Transmittal, properly completed and duly executed, with any required signature guarantees (or, in the case of a book-entry transfer, an Agent's Message (as defined below) in lieu of the Letter of Transmittal), and (iii) any other documents required by the Letter of Transmittal or any other customary documents required by Depository. See Section 13—"Procedures for Tendering Shares."

For purposes of the Offer, if and when Purchaser gives oral or written notice to the Depository of its acceptance for payment of such Shares pursuant to the Offer, then Purchaser has accepted for payment and purchased Shares validly tendered and not validly withdrawn pursuant to the Offer. Upon the terms and subject to the conditions of the Offer, payment for Shares accepted for payment pursuant to the Offer will be made by deposit of the aggregate Offer Price with the Depository, which will act as agent for the tendering stockholders for purposes of receiving payments from us and transmitting such payments to the tendering stockholders. **Under no circumstances will interest be paid on the Offer Price for Shares, regardless of any extension of the Offer or any delay in payment for Shares.**

If any tendered Shares are not accepted for payment pursuant to the terms and conditions of the Offer for any reason, or if certificates are submitted for more Shares than are tendered, certificates for such unpurchased Shares will be returned (or new certificates for the Shares not tendered will be sent), without expense to the tendering stockholder (or, in the case of Shares tendered by book-entry transfer into the Depository's account at DTC pursuant to the procedures set forth in Section 13—"Procedures for Tendering Shares," such Shares will be credited to an account maintained with DTC) promptly following expiration or termination of the Offer.

## **13. Procedures for Tendering Shares.**

**Valid Tender of Shares.** Except as set forth below, to validly tender Shares pursuant to the Offer, (i) a properly completed and duly executed Letter of Transmittal in accordance with the instructions of the Letter of Transmittal, with any required signature guarantees, or an Agent's Message (as defined below) in connection

with a book-entry delivery of Shares, and any other documents required by the Letter of Transmittal and any other customary documents required by the Depository, must be received by the Depository at one of its addresses set forth on the back cover of this Offer to Purchase prior to the expiration of the Offer and either (a) certificates representing Shares tendered must be delivered to the Depository or (b) such Shares must be properly delivered pursuant to the procedures for book-entry transfer described below and a confirmation of such delivery received by the Depository (which confirmation must include an Agent's Message (as defined below) if the tendering stockholder has not delivered a Letter of Transmittal), in each case, prior to the Expiration Date or (ii) the tendering stockholder must comply with the guaranteed delivery procedures set forth below. The term "Agent's Message" means a message, transmitted by DTC to, and received by, the Depository and forming a part of a Book-Entry Confirmation (as defined below), which states that DTC has received an express acknowledgment from the participant in DTC tendering the Shares which are the subject of such Book-Entry Confirmation (as defined below) that such participant has received and agrees to be bound by the terms of the Letter of Transmittal and that Purchaser may enforce such agreement against the participant.

**Book-Entry Transfer.** The Depository will take steps to establish and maintain an account with respect to the Shares at DTC for purposes of the Offer. Any financial institution that is a participant in DTC's systems may make a book-entry transfer of Shares by causing DTC to transfer such Shares into the Depository's account in accordance with DTC's procedures for such transfer. However, although delivery of Shares may be effected through book-entry transfer, either the Letter of Transmittal, properly completed and duly executed, together with any required signature guarantees, or an Agent's Message in lieu of the Letter of Transmittal, and any other required documents, must, in any case, be transmitted to and received by the Depository at one of its addresses set forth on the back cover of this Offer to Purchase prior to the Expiration Date or the tendering stockholder must comply with the guaranteed delivery procedures described below. The confirmation of a book-entry transfer of Shares into the Depository's account at DTC as described above is referred to herein as a "Book-Entry Confirmation."

**Delivery of documents to DTC in accordance with DTC's procedures does not constitute delivery to the Depository.**

**Signature Guarantees and Stock Powers.** Except as otherwise provided below, all signatures on a Letter of Transmittal must be guaranteed by a financial institution (including most commercial banks, savings and loan associations and brokerage houses) that is a member in good standing of a recognized Medallion Program approved by the Securities Transfer Association, Inc., including the Security Transfer Agents Medallion Program, the New York Stock Exchange Medallion Signature Program and the Stock Exchanges Medallion Program (each, an "Eligible Institution"). Signatures on a Letter of Transmittal need not be guaranteed (i) if the Letter of Transmittal is signed by the registered owner(s) (which term, for purposes of this section, includes any participant in any of DTC's systems whose name appears on a security position listing as the owner of the Shares) of Shares tendered therewith and such registered owner has not completed the box entitled "Special Payment Instructions" or the box entitled "Special Delivery Instructions" on the Letter of Transmittal or (ii) if such Shares are tendered for the account of an Eligible Institution. See Instructions 1 and 5 of the Letter of Transmittal. If the certificates for Shares are registered in the name of a person other than the signer of the Letter of Transmittal, or if payment is to be made or certificates for Shares not tendered or not accepted for payment are to be returned to a person other than the registered owner of the certificates surrendered, then the tendered certificates must be registered or accompanied by appropriate stock powers, in either case, signed exactly as the name or names of the registered owner(s) or holder(s) appear on the certificates, with the signatures on the certificates or stock powers guaranteed as described above. See Instructions 1 and 5 of the Letter of Transmittal.

If certificates representing Shares are forwarded separately to the Depository, a properly completed and duly executed Letter of Transmittal must accompany each delivery of certificates.

**Guaranteed Delivery.** A stockholder who desires to tender Shares pursuant to the Offer and whose certificates for Shares are not immediately available and cannot be delivered to the Depository prior to the

expiration of the Offer, or who cannot complete the procedure for book-entry transfer prior to the expiration of the Offer, or who cannot deliver all required documents to the Depository prior to the expiration of the Offer, may tender such Shares by satisfying all of the requirements set forth below:

- such tender is made by or through an Eligible Institution;
- a properly completed and duly executed Notice of Guaranteed Delivery, substantially in the form provided by Purchaser, is received by the Depository (as provided below) prior to the Expiration Date; and
- the certificates for all tendered Shares, in proper form for transfer (or a Book-Entry Confirmation with respect to all such Shares), together with a properly completed and duly executed Letter of Transmittal, with any required signature guarantees (or, in the case of a book-entry transfer, an Agent's Message in lieu of the Letter of Transmittal), and any other required documents, are received by the Depository within 2 trading days after the date of execution of such Notice of Guaranteed Delivery. A "trading day" is any day on which Nasdaq is open for business.

The Notice of Guaranteed Delivery may be delivered by overnight courier to the Depository or mailed to the Depository and must include a guarantee by an Eligible Institution in the form set forth in such Notice of Guaranteed Delivery. Shares tendered by a Notice of Guaranteed Delivery will not be deemed validly tendered for purposes of satisfying the Minimum Condition unless and until Shares underlying such Notice of Guaranteed Delivery are delivered to the Depository prior to the expiration of the Offer.

**THE METHOD OF DELIVERY OF SHARES, THE LETTER OF TRANSMITTAL AND ALL OTHER REQUIRED DOCUMENTS, INCLUDING DELIVERY THROUGH DTC, IS AT THE ELECTION AND RISK OF THE TENDERING STOCKHOLDER. DELIVERY OF ALL SUCH DOCUMENTS WILL BE DEEMED MADE ONLY WHEN ACTUALLY RECEIVED BY THE DEPOSITORY (INCLUDING, IN THE CASE OF A BOOK-ENTRY TRANSFER, BY BOOK-ENTRY CONFIRMATION). IF SUCH DELIVERY IS BY MAIL, IT IS RECOMMENDED THAT ALL SUCH DOCUMENTS BE SENT BY PROPERLY INSURED REGISTERED MAIL WITH RETURN RECEIPT REQUESTED. IN ALL CASES, SUFFICIENT TIME SHOULD BE ALLOWED TO ENSURE TIMELY DELIVERY.**

**Other Requirements.** Notwithstanding any provision of the Merger Agreement, Purchaser will pay for Shares tendered (and not validly withdrawn) pursuant to the Offer only after timely receipt by the Depository of (i) certificates for (or a timely Book-Entry Confirmation with respect to) such Shares, (ii) a Letter of Transmittal, properly completed and duly executed, with any required signature guarantees (or, in the case of a book-entry transfer, an Agent's Message in lieu of the Letter of Transmittal), and (iii) any other documents required by the Letter of Transmittal or any other customary documents required by the Depository. Accordingly, tendering stockholders may be paid at different times depending upon when certificates for Shares or Book-Entry Confirmations with respect to Shares are actually received by the Depository. **Under no circumstances will Purchaser pay interest on the purchase price of Shares, regardless of any extension of the Offer or any delay in making such payment.** If your Shares are held in street name (i.e., through a broker, dealer, commercial bank, trust company or other nominee), your Shares can be tendered by your nominee by book-entry transfer through the Depository. If you are unable to deliver any required document or instrument to the Depository by the expiration of the Offer, you may gain some extra time by having a broker, a bank or other fiduciary that is an eligible guarantor institution guarantee that the missing items will be received by the Depository by using the enclosed Notice of Guaranteed Delivery. For the tender to be valid, however, the Depository must receive the missing items together with the Shares within 2 Nasdaq trading days after the date of execution of the Notice of Guaranteed Delivery.

**Binding Agreement.** Our acceptance for payment of Shares tendered pursuant to one of the procedures described above will constitute a binding agreement between the tendering stockholder and us upon the terms and subject to the conditions of the Offer.

**Appointment as Proxy.** By executing and delivering a Letter of Transmittal as set forth above (or, in the case of a book-entry transfer, by delivery of an Agent's Message in lieu of a Letter of Transmittal), the tendering stockholder irrevocably appoints Purchaser's designees as such stockholder's proxies, each with full power of substitution, to the full extent of such stockholder's rights with respect to the Shares tendered by such stockholder and accepted for payment by us and with respect to any and all other Shares or other securities issued or issuable in respect of such Shares on or after the date of the Merger Agreement. All such proxies and powers of attorney will be considered coupled with an interest in the tendered Shares. Such appointment is effective when, and only to the extent that, we accept for payment Shares tendered by such stockholder as provided herein. Upon the effectiveness of such appointment, all prior powers of attorney, proxies and consents given by such stockholder will be revoked, and no subsequent powers of attorney, proxies and consents may be given (and, if given, will not be deemed effective). Our designees will, with respect to the Shares or other securities and rights for which the appointment is effective, be empowered to exercise all voting and other rights of such stockholder as they, in their sole discretion, may deem proper at any annual, special, adjourned or postponed meeting of the stockholders of Akcea, by written consent in lieu of any such meeting or otherwise. We reserve the right to require that, in order for Shares to be deemed validly tendered, immediately upon our payment for such Shares we must be able to exercise full voting, consent and other rights to the extent permitted under applicable law with respect to such Shares and other securities, including voting at any meeting of stockholders or executing a written consent concerning any matter.

**Determination of Validity.** All questions as to the validity, form, eligibility (including time of receipt) and acceptance of any tender of Shares will be determined by us in our sole and absolute discretion, which determination will be final and binding, subject to the rights of the tendering holders of Shares to challenge our determination in a court of competent jurisdiction. Purchaser reserves the absolute right to reject any and all tenders determined by us not to be in proper form or the acceptance for payment of or payment for which may, in our opinion, be unlawful. Purchaser also reserves the absolute right to waive any defect or irregularity in the tender of any Shares of any particular stockholder whether or not similar defects or irregularities are waived in the case of any other stockholder. No tender of Shares will be deemed to have been validly made until all defects and irregularities relating thereto have been cured or waived. None of Parent, Purchaser or any of their respective affiliates or assigns, the Depository, the Information Agent, or any other person will be under any duty to give notification of any defects or irregularities in tenders or incur any liability for failure to give any such notification. Purchaser's interpretation of the terms and conditions of the Offer (including the Letter of Transmittal and the instructions thereto and any other documents related to the Offer) will be final and binding, subject to the rights of the tendering holders of Shares to challenge our determination in a court of competent jurisdiction.

**Certification Regarding Tax Treatment and Withholding.** Tendering stockholders will be asked to certify whether cash received pursuant to the Offer or the Merger should be treated for U.S. federal income tax purposes as a payment in exchange for the stockholder's shares or as a distribution to which Section 301 of the Code (as defined in Section 15—"Certain U.S. Federal Income Tax Consequences of the Offer and the Merger") applies. Stockholders who provide the latter certification or who fail to certify will be treated as having received a distribution to which Section 301 of the Code applies. Dividends paid to Non-U.S. Holders (as defined below) generally are subject to withholding tax at a rate of 30% (or such lower rate as may be provided under an applicable income tax treaty).

In order to avoid "backup withholding" of U.S. federal income tax on payments of cash pursuant to the Offer or the Merger, a stockholder that is a "U.S. person" (as defined in the instructions to the IRS Form W-9 provided with the Letter of Transmittal) who surrenders Shares for cash pursuant to the Offer or the Merger must, unless an exemption applies, provide the Depository with such stockholder's correct taxpayer identification number ("TIN") on an IRS Form W-9, certify under penalties of perjury that such TIN is correct and provide certain other certifications. If a stockholder does not provide such stockholder's correct TIN or fails to provide the required certifications, the IRS may impose penalties on such stockholder, and the gross proceeds payable to such stockholder pursuant to the Offer or the Merger may be subject to backup withholding at a rate currently

equal to 24%. All stockholders that are U.S. persons surrendering Shares pursuant to the Offer or the Merger should complete and sign the IRS Form W-9 included as part of the Letter of Transmittal to provide the information and certifications required to avoid backup withholding (unless an applicable exemption exists and is established in a manner satisfactory to the Depository).

Certain stockholders (including, among others, all corporations and certain foreign individuals and entities) are not subject to backup withholding. Exempt stockholders that are “U.S. persons” should complete and sign an IRS Form W-9 indicating their exempt status in order to avoid backup withholding. Stockholders that are not “U.S. persons” should complete and sign an IRS Form W-8BEN, IRS Form W-8BEN-E, or other appropriate IRS Form W-8 (instead of an IRS Form W-9) in order to avoid backup withholding. An appropriate IRS Form W-8 may be obtained from the Depository or at the IRS website ([www.irs.gov](http://www.irs.gov)). See Instruction 9 to the Letter of Transmittal.

Backup withholding is not an additional tax and any amounts withheld under the backup withholding rules may be refunded or credited against your U.S. federal income tax liability, provided the required information is timely furnished in the appropriate manner to the IRS.

Information reporting to the IRS may also apply to the receipt of cash pursuant to the Offer or the Merger.

#### **14. Withdrawal Rights.**

Except as otherwise provided in this Section 14, tenders of Shares pursuant to the Offer are irrevocable. However, a stockholder has withdrawal rights that are exercisable until the expiration of the Offer (i.e., at any time prior to one minute after 11:59 p.m., Eastern Time on October 9, 2020), or in the event the Offer is extended, on such date and time to which the Offer is extended. In addition, Shares may be withdrawn at any time after November 13, 2020, which is the 60th day after the date of the commencement of the Offer, unless prior to that date Purchaser has accepted for payment the Shares validly tendered in the Offer.

For a withdrawal of Shares to be effective, a written or facsimile transmission notice of withdrawal must be timely received by the Depository at its address set forth on the back cover of this Offer to Purchase. Any notice of withdrawal must specify the name of the person having tendered the Shares to be withdrawn, the number of Shares to be withdrawn and the name of the record holder of the Shares to be withdrawn, if different from that of the person who tendered such Shares. The signature(s) on the notice of withdrawal must be guaranteed by an Eligible Institution, unless such Shares have been tendered for the account of any Eligible Institution. If Shares have been tendered pursuant to the procedures for book-entry transfer as set forth in Section 13—“Procedures for Tendering Shares,” any notice of withdrawal must specify the name and number of the account at DTC to be credited with the withdrawn Shares. If certificates representing the Shares to be withdrawn have been delivered or otherwise identified to the Depository, the name of the registered holder and the serial numbers shown on such certificates must also be furnished to the Depository prior to the physical release of such certificates.

All questions as to the form and validity (including time of receipt) of any notice of withdrawal will be determined by us, in our sole discretion, which determination will be final and binding, subject to the rights of the tendering holders of Shares to challenge our determination in a court of competent jurisdiction. No withdrawal of tendered Shares will be deemed to have been properly made until all defects and irregularities have been cured or waived. None of Parent, Purchaser or any of their respective affiliates or assigns, the Depository, the Information Agent, or any other person will be under any duty to give notification of any defects or irregularities in any notice of withdrawal or incur any liability for failure to give such notification. Withdrawals of tendered Shares may not be rescinded, and any Shares properly withdrawn will be deemed not to have been validly tendered for purposes of the Offer. However, withdrawn Shares may be retendered by following one of the procedures for tendering Shares described in Section 13—“Procedures for Tendering Shares” at any time prior to the expiration of the Offer.

If Purchaser extends the Offer, delays its acceptance for payment of Shares, or is unable to accept for payment Shares pursuant to the Offer, for any reason, then, without prejudice to Purchaser's rights under the Offer, the Depository may nevertheless, on Purchaser's behalf, retain tendered Shares, and such Shares may not be withdrawn except to the extent that tendering stockholders exercise withdrawal rights as described in this Section 14.

#### **15. Certain U.S. Federal Income Tax Consequences of the Offer and the Merger.**

The following discussion summarizes certain U.S. federal income tax considerations generally applicable to Holders (as defined below) of Shares who exchange their Shares for the Offer Price or the Merger Consideration pursuant to the Offer or the Merger, respectively. This discussion is for general information only and does not purport to consider all aspects of U.S. federal income taxation that might be relevant to stockholders of Akcea. This discussion is based on the Internal Revenue Code of 1986, as amended (the "Code"), Treasury Regulations promulgated thereunder, court decisions, published positions of the U.S. Internal Revenue Service (the "IRS") and other applicable authorities, each as currently in effect as of the date hereof and all of which are subject to change or differing interpretations (possibly with retroactive effect). No ruling has been requested or will be obtained from the IRS regarding the U.S. federal income tax consequences of the Offer or the Merger or any other matter; thus, there can be no assurance that the IRS will not challenge the U.S. federal income tax treatment described below or that, if challenged, such treatment will be sustained by a court. This summary is not binding on the IRS, and the IRS is not precluded from taking a position that is different from, and contrary to, the positions taken in this summary. In addition, because the authorities on which this summary is based are subject to various interpretations, the IRS and the courts could disagree with one or more of the positions taken in this summary.

This discussion applies only to Holders that hold their Shares as "capital assets" within the meaning of Section 1221 of the Code (generally, assets held for investment). For purposes of this discussion, a "U.S. Holder" is a beneficial owner of Shares that is one of the following:

- a citizen or individual resident of the United States;
- a corporation (or other entity treated as a corporation for U.S. federal income tax purposes) created or organized under the laws of the United States, any state thereof, or the District of Columbia;
- an estate, the income of which is subject to U.S. federal income taxation regardless of its source; or
- a trust if (a) a court within the United States is able to exercise primary supervision over the administration of the trust and one or more United States persons have the authority to control all substantial decisions of the trust, or (b) the trust has a valid election in effect under applicable Treasury Regulations to be treated as a United States person.

As used in this summary, the term "Non-U.S. Holder" means a beneficial owner of Shares that is neither a U.S. Holder nor a partnership for U.S. federal income tax purposes, and the term "Holder" means a U.S. Holder or a Non-U.S. Holder.

This discussion does not address all of the U.S. federal income tax considerations that may be relevant to a particular Holder in light of such Holder's particular circumstances, or to Holders that are subject to special treatment under U.S. federal income tax laws, such as: financial institutions; brokers or dealers in securities or commodities; mutual funds; insurance companies; tax-exempt organizations (including private foundations); certain former citizens or long-term residents of the United States; Holders who acquired their Shares pursuant to the exercise of employee stock options or otherwise in connection with the performance of services; partnerships (including limited liability companies or other arrangements, in each case that are treated as partnerships for U.S. federal income tax purposes), S corporations, or pass-through entities (and investors and partners in such entities); Holders who hold their Shares as part of a "straddle," "hedge," "conversion transaction" or other integrated transaction; Holders who have a functional currency other than the U.S. dollar; Holders who are

subject to the alternative minimum tax; regulated investment companies and real estate investment trusts; traders in securities who elect the mark-to-market method of accounting for their securities; controlled foreign corporations; and passive foreign investment companies.

This discussion does not address any U.S. state or local or non-U.S. tax considerations, other U.S. federal tax considerations (e.g., estate or gift tax), the Medicare contribution tax on net investment income, or the alternative minimum tax considerations of exchanging Shares in the Offer or the Merger.

If an entity or arrangement treated as a partnership for U.S. federal income tax purposes holds Shares, the U.S. federal income tax treatment of a partner in such partnership will generally depend upon the status of the partner and the activities of the partnership. Partnerships (including entities or arrangements treated as partnerships for U.S. federal income tax purposes) holding Shares and the partners therein should consult their tax advisors with respect to tax considerations of the Offer or the Merger applicable to them.

**Because this discussion is intended to be a general summary only and individual circumstances may differ, each Holder should consult its tax advisor to determine the applicability of the rules discussed below and the particular tax effects of the Offer or the Merger on a beneficial holder of Shares, including the application and effect of the alternative minimum tax and any state, local and non-U.S. tax laws and of changes in such laws.**

**Certain Tax Considerations for U.S. Holders.** The receipt of cash for Shares pursuant to the Offer or the Merger will be a taxable transaction for U.S. federal income tax purposes to a U.S. Holder of Shares. Subject to the discussion below relating to the application of Section 304 of the Code under “—Special Consequences of the Offer and the Merger to U.S. Holders of Shares that Actually or Constructively Own Parent Common Stock,” a U.S. Holder of Shares will generally recognize taxable gain or loss equal to the difference between (i) the stockholder’s adjusted tax basis in the Shares surrendered in the exchange, and (ii) the amount of cash received by such Holder in the Offer and/or the Merger.

If a U.S. Holder acquired Shares by purchase, the U.S. Holder’s adjusted tax basis in its Shares will generally equal the amount the U.S. Holder paid for the relevant Shares, less any returns of capital that the U.S. Holder might have received with regard to the relevant Shares. Such gain or loss will generally be long term capital gain or loss if, as of the date of the exchange, a U.S. Holder’s holding period in the Shares exchanged is more than one year. Long term capital gain recognized by certain noncorporate U.S. Holders, including individuals, is currently subject to tax at a reduced rate. The deductibility of capital losses is subject to limitations under the Code. If a U.S. Holder acquired different blocks of Shares at different times or at different prices, such U.S. Holder generally must determine its adjusted tax basis and holding period separately with respect to each such block of Shares.

**Special Consequences of the Offer and the Merger to U.S. Holders of Shares that Actually or Constructively Own Parent Common Stock.** Section 304 of the Code affects the tax treatment of certain transactions where there is overlapping ownership between the acquired and acquiring corporations, and is expected to apply to the Offer and the Merger because Parent currently owns more than 50% of the Shares. By virtue of the application of Section 304 of the Code, some Holders who exchange their Shares for the Offer Price or the Merger Consideration pursuant to the Offer or the Merger will be treated in the same manner as if they sold their Shares in a taxable transaction (i.e., as described above) (“sale treatment”), while others will instead be treated as having received a distribution with respect to such Holders’ stock to which Section 301 of the Code applies (“dividend treatment”). As more fully described below, the application of sale or dividend treatment may depend on the extent of the stockholder’s actual and constructive ownership of stock of Akcea prior to the Effective Time and of Parent after the Effective Time.

As described above, a U.S. Holder of Shares to whom sale treatment applies will recognize capital gain or loss in an amount equal to the difference, if any, between the amount of cash received and such U.S. Holder’s adjusted tax basis in the Shares exchanged.



As noted above, a U.S. Holder of Shares to whom dividend treatment applies will treat the proceeds of the Offer or Merger as a distribution on Parent common stock to which Section 301 of the Code applies, and the adjusted tax basis in the Shares exchanged generally will be added to any shares of Parent common stock retained by the U.S. Holder. Such a distribution will be treated as a dividend to the extent of Parent's and Akcea's current and accumulated earnings and profits, as determined under U.S. federal income tax principles. To the extent that the amount of the deemed distribution exceeds Parent's and Akcea's current and accumulated earnings and profits, the excess first will be treated as a non-taxable return of capital that will reduce the U.S. Holder's adjusted tax basis in its Parent common stock, and any remaining portion will be taxable to a U.S. Holder as capital gain. Such gain will generally be long term capital gain if, as of the date of the deemed redemption, the U.S. Holder's holding period in the Parent common stock deemed redeemed is more than one year. Long term capital gain recognized by certain noncorporate U.S. Holders, including individuals, is currently subject to tax at a reduced rate. Parent's and Akcea's current and accumulated earnings and profits may not be readily determinable or made available.

Sale treatment applies to those holders of Shares who do not actually or constructively own any shares of Parent common stock immediately before, during, or immediately after the Offer or the Merger. Sale treatment also applies to U.S. Holders of Shares who actually or constructively own shares of Parent common stock immediately before, during, or immediately after the Effective Time, if they meet certain tests under Section 302 of the Code.

Under Sections 302 and 304 of the Code, sale treatment applies if the deemed redemption is "substantially disproportionate" or is "not essentially equivalent to a dividend." The deemed redemption generally will be "substantially disproportionate" with respect to a U.S. Holder if the percentage of the outstanding Parent stock that the U.S. Holder actually and constructively owns immediately after the Effective Time is less than 80% of the percentage of the outstanding Shares that the U.S. Holder actually and constructively owned immediately before the Effective Time. The deemed redemption will be "not essentially equivalent to a dividend" if it results in a "meaningful reduction" in the U.S. Holder's percentage of stock ownership of Parent immediately after the Effective Time as compared to such U.S. Holder's percentage of stock ownership in Akcea immediately before the Effective Time, in each case applying constructive ownership rules. The IRS has ruled that a minority stockholder in a publicly traded corporation whose relative stock interest is minimal and who exercises no control with respect to corporate affairs is considered to have experienced a "meaningful reduction" if the stockholder has even a small reduction in such stockholder's percentage of stock ownership under the above analysis. In applying the "substantially disproportionate" and "not essentially equivalent to a dividend" tests to a Holder, sales or purchases of Parent common stock made by such Holder (or by persons whose shares are attributed to such Holder) in connection with the Offer or the Merger will be taken into account. In addition, in applying these tests, a Holder that owns Parent stock immediately before the Effective Time is treated as owning a proportionate share of the Shares that are owned by Parent at such time.

Holders of Shares who own or acquire Parent stock and who do not meet the criteria for sale treatment will be subject to dividend treatment, as described above.

Because the application of Sections 302 and 304 of the Code may depend on a U.S. Holder's particular circumstances, and because whether a deemed distribution under Sections 302 and 304 of the Code constitutes the distribution of a dividend depends on Parent's and Akcea's then-current and accumulated earnings and profits, a withholding agent may not be able to determine the amount of cash paid pursuant to the Offer or Merger that is a dividend for U.S. federal income tax purposes, if any. Withholding agents may report, on an applicable Form 1099, some or all of the cash received pursuant to the Offer or Merger as dividend income unless the withholding agent has established special procedures allowing U.S. Holders to certify that the cash they receive pursuant to the Offer or Merger is not treated as a distribution to which Section 301 of the Code applies under the Section 302 tests described above. However, there can be no assurances that such withholding agent will establish such special certification procedures. A withholding agent's treatment of amounts received pursuant to the Offer or Merger as a dividend for U.S. federal income tax purposes is not dispositive, and is not binding on the IRS or such U.S. Holder.

Because the possibility of dividend treatment may depend upon each Holder's particular circumstances, including the application of constructive ownership rules, U.S. Holders of Shares should consult their own tax advisors regarding the application of the foregoing rules to their particular circumstances, and any actions that may be taken to mitigate the potential application of such rules (such as the desirability of selling their shares of Parent common stock or Shares prior to the Effective Time, and the considerations relating to the timing of any such sales).

**Certain Tax Considerations for Non-U.S. Holders.** The U.S. federal income tax consequences of the Offer and the Merger to Non-U.S. Holders will be the same as those described above for U.S. Holders of Shares, except that, subject to the discussion below regarding potential dividend treatment, a Non-U.S. Holder generally will not be subject to U.S. federal income tax or withholding tax on any gain realized in connection with the Offer or the Merger unless:

- such gain is effectively connected with such Non-U.S. Holder's conduct of a trade or business within the United States (and, if required by an applicable income tax treaty, is attributable to a permanent establishment of such Non-U.S. Holder in the United States);
- such Non-U.S. Holder is an individual who is present in the United States for 183 days or more in the taxable year in which the gain is realized and certain other conditions are met; or
- Akcea is or has been a "United States real property holding corporation" for U.S. federal income tax purposes at any time during the shorter of the five-year period ending on the date of the Closing or the period that the Non-U.S. Holder held Shares.

Gain described in the first bullet point above will be subject to U.S. federal income tax on a net income basis at the regular graduated U.S. federal income tax rates in the same manner as if such Non-U.S. Holder were a U.S. person. A Non-U.S. Holder that is a corporation also may be subject to an additional branch profits tax at a rate of 30% (or such lower rate as may be specified by an applicable income tax treaty) on its "effectively connected earnings and profits" for the taxable year, subject to certain adjustments.

Gain described in the second bullet point above will be subject to U.S. federal income tax at a 30% rate (or such lower rate as may be specified by an applicable income tax treaty), but may be offset by U.S.-source capital losses, if any, of the Non-U.S. Holder.

If the third bullet point above applies to a Non-U.S. Holder, gain recognized by such Non-U.S. Holder on the exchange of Shares for the Offer Price or the Merger Consideration pursuant to the Offer or the Merger, as applicable, will be subject to tax at generally applicable U.S. federal income tax rates. In addition, Parent may be required to withhold U.S. income tax at a rate of 15% of the Offer Price or the Merger Consideration, as applicable. Akcea will be classified as a United States real property holding corporation if the fair market value of its "United States real property interests" equals or exceeds 50% of the sum of the fair market value of its worldwide real property interests plus its other assets used or held for use in a trade or business, as determined for U.S. federal income tax purposes. We do not believe Akcea currently is or has previously been a United States real property holding corporation, and we anticipate receiving a certification from Akcea in that regard. Non-U.S. Holders are urged to consult their tax advisors regarding the application of these rules.

As discussed above under the section entitled "—Certain Tax Considerations for U.S. Holders", in certain circumstances, dividend treatment may apply to the Offer Price or the Merger Consideration received pursuant to the Offer or the Merger, as applicable, in which case a Non-U.S. Holder may be treated as receiving a dividend up to the amount of the cash received. Any amount so treated generally would be subject to U.S. withholding tax at a rate of 30%, or such lower rate as may be specified by an applicable income tax treaty, unless such dividend is effectively connected with the Non-U.S. Holder's conduct of a trade or business within the United States (and, if required by an applicable income tax treaty, is attributable to a permanent establishment of such Non-U.S. Holder in the United States).

Because the application of Sections 302 and 304 of the Code may depend on a Non-U.S. Holder's particular circumstances, and because whether a deemed distribution under Sections 302 and 304 of the Code constitutes the distribution of a dividend depends on Parent's and Akcea's then-current and accumulated earnings and profits, a withholding agent may not be able to determine the amount subject to such withholding with respect to a Non-U.S. Holder. Accordingly, withholding agents may withhold tax at a rate of 30% (or such lower rate as may be specified by an applicable income tax treaty) on the entire amount of the cash consideration payable to such Non-U.S. Holder pursuant to the Offer or the Merger, as applicable, unless (i) the withholding agent has established special procedures allowing Non-U.S. Holders to certify that they are exempt from such withholding tax, and (ii) such Non-U.S. Holder is able to certify that it meets the requirements of such exemption (e.g., because such Non-U.S. Holder is eligible for sale rather than dividend treatment under the tests described above). However, there can be no assurance that such withholding agent will establish such special certification procedures. If a withholding agent withholds amounts from the cash consideration payable to a Non-U.S. Holder in excess of the tax actually owing (e.g., because the "Non-U.S. Holder" is eligible for sale treatment or because the "Non-U.S. Holder" is entitled to a lower rate of withholding on dividends under a treaty), such Non-U.S. Holder may obtain a refund of any such excess amounts by timely filing an appropriate claim with the IRS.

**Non-U.S. Holders should consult their own tax advisors regarding the application of the foregoing rules in light of their particular facts and circumstances, the procedures for claiming treaty benefits or otherwise establishing an exemption from U.S. withholding tax with respect to any portion of the cash consideration payable to them pursuant to the Offer or the Merger, as applicable, and the possible desirability of selling their Shares or Parent common stock (and considerations relating to the timing of any such sales).**

**Information Reporting and Backup Withholding.** Payments to Holders may be subject to information reporting and backup withholding. A U.S. Holder may avoid such backup withholding if such U.S. Holder furnishes its correct TIN on an IRS Form W-9 (or substitute or successor form or, if appropriate, another withholding form) or provides proof of an applicable exemption, and otherwise complies with all applicable requirements of the backup withholding rules. If a U.S. Holder fails to provide the correct TIN or certification or otherwise fails to comply with the applicable backup withholding rules, payments received pursuant to the Offer or the Merger may be subject to backup withholding. The backup withholding rate is currently 24%. Certain Holders (including corporations and Non-U.S. Holders) generally are exempt backup withholding. Exempt Holders may be required to comply with certification requirements and identification procedures in order to establish an exemption from information reporting and backup withholding.

Backup withholding is not an additional tax. Rather, any amounts withheld under the backup withholding rules generally will be allowed as a refund of, or credit against, the U.S. federal income tax liability of persons subject to backup withholding, provided that the required information is timely furnished to the IRS.

**Foreign Account Tax Compliance Act.** Sections 1471 through 1474 of the Code and the Treasury Regulations and administrative guidance promulgated thereunder (commonly referred to as the "Foreign Account Tax Compliance Act" or "FATCA") generally impose withholding at a rate of 30% in certain circumstances on dividends in respect of our securities which are held by or through certain foreign financial institutions (including investment funds), unless any such institution (1) enters into, and complies with, an agreement with the IRS to report, on an annual basis, information with respect to interests in, and accounts maintained by, the institution that are owned by certain U.S. persons and by certain non-U.S. entities that are wholly or partially owned by U.S. persons and to withhold on certain payments, or (2) if required under an intergovernmental agreement between the United States and an applicable foreign country, reports such information to its local tax authority, which will exchange such information with the U.S. authorities. An intergovernmental agreement between the United States and an applicable foreign country may modify these requirements. Accordingly, the entity through which our securities are held will affect the determination of whether such withholding is required. Similarly, dividends in respect of our securities held by an investor that is a non-financial non-U.S. entity that does not qualify under

certain exceptions will generally be subject to withholding at a rate of 30%, unless such entity either (1) certifies to Parent or the applicable withholding agent that such entity does not have any “substantial United States owners” or (2) provides certain information regarding the entity’s “substantial United States owners,” which will in turn be provided to the U.S. Department of Treasury. Holders should consult their tax advisors regarding the possible implications of FATCA on the Offer or the Merger.

**The U.S. federal income tax considerations described above are not intended to constitute a complete description of all tax considerations applicable to the Offer or the Merger. Because individual circumstances may differ, each Holder of Shares should consult such Holder’s tax advisor regarding the applicability of the rules discussed above to the Holder and the particular tax effects to the Holder of the Offer or the Merger in light of such Holder’s particular circumstances and the application of state, local and non-U.S. tax laws.**

#### 16. Price Range of Shares; Dividends.

The Shares are traded on Nasdaq under the symbol “AKCA.” Akcea has advised Parent that, as of the close of business on September 8, 2020, 101,759,772 Shares were outstanding. The following table sets forth, for the fiscal quarters indicated, the high and low sales prices per Share on Nasdaq with respect to the fiscal years ended December 31, 2018 and December 31, 2019 and, with respect to the fiscal year ended December 31, 2020, through September 11, 2020, using Share data reported by Nasdaq.

<u>Fiscal Year Ended December 31, 2018</u>	<u>High</u>	<u>Low</u>
First Quarter	\$33.99	\$15.23
Second Quarter	\$28.88	\$17.74
Third Quarter	\$40.75	\$23.56
Fourth Quarter	\$35.29	\$20.80
<u>Fiscal Year Ended December 31, 2019</u>	<u>High</u>	<u>Low</u>
First Quarter	\$35.82	\$24.82
Second Quarter	\$32.57	\$19.67
Third Quarter	\$25.66	\$15.28
Fourth Quarter	\$22.47	\$13.90
<u>Current Fiscal Year</u>	<u>High</u>	<u>Low</u>
First Quarter	\$20.10	\$ 8.00
Second Quarter	\$18.57	\$12.63
Third Quarter (through September 11, 2020)	\$19.65	\$ 9.81

Akcea has never paid dividends on its common stock. In Akcea’s Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2020 (the “Akcea 10-Q”), Akcea had indicated that it would continue to retain its future earnings to maintain and expand its operations. Additionally, under the terms of the Merger Agreement, Akcea is not permitted to declare or pay any dividends on or make other distributions in respect of any of its capital stock. See Section 23—“Dividends and Distributions.”

On August 28, 2020, the trading day before the public announcement of the execution of the Merger Agreement, the reported closing sales price of the Shares on Nasdaq was \$11.38. On September 11, 2020, the last full trading day prior to the commencement of the Offer, the reported closing sales price per Share on Nasdaq during normal trading hours was \$18.14 per Share. **Stockholders are urged to obtain a current market quotation for the Shares.**

**17. Possible Effects of the Offer on the Market for the Shares; Nasdaq Listing; Exchange Act Registration and Margin Regulations.**

**Possible Effects of the Offer on the Market for the Shares.** The purchase of Shares pursuant to the Offer will reduce the number of Shares that might otherwise trade publicly and could adversely affect the liquidity and market value of the remaining Shares held by the public. The purchase of Shares pursuant to the Offer can also be expected to reduce the number of holders of Shares. We cannot predict whether the reduction in the number of Shares that might otherwise trade publicly would have an adverse or beneficial effect on the market price or marketability of the Shares or whether it would cause future market prices to be greater or less than the Offer Price.

**Nasdaq Listing.** Depending upon the number of Shares purchased pursuant to the Offer, the Shares may no longer meet the requirements for continued listing on the Nasdaq. According to the published guidelines of The Nasdaq Stock Market, LLC, Nasdaq would consider disqualifying the Shares for listing on Nasdaq if, among other possible grounds, (i) the total number of holders of record and holders of beneficial interest, taken together, in the Shares falls below 400, (ii) the bid price for a Share over a 30 consecutive business day period is less than \$1.00, or (iii)(a) Akcea has stockholders' equity of less than \$10 million, the number of publicly held Shares falls below 750,000, the market value of publicly held Shares over a 30 consecutive business day period is less than \$5 million or there are fewer than two active and registered market makers in the Shares over a 10 consecutive business day period, (b) the number of publicly held Shares falls below 1,100,000, the market value of publicly held Shares over a 30 consecutive business day period is less than \$15 million, there are fewer than four active and registered market makers in the Shares over a 10 consecutive business day period, or the market value of Akcea's listed securities is less than \$50 million over a 10 consecutive business day period or (c) the number of publicly held shares falls below 1,100,000, the market value of publicly held Shares over a 30 consecutive business day period is less than \$15 million, there are fewer than four active and registered market makers in the Shares over a 10 consecutive business day period, or Akcea's total assets and total revenue is less than \$50 million each for the most recently completed fiscal year (or in two of the last three fiscal years). Shares held by officers or directors of Akcea, or by any beneficial owner of more than 10 percent of the Shares, will not be considered as being publicly held for this purpose. According to Akcea, there were, as of September 8, 2020, approximately 101,759,772 Shares issued and outstanding. If, as a result of the purchase of Shares pursuant to the Offer or otherwise, the Shares are delisted from Nasdaq, the market for Shares will be adversely affected.

If Nasdaq were to delist the Shares, it is possible that the Shares would continue to trade on other securities exchanges or in the over-the-counter market and that price or other quotations for the Shares would be reported by other sources. The extent of the public market for such Shares and the availability of such quotations would depend, however, upon such factors as the number of stockholders and the aggregate market value of such securities remaining at such time, the interest in maintaining a market in the Shares on the part of securities firms, the possible termination of registration under the Exchange Act as described below, and other factors. We cannot predict whether the reduction in the number of Shares that might otherwise trade publicly would have an adverse or beneficial effect on the market price for or marketability of the Shares or whether it would cause future market prices to be greater or less than the Offer Price.

Trading in the Shares will cease upon consummation of the Merger if trading has not ceased earlier as discussed above.

**Exchange Act Registration.** The Shares currently are registered under the Exchange Act. The purchase of the Shares pursuant to the Offer may result in the Shares becoming eligible for deregistration under the Exchange Act. Registration of the Shares may be terminated by Akcea upon application to the SEC if the outstanding Shares are not listed on a "national securities exchange" and if there are fewer than 300 holders of record of Shares.

We intend to seek to cause Akcea to apply for termination of registration of the Shares as soon as possible after consummation of the Offer if the requirements for termination of registration are met. Termination of registration of the Shares under the Exchange Act would reduce the information required to be furnished by

Akcea to its stockholders and to the SEC and would make certain provisions of the Exchange Act (such as the short-swing profit recovery provisions of Section 16(b), the requirement of furnishing a proxy statement or information statement in connection with stockholders' meetings or actions in lieu of a stockholders' meeting pursuant to Sections 14(a) and 14(c) under the Exchange Act and the related requirement of furnishing an annual report to stockholders) no longer applicable with respect to the Shares. In addition, if the Shares are no longer registered under the Exchange Act, the requirements of Rule 13e-3 under the Exchange Act with respect to "going private" transactions would no longer be applicable to Akcea. Furthermore, the ability of "affiliates" of Akcea and persons holding "restricted securities" of Akcea to dispose of such securities pursuant to Rule 144 under the Securities Act of 1933, as amended, may be impaired or eliminated. If registration of the Shares under the Exchange Act were terminated, the Shares would no longer be eligible for continued inclusion on the list of "margin securities" of the Board of Governors of the Federal Reserve System (the "Federal Reserve Board") or be eligible for stock exchange listing.

If registration of the Shares is not terminated prior to the Merger, then the registration of the Shares under the Exchange Act will be terminated following completion of the Merger.

**Margin Regulations.** The Shares are currently "margin securities" under the regulations of the Federal Reserve Board, which has the effect, among other things, of allowing brokers to extend credit using such Shares as collateral. Depending upon factors similar to those described above regarding listing and market quotations, following the Offer, the Shares may no longer constitute "margin securities" for the purposes of the margin regulations of the Federal Reserve Board, in which event the Shares would be ineligible as collateral for margin loans made by brokers.

#### **18. Certain Information Concerning Akcea.**

The following description of Akcea and its business was taken from the Akcea 10-K, and is qualified in its entirety by reference to such annual report.

Akcea is a commercial stage biopharmaceutical company developing and commercializing transformative medicines to treat patients with serious and rare diseases. Akcea's large and advancing pipeline of medicines in late-stage development and medicines on the market allow it to capitalize on its strengths in supporting patients, healthcare professionals and caregivers in treating rare and serious diseases. Akcea is highly focused on commercializing its approved therapies, TEGSEDI and WAYLIVRA. Akcea also has a robust portfolio of antisense medicines in development covering multiple targets and diseases that it has licensed from Parent. Akcea's strong relationship with Parent allows it to continue to expand its pipeline.

Akcea is a Delaware corporation incorporated in December 2014. Akcea's corporate headquarters are located at 22 Boston Wharf Road, 9th Floor, Boston, MA 02210. Akcea's telephone number at such corporate headquarters is (617) 207-0202.

**Historical Selected Financial Information.** The following tables sets forth summary historical consolidated financial data for Akcea as of and for each of the years ended December 31, 2018 and 2019 and as of and for each of the six months ended June 30, 2019 and 2020. The selected financial data and the per Share data set forth below are extracted from, and should be read in conjunction with, the consolidated financial statements and other financial information contained in the Akcea 10-Q and the Akcea 10-K. More comprehensive financial information is included in such reports (including management's discussion and analysis of financial condition and results of operation) and other documents filed by Akcea with the SEC, and the following summary is qualified in its entirety by reference to such reports and other documents and all of the financial information and notes contained therein. The financial statements included as Item 8 of the Akcea 10-K and Item 1 of Part I in the Akcea 10-Q are hereby incorporated by reference in this Offer to Purchase. The reports may be examined, and copies may be obtained from the SEC in the manner described under "Available Information" below. Historical results are not necessarily indicative of results to be expected in any future

period. Set forth below are Akcea’s selected consolidated financial data (in thousands, except share and per share amounts):

	Fiscal Year Ended December 31,		Six Months Ended June 30,	
	2019	2018	2020	2019
<b>CONSOLIDATED STATEMENT OF OPERATIONS DATA (1):</b>				
Product revenue	\$ 42,253	\$ 2,237	\$ 31,523	\$ 16,619
Licensing revenue	\$ 10,172	\$ 12,000	\$ —	\$ 6,036
Research and development and license revenue under collaborative agreements	\$ 436,118	\$ 50,630	\$ 6,928	\$ 167,784
Cost of sales—product	\$ (4,569)	\$ (1,820)	\$ (6,992)	\$ (2,405)
Cost of sales—intangible asset amortization	\$ (5,690)	\$ (2,713)	\$ (2,837)	\$ (2,822)
Cost of license	\$ (5,400)	\$ (7,200)	\$ —	\$ (3,000)
Research and development expenses	\$ (292,852)	\$ (130,340)	\$ (47,086)	\$ (119,890)
Selling, general and administrative	\$ (181,681)	\$ (153,610)	\$ (88,385)	\$ (95,342)
Net loss share from commercial activities under arrangement with Ionis Pharmaceuticals, Inc.	\$ 39,723	\$ —	\$ (10,499)	\$ (20,521)
Net income (loss)	\$ 40,772	\$ (225,821)	\$ (92,427)	\$ (10,136)
Net loss per share of preferred stock, basic and diluted	—	—	—	—
Weighted-average shares of preferred stock outstanding, basic and diluted	—	—	—	—
Net income (loss) per share of common stock owned by Ionis, basic	\$ 0.49	\$ (2.74)	\$ (0.91)	\$ (0.06)
Weighted-average shares of common stock outstanding owned by Ionis, basic	70,100	59,812	77,095	69,406
Net income (loss) per share of common stock owned by others, basic	\$ 0.29	\$ (2.87)	\$ (0.91)	\$ (0.26)
Weighted-average shares of common stock outstanding owned by others, basic	22,816	21,553	24,196	22,351
Net income (loss) per share of common stock owned by Ionis, diluted (2)	\$ 0.48	\$ (2.74)	\$ (0.91)	\$ (0.06)
Weighted-average shares of common stock outstanding owned by Ionis, diluted (2)	70,100	59,812	77,095	69,406
Net income (loss) per share of common stock owned by others, diluted (2)	\$ 0.29	\$ (2.87)	\$ (0.91)	\$ (0.26)
Weighted-average shares of common stock outstanding owned by others, diluted (2)	25,282	21,553	14,196	22,351

- (1) Akcea adopted Accounting Standards Codification (ASC) Topic 606, Revenue from Contracts with Customers in fiscal 2018 using the full retrospective method. As a result, all financial information beginning in fiscal 2017 was restated.
- (2) For the six months ended June 30, 2020, and June 30, 2019, Akcea incurred a net loss; therefore, Akcea did not include dilutive common equivalent shares in the computation of diluted net loss per share because the effect would have been anti-dilutive. Common stock from the following would have had an anti-dilutive effect on net loss per share:
  - Options to purchase common stock;
  - Unvested restricted stock units; and
  - Employee stock purchase plan.

	As of December 31,		As of June 30,	
	2019	2018	2020	2019
<b>CONSOLIDATED BALANCE SHEET</b>				
<b>Assets</b>				
Current assets:				
Cash and cash equivalents	\$ 306,866	\$ 86,454	\$ 135,744	\$ 150,234
Short-term investments	156,806	166,155	254,144	145,374
Accounts receivable	10,496	4,597	14,049	9,193
Receivable from Ionis Pharmaceuticals, Inc.	3,231	—	—	7,911
Inventories	8,817	85	13,756	8,286
Other current assets	10,689	9,944	10,480	6,713
Total current assets	496,905	267,235	428,173	327,711
Property, plant and equipment, net	5,261	5,696	5,895	5,443
Operating lease right-of-use assets	11,094	—	10,646	11,534
Intangible assets, net	83,051	88,914	80,127	86,006
Deposits and other assets	2,939	3,416	3,096	3,426
Total assets	\$ 599,250	\$ 365,261	\$ 527,937	\$ 434,120
<b>Liabilities and Stockholders' Equity</b>				
Current liabilities:				
Accounts payable	\$ 10,216	\$ 12,068	\$ 4,253	\$ 7,936
Payable to Ionis Pharmaceuticals, Inc.	—	18,901	5,320	—
Accrued compensation	12,793	8,583	8,313	7,521
Accrued liabilities	14,191	14,787	12,316	17,569
Deferred revenue	2,165	25,354	263	15,830
Other current liabilities	2,633	968	4,716	1,713
Total current liabilities	41,998	80,661	35,181	50,569
Long-term portion of lease liabilities	14,248	4,442	13,545	14,909
Other long-term liabilities	—	3,434	183	—
Total liabilities	56,246	88,537	48,909	65,478
Stockholders' equity:				
Common stock, \$0.001 par value; 125,000,000 shares authorized at June 30, 2020, June 30, 2019, December 31, 2019 and December 31, 2018; 101,509,223, 92,921,173, 100,993,173 and 89,345,978 shares issued and outstanding at June 30, 2020, June 30, 2019, December 31, 2019 and December 31, 2018, respectively.				
	101	89	102	93
Additional paid-in capital	1,024,168	799,001	1,051,142	900,837
Accumulated other comprehensive income	5	(324)	1,481	(110)
Accumulated deficit	(481,270)	(522,042)	(573,697)	(532,178)
Total stockholders' equity	543,004	276,724	479,028	368,642
Total liabilities and stockholders' equity	\$ 599,250	\$ 365,261	\$ 527,937	\$ 434,120

**Book Value Per Share.** Akcea's net book value per share as of June 30, 2020 was \$4.71 (calculated based on 101,598,619 Shares outstanding as of July 29, 2020).

**Certain Prospective Financial Information.** Neither Parent nor Akcea, as a matter of course, publicly discloses forecasts or projections as to future performance, earnings or other results due in part to the inherent unpredictability of the underlying assumptions, estimates and projections and the likelihood that the underlying assumptions, estimates and projections may not be realized.

The financial projections contained in this Offer to Purchase (the "Projections"), while presented with numerical specificity, necessarily were based on numerous variables and assumptions that are inherently



uncertain and many of which are beyond Parent's, Purchaser's and Akcea's control. Because the Projections cover multiple years, by its nature, this information becomes subject to greater uncertainty with each successive year. The assumptions upon which the Projections were based necessarily involve judgments with respect to, among other things, development timelines, likelihood of clinical success, product pricing, market uptake, reimbursement and potential competition, all of which are difficult or impossible to predict accurately and many of which are beyond Parent's, Purchaser's and Akcea's control. The Projections also reflect assumptions as to certain business decisions and transactions that are subject to change and may not occur, at all or on the terms assumed. Important factors that may affect actual results and result in the Projections not being achieved include, but are not limited to: (1) the availability and level of third-party reimbursement for Akcea's products and services; (2) market acceptance of such products and services; (3) the introduction of new Akcea products and services; (4) access to sufficient capital; (5) the impact of competition; (6) the effect of regulatory actions; (7) the effect of global economic conditions; (8) changes in applicable laws, rules and regulations; and (9) other risk factors described in Parent's and Akcea's Annual Reports on Form 10-K for the fiscal year ended December 31, 2019, and their subsequent respective Quarterly Reports on Form 10-Q and Current Reports on Form 8-K. In addition, the Projections may be affected by the ability of Parent, Purchaser or Akcea to achieve strategic goals, objectives and targets over the applicable period.

Accordingly, the Projections may not be realized, and actual results may vary materially from those contained in the Projections. The inclusion of the Projections in this Offer to Purchase should not be regarded as an indication that Parent or any of its affiliates (including Akcea), advisors or representatives considered or consider the Projections to be predictive of actual future events, and the Projections should not be relied upon as such. None of Parent or any of its affiliates (including Akcea), advisors, officers, directors or representatives can give any assurance that actual results will not differ materially from the Projections, and none of them undertakes any obligation to update or otherwise revise or reconcile the Projections to reflect circumstances existing after the dates on which the Projections were prepared or to reflect the occurrence of future events even in the event that any or all of the assumptions underlying the Projections are shown to be in error. Parent does not intend to make publicly available any update or other revision to the Projections, and the Projections have not been updated since the date of preparation to reflect subsequent developments or events that could impact Akcea or its future financial performance, and should not be treated as guidance with respect to projected results for any fiscal year or other period. None of Parent or any of its affiliates (including Akcea), advisors, officers, directors or representatives has made or makes any representation to any Parent or Akcea stockholder or other person regarding the ultimate performance of Akcea compared to the information contained in the Projections or that the Projections will be achieved or that any intervening event, development, change or result since the date of preparation of the Projections has not rendered the Projections unreliable or no longer current.

The Projections were developed under the assumption of Akcea's continued standalone operation and did not give effect to any changes or expenses as a result of the Transactions or reflect any effects of the Transactions or the effect of the failure of the Transactions to be consummated. The Projections were not prepared with a view toward public disclosure; and, accordingly, do not necessarily comply with published guidelines of the SEC, the guidelines established by the American Institute of Certified Public Accountants for preparation and presentation of financial forecasts, or GAAP. Certain of the Projections may be considered non-GAAP financial measures. Non-GAAP financial measures should not be considered in isolation from, or as a substitute for, financial information presented in compliance with GAAP, and non-GAAP financial measures as used by Parent or Akcea may not be comparable to similarly titled amounts used by other companies. Such non-GAAP financial measures should not be considered as an alternative to operating income or net income as measures of operating performance, or as an alternative to cash flows, as a measure of liquidity. Neither Parent's nor Akcea's independent registered public accounting firm, nor any other independent accountant, has audited, reviewed, compiled or performed any procedures with respect to the Projections or expressed any opinion or any other form of assurance related thereto.

The Projections are not intended to influence or induce any Akcea stockholder to tender Shares in the Offer. Instead, the Projections are included solely because the Projections were made available to Goldman Sachs and

Stifel, who, at the instruction of Parent, used such projections in connection with rendering their respective presentations to Parent's Finance Committee and Board of Directors and performing their related financial analyses, as described above in Section 10—"Materials Prepared by Parent's Financial Advisors."

In light of the foregoing factors and the uncertainties inherent in the financial projections included in this Offer to Purchase, stockholders are cautioned not to place undue, if any, reliance on the projected financial information included below.

As described in the Schedule 14D-9 under the heading "Certain Prospective Financial Information," in connection with Parent's regular long-term business planning process, Parent receives certain nonpublic financial, operating and other forward-looking information from Akcea in the ordinary course of business.

In advance of a meeting of the Akcea Board held on May 28, 2020, Akcea management presented certain financial projections for Akcea for the fiscal years 2020-2029 (the "May Projections"), which are summarized in the Schedule 14D-9 under the heading "Certain Prospective Financial Information." The May Projections were prepared at the request of the Akcea Board in order to inform its review of Akcea's strategic plans and anticipated financing needs. Consistent with past practice, Akcea's management developed the May Projections with the assistance of members of the Parent Board and management of Parent. The May Projections were provided to Parent in the ordinary course of business at or around the time of the May 28, 2020 meeting of the Akcea Board.

In connection with Parent's consideration of a potential acquisition of the Shares during July and August 2020, Parent used the May Projections to develop projections (with additional assumptions, adjustments and extrapolations by Parent) covering the period from the fiscal year ending December 31, 2020, through the fiscal year ending December 31, 2041, or the Projections. Parent provided the Projections to Goldman Sachs and Stifel for use in connection with rendering their respective presentations to Parent's Finance Committee and Board of Directors on August 7, 2020 and August 30, 2020 and performing their related financial analyses, as described more fully in Section 10—"Materials Prepared by Parent's Financial Advisors." The Projections were not made available to Akcea or its representatives.

The following table presents the Projections:

	Fiscal Years Ending December 31,																					
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
	Summary P&L (in millions)																					
<b>Total Revenue</b>	\$ 258.2	\$ 142.1	\$ 102.8	\$ 137.9	\$ 441.5	\$ 200.1	\$ 240.7	\$ 618.3	\$ 933.2	\$ 1,428.1	\$ 1,545.3	\$ 1,652.2	\$ 1,625.0	\$ 1,751.7	\$ 1,843.0	\$ 1,883.4	\$ 1,941.4	\$ 1,150.6	\$ 599.7	\$ 348.6	\$ 222.2	\$ 0.5
<b>% Growth</b>		(45.0%)	(27.6%)	34.1%	220.3%	(54.7%)	20.3%	156.9%	50.9%	53.0%	8.2%	6.9%	(1.6%)	7.8%	5.2%	2.2%	3.1%	(40.7%)	(47.9%)	(41.9%)	(36.3%)	(99.8%)
<b>Cost of Goods</b>																						
<b>Sold</b>	\$ 6.9	\$ 8.9	\$ 9.4	\$ 6.5	\$ 5.1	\$ 4.4	\$ 10.7	\$ 23.3	\$ 45.0	\$ 65.2	\$ 72.5	\$ 77.4	\$ 82.7	\$ 88.2	\$ 94.1	\$ 96.8	\$ 101.7	\$ 50.7	\$ 15.2	\$ 1.5	\$ —	\$ —
<b>Gross Profit</b>	\$ 251.3	\$ 133.2	\$ 93.4	\$ 131.4	\$ 436.5	\$ 195.6	\$ 230.0	\$ 595.0	\$ 888.1	\$ 1,362.9	\$ 1,472.8	\$ 1,574.7	\$ 1,542.3	\$ 1,663.5	\$ 1,748.9	\$ 1,786.6	\$ 1,839.6	\$ 1,099.9	\$ 584.5	\$ 347.1	\$ 222.2	\$ 0.5
<b>% of Revenue</b>	97.3%	93.8%	90.9%	95.3%	98.9%	97.8%	95.6%	96.2%	95.2%	95.4%	95.3%	93.3%	94.9%	95.0%	94.9%	94.8%	95.6%	97.5%	99.6%	100.0%	100.0%	100.0%
<b>Commercial Medical Affairs and Development</b>	\$ 150.2	\$ 155.4	\$ 162.1	\$ 137.6	\$ 79.5	\$ 36.3	\$ 21.2	\$ 12.6	\$ 11.1	\$ 11.0	\$ 10.9	\$ 10.9	\$ 10.9	\$ 10.9	\$ 10.9	\$ 9.5	\$ 8.9	\$ 8.7	\$ 8.7	\$ 2.2	\$ —	\$ —
<b>General &amp; Administrative</b>	\$ 26.4	\$ 28.8	\$ 29.5	\$ 30.3	\$ 31.1	\$ 32.0	\$ 32.9	\$ 33.8	\$ 34.8	\$ 35.8	\$ 30.9	\$ 33.0	\$ 32.5	\$ 35.0	\$ 36.9	\$ 37.7	\$ 38.8	\$ 23.0	\$ 12.0	\$ 7.0	\$ 4.4	\$ 0.0
<b>Stock-Based Compensation</b>	\$ 41.5	\$ 41.3	\$ 42.0	\$ 36.4	\$ 30.5	\$ 23.9	\$ 22.5	\$ 21.6	\$ 22.5	\$ 24.8	\$ 26.2	\$ 28.0	\$ 29.5	\$ 31.5	\$ 33.5	\$ 34.6	\$ 36.3	\$ 18.7	\$ 6.4	\$ 1.5	\$ 0.7	\$ 0.0
<b>Total Operating Expenses</b>	\$ 318.1	\$ 316.3	\$ 321.6	\$ 279.4	\$ 233.9	\$ 183.2	\$ 172.6	\$ 165.3	\$ 172.4	\$ 190.2	\$ 201.2	\$ 214.9	\$ 226.2	\$ 241.8	\$ 257.2	\$ 265.4	\$ 278.5	\$ 143.0	\$ 48.8	\$ 11.5	\$ 5.1	\$ 0.0
<b>% of Revenue</b>	123.2%	222.6%	312.9%	202.7%	53.0%	91.6%	71.7%	26.7%	18.3%	13.3%	13.0%	13.0%	13.9%	13.8%	14.0%	14.1%	14.3%	12.4%	8.1%	3.3%	2.3%	2.3%
<b>Operating Income</b>	(\$ 66.7)	(\$ 183.1)	(\$ 228.2)	(\$ 148.0)	\$ 202.6	\$ 12.4	\$ 57.4	\$ 429.8	\$ 715.8	\$ 1,172.7	\$ 1,271.6	\$ 1,359.8	\$ 1,316.1	\$ 1,421.8	\$ 1,491.8	\$ 1,521.3	\$ 1,561.1	\$ 956.9	\$ 535.8	\$ 335.6	\$ 217.1	\$ 0.5
<b>% of Revenue</b>	(25.8%)	(128.9%)	(222.0%)	(107.4%)	45.9%	6.2%	23.8%	69.5%	76.2%	82.1%	82.3%	82.3%	81.0%	81.2%	80.9%	80.8%	80.4%	83.2%	89.3%	96.3%	97.2%	97.2%
<b>Intercompany</b>	\$ 12.5	(\$ 45.1)	(\$ 39.4)	\$ 20.3	\$ 142.3	\$ 53.8	\$ 63.2	\$ 311.4	\$ 520.9	\$ 723.3	\$ 664.4	\$ 710.5	\$ 689.1	\$ 901.9	\$ 781.1	\$ 796.8	\$ 818.1	\$ 499.3	\$ 277.1	\$ 172.0	\$ 111.1	\$ 0.2
<b>Operating Income to Avalanche</b>	(\$ 79.2)	(\$ 138.0)	(\$ 188.9)	(\$ 168.3)	\$ 60.2	(\$ 41.4)	(\$ 5.7)	\$ 118.4	\$ 194.9	\$ 449.4	\$ 607.2	\$ 649.4	\$ 627.1	\$ 519.8	\$ 710.7	\$ 724.5	\$ 743.0	\$ 457.6	\$ 258.7	\$ 163.6	\$ 106.0	\$ 0.2
<b>% of Revenue</b>	(30.7%)	(97.1%)	(183.7%)	(122.1%)	13.6%	(20.7%)	(2.4%)	19.1%	20.9%	31.5%	39.3%	39.3%	38.6%	29.7%	38.6%	38.5%	38.3%	39.8%	43.1%	46.9%	47.7%	47.7%
<b>EBITDA</b>	(\$ 79.2)	(\$ 138.0)	(\$ 188.9)	(\$ 168.3)	\$ 60.2	(\$ 41.4)	(\$ 5.7)	\$ 118.4	\$ 194.9	\$ 449.4	\$ 607.2	\$ 649.4	\$ 627.1	\$ 519.8	\$ 710.7	\$ 724.5	\$ 743.0	\$ 457.6	\$ 258.7	\$ 163.6	\$ 106.0	\$ 0.2
<b>Depreciation &amp; Amortization</b>	\$ 6.6	\$ 6.8	\$ 6.7	\$ 6.5	\$ 6.5	\$ 6.4	\$ 6.3	\$ 6.3	\$ 6.2	\$ 6.2	\$ 6.2	\$ 6.1	\$ 6.1	\$ 2.8	\$ 0.5	\$ 0.5	\$ 0.5	\$ 0.5	\$ 0.5	\$ 0.6	\$ 0.6	\$ 0.6
<b>Pre-Tax Income (EBIT)</b>	(\$ 85.8)	(\$ 144.8)	(\$ 195.5)	(\$ 174.9)	\$ 53.8	(\$ 47.7)	(\$ 12.1)	\$ 112.1	\$ 188.6	\$ 443.2	\$ 601.0	\$ 643.2	\$ 620.9	\$ 513.7	\$ 707.9	\$ 724.0	\$ 742.4	\$ 457.1	\$ 258.2	\$ 163.0	\$ 105.4	(\$ 0.4)
<b>% of Revenue</b>	(33.2%)	(101.9%)	(190.2%)	(126.8%)	12.2%	(23.8%)	(5.0%)	18.1%	20.3%	31.0%	38.9%	38.9%	38.2%	29.3%	38.4%	38.4%	38.2%	39.7%	43.0%	46.7%	47.4%	(83.5%)
<b>Cash Taxes</b>	—	—	—	—	2.8	—	—	5.8	9.8	23.0	115.8	167.2	161.4	133.6	184.1	188.2	193.0	118.8	67.1	42.4	27.4	—
<b>Net Income</b>	(\$ 85.8)	(\$ 144.8)	(\$ 195.5)	(\$ 174.9)	\$ 51.0	(\$ 47.7)	(\$ 12.1)	\$ 106.3	\$ 178.8	\$ 420.1	\$ 485.3	\$ 476.0	\$ 459.5	\$ 380.1	\$ 523.8	\$ 535.7	\$ 549.4	\$ 338.3	\$ 191.0	\$ 120.6	\$ 78.0	(\$ 0.4)
<b>% of Revenue</b>	(33.2%)	(101.9%)	(190.2%)	(126.8%)	11.3%	(23.8%)	(5.0%)	17.2%	19.2%	29.4%	31.4%	28.8%	28.3%	21.7%	28.4%	28.4%	28.3%	29.4%	31.9%	34.6%	35.1%	(83.5%)
<b>EBIT</b>	(\$ 85.8)	(\$ 144.8)	(\$ 195.5)	(\$ 174.9)	\$ 53.8	(\$ 47.7)	(\$ 12.1)	\$ 112.1	\$ 188.6	\$ 443.2	\$ 601.0	\$ 643.2	\$ 620.9	\$ 513.7	\$ 707.9	\$ 724.0	\$ 742.4	\$ 457.1	\$ 258.2	\$ 163.0	\$ 105.4	(\$ 0.4)
<b>Less: Cash Taxes</b>	—	—	—	—	(2.8)	—	—	(5.8)	(9.8)	(23.0)	(115.8)	(167.2)	(161.4)	(133.6)	(184.1)	(188.2)	(193.0)	(118.8)	(67.1)	(42.4)	(27.4)	—
<b>Plus:</b>																						
<b>Depreciation &amp; Amortization</b>	6.6	6.8	6.7	6.5	6.5	6.4	6.3	6.3	6.2	6.2	6.2	6.1	6.1	2.8	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6
<b>Plus: Stock Compensation Expense</b>	41.5	41.3	42.0	36.4	30.5	23.9	22.5	21.6	22.5	24.8	26.2	28.0	29.5	31.5	33.5	34.6	36.3	18.7	6.4	1.5	0.7	0.0
<b>Less: Capital Expenditures</b>	(0.8)	(1.0)	(0.8)	(0.7)	(0.7)	(0.6)	(0.5)	(0.5)	(0.5)	(0.5)	(0.5)	(0.5)	(0.5)	(0.5)	(0.5)	(0.5)	(0.5)	(0.5)	(0.6)	(0.6)	(0.7)	(0.3)
<b>Less: Change in Working Capital</b>	(6.0)	(3.2)	(1.1)	3.0	(32.5)	34.3	(6.0)	(11.9)	(21.6)	(20.2)	(7.3)	(4.9)	(5.2)	(5.5)	(5.8)	(2.7)	(5.0)	51.1	35.5	13.7	1.5	—
<b>Free Cash Flow</b>	(\$ 44.5)	(\$ 100.9)	(\$ 148.8)	(\$ 129.6)	\$ 54.8	\$ 16.2	\$ 10.3	\$ 121.7	\$ 185.4	\$ 430.4	\$ 509.9	\$ 504.8	\$ 489.4	\$ 411.8	\$ 553.8	\$ 567.6	\$ 580.8	\$ 408.0	\$ 232.9	\$ 135.8	\$ 80.1	(\$ 0.0)
<b>Beginning Period Cash Balance +/- Free Cash Flow</b>	\$ 463.7	\$ 419.2	\$ 318.3	\$ 169.5	\$ 39.9	\$ 94.7	\$ 110.9	\$ 121.2	\$ 242.9	\$ 428.3	\$ 858.7	\$ 1,368.6	\$ 1,873.4	\$ 2,362.8	\$ 2,774.6	\$ 3,328.4	\$ 3,896.0	\$ 4,476.8	\$ 4,884.8	\$ 5,117.6	\$ 5,253.4	\$ 5,333.6
<b>Ending Cash Balance</b>	(\$ 44.5)	(\$ 100.9)	(\$ 148.8)	(\$ 129.6)	\$ 54.8	\$ 16.2	\$ 10.3	\$ 121.7	\$ 185.4	\$ 430.4	\$ 509.9	\$ 504.8	\$ 489.4	\$ 411.8	\$ 553.8	\$ 567.6	\$ 580.8	\$ 408.0	\$ 232.9	\$ 135.8	\$ 80.1	(\$ 0.0)
<b>Ending Cash Balance</b>	\$ 419.2	\$ 318.3	\$ 169.5	\$ 39.9	\$ 94.7	\$ 110.9	\$ 121.2	\$ 242.9	\$ 428.3	\$ 858.7	\$ 1,368.6	\$ 1,873.4	\$ 2,362.8	\$ 2,774.6	\$ 3,328.4	\$ 3,896.0	\$ 4,476.8	\$ 4,884.8	\$ 5,117.6	\$ 5,253.4	\$ 5,333.6	\$ 5,333.5

**Available Information.** Akcea is subject to the information and reporting requirements of the Exchange Act and in accordance therewith is obligated to file reports and other information with the SEC relating to its business, financial condition and other matters. Certain information, as of particular dates, concerning Akcea's business, principal physical properties, capital structure, material pending litigation, operating results, financial condition, directors and officers (including their remuneration and stock options granted to them), the principal holders of Akcea's securities, any material interests of such persons in transactions with Akcea, and other matters is required to be disclosed in proxy statements and periodic reports distributed to Akcea's stockholders and filed with the SEC. Copies may be obtained by mail, upon payment of the SEC's customary charges, by writing to its principal office at 100 F Street, NE, Washington, DC 20549. The SEC also maintains an Internet website that contains reports, proxy statements and other information about issuers, such as Akcea, who file electronically with the SEC. The address of that site is <https://www.sec.gov>. Akcea also maintains an Internet website at <https://akceatx.com>. The information contained in, accessible from or connected to Akcea's website is not incorporated into, or otherwise a part of, this Offer to Purchase or any of Akcea's filings with the SEC. The website addresses referred to in this paragraph are inactive text references and are not intended to be actual links to the websites.

**Sources of Information.** Except as otherwise set forth herein, the information concerning Akcea contained in this Offer to Purchase has been based upon publicly available documents and records on file with the SEC, other public sources and information provided by Akcea. Although we have no knowledge that any such information contains any misstatements or omissions, none of Parent, Purchaser or any of their respective affiliates or assigns, the Information Agent or the Depository assumes responsibility for the accuracy or completeness of the information concerning Akcea contained in such documents and records or for any failure by Akcea to disclose events which may have occurred or may affect the significance or accuracy of any such information.

#### 19. Certain Information Concerning Parent and Purchaser.

**General.** Purchaser is a Delaware corporation with its principal executive offices located at c/o Ionis Pharmaceuticals, Inc., 2855 Gazelle Court, Carlsbad, California 92010. The telephone number of Purchaser is (760) 931-9200. Purchaser is a wholly owned subsidiary of Parent. Purchaser was formed for the purpose of making a tender offer for all of the Shares of Akcea and has not engaged, and does not expect to engage, in any business other than in connection with the Offer and the Merger.

Parent is a Delaware corporation with its principal offices located at 2855 Gazelle Court, Carlsbad, California 92010. The telephone number of Parent is (760) 931-9200. Parent is a leader in RNA-targeted drug discovery and development and has created an efficient, broadly applicable, drug discovery platform called antisense technology that can treat diseases where no other therapeutic approaches have proven effective. Parent has set its sights on all the patients it has yet to reach with a pipeline of more than 40 novel medicines designed to potentially treat a broad range of diseases, including neurological, cardio-renal, metabolic, infectious, and pulmonary diseases.

The name, citizenship, business address, business phone number, present principal occupation or employment and past material occupation, positions, offices or employment for at least the last five years for each director and each of the executive officers of Parent and Purchaser and certain other information are set forth in Schedule A hereto. For additional information, see Section 5—"Transactions and Arrangements Concerning the Shares."

**Available Information.** Pursuant to Rule 14d-3 under the Exchange Act, Parent and Purchaser filed with the SEC a Tender Offer Statement on Schedule TO (the "Schedule TO"), of which this Offer to Purchase forms a part, and exhibits to the Schedule TO. Copies of the Schedule TO and the exhibits thereto, and reports, proxy statements and other information may be obtained by mail, upon payment of the SEC's customary charges, by writing to its principal office at 100 F Street, NE, Washington, DC 20549. Parent filings are also available to the public on the SEC's website (<https://www.sec.gov>).

The Purchaser and Parent have made no arrangements in connection with the Offer to provide holders of Shares access to our corporate files or to obtain counsel or appraisal services at our expense. For a discussion of appraisal rights, see “Summary Term Sheet” and Section 24—“Certain Legal Matters; Regulatory Approvals—Appraisal Rights.”

## **20. Summary of the Merger Agreement.**

*Merger Agreement.* The following summary of certain provisions of the Merger Agreement and all other provisions of the Merger Agreement discussed herein are qualified by reference to the Merger Agreement itself, which is incorporated herein by reference. We have filed a copy of the Merger Agreement as Exhibit (d)(1) to the Schedule TO. The Merger Agreement may be examined and copies may be obtained at the places and in the manner set forth in Section 19—“Certain Information Concerning Parent and Purchaser.” Stockholders and other interested parties should read the Merger Agreement for a more complete description of the provisions summarized below. Capitalized terms used herein and not otherwise defined have the respective meanings set forth in the Merger Agreement.

The Merger Agreement has been filed with the SEC and incorporated by reference herein to provide investors and stockholders with information regarding the terms of the Offer and the Merger. It is not intended to provide any other factual information about Parent, Purchaser or Akcea. The representations, warranties and covenants contained in the Merger Agreement were made only as of specified dates for the purposes of such agreement, were (except as expressly set forth therein) solely for the benefit of the parties to such agreement and may be subject to qualifications and limitations agreed upon by such parties. In particular, in reviewing the representations, warranties and covenants contained in the Merger Agreement and any description thereof contained or incorporated by reference herein, it is important to bear in mind that such representations, warranties and covenants were negotiated with the principal purpose of allocating risk among the parties, rather than establishing matters as facts. Such representations, warranties and covenants may also be subject to a contractual standard of materiality different from those generally applicable to stockholders and reports and documents filed with the SEC, and in some cases were qualified by disclosures set forth in confidential disclosure schedules that were provided by Akcea to Parent and Purchaser but not filed with the SEC as part of the Merger Agreement. Investors and stockholders are not third-party beneficiaries under the Merger Agreement, except with respect to their right to receive the Offer Price following the Offer Acceptance Time or to receive the Merger Consideration (as defined below). Accordingly, investors and stockholders should not rely on such representations, warranties and covenants as characterizations of the actual state of facts or circumstances described therein. Information concerning the subject matter of such representations, warranties and covenants, which do not purport to be accurate as of the date of this Offer to Purchase, may have changed since the date of the Merger Agreement, which subsequent information may or may not be fully reflected in the parties’ public disclosures.

*The Offer.* The Merger Agreement provides that Purchaser will commence the Offer on the 10th business day after the date of the Merger Agreement. Purchaser’s obligation to accept for payment and pay for Shares validly tendered in the Offer is subject to the satisfaction of the Minimum Condition and the other conditions of the Offer that are described in Section 22—“Conditions of the Offer” (the “Offer Conditions”). Subject to the satisfaction of the Minimum Condition and the other Offer Conditions that are described in Section 22—“Conditions of the Offer,” the Merger Agreement provides that Purchaser will, and Parent will cause Purchaser to, immediately after the applicable Expiration Date, as it may be extended pursuant to the terms of the Merger Agreement, irrevocably accept for payment all Shares tendered and not validly withdrawn pursuant to the Offer and, as promptly as practicable after the Offer Acceptance Time, pay for such Shares. The Offer will expire at one minute after 11:59 p.m., Eastern Time on October 9, 2020, unless we extend the Offer pursuant to the terms of the Merger Agreement.

Purchaser expressly reserves the right to (i) increase the Offer Price, (ii) waive any Offer Condition (to the extent permitted by the Merger Agreement) and (iii) make any other changes in the terms and conditions of the

Offer that are consistent with the terms of the Merger Agreement, except that Akcea's prior written approval is required for Parent or Purchaser to:

- decrease the Offer Price;
- change the form of consideration payable in the Offer;
- decrease the maximum number of Shares sought to be purchased in the Offer;
- impose conditions or requirements on the Offer in addition to the Offer Conditions;
- amend, modify or waive the Termination Condition or the Governmental Impediment Condition;
- otherwise amend or modify any of the other terms of the Offer in a manner that adversely affects, or would reasonably be expected to adversely affect, any holder of Shares (other than Parent and its affiliates) in its capacity as such;
- terminate the Offer or accelerate, extend or otherwise change the Expiration Date except as required or provided by the terms of the Merger Agreement; or
- provide any "subsequent offering period" (or any extension thereof) within the meaning of Rule 14d-11 promulgated under the Exchange Act.

None of Parent, Purchaser and Akcea may amend, modify or waive the Minimum Condition.

The Merger Agreement contains provisions to govern the circumstances under which Purchaser is required to, and Parent is required to cause Purchaser to, extend the Offer. Specifically, the Merger Agreement provides that:

- if, as of the then-scheduled Expiration Date, any Offer Condition is not satisfied and has not been waived by Purchaser or Parent, to the extent waivable by Purchaser or Parent, Parent and Purchaser may, in their sole discretion (and without the consent of Akcea or any other person), extend the Offer on one or more occasions, for an additional period of up to 10 business days per extension, to permit such Offer Condition to be satisfied; and
- Purchaser has agreed to (and Parent has agreed to cause Purchaser to) extend the Offer from time to time for any period required by any applicable legal requirement, any interpretation or position of the SEC, the staff thereof or Nasdaq applicable to the Offer.

However, Purchaser is not required to extend the Offer beyond the earlier to occur of the valid termination of the Merger Agreement in accordance with its terms and December 30, 2020 (such earlier occurrence, the "Extension Deadline"), and may not extend the Offer beyond the Extension Deadline without Akcea's prior written consent. In addition, Purchaser is not required to extend the Offer on more than 2 occasions in consecutive periods of 10 business days each if, as of the applicable Expiration Date, none of the tender offer documents is still being reviewed or commented on by the SEC and all of the Offer Conditions are satisfied or have been waived other than the Minimum Condition.

Upon any valid termination of the Merger Agreement, Purchaser has agreed that it will (and Parent will cause Purchaser to) immediately, irrevocably and unconditionally terminate the Offer and Purchaser will not acquire any Shares pursuant to the Offer.

*The Merger.* The Merger Agreement provides that, following completion of the Offer and subject to the terms and conditions of the Merger Agreement, and in accordance with the DGCL, at the Effective Time, Purchaser will be merged with and into Akcea, the separate existence of Purchaser will cease, and Akcea will continue as the Surviving Corporation in the Merger. The Merger will be effected under Section 251(h) of the DGCL. Accordingly, Parent, Purchaser and Akcea have agreed to take all necessary action to cause the Merger to become effective as soon as practicable following the Offer Acceptance Time without a vote of Akcea's stockholders in accordance with Section 251(h) of the DGCL, upon the terms and subject to the satisfaction or waiver of the conditions to the Merger.

As of the Effective Time, the certificate of incorporation of Akcea will, by virtue of the Merger and without any further action, be amended and restated in its entirety as set forth on Annex II to the Merger Agreement and, as so amended and restated, will be the certificate of incorporation of the Surviving Corporation.

As of the Effective Time, the bylaws of the Surviving Corporation will be amended and restated to conform to the bylaws of Purchaser as in effect immediately prior to the Effective Time, except that references to the name of Purchaser will be replaced by references to the name of the Surviving Corporation.

The obligations of Akcea, Parent and Purchaser to complete the Merger are subject to the satisfaction or, to the extent permitted by applicable legal requirements, waiver as of the Closing by each of the parties of the following conditions:

- there has not been issued by any governmental body of competent jurisdiction and remain any temporary restraining order, preliminary or permanent injunction or other order preventing the consummation of the Merger, and no legal requirement has been promulgated, enacted, issued or deemed applicable to the Merger by any governmental body which prohibits or makes illegal the consummation of the Merger; and
- Purchaser (or Parent on Purchaser's behalf) must have accepted for payment all Shares validly tendered pursuant to the Offer and not validly withdrawn.

*Board of Directors and Officers.* As of the Effective Time, the board of directors and officers of the Surviving Corporation will be the respective individuals who served as the directors and officers of Purchaser as of immediately prior to the Effective Time, until their respective successors have been duly elected and qualified, or until their earlier death, resignation or removal.

*Conversion of Capital Stock at the Effective Time.* Shares outstanding immediately prior to the Effective Time (other than Shares held by Akcea, Ionis, Purchaser, any wholly owned subsidiary of Parent or Purchaser, or by stockholders of Akcea who have perfected their statutory rights of appraisal under the DGCL) will be converted at the Effective Time into the right to receive \$18.15 per Share, net to the seller in cash, without any interest thereon (such amount, the "Merger Consideration"), and subject to any withholding of taxes.

Each share of Purchaser's common stock outstanding immediately prior to the Effective Time will be converted into one share of common stock of the Surviving Corporation.

Prior to the Offer Acceptance Time, Parent will deposit, or will cause to be deposited, with the Depository cash sufficient to make the payment of the aggregate Offer Price. On or prior to the Closing, Parent will deposit, or will cause to be deposited, with American Stock Transfer & Trust Company, LLC as the Paying Agent, cash sufficient to pay the aggregate Merger Consideration in the Merger.

*Treatment of Equity Awards.* At the effective time of the Merger, each option to purchase the Shares (the "Company Option") with an exercise price lower than the Offer Price and each Akcea restricted stock unit (the "Company RSU"), in each case whether or not vested, will be cancelled, and the holder thereof will be entitled to receive the Offer Price (less any applicable exercise price in the case of options) for each share subject to such award, pursuant to the terms set forth in the Merger Agreement. Each Company Option with an exercise price greater than or equal to the Offer Price will be cancelled with no consideration payable.

*Representations and Warranties.* This summary of the Merger Agreement has been included to provide investors with information regarding its terms. It is not intended to provide any other factual information about Parent, Purchaser or Akcea, their respective businesses, or the actual conduct of their respective businesses during the period prior to the consummation of the Offer or the Merger. The Merger Agreement contains representations and warranties that are the product of negotiations among the parties thereto and made to, and solely for the benefit of, each other as of specified dates. The assertions embodied in those representations and

warranties are subject to qualifications and limitations agreed to by the respective parties and are also qualified in important part by confidential disclosure schedules delivered by Akcea to Parent in connection with the Merger Agreement. The representations and warranties were negotiated with the principal purpose of allocating risk among the parties to the agreements instead of establishing these matters as facts, and may be subject to standards of materiality applicable to the contracting parties that differ from those applicable to investors.

In the Merger Agreement, Akcea has made representations and warranties to Parent and Purchaser with respect to, among other things: corporate matters, such as due organization, organizational documents, good standing, qualification, power and authority; capitalization; authority relative to the Merger Agreement; SEC filings and financial statements; disclosure controls and internal controls over financial reporting; absence of certain changes since Akcea's financial statements for the period ending December 31, 2019; absence of a Material Adverse Effect (as defined below) from June 30, 2020 through the Date of the Merger Agreement; title to assets; real property; intellectual property and data privacy; material contracts; absence of undisclosed liabilities; compliance with legal requirements; regulatory matters; compliance with anti-corruption and anti-bribery laws; governmental permits and licenses; tax matters; employees and employee benefit plans, including ERISA and certain related matters; environmental matters; insurance; absence of litigation; state takeover statutes; required consents and approvals, and no violations of organizational documents, contracts or applicable law as a result of the Offer or Merger; opinion of its financial advisor; and brokers' fees and expenses.

Some of the representations and warranties in the Merger Agreement made by Akcea are qualified as to "materiality" or "Material Adverse Effect." For purposes of the Merger Agreement, a "Material Adverse Effect" means any event, occurrence, circumstance, change or effect which, individually or in the aggregate, has had or would reasonably be expected to have a material adverse effect on (i) the ability of Akcea to consummate the Transactions on or before December 30, 2020 or (ii) the business, assets, financial condition or results of operations of Akcea and its subsidiaries, taken as a whole.

The definition of "Material Adverse Effect" excludes the following being deemed or constituting or being taken into account in determining whether there is, or would reasonably be expected to be, a Material Adverse Effect for purposes of (ii) above:

- any change in the market price or trading volume of Akcea's stock or change in Akcea's credit ratings (except that the underlying causes of any such change may be considered in determining whether a Material Adverse Effect has occurred to the extent not otherwise excluded by another exception);
- any event, occurrence, circumstance, change or effect resulting from the announcement, pendency or performance of the Transactions (subject to certain exceptions);
- any event, occurrence, circumstance, change or effect generally affecting the industries in which Akcea operates or in the economy generally or other general business, financial or market conditions;
- any event, occurrence, circumstance, change or effect arising directly or indirectly from or otherwise relating to fluctuations in the value of any currency or interest rates;
- any event, occurrence, circumstance, change or effect arising directly or indirectly from or otherwise relating to any act of terrorism (including cyber attacks and computer hacking), war, national or international calamity, natural disaster, epidemic, pandemic, political unrest or any other similar event (or the worsening thereof);
- the failure of Akcea to meet internal or analysts' expectations or projections (except that the underlying causes of such failure may be considered in determining whether a Material Adverse Effect has occurred to the extent not otherwise excluded by another exception);
- any adverse effect arising directly from or otherwise directly relating to any action taken by Parent, or by Akcea at the written direction of Parent, with the prior written consent of Parent or any action specifically required or permitted to be taken by Akcea by the terms of the Merger Agreement;



- any event, occurrence, circumstance, change or effect arising directly or indirectly from or otherwise relating to any change in, or any compliance with or action taken for the purpose of complying with any change in, any legal requirement or GAAP;
- any litigation against Akcea and/or its directors or officers relating to the transactions contemplated by the Merger Agreement or any legal proceedings relating to Akcea stockholders' exercise of appraisal rights under the DGCL; and
- any matter disclosed in Akcea's confidential disclosure schedules.

In the Merger Agreement, Parent and Purchaser have made representations and warranties to Akcea with respect to: corporate matters, such as due organization, good standing, power and authority; the formation and activities of Purchaser; authority relative to the Merger Agreement; required consents and approvals, and no violations of laws, governance documents or agreements; accuracy of information supplied for purposes of the Offer documents and the Schedule 14D-9; absence of litigation; sufficiency of funds to consummate the Offer and the Merger; independent investigation regarding Akcea; broker's fees and expenses; and ownership of Shares.

Some of the representations and warranties in the Merger Agreement made by Parent and Purchaser are qualified as to "materiality" or the ability to consummate the transactions contemplated by the Merger Agreement.

None of the representations and warranties of the parties to the Merger Agreement contained in the Merger Agreement or in any schedule, instrument or other document delivered pursuant to the Merger Agreement will survive the Effective Time.

*Conduct of Business Pending the Merger.* Akcea has agreed that, from the date of the Merger Agreement until the earlier of the Effective Time and the termination of the Merger Agreement pursuant to its terms, except (i) as required or permitted under the Merger Agreement or as required by applicable legal requirements, (ii) with the written consent of Parent (such consent not to be unreasonably withheld, delayed or conditioned) or as caused by Parent or its affiliates, or (iii) as set forth in Akcea's confidential disclosure schedules, Akcea will use reasonable best efforts to conduct its business in the ordinary course consistent in all material respects with past practice (other than in connection with the Merger Agreement), and use its reasonable best efforts to preserve intact its business and material relationships with third parties.

In addition, Akcea will not, among other things and subject to specified exceptions (including specified ordinary course exceptions):

- establish a record date for, declare, set aside, pay any dividend or make any other distribution in respect of any shares of its capital stock (including the Shares);
- repurchase, redeem or otherwise reacquire any of the Shares, or any rights, warrants or options to acquire any of the Shares;
- split, combine, subdivide or reclassify any Shares or other equity interests;
- sell, issue, grant, deliver, pledge, transfer, encumber or authorize the sale, issuance, grant, delivery, pledge, transfer or encumbrance of (i) any capital stock, equity interest or other security, (ii) any option, call, warrant, restricted securities or right to acquire any capital stock, equity interest or other security or (iii) any instrument convertible into or exchangeable for any capital stock, equity interest or other security (except that Akcea may issue Shares as required to be issued upon the exercise of Company Options and vesting of Company RSUs outstanding as of the date of the Merger Agreement, pursuant to their present terms, or issuable to participants in Akcea's employee stock purchase plan in accordance with its terms);

- establish, adopt, terminate or materially amend any employee plan (or any plan, program, arrangement or agreement that would be an employee plan if it were in existence as of the date of the Merger Agreement) or any collective bargaining agreement or other labor agreement;
- accelerate the payment or vesting of compensation or benefits under any employee plan;
- grant or agree to grant any current or former employee, director or other service provider any increase in severance, compensation, bonuses or other benefits;
- grant or pay any bonuses or other awards or accelerate the payment, vesting of or lapse of restrictions with respect to any incentive compensation;
- hire or promote any person (other than any hiring or promotion that (i) is consistent with the Akcea past practice and is contemplated in Akcea's hiring budget and (ii) is not for an executive officer position) or terminate, other than for cause, the employment of any person;
- Amend its certificate of incorporation and other organizational documents;
- form any subsidiary, acquire any equity interest in any other entity or enter into any material joint venture, partnership or similar arrangement;
- make or authorize any capital expenditures, other than capital expenditures (i) that do not exceed \$100,000 individually or in the aggregate or (ii) in accordance with Akcea's operating budget;
- acquire, lease, in-license, out-license, sublicense, pledge, sell or otherwise dispose of, divest or spin-off, abandon, waive, covenant not to assert, relinquish or permit to lapse, transfer or assign any material right or other material asset or property (including any intellectual property rights);
- lend money or make capital contributions or advances to or make investments in, any person, or incur or guarantee any indebtedness;
- amend, modify or waive any rights under, exercise any option to renew or extend the term of, or voluntarily terminate any real property lease;
- amend, modify or waive any rights under, in any material respect, or voluntarily terminate, any material contract;
- enter into any lease for real property or material contract;
- effect certain changes relating to tax and tax reporting;
- settle, release, waive or compromise any legal proceeding or other claim, other than any settlement, release, waiver or compromise that (i) results solely in monetary obligations involving only the payment of monies by Akcea of not more than \$5,000,000 in the aggregate or (ii) results in no monetary or other material non-monetary obligation of Akcea;
- enter into any collective bargaining agreement or other agreement with any labor organization;
- adopt or implement any stockholder rights plan or similar arrangement;
- adopt a plan or agreement of complete or partial liquidation or dissolution, merger, consolidation, restructuring, recapitalization or other reorganization of Akcea or its subsidiaries;
- relinquish, abandon or permit to lapse, or fail to take any action necessary to maintain, enforce and protect, any of its material intellectual property rights;
- fail to maintain in full force and effect material insurance policies covering Akcea and its subsidiaries and their material properties, business, assets and operations in a form and amount consistent with past practice in all material respects;
- enter into any new agreement in respect of an investigator-sponsored study, or, in any material respect, amend, modify or waive any agreement in respect of an investigator-sponsored study; or
- authorize any of, or agree or commit to take, any of the foregoing actions.

*Filings, Consents and Approvals.* Each of Parent, Akcea and Purchaser agree to use their respective reasonable best efforts to take promptly any and all steps necessary to avoid or eliminate each and every impediment under any legal requirements (including any antitrust laws if applicable) that may be asserted by any governmental body or any other party, so as to enable the Closing to occur as promptly as practicable, but in no case later than December 30, 2020, including providing as promptly as reasonably practicable and advisable all information required by any governmental body.

Subject to the terms and conditions of the Merger Agreement, each of Parent, Akcea and Purchaser will cooperate with each other in determining whether, and promptly preparing and making, any other filings, notifications or other consents are required to be made with, or obtained from, any governmental bodies in connection with the Transactions.

*Employee Matters.* During the one (1) year period following the date of the Closing, Parent will provide to each employee of Akcea or any subsidiary of Akcea who is employed at the Closing and who remains employed with the Surviving Corporation or any affiliate of Parent (“Company Employees”), for so long during such period as Akcea employee remains so employed, (i) a salary and annual bonus opportunity not less than that in effect immediately prior to the Closing and (ii) employee benefits that are no less favorable in the aggregate than either (a) the benefits provided to such employee under the Akcea’s employee plans immediately prior to the Closing or (b) the benefits provided to similarly situated employees of Parent, and (iii) severance benefits that are no less favorable than those provided to such employee immediately prior to the Closing.

Parent will give Company Employees full credit for such Company Employees’ service with Akcea for purposes of eligibility, vesting, and determination of the level of benefits, and for purposes of benefit accruals, under any benefit plans made generally available to employees of Parent, the Surviving Corporation or any of their respective affiliates in which a Company Employee participates to the same extent recognized by Akcea or its applicable affiliate immediately prior to the Closing, provided that such service will not be recognized to the extent that such recognition would result in a duplication of benefits with respect to the same period of service or for purposes of benefit accruals under any defined benefit plan.

Parent will (i) waive any preexisting condition limitations otherwise applicable to Company Employees and their eligible dependents under any plan of Parent or any affiliate of Parent that provides health benefits in which Company Employees participate following the Closing, other than any limitations that were in effect with respect to such employees as of the Closing under the analogous employee plan of Akcea, (ii) honor any deductible, co-payment and out-of-pocket maximums incurred by Akcea employees and their eligible dependents under the health plans in which they participated immediately prior to the Closing during the portion of the calendar year prior to the Closing in satisfying any deductibles, co-payments or out-of-pocket maximums under health plans of Parent, the Surviving Corporation or any of their respective affiliates in which they are eligible to participate after the Closing in the same plan year in which such deductibles, co-payments or out-of-pocket maximums were incurred and (iii) waive any waiting period limitation or evidence of insurability requirement that would otherwise be applicable to a Company Employee and his or her eligible dependents on or after the Closing, in each case to the extent such Company Employee or eligible dependent had satisfied any similar limitation or requirement under an analogous benefit plan prior to the Closing.

*Directors’ and Officers’ Indemnification and Insurance.* For a period of 6 years from the Effective Time, Parent agrees that all rights to indemnification, advancement of expenses and exculpation from liabilities for acts or omissions occurring at or prior to the Effective Time (whether asserted or claimed prior to, at or after the Effective Time) now existing in favor of the current or former directors or officers of Akcea, including in the Akcea’s certificate of incorporation and bylaws, and any indemnification or other similar agreements of Akcea, in each case as in effect on the date of the Merger Agreement, will continue in full force and effect in accordance with their terms, and Parent will cause Akcea to perform its obligations thereunder. Without limiting the foregoing, during the period commencing at the Effective Time and ending on the sixth anniversary of the Effective Time, Parent will cause the Surviving Corporation, and the Surviving Corporation agrees that it will,

indemnify and hold harmless each individual who is as of the date of the Merger Agreement, or who becomes prior to the Effective Time, a director or officer of Akcea or who is as of the date of the Merger Agreement, or who thereafter commences prior to the Effective Time, serving at the request of Akcea as a director or officer of another entity (the "Indemnified Persons"), against all claims, losses, liabilities, damages, judgments, inquiries, fines and reasonable fees, costs and expenses, including attorneys' fees and disbursements, incurred in connection with any claim, action, suit or proceeding, whether civil, criminal, administrative or investigative (including with respect to matters existing or occurring at or prior to the Effective Time, including the Merger Agreement and the transactions and actions contemplated thereby), arising out of or pertaining to the fact that the Indemnified Person is or was a director or officer of Akcea or is or was serving at the request of Akcea as a director or officer of another entity, whether asserted or claimed prior to, at or after the Effective Time, to the fullest extent permitted under applicable legal requirements. If any such claim, action, suit or proceeding arises, each Indemnified Person will be entitled to advancement of expenses incurred in the defense of any such claim, action, suit or proceeding from the Surviving Corporation or its subsidiaries, as applicable, to the extent provided for in, and in accordance with, the organizational documents and any indemnification or other similar agreements of the Surviving Corporation as in effect on the date of the Merger Agreement and the Surviving Corporation and its subsidiaries, as applicable, shall reasonably cooperate in the defense of any such matter.

For a period of 6 years from and after the Effective Time, Parent will either cause to be maintained in effect the current policies of directors' and officers' liability insurance maintained by or for the benefit of Akcea or provide substitute policies for Akcea and its current and former directors and officers who are currently covered by the directors' and officers' liability insurance coverage currently maintained by or for the benefit of Akcea, in either case, of not less than the existing coverage and having other terms not less favorable to the insured persons than the directors' and officers' liability insurance coverage currently maintained by or for the benefit of Akcea with respect to claims arising from facts or events that occurred at or before the Effective Time, except that in no event will Parent be required to pay annual premiums with respect to such insurance policies in an amount more than 300% of the aggregate annual premium most recently paid by Parent with respect to the shared primary policy that covers both Parent and Akcea or in an amount more than 300% of the aggregate annual premium most recently paid by or allocable to Akcea with respect to coverage applicable only to Akcea, in each case prior to the date of the Merger Agreement (the "Maximum Amount"), except to the extent Parent elects to pay a higher increase for the portion of the shared primary policy allocable to Parent and its subsidiaries (other than Akcea). In lieu of such continuation of insurance coverage applicable only to Akcea, prior to the Closing Akcea may at its option (and if Akcea does not do so on or prior to the Closing, Parent may at its option from and after the Closing, purchase "tail" directors' and officers' liability insurance policy(ies) (in respect of one or more of such current policies) for Akcea and its current and former directors and officers who are currently covered by the directors' and officers' liability insurance coverage currently maintained by or for the benefit of Akcea and to have other terms not less favorable to the insured persons than the directors' and officers' liability insurance coverage currently maintained by or for the benefit of Akcea with respect to claims arising from facts or events that occurred at or before the Effective Time; provided that in no event shall the cost of any such tail policy(ies) exceed the Maximum Amount (pro rated in respect of the policies that will be the subject of such tail coverage). In lieu of such continuation of insurance coverage applicable to both Parent and Akcea, Parent may at its option from and after the Closing, purchase "tail" directors' and officers' liability insurance policy(ies) (in respect of one or more of such current policies) for Akcea and their current and former directors and officers who are currently covered by the directors' and officers' liability insurance coverage currently maintained by or for the benefit of Akcea and to have other terms not less favorable to the insured persons than the directors' and officers' liability insurance coverage currently maintained by or for the benefit of Akcea with respect to claims arising from facts or events that occurred at or before the Effective Time.

If Parent, Akcea or any of its successors or assigns (i) consolidates with or merges into any other person and is not the continuing or surviving corporation or entity of such consolidation or merger or (ii) transfers or conveys all or substantially all of its properties and assets to any person, then, and in each such case, Parent or Akcea, as applicable, shall cause proper provision to be made so that the successors and assigns of Parent or Akcea assume certain obligations in accordance of the Merger Agreement.

*Security Holder Litigation.* Akcea agrees to give Parent the right to review and comment on all material filings or responses to be made by it in connection with any litigation against Akcea and/or its directors or officers relating to the Transactions, and the right to consult on any settlement with respect to such litigation, and no such settlement shall be agreed to without Parent's prior written consent (such consent not to be unreasonably withheld, conditioned or delayed), unless such settlement provides only for additional disclosure. Akcea agrees to promptly notify Parent of any such litigation and shall keep Parent reasonably and promptly informed with respect to the status thereof.

*Stock Exchange Delisting and Deregistration.* Prior to the Closing, Akcea shall cooperate with Parent and use its reasonable best efforts to take, or cause to be taken, all actions, and do or cause to be done all things, reasonably necessary, proper or advisable on its part under applicable legal requirements and rules and policies of Nasdaq to enable the delisting by the Surviving Corporation of the Shares from Nasdaq and the deregistration of the Shares under the Exchange Act as promptly as practicable after the Effective Time.

*No Solicitation.* Except as described below, until the earlier of the Effective Time or the valid termination of the Merger Agreement pursuant to its terms, Akcea has agreed not to, and use reasonable best efforts to cause its directors and officers not to, and to direct their other representatives not to:

- (1) continue any solicitation, knowing encouragement, discussions or negotiations with any persons that may be ongoing with respect to an Acquisition Proposal (as defined below);
- (2) solicit, initiate or knowingly facilitate or knowingly encourage (including by way of furnishing non-public information) any inquiries regarding, or the making of any proposal or offer that constitutes, or would reasonably be expected to lead to, an Acquisition Proposal;
- (3) engage in, continue or otherwise participate in any discussions or negotiations regarding, or furnish to any other person any non-public information in connection with, or for the purpose of soliciting or knowingly encouraging or facilitating, an Acquisition Proposal or any proposal or offer that would reasonably be expected to lead to an Acquisition Proposal; or
- (4) enter into any letter of intent, acquisition agreement, agreement in principle or similar agreement with respect to an Acquisition Proposal or any proposal or offer that would reasonably be expected to lead to an Acquisition Proposal.

Akcea agreed to, as promptly as reasonably practicable (and in any event within two business days) following the date of the Merger Agreement, request the prompt return or destruction (to the extent provided for by the applicable confidentiality agreement) of all non-public information previously furnished to any person (other than Parent) that has, within the one-year period prior to the date of the Merger Agreement, made or indicated an intention to make an Acquisition Proposal.

Notwithstanding the above limitations, if Akcea or any of its representatives receives after the date of the Merger Agreement and prior to the Offer Acceptance Time an unsolicited *bona fide* written Acquisition Proposal from any person or group of persons, which Acquisition Proposal was made or renewed on or after the date of the Merger Agreement, that did not result from a material breach of the non-solicitation provisions of the Merger Agreement, Akcea and its representatives may contact such person or group of persons solely to clarify the terms and conditions of the Acquisition Proposal. If Akcea Board or the Affiliate Transactions Committee determines in good faith, after consultation with financial advisors and outside legal counsel, that such Acquisition Proposal constitutes or could reasonably be expected to lead to a Superior Offer (as defined below), then Akcea and its representatives may:

- furnish, pursuant to an Acceptable Confidentiality Agreement (as defined in the Merger Agreement), information (including non-public information) with respect to Akcea to the person or group of persons who has made such Acquisition Proposal; provided that Akcea shall as promptly as practicable (and no later than within 24 hours) provide to Parent any non-public information concerning Akcea that is provided to any person to the extent access to such information was not previously provided to Parent or its representatives; and

- engage in or otherwise participate in discussions or negotiations with the person or group of persons making such Acquisition Proposal.

Until the earlier of the Effective Time or the valid termination of the Merger Agreement pursuant to its terms, Akcea has agreed to (i) promptly (and in any event within 24 hours) notify Parent if any inquiries, proposals or offers with respect to an Acquisition Proposal are received by an officer or director of Akcea and provide to Parent a copy of any written Acquisition Proposal and a summary of any material unwritten terms and conditions thereof, and (ii) keep Parent reasonably informed of any material developments, discussions or negotiations regarding any Acquisition Proposal on a prompt basis (and in any event within 24 hours of such material development, discussion or negotiation).

“Acquisition Proposal” means any proposal or offer from any person (other than Parent and its affiliates) or “group”, within the meaning of Section 13(d) of the Exchange Act, relating to, in a single transaction or series of related transactions, any (i) acquisition or license of assets of Akcea equal to 20% or more of Akcea’s consolidated assets or to which 20% or more of Akcea’s revenues or earnings on a consolidated basis are attributable, (ii) issuance or acquisition of 20% or more of the outstanding Akcea common stock, (iii) recapitalization, tender offer or exchange offer that if consummated would result in any person or group beneficially owning 20% or more of the outstanding Akcea common stock or (iv) merger, consolidation, amalgamation, share exchange, business combination, recapitalization, liquidation, dissolution or similar transaction involving Akcea that if consummated would result in any person or group beneficially owning 20% or more of the outstanding Akcea common stock, in each case other than the Transactions.

“Superior Offer” means an unsolicited *bona fide* written Acquisition Proposal (except that references to “20%” in the definition of Acquisition Proposal above will be deemed to be “50%”) that the Akcea Board or the Affiliate Transactions Committee determines, in its good faith judgment, after consultation with outside legal counsel and its financial advisors, is reasonably likely to be consummated in accordance with its terms, taking into account all legal, regulatory and financing aspects (including certainty of closing) of the proposal and the person making the proposal and other aspects of the Acquisition Proposal that the Akcea Board or the Affiliate Transactions Committee deems relevant, and if consummated, would result in a transaction more favorable to Akcea’s stockholders (other than Parent and its affiliates), solely in their capacity as such, from a financial point of view, than the Transactions (including after giving effect to any revisions to the terms of the Merger Agreement proposed by Parent or any other proposal of Parent so that such Acquisition Proposal would cease to constitute a Superior Offer).

Nothing in the Merger Agreement will prohibit Akcea from (i) taking and disclosing to the stockholders of Akcea a position contemplated by Rule 14e-2(a), Rule 14d-9 or Item 1012(a) of Regulation M-A promulgated under the Exchange Act, including any “stop, look and listen” communication pursuant to Rule 14d-9(f) promulgated under the Exchange Act, or (ii) making any disclosure to the stockholders of Akcea that is required by applicable legal requirements.

Akcea has agreed that it will be deemed to have breached the provisions summarized under this “—No Solicitation” heading, if Akcea’s subsidiaries or any officer, director or employee of Akcea or its subsidiaries takes any action which, if taken by Akcea, would constitute a breach of such provisions, or if any representative of Akcea or its subsidiaries (other than an officer, director or employee) takes any action which, if taken by Akcea, would constitute an intentional breach of such provisions and results in a *bona fide* publicly disclosed Acquisition Proposal.

*Recommendation Change.* The Affiliate Transactions Committee has recommended the execution of the Merger Agreement to the Akcea Board (such recommendation, the “Affiliate Transactions Committee Recommendation”). Acting on the Affiliate Transactions Committee Recommendation, the Akcea Board has determined to recommend that the stockholders of Akcea accept the Offer and tender their Shares to Purchaser pursuant to the Offer (such recommendation, the “Akcea Board Recommendation”). The Akcea Board and the

Affiliate Transactions Committee have agreed to include Akcea Board Recommendation and the Affiliate Transactions Committee Recommendation in the Schedule 14D-9 and have permitted Parent to refer to such recommendations in this Offer to Purchase and documents related to the Offer.

Except as described below, prior to the Effective Time or the termination of the Merger Agreement pursuant to its terms, neither the Akcea Board nor any committee thereof (including the Affiliate Transactions Committee) may:

- withdraw (or modify in a manner adverse to Parent or Purchaser) or publicly propose to withdraw (or modify in a manner adverse to Parent or Purchaser) the Akcea Board Recommendation or the Affiliate Transactions Committee Recommendation; or
- approve, recommend or declare advisable, or publicly propose to approve, recommend or declare advisable, any Acquisition Proposal (such actions, together with the actions described in the previous bullet point, the “Company Adverse Change Recommendation”).

The Merger Agreement further provides that neither the Akcea Board or the Affiliate Transactions Committee will approve, recommend or declare advisable, or publicly propose to approve, recommend or declare advisable, or allow Akcea to execute or enter into any contract (other than an Acceptable Confidentiality Agreement) with respect to any Acquisition Proposal, or requiring Akcea to abandon, terminate, delay or fail to consummate, or that would otherwise materially impede, or interfere with, the Transactions.

Notwithstanding anything to the contrary in the Merger Agreement, at any time prior to the Offer Acceptance Time, if Akcea has received a *bona fide* written Acquisition Proposal from any person that has not been withdrawn (or any material amendment to any Acquisition Proposal, which requires a new Determination Notice (as defined below), except that the references to 5 days below is deemed to be 3 days) and after consultation with outside legal counsel, the Akcea Board or the Affiliate Transactions Committee shall have determined, in good faith, that such Acquisition Proposal is a Superior Offer:

- the Akcea Board or the Affiliate Transactions Committee may make a Company Adverse Change Recommendation; or
- provided that Akcea is not in material breach of the non-solicitation provisions with respect to such Acquisition Proposal, Akcea may terminate the Merger Agreement to enter into a Specified Agreement (as defined below) with respect to such Superior Offer, in each case, if and only if:
  - the Akcea Board or the Affiliate Transactions Committee determines in good faith, after consultation with outside legal counsel, that the failure to do so would be inconsistent with the fiduciary duties of the Akcea Board or the Affiliate Transactions Committee, respectively, to Akcea’s stockholders under applicable legal requirements;
  - Akcea has given Parent prior written notice of its intention to make a Company Adverse Change Recommendation or terminate the Merger Agreement pursuant to its terms at least 5 days prior to making any such Company Adverse Change Recommendation or termination (a “Determination Notice”) (which notice shall not constitute a Company Adverse Change Recommendation or termination) and, if desired by Parent, during such five (5)-day period shall have negotiated in good faith with respect to any revisions to the terms of the Merger Agreement or another proposal to the extent proposed by Parent so that Akcea would cease to constitute a Superior Offer;
  - Akcea has provided to Parent information with respect to such Acquisition Proposal in accordance with the terms of the Merger Agreement;
  - Akcea has given Parent the 5-day period after the Determination Notice to propose revisions to the terms of the Merger Agreement or make another proposal so that such Acquisition Proposal would cease to constitute a Superior Offer; and
  - after giving effect to the proposals made by Parent during such period, if any, after consultation with outside legal counsel, the Akcea Board or the Affiliate Transactions Committee determine, in

good faith, that such Acquisition Proposal is a Superior Offer and that the failure to make the Company Adverse Change Recommendation or terminate the Merger Agreement pursuant to its terms would be inconsistent with the fiduciary duties of the Akcea Board or the Affiliate Transactions Committee, respectively, to Akcea's stockholders under applicable legal requirements.

Issuance of any "stop, look and listen" communication by or on behalf of Akcea pursuant to Rule 14d-9(f) promulgated under the Exchange Act will not be considered a Company Adverse Change Recommendation and will not require the giving of a Determination Notice or compliance with the procedures set forth above.

In addition, notwithstanding anything to the contrary in the Merger Agreement, at any time prior to the Offer Acceptance Time, in connection with an Intervening Event (as defined below) (or any material change to the facts and circumstances relating to such Intervening Event, which requires a new Determination Notice, except that the references to 5 days below is deemed to be 3 days), the Akcea Board or the Affiliate Transactions Committee may make a Company Adverse Change Recommendation if:

- the Akcea Board or the Affiliate Transactions Committee determines in good faith, after consultation with outside legal counsel, that the failure to do so would be inconsistent with the fiduciary duties of the Akcea Board or the Affiliate Transactions Committee, respectively, to Akcea's stockholders under applicable legal requirements;
- Akcea has given Parent a Determination Notice at least 5 days prior to making any such Company Adverse Change Recommendation and, if desired by Parent, during such five (5)-day period shall have negotiated in good faith with respect to any revisions to the terms of the Merger Agreement or another proposal to the extent proposed by Parent so that a Company Adverse Change Recommendation would no longer be necessary;
- Akcea has specified in reasonable detail the facts and circumstances underlying the Intervening Event (as defined below) that render a Company Adverse Change Recommendation necessary; and
- after giving effect to the proposals made by Parent during such 5-day period, if any, after consultation with outside legal counsel, the Akcea Board or the Affiliate Transactions Committee has determined, in good faith, that the failure to make the Company Adverse Change Recommendation in response to such Intervening Event would be inconsistent with the fiduciary duties of the Akcea Board or the Affiliate Transactions Committee, respectively, to Akcea's stockholders under applicable legal requirements.

An "Intervening Event" is an event, fact, circumstance, development or occurrence that was not known or reasonably foreseeable to Akcea Board or the Affiliate Transactions Committee, as applicable, as of the date of the Merger Agreement and does not relate to an Acquisition Proposal.

*Termination.* The Merger Agreement may be terminated prior to the Effective Time as follows:

- by mutual written consent of Parent and Akcea at any time prior to the Offer Acceptance Time;
- by either Parent or Akcea at any time prior to the Offer Acceptance Time, if the Offer Acceptance Time shall not have occurred on or prior to 11:59 p.m. Eastern Time, on December 30, 2020, provided that this termination right is not available to any party whose material breach of the Merger Agreement has caused or resulted in the Offer not being consummated by such date (the "End Date Termination");
- by either Parent or Akcea if a governmental body of competent jurisdiction has issued any permanent injunction or other order restraining, enjoining or otherwise preventing the acquisition of or payment for Shares pursuant to the Offer, or if any legal requirement has been promulgated, enacted, issued or deemed applicable to the Offer or the Merger by any governmental body which prohibits or makes illegal the acquisition of or payment for Shares pursuant to the Offer or the consummation of the



Merger, in any case which shall be final and nonappealable, provided that this termination right is not available to any party whose material breach of the Merger Agreement has caused or resulted in the issuance of such final and nonappealable order or other action or to any party that has failed to use its reasonable best efforts as required by the Merger Agreement to remove such order or other action;

- by Parent at any time prior to the Offer Acceptance Time, if:
  - the Akcea Board has failed to include the Akcea Board Recommendation or the Affiliate Transactions Committee Recommendation in the Schedule 14D-9 when mailed, or has effected a Company Adverse Change Recommendation;
  - in the case of a tender offer or exchange offer subject to Regulation 14D under the Exchange Act, other than the Offer, the Akcea Board fails to recommend, in a Solicitation/Recommendation Statement on Schedule 14D-9, rejection of such tender offer or exchange offer within ten (10) business days of the commencement of such tender offer or exchange offer; or
  - after the public disclosure of an Acquisition Proposal, the Akcea Board or the Affiliate Transactions Committee fails to publicly reaffirm the Akcea Board Recommendation or the Affiliate Transactions Committee Recommendation, respectively, no later than the earlier of ten (10) business days after Parent so requests in writing and two (2) business days prior to the Expiration Date, provided that (i) Akcea must receive the request from Parent at least twenty-four (24) hours prior to such reaffirmation being required and (ii) Parent may deliver only three (3) such requests with respect to any Acquisition Proposal (collectively, the “Adverse Recommendation Termination”);
- by Akcea at any time prior to the Offer Acceptance Time, in order to accept a Superior Offer and substantially concurrently enter into a binding written definitive acquisition agreement providing for the consummation of a transaction which the Akcea Board or the Affiliate Transactions Committee has determined, in good faith, constitutes a Superior Offer (a “Specified Agreement”), provided that (i) Akcea shall not have materially violated the non-solicitation provisions in relation to such Superior Offer and (ii) Akcea paid the Termination Fee (as defined below) immediately before or simultaneously with and as a condition to such termination (the “Superior Offer Termination”);
- by Parent at any time prior to the Offer Acceptance Time, if a breach of any representation or warranty contained in the Merger Agreement or failure to perform any agreement, covenant or obligation in the Merger Agreement on the part of Akcea has occurred such that a condition set forth in conditions 2 to 6 of Section 22—“Conditions of the Offer” would not be satisfied and cannot be cured by Akcea by December 30, 2020, or if capable of being cured in such time period, has been cured within thirty (30) days of the date Parent gives Akcea written notice of such breach or failure to perform; provided that (i) this termination right applies if Akcea fails to timely file the Schedule 14D-9 and its Schedule 13E-3 pursuant to the Merger Agreement, and if such failure has not been cured within five (5) business days of the date Parent gives Akcea written notice of such breach or failure to perform and (ii) this termination right is not available if either Parent or Purchaser is then in material breach of any representation, warranty, covenant or obligation under the Merger Agreement (the “Akcea Breach Termination”);
- by Akcea at any time prior to the Offer Acceptance Time, if a breach of any representation or warranty contained in the Merger Agreement or failure to perform any covenant or obligation in the Merger Agreement on the part of Parent or Purchaser has occurred, in each case, if such breach or failure would reasonably be expected to prevent Parent or Purchaser from consummating the Transactions and such breach or failure cannot be cured by Parent or Purchaser, as applicable, by December 30, 2020, or, if capable of being cured in such time period, has not been cured within thirty (30) days of the date Akcea gives Parent written notice of such breach or failure to perform; provided that (i) this termination right applies if Purchaser has failed to timely commence the Offer, if such failure has not been cured within five (5) business days of the date Akcea gives Parent written notice of such breach or failure to perform and (ii) this termination right is not available if Akcea is then in material breach of any representation, warranty, covenant or obligation under the Merger Agreement;

- by Akcea if following the expiration of the Offer, Purchaser fails to accept for payment or purchase all Shares validly tendered (and not validly withdrawn) pursuant to the Offer in accordance to the terms of the Merger Agreement; or
- by Parent if the Offer has expired without the acceptance for payment of Shares pursuant to the Offer, in a circumstance in which all of the Offer Conditions are satisfied or have been waived (other than the Minimum Condition and conditions which by their nature are to be satisfied at the expiration of the Offer) at the then-existing Expiration Date after the extension of the Offer on two (2) occasions in consecutive periods of ten (10) business days each, provided that none of the offer documents is still being reviewed or commented on by the SEC, and provided that this termination right is not available if the material breach of the Merger Agreement by Parent has caused or resulted in the failure of the acceptance for payment of Shares pursuant to the Offer (the “Minimum Condition Termination”).

*Effect of Termination.* If the Merger Agreement is terminated pursuant to its terms, the Merger Agreement will be of no further force or effect and there will be no liability on the part of Parent, Purchaser or Akcea or any of their respective former, current or future officers, directors, partners, stockholders, managers, members or affiliates following any such termination with respect to the Merger Agreement or the Transaction. In the event of such a termination, (i) certain specified provisions of the Merger Agreement will survive the termination and will remain in full force and effect, including the provisions described in “—Akcea Termination Fee” below, (ii) the Confidentiality Agreement, will survive the termination of the Merger Agreement and will remain in full force and effect in accordance with its terms and (iii) the termination of the Merger Agreement will not relieve any party from any liability for fraud or willful and material breach of the Merger Agreement prior to termination.

*Akcea Termination Fee.* Akcea has agreed to pay Parent a termination fee of \$15 million in cash (the “Termination Fee”) if:

- the Merger Agreement is terminated by Akcea pursuant to a Superior Offer Termination;
- the Merger Agreement is terminated by Parent pursuant to an Adverse Recommendation Termination; or
- (i) the Merger Agreement is terminated by Parent or Akcea pursuant to an End Date Termination, by Parent pursuant to an Akcea Breach Termination or by Parent pursuant to Minimum Condition Termination, (ii) any person has publicly disclosed a *bona fide* Acquisition Proposal after the date the Merger Agreement and prior to such termination and such Acquisition Proposal has not been publicly withdrawn prior to such termination and (iii) within twelve (12) months of such termination Akcea enters into a definitive agreement with respect to or consummated an Acquisition Proposal; provided that for purposes of determining if the Termination Fee is payable in such circumstances, the term “Acquisition Proposal” will have the meaning described in “—No Solicitation” above, except that all references to “20%” will be deemed to be references to “50%.”

The parties have agreed that the payment of the Termination Fee pursuant to the terms of the Merger Agreement will be deemed to be liquidated damages for any and all losses or damages suffered or incurred by Parent, Purchaser, any of their respective affiliates or any other person in connection with the Merger Agreement, the Transactions or any matter forming the basis for such termination, and upon the payment of the Termination Fee, none of Parent, Purchaser or any of their respective affiliates will be entitled to bring or maintain any claim, action or proceeding against Akcea or any of its affiliates arising out of or in connection with the Merger Agreement, any of the Transactions or any matters forming the basis for such termination.

The parties have further agreed that, if the Merger Agreement is terminated and the Termination Fee is payable, (i) payment of the Termination Fee will be the sole and exclusive remedy of Parent, Purchaser or any of their respective affiliates against Akcea and any of its respective former, current or future officers, directors, partners, stockholders, managers, members or affiliates (collectively, “Company Related Parties”) for any loss

suffered as a result of the failure of the Offer or the Merger to be consummated or for a breach or failure to perform under the Merger Agreement or otherwise, and (ii) upon payment of such amount, none of the Company Related Parties will have any further liability or obligation relating to or arising out of the Merger Agreement or the Transactions.

*Specific Performance.* The parties have agreed that irreparable damage would occur in the event that any of the provisions of the Merger Agreement were not performed in accordance with their specific terms or were otherwise breached, and that the parties will be entitled to an injunction or injunctions, specific performance or other equitable relief to prevent breaches of the Merger Agreement and to enforce specifically the terms and provisions of the Merger Agreement, without proof of damages or otherwise, in addition to any other remedy to which they are entitled under the Merger Agreement.

*Expenses.* Except as otherwise provided in the Merger Agreement, all fees and expenses incurred by the parties in connection with the Merger Agreement and the Transactions will be paid by the party incurring such expenses, whether or not the Offer and Merger are consummated.

*Offer Conditions.* The Offer Conditions are described in Section 22—“Conditions of the Offer.”

*Confidentiality Agreement.* Prior to signing the Merger Agreement, Parent and Akcea entered into the Confidentiality Agreement, pursuant to which each party agreed, subject to certain exceptions, to keep confidential nonpublic information about the other party in connection with the consideration of a possible business transaction involving Parent and Akcea. Parent’s and Akcea’s obligations with respect to confidential information under the Confidentiality Agreement survive termination or expiration of the Confidentiality Agreement, and will expire three (3) years after the date of the Confidentiality Agreement. The Confidentiality Agreement does not include (i) an employee non-solicitation provision or (ii) a standstill provision.

This summary of the Confidentiality Agreement does not purport to be complete and is qualified in its entirety by reference to the Confidentiality Agreement, which is filed as Exhibit (d)(2) to the Schedule TO and is incorporated by reference herein.

## **21. Source and Amount of Funds.**

The Offer is not conditioned upon Parent’s or Purchaser’s ability to finance the purchase of Shares pursuant to the Offer. Parent and Purchaser estimate that the total amount of funds required to consummate the Merger (including payments for Company Options and Company RSUs and other payments referred to in the Merger Agreement) pursuant to the Merger Agreement and to purchase all of the Shares pursuant to the Offer and the Merger Agreement will be approximately \$500 million at or prior to the Closing. The funds to pay for all Shares accepted for payment in the Offer and the consideration in connection with the Merger are expected to come from Parent’s available cash and cash equivalents on hand.

Purchaser does not believe its financial condition is relevant to Akcea stockholders’ decision whether to tender their Shares and accept the Offer because (i) the Offer is being made for all outstanding Shares solely for cash, (ii) the Offer is not subject to any financing condition, (iii) if the Offer is consummated, Purchaser will acquire all remaining Shares for the same price in the Merger, and (iv) Parent and/or one or more of its affiliates has, and will arrange for Purchaser to have, sufficient funds to purchase all Shares validly tendered in the Offer (and not properly withdrawn) on the terms set forth in this Offer to Purchase and to acquire the remaining outstanding Shares in the Merger.

## **22. Conditions of the Offer.**

The obligation of Purchaser to accept for payment and pay for Shares validly tendered (and not validly withdrawn) pursuant to the Offer is subject to the satisfaction of the conditions set forth below. Accordingly,

notwithstanding any other provision of the Offer or the Merger Agreement to the contrary, Purchaser shall not be required to accept for payment or (subject to any applicable rules and regulations of the SEC, including Rule 14e-1(c) under the Exchange Act) pay for, and may delay the acceptance for payment of, or (subject to any such rules and regulations) the payment for, any tendered Shares, and, to the extent permitted by the Merger Agreement, may terminate the Offer (i) upon termination of the Merger Agreement and (ii) at any scheduled Expiration Date (subject to any extensions of the Offer pursuant to the Merger Agreement), if (a) the Minimum Condition, the Termination Condition and the Governmental Impediment Condition are not satisfied by one minute after 11:59 p.m. Eastern Time on the scheduled Expiration Date or (b) any of the additional conditions set forth below shall not be satisfied or waived (to the extent permitted by applicable legal requirement) in writing by Parent:

- (1) there shall have been validly tendered and not validly withdrawn Shares that, excluding the Shares beneficially owned by Parent, its affiliates, their respective directors and executive officers and Damien McDevitt, Akcea's chief executive officer, represent at least one more Share than 50% of the Shares not beneficially owned by such persons outstanding at the time of the expiration of the Offer, i.e. the Minimum Condition;
- (2) the representations and warranties of Akcea set forth in Section 3.3(a), 3.3(c) and 3.3(e) of the Merger Agreement shall be accurate except for any de minimis inaccuracies as of the date of the Merger Agreement and at and as of the Offer Acceptance Time as if made on and as of the Offer Acceptance Time (except to the extent any such representation or warranty expressly relates to an earlier date or period, in which case as of such date or period);
- (3) the representations and warranties of Akcea set forth in the first sentence of Section 3.1 and Sections 3.2, 3.3(b) and 3.3(d), 3.21, 3.23 and 3.24 of the Merger Agreement shall be accurate (disregarding for this purpose all "Material Adverse Effect" and "materiality" qualifications contained in such representations and warranties) in all material respects as of the date of the Merger Agreement and at and as of the Offer Acceptance Time as if made on and as of the Offer Acceptance Time (except to the extent any such representation or warranty expressly relates to an earlier date or period, in which case as of such date or period);
- (4) the representations and warranties of Akcea set forth in Sections 3.5(b), 3.20 and 3.22(a)(i) of the Merger Agreement shall be accurate in all respects as of the date of the Merger Agreement and at and as of the Offer Acceptance Time as if made on and as of the Offer Acceptance Time (except to the extent any such representation or warranty expressly relates to an earlier date or period, in which case as of such date or period);
- (5) the representations and warranties of Akcea set forth in the Merger Agreement (other than conditions 2, 3 and 4 above) shall be accurate (disregarding for this purpose all "Material Adverse Effect" and "materiality" qualifications contained in such representations and warranties) as of the date of the Merger Agreement and at and as of the Offer Acceptance Time as if made on and as of the Offer Acceptance Time (except to the extent any such representation or warranty expressly relates to an earlier date or period, in which case as of such date or period), except where the failure of such representations and warranties to be so accurate has not had, and would not reasonably be expected to have, individually or in the aggregate, a Material Adverse Effect;
- (6) Akcea shall be in compliance with, in all material respects, the obligations, covenants and agreements it is required to comply with or perform at or prior to the Offer Acceptance Time;
- (7) since the date of the Merger Agreement, there shall not have occurred and be continuing any event, occurrence, circumstance, change or effect which, individually or in the aggregate, has had, or would reasonably be expected to have, a Material Adverse Effect;
- (8) Parent and Purchaser shall have received a certificate executed on behalf of Akcea by Akcea's Chief Executive Officer and Chief Financial Officer confirming that conditions 2 through 7 above have been satisfied;

- (9) there shall not have been issued by any governmental body of competent jurisdiction and remain in effect any temporary restraining order, preliminary or permanent injunction or other order preventing the acquisition of or payment for Shares pursuant to the Offer or the consummation of the Merger, and there shall not have been any final and nonappealable law, rule, regulation or other requirement promulgated, enacted, issued or deemed applicable to the Offer or the Merger by any governmental body which prohibits or makes illegal the acquisition or acceptance for payment of Shares pursuant to the Offer or the consummation of the Merger, i.e. the Governmental Impediment Condition; and
- (10) the Merger Agreement shall not have been terminated in accordance with its terms, i.e. the Termination Condition.

The foregoing conditions are for the sole benefit of Parent and Purchaser and (except for the Minimum Condition, which condition is non-waivable, and the Termination Condition and the Governmental Impediment Condition, which conditions cannot be waived without the consent of Akcea) may be waived by Parent and Purchaser, in whole or in part, at any time and from time to time, in the sole and absolute discretion of Parent and Purchaser.

### **23. Dividends and Distributions.**

The Merger Agreement provides that Akcea will not, between the date of the Merger Agreement and the Effective Time, establish a record date for, declare, set aside or pay any dividends on or make other distribution in respect of any shares of its capital stock (including the Shares). See Section 20—“Summary of the Merger Agreement—Conduct of Business Pending the Merger.”

### **24. Certain Legal Matters; Regulatory Approvals.**

**General.** Except as otherwise set forth in this Offer to Purchase, based on Parent’s and Purchaser’s review of publicly available filings by Akcea with the SEC and other information regarding Akcea, Parent and Purchaser are not aware of any licenses or other regulatory permits which appear to be material to the business of Akcea and which might be adversely affected by the acquisition of Shares by Purchaser or Parent pursuant to the Offer or of any approval or other action by any governmental, administrative or regulatory agency or authority which would be required for the acquisition or ownership of Shares by Purchaser or Parent pursuant to the Offer. In addition, except as set forth below, Parent and Purchaser are not aware of any filings, approvals or other actions by or with any governmental body or administrative or regulatory agency that would be required for Parent’s and Purchaser’s acquisition or ownership of the Shares. Should any such approval or other action be required, Parent and Purchaser currently expect that such approval or action, except as described below under “—State Takeover Laws,” would be sought or taken. There can be no assurance that any such approval or action, if needed, would be obtained or, if obtained, that it will be obtained without substantial conditions; and there can be no assurance that, in the event that such approvals were not obtained or such other actions were not taken, adverse consequences might not result to Akcea’s or Parent’s business or that certain parts of Akcea’s or Parent’s business might not have to be disposed of or held separate. In such an event, we may not be required to purchase any Shares in the Offer. See Section 22—“Conditions of the Offer.”

**Antitrust.** Based upon an examination of publicly available and other information relating to the businesses in which Akcea is engaged, Parent and Purchaser believe that the acquisition of Shares in the Offer (and the Merger) should not violate applicable antitrust laws. Nevertheless, Parent and Purchaser cannot be certain that a challenge to the Offer (and the Merger) on antitrust grounds will not be made, or, if such challenge is made, what the result will be.

*U.S. Antitrust.* Under the Hart-Scott-Rodino Antitrust Improvements Act of 1976 (the “HSR Act”) and the rules and regulations promulgated thereunder by the Federal Trade Commission (the “FTC”), certain transactions may not be consummated until certain information and documentary materials have been furnished for review to

the FTC and the Antitrust Division of the United States Department of Justice (the “Antitrust Division”) and certain waiting period requirements have been satisfied. Parent and Purchaser do not believe the purchase of Shares in the Offer (and the Merger) is subject to the HSR Act.

The FTC and the Antitrust Division frequently scrutinize the legality under the U.S. antitrust laws of transactions, such as Purchaser’s acquisition of Shares in the Offer (and the Merger). At any time before or after Purchaser’s purchase of Shares in the Offer (and the Merger), the FTC or the Antitrust Division could take any action under the antitrust laws that it either considers necessary or desirable in the public interest, including seeking to enjoin the purchase of Shares in the Offer (and the Merger), the divestiture of Shares purchased in the Offer and Merger or the divestiture of substantial assets of Parent, Akcea or any of their respective subsidiaries or affiliates. Private parties, as well as state attorneys general, also may bring legal actions under the antitrust laws under certain circumstances.

*Foreign Antitrust.* Parent and Akcea, and their respective subsidiaries, also conduct business outside of the United States. However, based on a review of the information currently available relating to the countries and businesses in which Parent and Akcea are engaged, Parent and Purchaser believe that no mandatory antitrust premerger notification filing is required outside the United States and approval of any non-U.S. antitrust authority is not a condition to the consummation of the Offer or the Merger.

**Stockholder Approval Not Required.** Akcea has represented in the Merger Agreement that execution, delivery and performance of the Merger Agreement by Akcea and the consummation by Akcea of the Offer and the Merger have been duly and validly authorized by all necessary corporate action on the part of Akcea, and no other corporate proceedings on the part of Akcea are necessary to authorize the Merger Agreement or to consummate the Offer and the Merger. Section 251(h) of the DGCL provides that stockholder approval of a merger is not required if certain requirements are met, including that (i) the acquiring company consummates an offer for all of the outstanding stock of the company to be acquired that, absent Section 251(h) of the DGCL, would be entitled to vote on the merger, and (ii) following the consummation of such tender offer, the acquiring company owns at least such percentage of the stock of Akcea to be acquired that, absent Section 251(h) of the DGCL, would be required to adopt the merger agreement. Parent currently owns 76% of all outstanding Shares. Because Parent holds a sufficient number of Shares, Akcea will not be required to submit the adoption of the Merger Agreement to a vote of its stockholders. Following the consummation of the Offer and subject to the satisfaction of the conditions set forth in the Merger Agreement, Purchaser, Parent and Akcea will take all necessary and appropriate action to effect the Merger as promptly as practicable without a meeting of stockholders of Akcea in accordance with Section 251(h) of the DGCL. See Section 20—“Summary of the Merger Agreement.”

**State Takeover Laws.** A number of states (including Delaware, where Akcea is incorporated) have adopted takeover laws and regulations which purport, to varying degrees, to be applicable to attempts to acquire securities of corporations which are incorporated in such states or which have substantial assets, stockholders, principal executive offices or principal places of business therein.

Akcea has not opted out of Section 203 of the DGCL. In general, Section 203 of the DGCL would prevent an “interested stockholder” (generally defined in Section 203 of the DGCL as a person beneficially owning 15% or more of a corporation’s voting stock) from engaging in a “business combination” (as defined in Section 203 of the DGCL) with a Delaware corporation for three years following the time such person became an interested stockholder unless: (i) before such person became an interested stockholder, the board of directors of the corporation approved the transaction in which the interested stockholder became an interested stockholder or approved the business combination; (ii) upon consummation of the transaction which resulted in the interested stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced (excluding for purposes of determining the number of shares of outstanding stock held by directors who are also officers and by employee stock plans that do not allow plan participants to determine confidentially whether to tender shares); or

(iii) following the transaction in which such person became an interested stockholder, the business combination is (a) approved by the board of directors of the corporation and (b) authorized at a meeting of stockholders by the affirmative vote of the holders of at least 66 2/3% of the outstanding voting stock of the corporation not owned by the interested stockholder.

Akcea has represented to us in the Merger Agreement that it has taken all actions necessary or appropriate to exempt the execution, delivery, and performance of the Merger Agreement and the Offer, the Merger, and the other transactions contemplated by the Merger Agreement from Section 203 of the DGCL and any other “moratorium,” “control share acquisition,” “fair price,” “super majority,” “affiliate transactions,” or “business combination” or other similar state anti-takeover laws and regulations. Purchaser has not attempted to comply with any other state takeover statutes in connection with the Offer or the Merger. Purchaser reserves the right to challenge the validity or applicability of any state law allegedly applicable to the Offer, Merger, the Merger Agreement or the transactions contemplated thereby, and nothing in this Offer to Purchase or any action taken in connection herewith is intended as a waiver of that right. In the event that it is asserted that one or more takeover statutes apply to the Offer or the Merger, and it is not determined by an appropriate court that such statute or statutes do not apply or are invalid as applied to the Offer, the Merger or the Merger Agreement, as applicable, Purchaser may be required to file certain documents with, or receive approvals from, the relevant state authorities, and Purchaser might be unable to accept for payment or purchase Shares tendered pursuant to the Offer or be delayed in continuing or consummating the Offer. In such case, Purchaser may not be obligated to accept for purchase, or pay for, any Shares tendered. See Section 22—“Conditions of the Offer.”

**Appraisal Rights.** No appraisal rights are available to the holders of Shares in connection with the Offer. However, if the Offer is successful and the Merger is consummated, the holders of record of Shares immediately prior to the Effective Time Akcea who (i) did not tender their Shares in the Offer (or who had tendered but subsequently validly withdrawn such tender, and not otherwise waived their appraisal rights); (ii) otherwise comply with the applicable requirements and procedures of Section 262 of the DGCL; and (iii) do not thereafter withdraw their demand for appraisal of such Shares or otherwise lose their appraisal rights, in each case in accordance with the DGCL, will be entitled to demand appraisal of their Shares and receive in lieu of the consideration payable in the Offer a cash payment equal to the “fair value” of their Shares, as determined by the Delaware Court of Chancery, in accordance with Section 262 of the DGCL.

The following discussion is not a complete statement of the law pertaining to appraisal rights under the DGCL and is qualified in its entirety by the full text of Section 262 of the DGCL, which is attached to this Schedule TO as Schedule B and is incorporated by reference herein. All references in Section 262 of the DGCL and in this summary to a “stockholder” or “holder of Shares” are to the record holder of Shares immediately prior to the Effective Time as to which appraisal rights are asserted. Under Delaware law, the procedures to properly demand and perfect appraisal rights must be carried out by, and in the name of, those registered as the holders of record of Shares. A person having a beneficial interest in Shares held of record in the name of another person, such as a broker or nominee, and who wishes to demand appraisal rights, must act promptly to cause the record holder to follow the steps summarized below properly and in a timely manner to perfect appraisal rights. Stockholders should carefully review the full text of Section 262 of the DGCL as well as the information discussed below.

If you choose to exercise your appraisal rights in connection with the Merger and you properly demand and perfect such rights in accordance with Section 262 of the DGCL, you may be entitled to payment for your Shares based on a judicial determination of the fair value of your Shares. Any such judicial determination of the fair value of the Shares could be based upon considerations other than or in addition to the price paid in the Offer and the market value of the Shares. Stockholders should recognize that the value so determined could be higher or lower than the price per Share paid pursuant to the Offer or the per Share price to be paid in the Merger. Moreover, Akcea may argue in an appraisal proceeding that, for purposes of such a proceeding, the fair value of the Shares is less than the price paid in the Offer and the Merger.

Under Section 262 of the DGCL, where a merger is approved under Section 251(h), either a constituent corporation before the effective date of the merger, or the surviving corporation within ten days thereafter, must notify each of the holders of any class or series of stock of such constituent corporation who are entitled to appraisal rights of the approval of the merger or consolidation and that appraisal rights are available for any or all shares of such class or series of stock of such constituent corporation, and shall include in such notice a copy of Section 262 of the DGCL. **The Schedule 14D-9 will constitute the formal notice of appraisal rights under Section 262 of the DGCL.**

Stockholders wishing to exercise the right to seek an appraisal of their Shares must do ALL of the following:

- the stockholder must, within the later of the consummation of the Offer (which will occur at the date and time of the acceptance for payment of Shares pursuant to and subject to the conditions of the Offer) and 20 days after the mailing of the Schedule 14D-9, deliver to Akcea a written demand for appraisal of their Shares, which demand must reasonably inform Akcea of the identity of the stockholder and that the stockholder is demanding appraisal;
- the stockholder must not tender his, her or its Shares pursuant to the Offer; and
- the stockholder must continuously hold the Shares from the date of making the demand through the Effective Time.

**Failure to follow the steps required by Section 262 of the DGCL for perfecting appraisal rights may result in the loss of such rights. Any stockholder who sells Shares in the Offer will not be entitled to exercise appraisal rights with respect thereto but rather will receive the Offer Price, subject to the terms and conditions of the Merger Agreement, as well as the Offer to Purchase and related Letter of Transmittal, as applicable.**

Only a holder of record of Shares issued and outstanding immediately prior to the Effective Time may assert appraisal rights for the Shares registered in that holder's name. A demand for appraisal must be executed by or on behalf of the stockholder of record. The demand should set forth, fully and correctly, the record stockholder's name as it appears on the stock certificate(s). The demand must reasonably inform Akcea of the identity of the stockholder and state that the stockholder intends to demand appraisal of his, her or its Shares.

If the Shares are owned of record in a fiduciary capacity, such as by a trustee, guardian or custodian, execution of the demand must be made in that capacity, and if the Shares are owned of record by more than one person, as in a joint tenancy or tenancy in common, the demand must be executed by or on behalf of all joint owners. An authorized agent, including an agent of two or more joint owners, may execute a demand for appraisal on behalf of a holder of record; however, the agent must identify the record owner or owners and expressly disclose the fact that, in executing the demand, the agent is agent for such owner or owners. A record holder, such as a broker who holds Shares as nominee for several beneficial owners, may exercise appraisal rights with respect to the Shares issued and outstanding immediately prior to the Effective Time held for one or more beneficial owners while not exercising such rights with respect to the Shares held for other beneficial owners; in such case, however, the written demand should set forth the number of Shares issued and outstanding immediately prior to the Effective Time as to which appraisal is sought, and where no number of Shares is expressly mentioned the demand will be presumed to cover all Shares that are held in the name of the record owner. **STOCKHOLDERS WHO HOLD THEIR SHARES IN BROKERAGE ACCOUNTS OR OTHER NOMINEE FORMS, AND WHO WISH TO EXERCISE APPRAISAL RIGHTS, SHOULD CONSULT WITH THEIR BROKERS TO DETERMINE THE APPROPRIATE PROCEDURES FOR THE NOMINEE HOLDER TO MAKE A DEMAND FOR APPRAISAL OF THOSE SHARES. A PERSON HAVING A BENEFICIAL INTEREST IN SHARES HELD OF RECORD IN THE NAME OF ANOTHER PERSON, SUCH AS A BROKER OR NOMINEE, MUST ACT PROMPTLY TO CAUSE THE RECORD HOLDER TO FOLLOW PROPERLY AND IN A TIMELY MANNER THE STEPS**



**NECESSARY TO PERFECT APPRAISAL RIGHTS. IF A STOCKHOLDER HOLDS HIS, HER OR ITS SHARES THROUGH A BROKER WHO IN TURN HOLDS THE STOCKHOLDER'S SHARES THROUGH A CENTRAL SECURITIES DEPOSITORY NOMINEE SUCH AS CEDE & CO., A DEMAND FOR APPRAISAL OF SUCH SHARES MUST BE MADE BY OR ON BEHALF OF THE DEPOSITORY NOMINEE AND MUST IDENTIFY THE DEPOSITORY NOMINEE AS RECORD HOLDER.**

If the Merger is consummated pursuant to Section 251(h) of the DGCL, within ten (10) days after the Effective Time, the Surviving Corporation must send an additional notice of the Effective Time to all of Akcea's stockholders who are entitled to appraisal rights and who have delivered a written demand for appraisal to Akcea in accordance with Section 262 of the DGCL. Within one hundred twenty (120) days after the Effective Time, the Surviving Corporation or any stockholder who has complied with the requirements of Section 262 of the DGCL and who is otherwise entitled to appraisal rights may file a petition in the Delaware Court of Chancery, with a copy served upon the Surviving Corporation in the case of a petition filed by a stockholder, demanding a determination of the "fair value" of the Shares held by all dissenting stockholders. A person who is the beneficial owner of Shares held in a voting trust or by a nominee on behalf of such person may, in such person's own name, file the petition described in the previous sentence. The Surviving Corporation is under no obligation to file any such petition and has no intention of doing so. If a petition for appraisal is not timely filed, all stockholders' appraisal rights will cease.

Stockholders who desire to have their Shares appraised should initiate any petitions necessary for the perfection of their appraisal rights within the time periods and in the manner prescribed in Section 262 of the DGCL.

Within one hundred twenty (120) days after the Effective Time, any stockholder who has complied with the provisions of Section 262 of the DGCL to that point in time may receive from the Surviving Corporation, upon request given in writing (or by electronic transmission), a statement setting forth the aggregate number of Shares not tendered into the Offer and with respect to which the Surviving Corporation has received demands for appraisal, and the aggregate number of holders of those Shares. A person who is the beneficial owner of Shares held in a voting trust or by a nominee on behalf of such person may, in such person's own name, request from the Surviving Corporation the statement described in the previous sentence. The Surviving Corporation must mail this statement to the stockholder within the later of ten (10) days of receipt of the request or ten (10) days after expiration of the period for delivery of demands for appraisal.

If a petition for appraisal is duly filed by a stockholder and a copy of the petition is served on the Surviving Corporation, the Surviving Corporation will then be obligated, within twenty (20) days after receiving service of a copy of the petition, to file in the office of the Delaware Register in Chancery a duly verified list containing the names and addresses of all stockholders who have demanded an appraisal of their Shares and with whom agreements as to the value of their Shares have not been reached by the Surviving Corporation. After notice to stockholders who demanded appraisal of their Shares as may be required by the Delaware Court of Chancery, the Delaware Court of Chancery will conduct a hearing upon the petition to determine those stockholders who have complied with Section 262 of the DGCL and who have become entitled to the appraisal rights provided thereby.

The Delaware Court of Chancery may require the stockholders demanding appraisal who hold certificated Shares to submit their stock certificates to the court for notation of the pendency of the appraisal proceedings. If any stockholder fails to comply with the court's direction, the court may dismiss the proceeding as to that stockholder.

The Delaware Court of Chancery will thereafter determine the "fair value" of the Shares held by stockholders who have complied with Section 262 of the DGCL, exclusive of any element of value arising from the accomplishment or expectation of the Merger, but together with the interest, if any, to be paid on the amount determined to be "fair value." Such interest rate shall accrue from the Effective Time through the date of

payment of the judgment, compounded quarterly, and shall accrue at 5% over the Federal Reserve discount rate (including any surcharge), unless the Delaware Court of Chancery in its discretion determines otherwise for good cause shown.

In *Weinberger v. UOP, Inc.*, the Delaware Supreme Court discussed the factors that could be considered in determining “fair value” in an appraisal proceeding, stating that “proof of value by any techniques or methods which are generally considered acceptable in the financial community and otherwise admissible in court” should be considered and that “[f]air price obviously requires consideration of all relevant factors involving the value of a company.” The Delaware Supreme Court stated that, in making this determination of fair value, the court must consider market value, asset value, dividends, earnings prospects, the nature of the enterprise and any other facts that could be ascertained as of the date of the merger that throw any light on future prospects of the merged corporation. Section 262 of the DGCL provides that “fair value” is to be “exclusive of any element of value arising from the accomplishment or expectation of the merger.” In *Cede & Co. v. Technicolor, Inc.*, the Delaware Supreme Court stated that such exclusion is a “narrow exclusion [that] does not encompass known elements of value,” but which rather applies only to the speculative elements of value arising from such accomplishment or expectation. In *Weinberger*, the Delaware Supreme Court construed Section 262 of the DGCL to mean that “elements of future value, including the nature of the enterprise, which are known or susceptible of proof as of the date of the merger and not the product of speculation, may be considered.” The Delaware Court of Chancery may determine the “fair value” of the Shares to be more than, less than or equal to the Merger Consideration that the stockholders would otherwise receive under the Merger Agreement. If no party files a petition for appraisal in a timely manner, then stockholders will lose the right to an appraisal, and will instead receive the Merger Consideration described in the Merger Agreement.

The Delaware Court of Chancery may determine the costs of the appraisal proceeding (which do not include attorneys’ fees or the fees and expenses of experts), and those costs may be taxed upon the parties as the Delaware Court of Chancery determines to be equitable under the circumstances. Upon application of a stockholder, the Delaware Court of Chancery may order all or a portion of the expenses incurred by any stockholder in connection with the appraisal proceeding, including reasonable attorneys’ fees and the fees and expenses of experts, to be charged pro rata against the value of all Shares entitled to appraisal.

The “fair value” of the Shares as determined under Section 262 of the DGCL could be greater than, the same as or less than the Merger Consideration described in the Merger Agreement. An opinion of an investment banking firm as to the fairness, from a financial point of view, of the consideration payable in a merger is not an opinion as to, and does not in any manner address, “fair value” under Section 262 of the DGCL. No representation is made as to the outcome of the appraisal of “fair value” as determined by the Delaware Court of Chancery, and stockholders should recognize that such an appraisal could result in a determination of a value higher or lower than, or the same as, the Merger Consideration.

Any stockholder who has duly demanded an appraisal in compliance with Section 262 of the DGCL may not, after the Effective Time, vote the Shares subject to the demand for any purpose or receive any dividends or other distributions on those Shares, except dividends or other distributions payable to holders of record of Shares as of a record date prior to the Effective Time.

If no petition for appraisal is filed within one hundred twenty (120) days after the Effective Time, or if a stockholder who has not commenced an appraisal proceeding or joined that proceeding as a named party delivers a written withdrawal of the stockholder’s demand for appraisal and an acceptance of the terms offered in the Merger within sixty (60) days after the Effective Time, then the right of the stockholder to appraisal will cease. Any attempt to withdraw made more than sixty (60) days after the Effective Time will require the Surviving Corporation’s written approval, and no appraisal proceeding in the Delaware Court of Chancery will be dismissed as to any stockholder without the approval of the Delaware Court of Chancery, and may be conditioned on such terms as the Delaware Court of Chancery deems just; provided, however, that any stockholder who has not commenced an appraisal proceeding or joined that proceeding as a named party may

withdraw his, her or its demand for appraisal and accept the Merger Consideration offered pursuant to the Merger Agreement within sixty (60) days after the Effective Time. If the stockholder fails to perfect, successfully withdraws or loses the appraisal right, the stockholder's Shares will be converted into the right to receive the Merger Consideration described in the Merger Agreement.

**The foregoing summary of the rights of dissenting stockholders under the DGCL does not purport to be a statement of the procedures to be followed by stockholders desiring to exercise any appraisal rights under Delaware law. The preservation and exercise of appraisal rights require strict and timely adherence to the applicable provisions of Delaware law which will be set forth in their entirety in the notice of merger. The foregoing discussion is not a complete statement of law pertaining to appraisal rights under Delaware law and is qualified in its entirety by reference to Delaware law, including without limitation, Section 262 of the DGCL, a copy of which is included as Schedule B hereto.**

**The information provided above is for informational purposes only with respect to your alternatives if the Merger is consummated. Any stockholder who desires to exercise his, her or its appraisal rights should review carefully Section 262 of the DGCL and is urged to consult his, her or its legal advisor before electing or attempting to exercise such rights. The foregoing summary does not constitute any legal or other advice nor does it constitute a recommendation that Akcea stockholders exercise appraisal rights under Section 262 of the DGCL.**

**Legal Proceedings Relating to the Tender Offer.** None.

## **25. Fees and Expenses.**

Parent has retained the Depository and the Information Agent in connection with the Offer. The Depository and the Information Agent will receive customary compensation, reimbursement for reasonable out-of-pocket expenses and indemnification against certain liabilities in connection with the Offer, including certain liabilities under the federal securities laws.

As part of the services included in such retention, the Information Agent may contact holders of Shares by personal interview, mail, electronic mail, telephone, telex, telegraph and other methods of electronic communication and may request brokers, dealers, commercial banks, trust companies and other nominees to forward the Offer materials to beneficial holders of Shares.

Except as set forth above, neither Parent nor Purchaser will pay any fees or commissions to any broker or dealer or other person for soliciting tenders of Shares pursuant to the Offer. Brokers, dealers, commercial banks and trust companies will upon request be reimbursed by us for customary mailing and handling expenses incurred by them in forwarding the offering material to their customers.

The following is an estimate of fees and expenses to be incurred by Parent and/or Purchaser in connection with the Offer:

<u>Description</u>	<u>Amount</u>
Financial advisory fees and expenses	\$ 20,000,000
Legal fees and expenses	\$ 4,700,000
SEC filing fees	\$ 69,560
Printing and mailing costs	\$ 85,000
Accounting fees	\$ 30,000
Information Agent fees and expenses	\$ 20,000
Total	\$ 24,904,560

In addition, Akcea will incur its own fees and expenses in connection with the Offer. Akcea will not pay any of the fees and expenses to be incurred by Parent and/or Purchaser.

**26. Miscellaneous.**

The Offer is being made to all holders of the Shares. We are not aware of any jurisdiction in which the making of the Offer or the acceptance thereof would be prohibited by securities, “blue sky” or other valid laws of such jurisdiction. If we become aware of any U.S. state in which the making of the Offer or the acceptance of Shares pursuant thereto would not be in compliance with an administrative or judicial action taken pursuant to a U.S. state statute, we will make a good faith effort to comply with any such law. If, after such good faith effort, we cannot comply with any such law, the Offer will not be made to (nor will tenders be accepted from or on behalf of) the holders of Shares in such state. In any jurisdictions where applicable laws require the Offer to be made by a licensed broker or dealer, the Offer shall be deemed to be made on behalf of Purchaser by one or more registered brokers or dealers licensed under the laws of such jurisdiction to be designated by Purchaser.

Parent and Purchaser have filed with the SEC the Schedule TO (including exhibits) in accordance with the Exchange Act, furnishing certain additional information with respect to the Offer, and may file amendments thereto. The Schedule TO and any amendments thereto, including exhibits, may be examined and copies may be obtained from the SEC in the manner set forth in Section 18—“Certain Information Concerning Akcea” under “Available Information.”

The Offer does not constitute a solicitation of proxies for any meeting of Akcea’s stockholders. Any solicitation of proxies which Purchaser or any of its affiliates might seek would be made only pursuant to separate proxy materials complying with the requirements of Section 14(a) of the Exchange Act.

**No person has been authorized to give any information or make any representation on behalf of Parent or Purchaser not contained in this Offer to Purchase or in the Letter of Transmittal and, if given or made, such information or representation must not be relied upon as having been authorized. No broker, dealer, bank, trust company, fiduciary or other person shall be deemed to be an agent of Purchaser, the Depository or the Information Agent for the purpose of the Offer. Neither delivery of this Offer to Purchase nor any purchase pursuant to the Offer will, under any circumstances, create any implication that there has been no change in the affairs of Parent, Purchaser, Akcea or any of their respective subsidiaries since the date as of which information is furnished or the date of this Offer to Purchase.**

Ionis Pharmaceuticals, Inc.  
Avalanche Merger Sub, Inc.  
September 14, 2020

SCHEDULE A

INFORMATION CONCERNING MEMBERS OF THE BOARDS OF DIRECTORS AND  
THE EXECUTIVE OFFICERS OF PURCHASER AND PARENT

The common business address and telephone number for all the directors and executive officers of Parent and Purchaser is as follows:  
c/o Ionis Pharmaceuticals, Inc., 2855 Gazelle Court, Carlsbad, California 92010, telephone number: (760) 931-9200.

**1. Directors and Executive Officers of Purchaser.**

The following table sets forth information about the directors and executive officers of Purchaser as of September 8, 2020.

<u>Name, Country of Citizenship, Position</u>	<u>Present Principal Occupation or Employment; Material Positions Held During the Past Five Years; Certain Other Information</u>
<b>Brett Monia</b> United States of America Director and President	Dr. Monia is also a Director and the Chief Executive Officer of Parent. See “2. Directors and Executive Officers of Parent” below for further information.
<b>Elizabeth L. Hougen</b> United States of America Director and Treasurer	Ms. Hougen also serves as Parent’s Executive Vice President, Finance and Chief Financial Officer. See “2. Directors and Executive Officers of Parent” below for further information.
<b>Melissa Yoon</b> United States of America Secretary	Melissa Yoon has served as Parent’s Executive Director and Deputy General Counsel since January 2020. From November 2017 to December 2019, Ms. Yoon was the Director and Associate General Counsel for Parent. From March 2015 to June 2017, she served as the General Counsel of Amby Genetics Corp.

**2. Directors and Executive Officers of Parent.**

The following table sets forth information about the directors and executive officers of Parent as of September 8, 2020.

<u>Name, Country of Citizenship, Position</u>	<u>Present Principal Occupation or Employment; Material Positions Held During the Past Five Years; Certain Other Information</u>
<b>Spencer R. Berthelsen</b> United States of America Director	Spencer R. Berthelsen, M.D. has served as a Director of Parent since May 2002. Dr. Berthelsen practiced Internal Medicine with the Kelsey Seybold Clinic, a 400-physician medical group based in the Texas Medical Center in Houston, until March 2017. Dr. Berthelsen began at Kelsey Seybold in 1980 and served in various senior leadership positions throughout his nearly four-decade career at the clinic, including Chairman of the Department of Internal Medicine, Medical Director and Managing Director. He also served as Chairman of its board of directors from October 2001 through April 2016. He has served as Clinical Professor of Medicine at both Baylor College of Medicine and The University of Texas Health Science Center. Dr. Berthelsen served on the board of the Texas Academy of Internal Medicine in the past and the Caremark National Pharmacy and Therapeutics Committee from 1999 through 2005.

<u>Name, Country of Citizenship, Position</u>	<u>Present Principal Occupation or Employment; Material Positions Held During the Past Five Years; Certain Other Information</u>
<b>Breaux B. Castleman</b> United States of America Director	Breaux B. Castleman has served as a Director of Parent since June 2013. Since August 2001, Mr. Castleman has been President and Chief Executive Officer of Syntiro Healthcare Services, Inc., a healthcare investment company, which sold its operations as a service provider of integrated care management and disease management. Since January 2008, Mr. Castleman has been a Senior Advisor of McNally Capital, LLC, a private equity and merchant banking firm focused on investments in private equity, both direct to companies and through private equity partnerships. Mr. Castleman was a director of USMD Holdings, Inc., a physician-led integrated healthcare system, from August 2010 until September 2016.
<b>Stanley T. Crooke</b> United States of America Director	Stanley T. Crooke, M.D., Ph.D. is a founder of Parent and is Parent's Executive Chairman of the Board. He has been a Director since January 1989. He served as Parent's Chief Executive Officer from February 1989 until January 2020. In January 2020, Dr. Crooke was appointed Executive Chairman of the Board, and he has served as Chairman of the Board since February 1991. Prior to founding Parent, from 1980 until January 1989, Dr. Crooke worked for SmithKline Beckman Corporation, a pharmaceutical company, where his titles included President of Research and Development of SmithKline and French Laboratories. Dr. Crooke served on the board of directors of Akcea Therapeutics, Inc., a public biopharmaceutical company, from January 2015 through October 2018. The Board believes
<b>Michael Hayden</b> Canada and United States of America Director	Michael Hayden, CM, OBC, MB, ChB, Ph.D., FRCP(C), FRSC has served as a Director of Parent since September 2018. Dr. Hayden is a Killam Professor at the University of British Columbia and the Director of the Translational Laboratory in Genetic Medicine at the National University of Singapore and the Agency for Science, Technology and Research (A*STAR). From 2012 to 2017, he served as President of Global R&D and Chief Scientific Officer at Teva Pharmaceutical Industries Ltd. Dr. Hayden has founded three biotechnology companies and has been the recipient of numerous prestigious honors and awards, including being inducted into the Canadian Medical Hall of Fame, receiving the July 2012 Diamond Jubilee Medal, on behalf of HRH Queen Elisabeth II and the Margolese National Brain Disorder Prize, awarded to Canadians who have made outstanding contributions to the treatment, amelioration or cure of brain diseases. He has also received the Canada Gairdner Wightman award for his outstanding leadership in medicine and medical science as a physician-scientist. Dr. Hayden was awarded the Order of Canada, the Order of British Columbia, named Canada's Health Researcher of the Year by Canadian Institutes of Health Research, and has received the Prix Galien Award for his contribution to Canadian pharmaceutical research. Dr. Hayden has served on the boards of Aurinia Pharmaceuticals since February 2018 and Xenon Pharmaceuticals since November 1996, both public biopharmaceutical companies.
<b>Joan E. Herman</b> United States of America Director	Joan E. Herman has served as a Director of Parent since June 2019. Since 2008, Ms. Herman has served as President and Chief Executive Officer of Herman & Associates, a management consulting firm that

<u>Name, Country of Citizenship, Position</u>	<u>Present Principal Occupation or Employment; Material Positions Held During the Past Five Years; Certain Other Information</u>
<b>Joseph Klein, III</b> United States of America Director	<p>specializes in advising private equity firms investing in healthcare. She has experience leading healthcare and payor companies, serving in several executive positions at Anthem (formerly WellPoint), including as President and Chief Executive Officer of several different business units. Ms. Herman also served as a Senior Vice President of Phoenix Life Insurance Company. Since January 2013, Ms. Herman has served on the board of directors for Encompass Health (formerly HealthSouth). She previously served on the boards of both Convergys and AARP Services, Inc.</p> <p>Joseph Klein, III has served as a Director of Parent since December 2005. Mr. Klein has also served as a director of Akcea since September 2019, and is currently Managing Director of Gauss Capital Advisors, LLC, a financial consulting and investment advisory firm focused on biopharmaceuticals, which he founded in March 1998. From September 2003 to December 2008, Mr. Klein also served as a Venture Partner of Red Abbey Venture Partners, L.P., a life science private equity fund. From September 2001 to September 2002, Mr. Klein was a Venture Partner of MPM Capital, a healthcare venture capital firm. From June 1999 to September 2000 when it merged with WebMD Corporation, Mr. Klein served as Vice President, Strategy, for Medical Manager Corporation, a leading developer of physician office management information systems. For over nine years from 1989 to 1998, Mr. Klein was a health care investment analyst at T. Rowe Price Associates, Inc., where he was the founding portfolio manager of the T. Rowe Price Health Sciences Fund, Inc. Mr. Klein has served on the boards of directors of The Prospector Funds, Inc., an SEC Registered Investment Company that manages two no-load mutual funds, since September 2007 and Akcea Therapeutics, Inc., a public biopharmaceutical company, since September 2019. Mr. Klein also serves on the boards of private and non-profit entities.</p>
<b>Joseph Loscalzo</b> United States of America Director	<p>Joseph Loscalzo, M.D., Ph.D. has served as a Director of Parent since February 2014. Dr. Loscalzo is Hersey Professor of the Theory and Practice of Medicine at Harvard Medical School, Chairman of the Department of Medicine, and Physician-in-Chief at Brigham and Women's Hospital. Dr. Loscalzo received his A.B. degree, summa cum laude, his Ph.D. in biochemistry, and his M.D. from the University of Pennsylvania. He completed his clinical training at Brigham and Women's Hospital and Harvard Medical School, where he served as Resident and Chief Resident in medicine and Fellow in cardiovascular medicine. Post-training, Dr. Loscalzo joined the Harvard faculty and staff at Brigham and Women's Hospital in 1984. He rose to the rank of Associate Professor of Medicine, Chief of Cardiology at the West Roxbury Veterans Administration Medical Center, and Director of the Center for Research in Thrombolysis at Brigham and Women's Hospital. He joined the faculty of Boston University in 1994, first as Chief of Cardiology and, in 1997, Wade Professor and Chair of Medicine, Professor of Biochemistry, and Director of the Whitaker Cardiovascular Institute. He returned to Harvard and Brigham and Women's Hospital in 2005. Since January 2016, Dr. Loscalzo has served on the board of</p>

<u>Name, Country of Citizenship, Position</u>	<u>Present Principal Occupation or Employment; Material Positions Held During the Past Five Years; Certain Other Information</u>
<b>Brett Monia</b> United States of America Director and Chief Executive Officer	directors of Leap Therapeutics, Inc., a public biopharmaceutical company.  Brett Monia, Ph.D. has served as a Director of Parent since March 2019. Dr. Monia was promoted to Chief Executive Officer in January 2020. From January 2018 to December 2019, Dr. Monia served as Parent’s Chief Operating Officer, from January 2012 to January 2018, as Parent’s Senior Vice President, Drug Discovery, from February 2009 to January 2012, as Parent’s Vice President, Drug Discovery, and from October 2000 to February 2009, as Parent’s Vice President, Preclinical Drug Discovery. From October 1989 to October 2000, he held various positions within Parent’s Molecular Pharmacology department.
<b>Frederick T. Muto</b> United States of America Director	Frederick T. Muto has served as a Director of Parent since March 2001. Mr. Muto joined the law firm of Cooley LLP, outside counsel to Parent, in 1980, became a partner in 1986 and senior counsel in 2018. He is a founder of Cooley LLP’s San Diego office and was chair of the firm’s Business Department for a number of years.
<b>B. Lynne Parshall</b> United States of America Director	B. Lynne Parshall has served as a Director of Parent since September 2000 and as a Senior Strategic Advisor to Parent since January 2018. Previously she served as Parent’s Chief Operating Officer from December 2007 through January 2018 and as Chief Financial Officer from June 1994 through December 2012. She also served as Parent’s Corporate Secretary through 2014 and has served with Parent in various executive roles since November 1991. Prior to joining Parent, Ms. Parshall practiced law at Cooley LLP, outside counsel to Parent, where she was a partner from 1986 to 1991. Ms. Parshall is a member of the American and California bar associations. Ms. Parshall has served on the boards of directors of Cytokinetics, Inc. since February 2013, and Akcea Therapeutics, Inc., since January 2015, both public biopharmaceutical companies.
<b>Peter N. Reikes</b> United States of America Director	Peter N. Reikes has served as a Director of Parent since September 2018. Mr. Reikes is a Vice Chairman in the Investment Banking Division at Stifel, which he joined in late 2010. Over the course of his extensive career in investment banking, Mr. Reikes has completed a wide range of financing and merger and acquisition transactions for companies in the life sciences, medical technology and healthcare services sectors. Prior to joining Stifel, he spent 11 years at Cowen and Company, LLC, where he was Vice Chairman and Head of Healthcare Investment Banking, and over 14 years at PaineWebber Incorporated, where he was a Managing Director and Head of Healthcare Investment Banking and began his career in 1985. Mr. Reikes is also a director of the Heart & Soul Foundation, an organization that supports a range of community service programs in the greater New York City area. Mr. Reikes is a former director of Ricerca Biosciences, LLC, Biocompatibles, Ltd., and the affiliated partnership boards of Alkermes, Inc., Cephalon, Inc., Gensia, Inc., Genzyme Corporation and Repligen Corporation, as well as the Institute for Quality Improvement of the Accreditation Association for Ambulatory Health Care. Mr. Reikes received his B.A. in Economics from the University of California at Los Angeles and his M.B.A. in Finance from The Wharton School at the University of Pennsylvania.



<u>Name, Country of Citizenship, Position</u>	<u>Present Principal Occupation or Employment; Material Positions Held During the Past Five Years; Certain Other Information</u>
<b>Joseph H. Wender</b> United States of America Director	Joseph H. Wender has served as a Director of Parent since January 1994. Mr. Wender began with Goldman, Sachs & Co. in 1971 and became a General Partner of that firm in 1982, where he headed the Financial Institutions Group for over a decade. From January 2008 to January 2019, he was a Senior Consultant to Goldman Sachs & Co and is an Advisory Director to Goldman Sachs & Co. as of the beginning of 2019. He is a former Independent Trustee of the Schwab Family of Funds and Director of Grandpoint Capital, a bank holding company. Mr. Wender also is co-CEO and partner of Colgin Cellars. Since March 2014, Mr. Wender has been a Director of Outfront Media, a lessor of advertising space on out-of-home advertising structures, and has served as its Lead Independent Director since 2016.
<b>C. Frank Bennett</b> United States of America Executive Vice President, Chief Scientific Officer	Dr. Bennett was promoted to Chief Scientific Officer in January 2020. From January 2006 to December 2019, Dr. Bennett served as Senior Vice President, Antisense Research. From June 1995 to January 2006, Dr. Bennett served as Parent's Vice President, Research. From March 1993 to June 1995, he was Director, Molecular Pharmacology, and from May 1992 to March 1993, he was an Associate Director in Parent's Molecular and Cellular Biology department. Prior to joining Parent in 1989, Dr. Bennett was employed by SmithKline and French Laboratories in various research positions. He is an external member of the Scientific Advisory Board of Experimental Therapeutics Center in Singapore and the Hereditary Disease Foundation.
<b>Onaiza Cadoret-Manier</b> United States of America Executive Vice President, Chief Corporate Development and Commercial Officer	Ms. Cadoret-Manier joined Parent as Chief Corporate Development and Commercial Officer in January 2020. Prior to joining Parent, from 2018 to 2019 Ms. Cadoret-Manier was the chief commercial officer for Grail Biosciences, an early detection genomics company. Prior to Grail, Ms. Cadoret-Manier was vice president of the Respiratory Franchise at Genentech where she worked from 2011 to 2018. Ms. Cadoret-Manier also has held multiple senior management positions overseeing corporate strategy, alliances, and marketing and sales for numerous disease areas for Genentech, Pfizer and Amylin Pharmaceuticals.
<b>Richard S. Geary</b> United States of America Executive Vice President, Development	Dr. Geary has served as Parent's Executive Vice President, Development since August 2008. From August 2003 to August 2008, Dr. Geary served as Parent's Vice President, Preclinical Development. From November 1995 to August 2003, he held various positions within the Preclinical Development department. Prior to joining Parent in 1995, Dr. Geary was Senior Research Scientist and Group Leader for the bioanalytical and preclinical pharmacokinetics group in the Applied Chemistry Department at Southwest Research Institute.
<b>Elizabeth L. Hougen</b> United States of America Executive Vice President, Finance and Chief Financial Officer	Ms. Hougen has served as Parent's Executive Vice President, Finance and Chief Financial Officer since January 2013. From January 2007 to December 2012, Ms. Hougen served as Parent's Vice President, Finance and Chief Accounting Officer and from May 2000 to January 2007, she served as Parent's Vice President, Finance. Prior to joining Parent in 2000, Ms. Hougen was Executive Director, Finance and Chief Financial Officer for Molecular Biosystems, Inc., a public biotechnology company. Ms. Hougen is also the Treasurer and a Director of Purchaser.

<u>Name, Country of Citizenship, Position</u>	<u>Present Principal Occupation or Employment; Material Positions Held During the Past Five Years; Certain Other Information</u>
<b>Patrick R. O'Neil</b> United States of America Executive Vice President, Legal and General Counsel, Chief Compliance Officer	Mr. O'Neil has served as Parent's Executive Vice President, Legal and General Counsel since January 2013. Mr. O'Neil also serves as Parent's Chief Compliance Officer and Corporate Secretary. From September 2010 to January 2013, Mr. O'Neil served as Parent's Vice President, Legal and General Counsel and from January 2009 to September 2010, he served as Parent's Vice President, Legal and Senior Transactions Counsel. From October 2001 to January 2009 he held various positions within Parent's Legal department. Prior to joining Parent, Mr. O'Neil was an associate at Cooley LLP. Mr. O'Neil is also the President and a Director of Purchaser.
<b>Eric E. Swayze</b> United States of America Executive Vice President, Research	Dr. Swayze was promoted to Executive Vice President of Research at Parent Pharmaceuticals in January 2020. He is responsible for leading preclinical antisense drug discovery and antisense technology research. Previously, Dr. Swayze was Vice President of Chemistry and Neuroscience Drug Discovery at Parent, overseeing the advancement of multiple programs to clinical development. He joined Parent in 1994 and has contributed to key technology advancements, including Parent's Generation 2.5 chemistry and LICA technology.

**SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT**

The following table sets forth (i) certain information with respect to the Shares beneficially owned by Parent, the Purchaser and, to the best of their knowledge, their respective directors and officers, and, in the case of Parent, controlling stockholders and (ii) the purchases of Shares by Parent, the Purchaser and, to the best of their knowledge, their respective directors and officers, and, in the case of Parent, controlling stockholders during the past sixty days. The security ownership information in the table below is given as of September 8, 2020 and, in the case of percentage ownership information, is based on 101,759,772 Shares outstanding as of September 8, 2020. Beneficial ownership is determined in accordance with the rules of the SEC (except as noted below).

Filing Person	Securities Ownership		Securities Transaction for past 60 Days
	Number	Percent	
Parent	77,094,682	75.9%	—
The Purchaser	—	—	—
Spencer R. Berthelsen	—	—	—
Breaux B. Castleman	—	—	—
Stanley T. Crooke	—	—	—
Michael Hayden	—	—	—
Joan E. Herman	—	—	—
Joseph Klein, III	13,250	*	—
Joseph Loscalzo	—	—	—
Brett Monia	—	—	—
Frederick T. Muto	—	—	—
B. Lynne Parshall	52,925	*	—
Peter N. Reikes	—	—	—
Joseph H. Wender	—	—	—
C. Frank Bennett	—	—	—
Onaiza Cadoret-Manier	—	—	—
Richard S. Geary	—	—	—
Elizabeth L. Hougen	—	—	—
Patrick R. O'Neil	2,800	*	—
Eric E. Swayze	—	—	—
Melissa Yoon	—	—	—
All directors, officers and controlling stockholders of Parent and Purchaser as a group (1)	68,975	*	—

\* Represents beneficial ownership of less than 0.1%.

(1) The Shares owned by the Parent or Purchaser are not included in the Shares beneficially owned by the directors, officers and controlling stockholder of Parent or Purchaser.

SCHEDULE B

SECTION 262 OF THE GENERAL CORPORATION LAW OF THE STATE OF DELAWARE

§ 262 Appraisal rights

(a) Any stockholder of a corporation of this State who holds shares of stock on the date of the making of a demand pursuant to subsection (d) of this section with respect to such shares, who continuously holds such shares through the effective date of the merger or consolidation, who has otherwise complied with subsection (d) of this section and who has neither voted in favor of the merger or consolidation nor consented thereto in writing pursuant to § 228 of this title shall be entitled to an appraisal by the Court of Chancery of the fair value of the stockholder's shares of stock under the circumstances described in subsections (b) and (c) of this section. As used in this section, the word "stockholder" means a holder of record of stock in a corporation; the words "stock" and "share" mean and include what is ordinarily meant by those words; and the words "depository receipt" mean a receipt or other instrument issued by a depository representing an interest in 1 or more shares, or fractions thereof, solely of stock of a corporation, which stock is deposited with the depository.

(b) Appraisal rights shall be available for the shares of any class or series of stock of a constituent corporation in a merger or consolidation to be effected pursuant to § 251 (other than a merger effected pursuant to § 251(g) of this title), § 252, § 254, § 255, § 256, § 257, § 258, § 263 or § 264 of this title:

(1) Provided, however, that no appraisal rights under this section shall be available for the shares of any class or series of stock, which stock, or depository receipts in respect thereof, at the record date fixed to determine the stockholders entitled to receive notice of the meeting of stockholders to act upon the agreement of merger or consolidation (or, in the case of a merger pursuant to § 251(h), as of immediately prior to the execution of the agreement of merger), were either: (i) listed on a national securities exchange or (ii) held of record by more than 2,000 holders; and further provided that no appraisal rights shall be available for any shares of stock of the constituent corporation surviving a merger if the merger did not require for its approval the vote of the stockholders of the surviving corporation as provided in § 251(f) of this title.

(2) Notwithstanding paragraph (b)(1) of this section, appraisal rights under this section shall be available for the shares of any class or series of stock of a constituent corporation if the holders thereof are required by the terms of an agreement of merger or consolidation pursuant to §§ 251, 252, 254, 255, 256, 257, 258, 263 and 264 of this title to accept for such stock anything except:

- a. Shares of stock of the corporation surviving or resulting from such merger or consolidation, or depository receipts in respect thereof;
- b. Shares of stock of any other corporation, or depository receipts in respect thereof, which shares of stock (or depository receipts in respect thereof) or depository receipts at the effective date of the merger or consolidation will be either listed on a national securities exchange or held of record by more than 2,000 holders;
- c. Cash in lieu of fractional shares or fractional depository receipts described in the foregoing paragraphs (b)(2)a. and b. of this section; or
- d. Any combination of the shares of stock, depository receipts and cash in lieu of fractional shares or fractional depository receipts described in the foregoing paragraphs (b)(2)a., b. and c. of this section.

(3) In the event all of the stock of a subsidiary Delaware corporation party to a merger effected under § 253 or § 267 of this title is not owned by the parent immediately prior to the merger, appraisal rights shall be available for the shares of the subsidiary Delaware corporation.

(4) [Repealed.]

(c) Any corporation may provide in its certificate of incorporation that appraisal rights under this section shall be available for the shares of any class or series of its stock as a result of an amendment to its certificate of incorporation, any merger or consolidation in which the corporation is a constituent corporation or the sale of all or substantially all of the assets of the corporation. If the certificate of incorporation contains such a provision, the provisions of this section, including those set forth in subsections (d),(e), and (g) of this section, shall apply as nearly as is practicable.

(d) Appraisal rights shall be perfected as follows:

(1) If a proposed merger or consolidation for which appraisal rights are provided under this section is to be submitted for approval at a meeting of stockholders, the corporation, not less than 20 days prior to the meeting, shall notify each of its stockholders who was such on the record date for notice of such meeting (or such members who received notice in accordance with § 255(c) of this title) with respect to shares for which appraisal rights are available pursuant to subsection (b) or (c) of this section that appraisal rights are available for any or all of the shares of the constituent corporations, and shall include in such notice a copy of this section and, if 1 of the constituent corporations is a nonstock corporation, a copy of § 114 of this title. Each stockholder electing to demand the appraisal of such stockholder's shares shall deliver to the corporation, before the taking of the vote on the merger or consolidation, a written demand for appraisal of such stockholder's shares; provided that a demand may be delivered to the corporation by electronic transmission if directed to an information processing system (if any) expressly designated for that purpose in such notice. Such demand will be sufficient if it reasonably informs the corporation of the identity of the stockholder and that the stockholder intends thereby to demand the appraisal of such stockholder's shares. A proxy or vote against the merger or consolidation shall not constitute such a demand. A stockholder electing to take such action must do so by a separate written demand as herein provided. Within 10 days after the effective date of such merger or consolidation, the surviving or resulting corporation shall notify each stockholder of each constituent corporation who has complied with this subsection and has not voted in favor of or consented to the merger or consolidation of the date that the merger or consolidation has become effective; or

(2) If the merger or consolidation was approved pursuant to § 228, § 251(h), § 253, or § 267 of this title, then either a constituent corporation before the effective date of the merger or consolidation or the surviving or resulting corporation within 10 days thereafter shall notify each of the holders of any class or series of stock of such constituent corporation who are entitled to appraisal rights of the approval of the merger or consolidation and that appraisal rights are available for any or all shares of such class or series of stock of such constituent corporation, and shall include in such notice a copy of this section and, if 1 of the constituent corporations is a nonstock corporation, a copy of § 114 of this title. Such notice may, and, if given on or after the effective date of the merger or consolidation, shall, also notify such stockholders of the effective date of the merger or consolidation. Any stockholder entitled to appraisal rights may, within 20 days after the date of giving such notice or, in the case of a merger approved pursuant to § 251(h) of this title, within the later of the consummation of the offer contemplated by § 251(h) of this title and 20 days after the date of giving such notice, demand in writing from the surviving or resulting corporation the appraisal of such holder's shares; provided that a demand may be delivered to the corporation by electronic transmission if directed to an information processing system (if any) expressly designated for that purpose in such notice. Such demand will be sufficient if it reasonably informs the corporation of the identity of the stockholder and that the stockholder intends thereby to demand the appraisal of such holder's shares. If such notice did not notify stockholders of the effective date of the merger or consolidation, either (i) each such constituent corporation shall send a second notice before the effective date of the merger or consolidation notifying each of the holders of any class or series of stock of such constituent corporation that are entitled to appraisal rights of the effective date of the merger or consolidation or (ii) the surviving or resulting corporation shall send such a second notice to all such holders on or within 10 days after such effective date; provided, however, that if such second notice is sent more than 20 days following the sending of the first notice or, in the case of a merger approved pursuant to § 251(h) of this title, later than the later of the consummation of the offer contemplated by § 251(h) of this title and 20 days following the sending of the first notice, such second notice need only be sent to each stockholder who is entitled to appraisal rights and

who has demanded appraisal of such holder's shares in accordance with this subsection. An affidavit of the secretary or assistant secretary or of the transfer agent of the corporation that is required to give either notice that such notice has been given shall, in the absence of fraud, be prima facie evidence of the facts stated therein. For purposes of determining the stockholders entitled to receive either notice, each constituent corporation may fix, in advance, a record date that shall be not more than 10 days prior to the date the notice is given, provided, that if the notice is given on or after the effective date of the merger or consolidation, the record date shall be such effective date. If no record date is fixed and the notice is given prior to the effective date, the record date shall be the close of business on the day next preceding the day on which the notice is given.

(e) Within 120 days after the effective date of the merger or consolidation, the surviving or resulting corporation or any stockholder who has complied with subsections (a) and (d) of this section hereof and who is otherwise entitled to appraisal rights, may commence an appraisal proceeding by filing a petition in the Court of Chancery demanding a determination of the value of the stock of all such stockholders. Notwithstanding the foregoing, at any time within 60 days after the effective date of the merger or consolidation, any stockholder who has not commenced an appraisal proceeding or joined that proceeding as a named party shall have the right to withdraw such stockholder's demand for appraisal and to accept the terms offered upon the merger or consolidation. Within 120 days after the effective date of the merger or consolidation, any stockholder who has complied with the requirements of subsections (a) and (d) of this section hereof, upon request given in writing (or by electronic transmission directed to an information processing system (if any) expressly designated for that purpose in the notice of appraisal), shall be entitled to receive from the corporation surviving the merger or resulting from the consolidation a statement setting forth the aggregate number of shares not voted in favor of the merger or consolidation (or, in the case of a merger approved pursuant to § 251(h) of this title, the aggregate number of shares (other than any excluded stock (as defined in § 251(h)(6)d. of this title)) that were the subject of, and were not tendered into, and accepted for purchase or exchange in, the offer referred to in § 251(h)(2)), and, in either case, with respect to which demands for appraisal have been received and the aggregate number of holders of such shares. Such statement shall be given to the stockholder within 10 days after such stockholder's request for such a statement is received by the surviving or resulting corporation or within 10 days after expiration of the period for delivery of demands for appraisal under subsection (d) of this section hereof, whichever is later. Notwithstanding subsection (a) of this section, a person who is the beneficial owner of shares of such stock held either in a voting trust or by a nominee on behalf of such person may, in such person's own name, file a petition or request from the corporation the statement described in this subsection.

(f) Upon the filing of any such petition by a stockholder, service of a copy thereof shall be made upon the surviving or resulting corporation, which shall within 20 days after such service file in the office of the Register in Chancery in which the petition was filed a duly verified list containing the names and addresses of all stockholders who have demanded payment for their shares and with whom agreements as to the value of their shares have not been reached by the surviving or resulting corporation. If the petition shall be filed by the surviving or resulting corporation, the petition shall be accompanied by such a duly verified list. The Register in Chancery, if so ordered by the Court, shall give notice of the time and place fixed for the hearing of such petition by registered or certified mail to the surviving or resulting corporation and to the stockholders shown on the list at the addresses therein stated. Such notice shall also be given by 1 or more publications at least 1 week before the day of the hearing, in a newspaper of general circulation published in the City of Wilmington, Delaware or such publication as the Court deems advisable. The forms of the notices by mail and by publication shall be approved by the Court, and the costs thereof shall be borne by the surviving or resulting corporation.

(g) At the hearing on such petition, the Court shall determine the stockholders who have complied with this section and who have become entitled to appraisal rights. The Court may require the stockholders who have demanded an appraisal for their shares and who hold stock represented by certificates to submit their certificates of stock to the Register in Chancery for notation thereon of the pendency of the appraisal proceedings; and if any stockholder fails to comply with such direction, the Court may dismiss the proceedings as to such stockholder. If immediately before the merger or consolidation the shares of the class or series of stock of the constituent corporation as to which appraisal rights are available were listed on a national securities exchange, the Court

shall dismiss the proceedings as to all holders of such shares who are otherwise entitled to appraisal rights unless (1) the total number of shares entitled to appraisal exceeds 1% of the outstanding shares of the class or series eligible for appraisal, (2) the value of the consideration provided in the merger or consolidation for such total number of shares exceeds \$1 million, or (3) the merger was approved pursuant to § 253 or § 267 of this title.

(h) After the Court determines the stockholders entitled to an appraisal, the appraisal proceeding shall be conducted in accordance with the rules of the Court of Chancery, including any rules specifically governing appraisal proceedings. Through such proceeding the Court shall determine the fair value of the shares exclusive of any element of value arising from the accomplishment or expectation of the merger or consolidation, together with interest, if any, to be paid upon the amount determined to be the fair value. In determining such fair value, the Court shall take into account all relevant factors. Unless the Court in its discretion determines otherwise for good cause shown, and except as provided in this subsection, interest from the effective date of the merger through the date of payment of the judgment shall be compounded quarterly and shall accrue at 5% over the Federal Reserve discount rate (including any surcharge) as established from time to time during the period between the effective date of the merger and the date of payment of the judgment. At any time before the entry of judgment in the proceedings, the surviving corporation may pay to each stockholder entitled to appraisal an amount in cash, in which case interest shall accrue thereafter as provided herein only upon the sum of (1) the difference, if any, between the amount so paid and the fair value of the shares as determined by the Court, and (2) interest theretofore accrued, unless paid at that time. Upon application by the surviving or resulting corporation or by any stockholder entitled to participate in the appraisal proceeding, the Court may, in its discretion, proceed to trial upon the appraisal prior to the final determination of the stockholders entitled to an appraisal. Any stockholder whose name appears on the list filed by the surviving or resulting corporation pursuant to subsection (f) of this section and who has submitted such stockholder's certificates of stock to the Register in Chancery, if such is required, may participate fully in all proceedings until it is finally determined that such stockholder is not entitled to appraisal rights under this section.

(i) The Court shall direct the payment of the fair value of the shares, together with interest, if any, by the surviving or resulting corporation to the stockholders entitled thereto. Payment shall be so made to each such stockholder, in the case of holders of uncertificated stock forthwith, and the case of holders of shares represented by certificates upon the surrender to the corporation of the certificates representing such stock. The Court's decree may be enforced as other decrees in the Court of Chancery may be enforced, whether such surviving or resulting corporation be a corporation of this State or of any state.

(j) The costs of the proceeding may be determined by the Court and taxed upon the parties as the Court deems equitable in the circumstances. Upon application of a stockholder, the Court may order all or a portion of the expenses incurred by any stockholder in connection with the appraisal proceeding, including, without limitation, reasonable attorney's fees and the fees and expenses of experts, to be charged pro rata against the value of all the shares entitled to an appraisal.

(k) From and after the effective date of the merger or consolidation, no stockholder who has demanded appraisal rights as provided in subsection (d) of this section shall be entitled to vote such stock for any purpose or to receive payment of dividends or other distributions on the stock (except dividends or other distributions payable to stockholders of record at a date which is prior to the effective date of the merger or consolidation); provided, however, that if no petition for an appraisal shall be filed within the time provided in subsection (e) of this section, or if such stockholder shall deliver to the surviving or resulting corporation a written withdrawal of such stockholder's demand for an appraisal and an acceptance of the merger or consolidation, either within 60 days after the effective date of the merger or consolidation as provided in subsection (e) of this section or thereafter with the written approval of the corporation, then the right of such stockholder to an appraisal shall cease. Notwithstanding the foregoing, no appraisal proceeding in the Court of Chancery shall be dismissed as to any stockholder without the approval of the Court, and such approval may be conditioned upon such terms as the Court deems just; provided, however that this provision shall not affect the right of any stockholder who has not commenced an appraisal proceeding or joined that proceeding as a named party to withdraw such stockholder's

demand for appraisal and to accept the terms offered upon the merger or consolidation within 60 days after the effective date of the merger or consolidation, as set forth in subsection (e) of this section.

(l) The shares of the surviving or resulting corporation to which the shares of such objecting stockholders would have been converted had they assented to the merger or consolidation shall have the status of authorized and unissued shares of the surviving or resulting corporation.

The Letter of Transmittal, certificates for Shares and any other required documents should be sent by each stockholder of Akcea or such stockholder's broker, dealer, commercial bank, trust company or other nominee to the Depository as follows:

The Depository for the Offer is:



***By Mail:***

American Stock Transfer & Trust Company, LLC  
Operations Center  
Attention: Reorganization Department  
6201 15th Avenue  
Brooklyn, NY 11219

***By Overnight Courier:***

American Stock Transfer & Trust Company, LLC  
Operations Center  
Attention: Reorganization Department  
6201 15th Avenue  
Brooklyn, NY 11219

Any questions or requests for assistance may be directed to the Information Agent at its telephone number and location listed below. Requests for additional copies of this Offer to Purchase and the Letter of Transmittal may be directed to the Information Agent at its telephone number and location listed below. You may also contact your broker, dealer, commercial bank or trust company or other nominee for assistance concerning the Offer.

The Information Agent for the Offer is:



Alliance Advisors, LLC  
200 Broadacres Drive, 3<sup>rd</sup> Floor  
Bloomfield, New Jersey 07003  
(833) 934-2735





**PLEASE READ THE INSTRUCTIONS ACCOMPANYING THIS LETTER OF TRANSMITTAL CAREFULLY BEFORE COMPLETING THIS LETTER OF TRANSMITTAL.**

**IF YOU WOULD LIKE ADDITIONAL COPIES OF THIS LETTER OF TRANSMITTAL OR ANY OF THE OTHER OFFERING DOCUMENTS, YOU SHOULD CONTACT THE INFORMATION AGENT, ALLIANCE ADVISORS, LLC AT (833) 934-2735.**

You have received this Letter of Transmittal in connection with the offer of Avalanche Merger Sub, Inc., a Delaware corporation (“Purchaser”) and a wholly owned subsidiary of Ionis Pharmaceuticals, Inc., a Delaware corporation (“Parent”), to purchase all outstanding shares of common stock, par value \$0.001 per share (the “Shares”), of Akcea Therapeutics, Inc., a Delaware corporation (“Akcea”), that Parent does not already own, at a price of \$18.15 per Share, net to the seller in cash, without interest and subject to deduction for any required withholding taxes, as described in the Offer to Purchase, dated September 14, 2020 (as it may be amended or supplemented from time to time, the “Offer to Purchase” and which, together with this Letter of Transmittal, as it may be amended or supplemented from time to time, constitutes the “Offer”).

You should use this Letter of Transmittal to deliver to American Stock Transfer & Trust Company, LLC (the “Depository”) Shares represented by stock certificates, or held in book-entry form on the books of Akcea, for tender. If you are delivering your Shares by book-entry transfer to an account maintained by the Depository at The Depository Trust Company (“DTC”), you must use an Agent’s Message (as defined in Instruction 2 below). In this Letter of Transmittal, stockholders who deliver certificates representing their Shares are referred to as “Certificated Stockholders,” and stockholders who deliver their Shares through book-entry transfer are referred to as “Book-Entry Stockholders.”

If certificates for your Shares are not immediately available or you cannot deliver your certificates and all other required documents to the Depository prior to the Expiration Date or you cannot complete the book-entry transfer procedures prior to the Expiration Date, you may nevertheless tender your Shares according to the guaranteed delivery procedures set forth in Section 13 of the Offer to Purchase. See Instruction 2 below. **Delivery of documents to DTC will not constitute delivery to the Depository.**

- CHECK HERE IF TENDERED SHARES ARE BEING DELIVERED BY BOOK-ENTRY TRANSFER TO THE ACCOUNT MAINTAINED BY THE DEPOSITORY WITH DTC AND COMPLETE THE FOLLOWING (ONLY FINANCIAL INSTITUTIONS THAT ARE PARTICIPANTS IN DTC MAY DELIVER SHARES BY BOOK-ENTRY TRANSFER):**

Name of Tendering  
Institution: \_\_\_\_\_

DTC Participant  
Number: \_\_\_\_\_

Transaction Code  
Number: \_\_\_\_\_

- CHECK HERE IF TENDERED SHARES ARE BEING DELIVERED PURSUANT TO A NOTICE OF GUARANTEED DELIVERY PREVIOUSLY SENT TO THE DEPOSITORY AND COMPLETE THE FOLLOWING (PLEASE ENCLOSE A PHOTOCOPY OF SUCH NOTICE OF GUARANTEED DELIVERY):**

Name(s) of Registered Owner(s): \_\_\_\_\_

Window Ticket Number (if any) or DTC Participant  
Number: \_\_\_\_\_

Date of Execution of Notice of Guaranteed  
Delivery: \_\_\_\_\_

Name of Institution which Guaranteed  
Delivery: \_\_\_\_\_

**NOTE: SIGNATURES MUST BE PROVIDED BELOW.  
PLEASE READ THE ACCOMPANYING INSTRUCTIONS CAREFULLY.**

Ladies and Gentlemen:

The undersigned hereby tenders to Avalanche Merger Sub, Inc., a Delaware corporation (“Purchaser”) and a wholly owned subsidiary of Ionis Pharmaceuticals, Inc., a Delaware corporation (“Parent”), the above-described shares of common stock, par value \$0.001 per share (the “Shares”), of Akcea Therapeutics, Inc., a Delaware corporation (“Akcea”), at a price of \$18.15 per Share, net to the seller in cash, without interest and subject to deduction of any required withholding taxes, on the terms and subject to the conditions set forth in the Offer to Purchase, receipt of which is hereby acknowledged, and this Letter of Transmittal (as it may be amended or supplemented from time to time, this “Letter of Transmittal” and, together with the Offer to Purchase, as it may be amended or supplemented from time to time, constitutes the “Offer”). The Offer is being made pursuant to the Agreement and Plan of Merger, dated August 30, 2020 (as amended from time to time, the “Merger Agreement”), among Akcea, Parent and Purchaser. The Merger Agreement provides, among other things, that as soon as practicable following acceptance of Shares pursuant to the Offer, Purchaser will merge with and into Akcea, with Akcea being the surviving corporation. The undersigned understands that Purchaser reserves the right to transfer or assign, from time to time, in whole or in part, to one or more of its affiliates, the right to purchase the Shares tendered herewith.

On the terms and subject to the conditions of the Offer (including, if the Offer is extended or amended, the terms and conditions of such extension or amendment), subject to, and effective upon, acceptance for payment and payment for the Shares validly tendered herewith, and not properly withdrawn, prior to the Expiration Date in accordance with the terms of the Offer, the undersigned hereby sells, assigns and transfers to, or upon the order of, Purchaser, all right, title and interest in and to all of the Shares being tendered hereby. In addition, the undersigned hereby irrevocably appoints American Stock Transfer & Trust Company, LLC (the “Depository”) the true and lawful agent and attorney-in-fact and proxy of the undersigned with respect to such Shares with full power of substitution (such proxies and power of attorney being deemed to be an irrevocable power coupled with an interest in the tendered shares) to the full extent of such stockholder’s rights with respect to such Shares (a) to deliver certificates representing Shares (the “Share Certificates”) or transfer of ownership of such Shares on the account books maintained by DTC, together, in either such case, with all accompanying evidence of transfer and authenticity, to or upon the order of Purchaser, (b) to present such Shares for transfer on the books of Akcea, and (c) to receive all benefits and otherwise exercise all rights of beneficial ownership of such Shares, all in accordance with the terms and subject to the conditions of the Offer.

The undersigned hereby irrevocably appoints each of the designees of Purchaser the attorneys-in-fact and proxies of the undersigned, each with full power of substitution, to the full extent of such stockholder’s rights with respect to the Shares tendered hereby which have been accepted for payment. The designees of Purchaser will, with respect to the Shares for which the appointment is effective, be empowered to exercise all voting and any other rights of such stockholder, as they, in their sole discretion, may deem proper at any annual, special, adjourned or postponed meeting of Akcea’s stockholders, by written consent in lieu of any such meeting or otherwise. This proxy and power of attorney shall be irrevocable and coupled with an interest in the tendered Shares. Such appointment is effective when, and only to the extent that, Purchaser accepts the Shares tendered with this Letter of Transmittal for payment pursuant to the Offer. Upon the effectiveness of such appointment, without further action, all prior powers of attorney, proxies and consents given by the undersigned with respect to such Shares will be revoked and no subsequent powers of attorney, proxies, consents or revocations may be given (and, if given, will not be deemed effective). Purchaser reserves the right to require that, in order for Shares to be deemed validly tendered, immediately upon Purchaser’s acceptance for payment of such Shares, Purchaser must be able to exercise full voting, consent and other rights, to the extent permitted under applicable law, with respect to such Shares, including voting at any meeting of stockholders or executing a written consent concerning any matter.

The undersigned hereby represents and warrants that the undersigned has full power and authority to tender, sell, assign and transfer the Shares tendered hereby and, when the same are accepted for payment by Purchaser,

Purchaser will acquire good, marketable and unencumbered title thereto, free and clear of all liens, restrictions, charges and encumbrances and the same will not be subject to any adverse claim. The undersigned hereby represents and warrants that the undersigned is the registered owner of the Shares, or the Share Certificate(s) have been endorsed to the undersigned in blank, or the undersigned is a participant in DTC whose name appears on a security position listing as the owner of the Shares. The undersigned will, upon request, execute and deliver any additional documents deemed by the Depository or Purchaser to be necessary or desirable to complete the sale, assignment and transfer of the Shares tendered hereby.

It is understood that the undersigned will not receive payment for the Shares unless and until the Shares are accepted for payment and until the Share Certificate(s) owned by the undersigned are received by the Depository at the address set forth above, together with such additional documents as the Depository may require, or, in the case of Shares held in book-entry form, ownership of Shares is validly transferred on the account books maintained by DTC, and until the same are processed for payment by the Depository.

**IT IS UNDERSTOOD THAT THE METHOD OF DELIVERY OF THE SHARES, THE SHARE CERTIFICATE(S) AND ALL OTHER REQUIRED DOCUMENTS (INCLUDING DELIVERY THROUGH DTC) IS AT THE OPTION AND RISK OF THE UNDERSIGNED AND THAT THE RISK OF LOSS OF SUCH SHARES, SHARE CERTIFICATE(S) AND OTHER DOCUMENTS SHALL PASS ONLY AFTER THE DEPOSITORY HAS ACTUALLY RECEIVED THE SHARES OR SHARE CERTIFICATE(S) (INCLUDING, IN THE CASE OF A BOOK-ENTRY TRANSFER, BY BOOK-ENTRY CONFIRMATION (AS DEFINED BELOW)). IF DELIVERY IS BY MAIL, IT IS RECOMMENDED THAT ALL SUCH DOCUMENTS BE SENT BY PROPERLY INSURED REGISTERED MAIL WITH RETURN RECEIPT REQUESTED. DELIVERY WILL BE DEEMED EFFECTIVE AND RISK OF LOSS AND TITLE WILL PASS FROM THE OWNER ONLY WHEN RECEIVED BY THE EXCHANGE AGENT. IN ALL CASES, SUFFICIENT TIME SHOULD BE ALLOWED TO ENSURE TIMELY DELIVERY.**

All authority conferred or agreed to be conferred pursuant to this Letter of Transmittal shall not be affected by, and shall survive, the death or incapacity of the undersigned and any obligation of the undersigned hereunder shall be binding upon the heirs, executors, administrators, trustees in bankruptcy, personal representatives, successors and assigns of the undersigned. Except as stated in the Offer to Purchase, this tender is irrevocable.

The undersigned understands that the acceptance for payment by Purchaser of Shares tendered pursuant to one of the procedures described in Section 13 of the Offer to Purchase and in the instructions hereto will constitute a binding agreement between the undersigned and Purchaser upon the terms and subject to the conditions of the Offer.

Unless otherwise indicated herein under "Special Payment Instructions," please issue the check for the purchase price in the name(s) of, and/or return any Share Certificates representing Shares not tendered or accepted for payment to, the registered owner(s) appearing under "Description of Shares Tendered." Similarly, unless otherwise indicated under "Special Delivery Instructions," please mail the check for the purchase price and/or return any Share Certificates representing Shares not tendered or accepted for payment (and accompanying documents, as appropriate) to the address(es) of the registered owner(s) appearing under "Description of Shares Tendered." In the event that both the Special Delivery Instructions and the Special Payment Instructions are completed, please issue the check for the purchase price and/or issue any Share Certificates representing Shares not tendered or accepted for payment (and any accompanying documents, as appropriate) in the name of, and deliver such check and/or return such Share Certificates (and any accompanying documents, as appropriate) to, the person or persons so indicated. Unless otherwise indicated herein in the box titled "Special Payment Instructions," please credit any Shares tendered hereby or by an Agent's Message and delivered by book-entry transfer, but which are not purchased, by crediting the account at DTC designated above. The undersigned recognizes that Purchaser has no obligation pursuant to the Special Payment Instructions to transfer any Shares from the name of the registered owner thereof if Purchaser does not accept for payment any of the Shares so tendered.

**SPECIAL PAYMENT INSTRUCTIONS**  
(See Instructions 1, 4, 5 and 7)

To be completed ONLY if Share Certificate(s) not tendered or not accepted for payment and/or the check for the purchase price in consideration of Shares accepted for payment are to be issued in the name of someone other than the undersigned or if Shares tendered by book-entry transfer which are not accepted for payment are to be returned by credit to an account maintained at DTC other than that designated above.

Issue:  Check and/or  Share  
Certificates to:

Name: \_\_\_\_\_  
(Please Print)

Address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_ (Include Zip Code)

\_\_\_\_\_ (Tax Identification or Social Security Number)

Credit Shares tendered by book-entry transfer that are not accepted for payment to the DTC account set forth below.

\_\_\_\_\_ (DTC Account Number)

**SPECIAL DELIVERY INSTRUCTIONS**  
(See Instructions 1, 4, 5 and 7)

To be completed ONLY if Share Certificate(s) not tendered or not accepted for payment and/or the check for the purchase price of Shares accepted for payment are to be sent to someone other than the undersigned or to the undersigned at an address other than that shown in the box titled "Description of Shares Tendered" above.

Deliver:  Check(s) and/or  Share Certificates to:

Name: \_\_\_\_\_  
(Please Print)

Address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_ (Include Zip Code)

**IMPORTANT—SIGN HERE**  
**(U.S. Holders Please Also Complete the Enclosed IRS Form W-9)**  
**(Non-U.S. Holders Please Obtain and Complete IRS Form W-8BEN or Other Applicable IRS Form W-8)**

\_\_\_\_\_  
(Signature(s) of Stockholder(s))

Dated: \_\_\_\_\_, 2020

(Must be signed by registered owner(s) exactly as name(s) appear(s) on Share Certificate(s) or on a security position listing or by person(s) authorized to become registered owner(s) by certificates and documents transmitted herewith. If signature is by trustees, executors, administrators, guardians, attorneys-in-fact, officers of corporations or others acting in a fiduciary or representative capacity, please set forth full title and see Instruction 5. For information concerning signature guarantees, see Instruction 1.)

Name(s): \_\_\_\_\_  
(Please Print)

Capacity (full title): \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_  
(Include Zip Code)

Area Code and Telephone Number: \_\_\_\_\_

Email Address: \_\_\_\_\_

Tax Identification or  
Social Security No.: \_\_\_\_\_

**GUARANTEE OF SIGNATURE(S)**  
**(For use by Eligible Institutions only;**  
**see Instructions 1 and 5)**

Name of Firm: \_\_\_\_\_

\_\_\_\_\_  
(Include Zip Code)

Authorized Signature: \_\_\_\_\_

Name: \_\_\_\_\_

\_\_\_\_\_  
(Please Type or Print)

Area Code and Telephone Number: \_\_\_\_\_

Dated: \_\_\_\_\_, 20

**INSTRUCTIONS**  
**Forming Part of the Terms and Conditions of the Offer**

1. **Guarantee of Signatures.** Except as otherwise provided below, all signatures on this Letter of Transmittal must be guaranteed by a financial institution (including most commercial banks, savings and loan associations and brokerage houses) that is a member in good standing of a recognized Medallion Program approved by the Securities Transfer Association, Inc., including the Security Transfer Agents Medallion Program, the New York Stock Exchange Medallion Signature Program and the Stock Exchanges Medallion Program (each, an "Eligible Institution"). Signatures on this Letter of Transmittal need not be guaranteed (a) if this Letter of Transmittal is signed by the registered owner(s) (which term, for purposes of this document, includes any participant in any of DTC's systems whose name appears on a security position listing as the owner of the Shares) of Shares tendered herewith and such registered owner has not completed the box titled "Special Payment Instructions" or the box titled "Special Delivery Instructions" on this Letter of Transmittal or (b) if such Shares are tendered for the account of an Eligible Institution. See Instruction 5.

2. **Delivery of Letter of Transmittal and Certificates or Book-Entry Confirmations.** This Letter of Transmittal is to be completed by stockholders if Share Certificates are to be forwarded herewith. If tenders are to be made pursuant to the procedures for tender by book-entry transfer set forth in Section 13 of the Offer to Purchase, an Agent's Message must be utilized. A manually executed facsimile of this document may be used in lieu of the original. Share Certificates representing all physically tendered Shares, or confirmation of any book-entry transfer into the Depository's account at DTC of Shares tendered by book-entry transfer ("Book Entry Confirmation"), as well as this Letter of Transmittal properly completed and duly executed with any required signature guarantees, or an Agent's Message in the case of a book-entry transfer, and any other documents required by this Letter of Transmittal, must be received by the Depository at its address set forth herein prior to the Expiration Date (as defined in Section 11 of the Offer to Purchase). Please do not send your Share Certificates directly to Purchaser, Parent, or Akcea.

Stockholders whose Share Certificates are not immediately available or who cannot deliver all other required documents to the Depository prior to the Expiration Date or who cannot complete the procedures for book-entry transfer prior to the Expiration Date may nevertheless tender their Shares by properly completing and duly executing a Notice of Guaranteed Delivery pursuant to the guaranteed delivery procedure set forth in Section 13 of the Offer to Purchase. Pursuant to such procedure: (a) such tender must be made by or through an Eligible Institution, (b) a properly completed and duly executed Notice of Guaranteed Delivery substantially in the form provided by Purchaser must be received by the Depository prior to the Expiration Date, and (c) Share Certificates representing all tendered Shares, in proper form for transfer (or a Book Entry Confirmation with respect to such Shares), this Letter of Transmittal (or facsimile thereof), properly completed and duly executed with any required signature guarantees (or, in the case of a book-entry transfer, an Agent's Message), and all other documents required by this Letter of Transmittal, if any, must be received by the Depository within two Nasdaq trading days after the date of execution of such Notice of Guaranteed Delivery.

A properly completed and duly executed Letter of Transmittal (or facsimile thereof) must accompany each such delivery of Share Certificates to the Depository.

The term "Agent's Message" means a message, transmitted through electronic means by DTC to, and received by, the Depository and forming part of a Book-Entry Confirmation, which states that DTC has received an express acknowledgment from the participant in DTC tendering the Shares which are the subject of such Book-Entry Confirmation that such participant has received and agrees to be bound by the terms of this Letter of Transmittal and that Purchaser may enforce such agreement against the participant. The term "Agent's Message" also includes any hard copy printout evidencing such message generated by a computer terminal maintained at the Depository's office.



**THE METHOD OF DELIVERY OF THE SHARES, THIS LETTER OF TRANSMITTAL AND ALL OTHER REQUIRED DOCUMENTS, INCLUDING DELIVERY THROUGH DTC, IS AT THE ELECTION AND RISK OF THE TENDERING STOCKHOLDER. DELIVERY OF ALL SUCH DOCUMENTS WILL BE DEEMED MADE AND RISK OF LOSS OF THE SHARE CERTIFICATES SHALL PASS ONLY WHEN ACTUALLY RECEIVED BY THE DEPOSITORY (INCLUDING, IN THE CASE OF A BOOK-ENTRY TRANSFER, BY BOOK-ENTRY CONFIRMATION). IF SUCH DELIVERY IS BY MAIL, IT IS RECOMMENDED THAT ALL SUCH DOCUMENTS BE SENT BY PROPERLY INSURED REGISTERED MAIL WITH RETURN RECEIPT REQUESTED. IN ALL CASES, SUFFICIENT TIME SHOULD BE ALLOWED TO ENSURE TIMELY DELIVERY.**

No alternative, conditional or contingent tenders will be accepted and no fractional Shares will be purchased. All tendering stockholders, by execution of this Letter of Transmittal (or facsimile thereof), waive any right to receive any notice of the acceptance of their Shares for payment.

All questions as to validity, form and eligibility (including time of receipt) of the surrender of any Share Certificate hereunder, including questions as to the proper completion or execution of any Letter of Transmittal, Notice of Guaranteed Delivery or other required documents and as to the proper form for transfer of any certificate of Shares, will be determined by Purchaser in its sole and absolute discretion (which may delegate power in whole or in part to the Depository) which determination will be final and binding. Purchaser reserves the absolute right to reject any and all tenders determined by it not to be in proper form or the acceptance for payment of or payment for which may be unlawful. Purchaser also reserves the absolute right to waive any defect or irregularity in the surrender of any Shares or Share Certificate(s) whether or not similar defects or irregularities are waived in the case of any other stockholder. A surrender will not be deemed to have been validly made until all defects and irregularities have been cured or waived. Purchaser and the Depository shall make reasonable efforts to notify any person of any defect in any Letter of Transmittal submitted to the Depository.

**3. Inadequate Space.** If the space provided herein is inadequate, the certificate numbers and/or the number of Shares should be listed on a separate schedule attached hereto and separately signed on each page thereof in the same manner as this Letter of Transmittal is signed.

**4. Partial Tenders (Applicable to Certificated Stockholders Only).** If fewer than all the Shares evidenced by any Share Certificate delivered to the Depository are to be tendered, fill in the number of Shares which are to be tendered in the column titled "Number of Shares Tendered" in the box titled "Description of Shares Tendered." In such cases, new certificate(s) for the remainder of the Shares that were evidenced by the old certificate(s) but not tendered will be sent to the registered owner, unless otherwise provided in the appropriate box on this Letter of Transmittal, as soon as practicable after the Expiration Date. All Shares represented by Share Certificates delivered to the Depository will be deemed to have been tendered unless otherwise indicated.

**5. Signatures on Letter of Transmittal; Stock Powers and Endorsements.** If this Letter of Transmittal is signed by the registered owner(s) of the Shares tendered hereby, the signature(s) must correspond with the name(s) as written on the face of the Share Certificate(s) without alteration or any other change whatsoever.

If any Shares tendered hereby are owned of record by two or more joint owners, all such owners must sign this Letter of Transmittal.

If any tendered Shares are registered in the names of different holder(s), it will be necessary to complete, sign and submit as many separate Letters of Transmittal (or facsimiles thereof) as there are different registrations of such Shares.

If this Letter of Transmittal or any certificates or stock powers are signed by trustees, executors, administrators, guardians, attorneys-in-fact, officers of corporations or others acting in a fiduciary or representative capacity, such persons should so indicate when signing, and proper evidence satisfactory to Purchaser of their authority so to act must be submitted.

If this Letter of Transmittal is signed by the registered owner(s) of the Shares listed and transmitted hereby, no endorsements of Share Certificates or separate stock powers are required unless payment is to be made to, or Share Certificates representing Shares not tendered or accepted for payment are to be issued in the name of, a person other than the registered owner(s), in which case the Share Certificates representing the Shares tendered by this Letter of Transmittal must be endorsed or accompanied by appropriate stock powers, in either case, signed exactly as the name(s) of the registered owner(s) or holder(s) appear(s) on the Share Certificates. Signatures on such Share Certificates or stock powers must be guaranteed by an Eligible Institution.

If this Letter of Transmittal is signed by a person other than the registered owner(s) of the Share(s) listed, the Share Certificate(s) must be endorsed or accompanied by the appropriate stock powers, in either case, signed exactly as the name or names of the registered owner(s) or holder(s) appear(s) on the Share Certificate(s). Signatures on such Share Certificates or stock powers must be guaranteed by an Eligible Institution.

**6. Transfer Taxes.** Akcea will pay any transfer, documentary, sales, use, stamp, registration and other similar taxes and fees imposed on Akcea with respect to the transfer of Shares pursuant to the Offer or the Merger, as applicable. For the avoidance of doubt, such taxes do not include United States federal income or backup withholding taxes. If, however, payment of the purchase price is to be made to any person other than the registered owner(s), or if tendered Share Certificates are registered in the name of any person other than the person signing this Letter of Transmittal, it shall be a condition of payment that the person requesting such payment shall have paid all transfer and other similar taxes required by reason of the payment of the purchase price to a person other than the registered holder of the Shares tendered, or shall have established to the satisfaction of Parent that such transfer or other taxes either have been paid or are not applicable.

**Except as provided in this Instruction 6, it will not be necessary for transfer tax stamps to be affixed to the Share Certificates listed in this Letter of Transmittal.**

**7. Special Payment and Delivery Instructions.** If a check for the purchase price is to be issued, and/or Share Certificates representing Shares not tendered or accepted for payment are to be issued or returned to, a person other than the signer(s) of this Letter of Transmittal or to an address other than that shown in the box titled "Description of Shares Tendered" above, the appropriate boxes on this Letter of Transmittal should be completed. Stockholders delivering Shares tendered hereby or by Agent's Message by book-entry transfer may request that Shares not purchased be credited to an account maintained at DTC as such stockholder may designate in the box titled "Special Payment Instructions" herein. If no such instructions are given, all such Shares not purchased will be returned by crediting the same account at DTC as the account from which such Shares were delivered.

**8. Requests for Assistance or Additional Copies.** Questions or requests for assistance may be directed to the Information Agent at its address and telephone number set forth below or to your broker, dealer, commercial bank or trust company. Additional copies of the Offer to Purchase, this Letter of Transmittal, the Notice of Guaranteed Delivery and other tender offer materials may be obtained from the Information Agent as set forth below, and will be furnished at Purchaser's expense.

**9. Backup Withholding.** In order to eliminate the Depository's obligation to withhold a portion of the amount of any payments under U.S. federal backup withholding tax rules, each tendering stockholder or payee that is a United States person (for U.S. federal income tax purposes), must provide the Depository with such stockholder's or payee's correct taxpayer identification number ("TIN") and certify that such stockholder or payee is not subject to such backup withholding by completing the attached Internal Revenue Service ("IRS") Form W-9.

Certain stockholders or payees (including, among others, corporations, non-resident foreign individuals and foreign entities) are exempt from these backup withholding and reporting requirements. Exempt stockholders or payees that are United States persons should furnish their TIN, check the appropriate box on the IRS Form W-9 and sign, date and return the IRS Form W-9 to the Depository in order to avoid backup withholding. A tendering stockholder who is not a United States person should complete, sign, and submit to the Depository the appropriate IRS Form W-8, or otherwise establish an exemption from backup withholding. An IRS Form W-8BEN may be obtained from the Depository or downloaded from the Internal Revenue Service's website at the following address: <http://www.irs.gov>. Failure to complete the IRS Form W-9 will not, by itself, cause Shares to be deemed invalidly tendered, but may require the Depository to withhold a portion of the amount of any payments made of the Offer Price or the Merger Consideration pursuant to the Offer or Merger, as applicable, and such stockholder or payee may be subject to a penalty imposed by the IRS. See the enclosed IRS Form W-9 and the instructions thereto for additional information.

Backup withholding is not an additional tax. Rather, the U.S. federal income tax liability of persons subject to backup withholding will be reduced by the amount of tax withheld. If withholding results in an overpayment of taxes, a refund or credit may be obtained from the IRS provided that the required information is timely furnished to the IRS.

**NOTE: FAILURE TO COMPLETE AND RETURN THE IRS FORM W-9 OR AN APPROPRIATE IRS FORM W-8 MAY RESULT IN BACKUP WITHHOLDING OF A PORTION OF ANY PAYMENTS MADE TO YOU PURSUANT TO THE OFFER. PLEASE REVIEW THE "IMPORTANT TAX INFORMATION" SECTION BELOW.**

**10. Withholding with Respect to Payments Treated as Dividends.** To the extent that the payment of any consideration pursuant to the Offer or the Merger to a person other than a United States person is treated as the payment of a dividend for U.S. federal income tax purposes, as described in Section 15 of the Offer to Purchase, the Depository may be required to withhold a portion of such consideration. The Depository may deduct and withhold from any consideration payable pursuant to the Offer or the Merger unless such stockholder (i) certifies in this Letter of Transmittal, as provided below, that such stockholder's receipt of cash in exchange for its Shares pursuant to the Offer or the Merger is not a distribution of property to which Section 301 of the Internal Revenue Code of 1986, as amended, applies, or (ii) timely delivers to the Depository a properly completed and executed appropriate IRS Form W-8 evidencing that such withholding is not required or that such withholding may be done at a reduced rate under an applicable income tax treaty. Under certain circumstances, such stockholder may be eligible to obtain a refund of all or a portion of any U.S. federal income tax so withheld. Stockholders that are not United States persons are encouraged to consult their tax advisors to determine the particular tax consequences to them of the Offer or the Merger. See the Offer to Purchase for additional information regarding the treatment of such consideration as a dividend for U.S. federal income tax purposes. Each stockholder that is not a United States person should consult its tax advisor with any questions regarding which IRS Form W-8 is appropriate or how to fill out the form.

**11. Lost, Destroyed, Mutilated or Stolen Share Certificates.** If any Share Certificate has been lost, destroyed, mutilated or stolen, the stockholder should promptly notify Akcea's stock transfer agent, American Stock Transfer & Trust Company, LLC at (800) 937-5449. The stockholder will then be instructed as to the steps that must be taken in order to replace the Share Certificate. This Letter of Transmittal and related documents cannot be processed until the procedures for replacing lost, mutilated, destroyed or stolen Share Certificates have been followed.

**12. Waiver of Conditions.** Subject to the terms and conditions of the Merger Agreement (as defined in the Offer to Purchase) and the applicable rules and regulations of the Securities and Exchange Commission, the conditions of the Offer may be waived by Purchaser in whole or in part at any time and from time to time in its sole discretion.

**IMPORTANT: THIS LETTER OF TRANSMITTAL (OR A MANUALLY EXECUTED FACSIMILE COPY THEREOF) OR AN AGENT'S MESSAGE, TOGETHER WITH SHARE CERTIFICATE(S) OR BOOK-ENTRY CONFIRMATION OR A PROPERLY COMPLETED AND DULY EXECUTED NOTICE OF GUARANTEED DELIVERY AND ALL OTHER REQUIRED DOCUMENTS, MUST BE RECEIVED BY THE DEPOSITORY PRIOR TO THE EXPIRATION DATE.**

## IMPORTANT TAX INFORMATION

Under United States federal income tax law, a stockholder that is a non-exempt United States person (for U.S. federal income tax purposes) whose tendered Shares are accepted for payment, or whose Shares are converted in the Merger, is required by law to provide the Depository (as payer) with such stockholder's correct TIN and to make certain certifications under penalty in IRS Form W-9 below. If such stockholder is an individual, the TIN is such stockholder's social security number. If the Depository is not provided with the correct TIN, or the required certifications are not provided, the stockholder may be subject to penalties imposed by the IRS and payments that are made to such stockholder with respect to Shares purchased pursuant to the Offer, or converted in the Merger, may be subject to backup withholding.

If backup withholding applies, the Depository is required to withhold 24% of any payments of the purchase price made to the stockholder. Backup withholding is not an additional tax. Rather, the U.S. federal income tax liability of persons subject to backup withholding will be reduced by the amount of tax withheld. If withholding results in an overpayment of taxes, a refund or credit may be obtained from the IRS provided that the required information is timely furnished to the IRS.

### IRS Form W-9

To prevent backup withholding on payments that are made to a United States person with respect to Shares purchased pursuant to the Offer or converted in the Merger, as applicable, the stockholder is required to notify the Depository of such stockholder's correct TIN by completing IRS Form W-9 certifying, under penalties of perjury, (i) that the TIN provided on IRS Form W-9 is correct (or that such stockholder is awaiting a TIN), (ii) that such stockholder is not subject to backup withholding because (a) such stockholder has not been notified by the IRS that such stockholder is subject to backup withholding as a result of a failure to report all interest or dividends, (b) the IRS has notified such stockholder that such stockholder is no longer subject to backup withholding or (c) such stockholder is exempt from backup withholding, and (iii) that such stockholder is a U.S. person.

### What Number to Give the Depository

Each stockholder that is a United States person is generally required to give the Depository its social security number or employer identification number. If the tendering stockholder has not been issued a TIN and has applied for a number or intends to apply for a number in the near future, the stockholder should write "Applied For" in the space for TIN, and sign and date the IRS Form W-9. Notwithstanding that "Applied For" is written in the space for TIN, the Depository will withhold 24% of all payments of the purchase price to such stockholder. Such amounts will be refunded to such surrendering stockholder if a TIN is provided to the Depository within 60 days. We note that your IRS Form W-9, including your TIN, may be transferred from the Depository to the Paying Agent, in certain circumstances.

### IRS Form W-8

To prevent backup withholding on payments that are made to a stockholder that is not a United States person with respect to Shares purchased pursuant to the Offer or converted in the Merger, as applicable, the stockholder should complete, sign, and submit to the Depository the appropriate IRS Form W-8 or otherwise establish an exemption from backup withholding. An IRS Form W-8BEN, IRS Form W-8BEN-E, or other appropriate IRS Form W-8 may be obtained from the Depository or downloaded from the Internal Revenue Service's website at the following address: <http://www.irs.gov>.

**Please consult your accountant or tax advisor for further guidance regarding the completion of IRS Form W-9, IRS Form W-8BEN, IRS Form W-8BEN-E, or another version of IRS Form W-8 to claim exemption from backup withholding, or contact the Depository.**

**Withholding with Respect to Payments Treated as Dividends**

To the extent that the payment of any consideration pursuant to the Offer or the Merger to a person other than a United States person is treated as the payment of a dividend for U.S. federal income tax purposes, as described in Section 15 of the Offer to Purchase, the Depository may be required to withhold a portion of such consideration. The Depository may deduct and withhold from any consideration payable pursuant to the Offer or the Merger unless such stockholder (i) certifies in this Letter of Transmittal, as provided below, that such stockholder's receipt of cash in exchange for its Shares pursuant to the Offer or the Merger is not a distribution of property to which Section 301 of the Internal Revenue Code of 1986, as amended, applies, or (ii) timely delivers to the Depository a properly completed and executed an appropriate IRS Form W-8 evidencing that such withholding is not required or that such withholding may be done at a reduced rate under an applicable income tax treaty. Under certain circumstances, such stockholder may be eligible to obtain a refund of all or a portion of any U.S. federal income tax so withheld. Stockholders that are not United States persons are encouraged to consult their tax advisors to determine the particular tax consequences to them of the Offer or the Merger. See the Offer to Purchase for additional information regarding the treatment of such consideration as a dividend for U.S. federal income tax purposes.

**Each stockholder that is not a United States person should consult its tax advisor with any questions regarding which IRS Form W-8 is appropriate or how to fill out the form.**

# Request for Taxpayer

## Identification Number and Certification

Give Form to the requester. Do not send to the IRS.

Go to [www.irs.gov/FormW9](http://www.irs.gov/FormW9) for instructions and the latest information.

	<b>1</b> Name (as shown on your income tax return). Name is required on this line; do not leave this line blank.	
	<b>2</b> Business name/disregarded entity name, if different from above	
	<b>3</b> Check appropriate box for federal tax classification of the person whose name is entered on line 1. Check only <b>one</b> of the following seven boxes.  <input type="checkbox"/> Individual/sole proprietor or single-member LLC <input type="checkbox"/> C Corporation <input type="checkbox"/> S Corporation <input type="checkbox"/> Partnership <input type="checkbox"/> Trust/estate  <input type="checkbox"/> Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=Partnership) u _____  <b>Note:</b> Check the appropriate box in the line above for the tax classification of the single-member owner. Do not check LLC if the LLC is classified as a single-member LLC that is disregarded from the owner unless the owner of the LLC is another LLC that is not disregarded from the owner for U.S. federal tax purposes. Otherwise, a single-member LLC that is disregarded from the owner should check the appropriate box for the tax classification of its owner.  <input type="checkbox"/> Other (see instructions) u _____	<b>4</b> Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3): Exempt payee code (if any) _____ Exemption from FATCA reporting code (if any) _____  <i>(Applies to accounts maintained outside the U.S.)</i>
Print or type. See Specific Instructions on page 3.	<b>5</b> Address (number, street, and apt. or suite no.) See instructions.	Requester's name and address (optional)
	<b>6</b> City, state, and ZIP code	
	<b>7</b> List account number(s) here (optional)	

### Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I later. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN*, later.

**Note:** If the account is in more than one name, see the instructions for line 1. Also see *What Name and Number To Give the Requester* for guidelines on whose number to enter.

Social security number										
			-							
or										
Employer identification number										
			-							

### Part II Certification

Under penalties of perjury, I certify that:

- The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
- I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
- I am a U.S. citizen or other U.S. person (defined below); and
- The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

**Certification instructions.** You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, later.

<b>Sign Here</b>	Signature of U.S. person u _____	Date u _____
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#### General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

**Future developments.** For the latest information about developments related to Form W-9 and its instructions, such as legislation enacted after they were published, go to [www.irs.gov/FormW9](http://www.irs.gov/FormW9).

#### Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following.

- Form 1099-INT (interest earned or paid)
- Form 1099-DIV (dividends, including those from stocks or mutual funds)
- Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)
- Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)
- Form 1099-S (proceeds from real estate transactions)
- Form 1099-K (merchant card and third party network transactions)
- Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)
- Form 1099-C (canceled debt)
- Form 1099-A (acquisition or abandonment of secured property)

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See What is backup withholding, later.

By signing the filled-out form, you:

1. Certify that the TIN you are giving is correct (or you are waiting for a number to be issued).
2. Certify that you are not subject to backup withholding, or
3. Claim exemption from backup withholding if you are a U.S. exempt payee. If applicable, you are also certifying that as a U.S. person, your allocable share of any partnership income from a U.S. trade or business is not subject to the withholding tax on foreign partners' share of effectively connected income, and
4. Certify that FATCA code(s) entered on this form (if any) indicating that you are exempt from the FATCA reporting, is correct. See *What is FATCA reporting*, later, for further information.

**Note:** If you are a U.S. person and a requester gives you a form other than Form W-9 to request your TIN, you must use the requester's form if it is substantially similar to this Form W-9.

**Definition of a U.S. person.** For federal tax purposes, you are considered a U.S. person if you are:

- An individual who is a U.S. citizen or U.S. resident alien;
- A partnership, corporation, company, or association created or organized in the United States or under the laws of the United States;
- An estate (other than a foreign estate); or
- A domestic trust (as defined in Regulations section 301.7701-7).

**Special rules for partnerships.** Partnerships that conduct a trade or business in the United States are generally required to pay a withholding tax under section 1446 on any foreign partners' share of effectively connected taxable income from such business. Further, in certain cases where a Form W-9 has not been received, the rules under section 1446 require a partnership to presume that a partner is a foreign person, and pay the section 1446 withholding tax. Therefore, if you are a U.S. person that is a partner in a partnership conducting a trade or business in the United States, provide Form W-9 to the partnership to establish your U.S. status and avoid section 1446 withholding on your share of partnership income.

In the cases below, the following person must give Form W-9 to the partnership for purposes of establishing its U.S. status and avoiding withholding on its allocable share of net income from the partnership conducting a trade or business in the United States.

- In the case of a disregarded entity with a U.S. owner, the U.S. owner of the disregarded entity and not the entity;
- In the case of a grantor trust with a U.S. grantor or other U.S. owner, generally, the U.S. grantor or other U.S. owner of the grantor trust and not the trust; and
- In the case of a U.S. trust (other than a grantor trust), the U.S. trust (other than a grantor trust) and not the beneficiaries of the trust.

**Foreign person.** If you are a foreign person or the U.S. branch of a foreign bank that has elected to be treated as a U.S. person, do not use Form W-9. Instead, use the appropriate Form W-8 or Form 8233 (see Pub. 515, Withholding of Tax on Nonresident Aliens and Foreign Entities).

**Nonresident alien who becomes a resident alien.** Generally, only a nonresident alien individual may use the terms of a tax treaty to reduce or eliminate U.S. tax on certain types of income. However, most tax treaties contain a provision known as a "saving clause." Exceptions specified in the saving clause may permit an exemption from tax to continue for certain types of income even after the payee has otherwise become a U.S. resident alien for tax purposes.

If you are a U.S. resident alien who is relying on an exception contained in the saving clause of a tax treaty to claim an exemption from U.S. tax on certain types of income, you must attach a statement to Form W-9 that specifies the following five items.

1. The treaty country. Generally, this must be the same treaty under which you claimed exemption from tax as a nonresident alien.
2. The treaty article addressing the income.
3. The article number (or location) in the tax treaty that contains the saving clause and its exceptions.
4. The type and amount of income that qualifies for the exemption from tax.
5. Sufficient facts to justify the exemption from tax under the terms of the treaty article.

**Example.** Article 20 of the U.S.-China income tax treaty allows an exemption from tax for scholarship income received by a Chinese student temporarily present in the United States. Under U.S. law, this student will become a resident alien for tax purposes if his or her stay in the United States exceeds 5 calendar years. However, paragraph 2 of the first Protocol to the U.S.-China treaty (dated April 30, 1984) allows the provisions of Article 20 to continue to apply even after the Chinese student becomes a resident alien of the United States. A Chinese student who qualifies for this exception (under paragraph 2 of the first protocol) and is relying on this exception to claim an exemption from tax on his or her scholarship or fellowship income would attach to Form W-9 a statement that includes the information described above to support that exemption.

If you are a nonresident alien or a foreign entity, give the requester the appropriate completed Form W-8 or Form 8233.

## Backup Withholding

**What is backup withholding?** Persons making certain payments to you must under certain conditions withhold and pay to the IRS 24% of such payments. This is called "backup withholding." Payments that may be subject to backup withholding include interest, tax-exempt interest, dividends, broker and barter exchange transactions, rents, royalties, nonemployee pay, payments made in settlement of payment card and third party network transactions, and certain payments from fishing boat operators. Real estate transactions are not subject to backup withholding.

You will not be subject to backup withholding on payments you receive if you give the requester your correct TIN, make the proper certifications, and report all your taxable interest and dividends on your tax return.

### Payments you receive will be subject to backup withholding if:

1. You do not furnish your TIN to the requester;
2. You do not certify your TIN when required (see the instructions for Part II for details);
3. The IRS tells the requester that you furnished an incorrect TIN;
4. The IRS tells you that you are subject to backup withholding because you did not report all your interest and dividends on your tax return (for reportable interest and dividends only); or
5. You do not certify to the requester that you are not subject to backup withholding under 4 above (for reportable interest and dividend accounts opened after 1983 only).

Certain payees and payments are exempt from backup withholding. See *Exempt payee code*, later, and the separate Instructions for the Requester of Form W-9 for more information.

Also see *Special rules for partnerships*, earlier.

## What is FATCA Reporting?

The Foreign Account Tax Compliance Act (FATCA) requires a participating foreign financial institution to report all United States account holders that are specified United States persons. Certain payees are exempt from FATCA reporting. See *Exemption from FATCA reporting code*, later, and the Instructions for the Requester of Form W-9 for more information.

## Updating Your Information

You must provide updated information to any person to whom you claimed to be an exempt payee if you are no longer an exempt payee and anticipate receiving reportable payments in the future from this person. For example, you may need to provide updated information if you are a C corporation that elects to be an S corporation, or if you no longer are tax exempt. In addition, you must furnish a new Form W-9 if the name or TIN changes for the account; for example, if the grantor of a grantor trust dies.

## Penalties

**Failure to furnish TIN.** If you fail to furnish your correct TIN to a requester, you are subject to a penalty of \$50 for each such failure unless your failure is due to reasonable cause and not to willful neglect.

**Civil penalty for false information with respect to withholding.** If you make a false statement with no reasonable basis that results in no backup withholding, you are subject to a \$500 penalty.

**Criminal penalty for falsifying information.** Willfully falsifying certifications or affirmations may subject you to criminal penalties including fines and/or imprisonment.

**Misuse of TINs.** If the requester discloses or uses TINs in violation of federal law, the requester may be subject to civil and criminal penalties.

## Specific Instructions

### Line 1

You must enter one of the following on this line; **do not** leave this line blank. The name should match the name on your tax return.

If this Form W-9 is for a joint account (other than an account maintained by a foreign financial institution (FFI)), list first, and then circle, the name of the person or entity whose number you entered in Part I of Form W-9. If you are providing Form W-9 to an FFI to document a joint account, each holder of the account that is a U.S. person must provide a Form W-9.

a. **Individual.** Generally, enter the name shown on your tax return. If you have changed your last name without informing the Social Security Administration (SSA) of the name change, enter your first name, the last name as shown on your social security card, and your new last name.

**Note: TIN applicant:** Enter your individual name as it was entered on your Form W-7 application, line 1a. This should also be the same as the name you entered on the Form 1040/1040A/1040EZ you filed with your application.

b. **Sole proprietor or single-member LLC.** Enter your individual name as shown on your 1040/1040A/1040EZ on line 1. You may enter your business, trade, or "doing business as" (DBA) name on line 2.

c. **Partnership, LLC that is not a single-member LLC, C corporation, or S corporation.** Enter the entity's name as shown on the entity's tax return on line 1 and any business, trade, or DBA name on line 2.

d. **Other entities.** Enter your name as shown on required U.S. federal tax documents on line 1. This name should match the name shown on the charter or other legal document creating the entity. You may enter any business, trade, or DBA name on line 2.



e. **Disregarded entity.** For U.S. federal tax purposes, an entity that is disregarded as an entity separate from its owner is treated as a "disregarded entity." See Regulations section 301.7701-2(c)(2)(iii). Enter the owner's name on line 1. The name of the entity entered on line 1 should never be a disregarded entity. The name on line 1 should be the name shown on the income tax return on which the income should be reported. For example, if a foreign LLC that is treated as a disregarded entity for U.S. federal tax purposes has a single owner that is a U.S. person, the U.S. owner's name is required to be provided on line 1. If the direct owner of the entity is also a disregarded entity, enter the first owner that is not disregarded for federal tax purposes. Enter the disregarded entity's name on line 2, "Business name/disregarded entity name." If the owner of the disregarded entity is a foreign person, the owner must complete an appropriate Form W-8 instead of a Form W-9. This is the case even if the foreign person has a U.S. TIN.

**Line 2**

If you have a business name, trade name, DBA name, or disregarded entity name, you may enter it on line 2.

**Line 3**

Check the appropriate box on line 3 for the U.S. federal tax classification of the person whose name is entered on line 1. Check only one box on line 3.

IF the entity/person on line 1 is a(n) . . .	THEN check the box for . . .
<ul style="list-style-type: none"> <li>Corporation</li> </ul>	Corporation
<ul style="list-style-type: none"> <li>Individual</li> <li>Sole proprietorship, or</li> <li>Single-member limited liability company (LLC) owned by an individual and disregarded for U.S. federal tax purposes.</li> </ul>	Individual/sole proprietor or single-member LLC
<ul style="list-style-type: none"> <li>LLC treated as a partnership for U.S. federal tax purposes.</li> <li>LLC that has filed Form 8832 or 2553 to be taxed as a corporation, or</li> <li>LLC that is disregarded as an entity separate from its owner but the owner is another LLC that is not disregarded for U.S. federal tax purposes.</li> </ul>	Limited liability company and enter the appropriate tax classification. (P= Partnership; C= C corporation; or S= S corporation)
<ul style="list-style-type: none"> <li>Partnership</li> </ul>	Partnership
<ul style="list-style-type: none"> <li>Trust/estate</li> </ul>	Trust/estate

**Line 4, Exemptions**

If you are exempt from backup withholding and/or FATCA reporting, enter in the appropriate space on line 4 any code(s) that may apply to you.

**Exempt payee code.**

- Generally, individuals (including sole proprietors) are not exempt from backup withholding.
- Except as provided below, corporations are exempt from backup withholding for certain payments, including interest and dividends.
- Corporations are not exempt from backup withholding for payments made in settlement of payment card or third party network transactions.
- Corporations are not exempt from backup withholding with respect to attorneys' fees or gross proceeds paid to attorneys, and corporations that provide medical or health care services are not exempt with respect to payments reportable on Form 1099-MISC.

The following codes identify payees that are exempt from backup withholding. Enter the appropriate code in the space in line 4.

- An organization exempt from tax under section 501(a), any IRA, or a custodial account under section 403(b)(7) if the account satisfies the requirements of section 401(f)(2)
- The United States or any of its agencies or instrumentalities
- A state, the District of Columbia, a U.S. commonwealth or possession, or any of their political subdivisions or instrumentalities
- A foreign government or any of its political subdivisions, agencies, or instrumentalities
- A corporation
- A dealer in securities or commodities required to register in the United States, the District of Columbia, or a U.S. commonwealth or possession
- A futures commission merchant registered with the Commodity Futures Trading Commission
- A real estate investment trust
- An entity registered at all times during the tax year under the Investment Company Act of 1940
- A common trust fund operated by a bank under section 584(a)
- A financial institution
- A middleman known in the investment community as a nominee or custodian
- A trust exempt from tax under section 664 or described in section 4947

The following chart shows types of payments that may be exempt from backup withholding. The chart applies to the exempt payees listed above, 1 through 13.

IF the payment is for . . .	THEN the payment is exempt for . . .
Interest and dividend payments	All exempt payees except for 7
Broker transactions	Exempt payees 1 through 4 and 6 through 11 and all C corporations. S corporations must not enter an exempt payee code because they are exempt only for sales of noncovered securities acquired prior to 2012.
Barter exchange transactions and patronage dividends	Exempt payees 1 through 4
Payments over \$600 required to be reported and direct sales over \$5,000 <sup>1</sup>	Generally, exempt payees 1 through 52
Payments made in settlement of payment card or third party network transactions	Exempt payees 1 through 4

<sup>1</sup> See Form 1099-MISC, Miscellaneous Income, and its instructions.

2 However, the following payments made to a corporation and reportable on Form 1099-MISC are not exempt from backup withholding: medical and health care payments, attorneys' fees, gross proceeds paid to an attorney reportable under section 6045(f), and payments for services paid by a federal executive agency.

**Exemption from FATCA reporting code.** The following codes identify payees that are exempt from reporting under FATCA. These codes apply to persons submitting this form for accounts maintained outside of the United States by certain foreign financial institutions. Therefore, if you are only submitting this form for an account you hold in the United States, you may leave this field blank. Consult with the person requesting this form if you are uncertain if the financial institution is subject to these requirements. A requester may indicate that a code is not required by providing you with a Form W-9 with "Not Applicable" (or any similar indication) written or printed on the line for a FATCA exemption code.

- A — An organization exempt from tax under section 501(a) or any individual retirement plan as defined in section 7701(a)(37)
- B — The United States or any of its agencies or instrumentalities
- C — A state, the District of Columbia, a U.S. commonwealth or possession, or any of their political subdivisions or instrumentalities
- D — A corporation the stock of which is regularly traded on one or more established securities markets, as described in Regulations section 1.1472-1(c)(1)(i)
- E — A corporation that is a member of the same expanded affiliated group as a corporation described in Regulations section 1.1472-1(c)(1)(i)
- F — A dealer in securities, commodities, or derivative financial instruments (including notional principal contracts, futures, forwards, and options) that is registered as such under the laws of the United States or any state
- G — A real estate investment trust
- H — A regulated investment company as defined in section 851 or an entity registered at all times during the tax year under the Investment Company Act of 1940
  - I — A common trust fund as defined in section 584(a)
  - J — A bank as defined in section 581
  - K — A broker
  - L — A trust exempt from tax under section 664 or described in section 4947(a)(1)
  - M — A tax exempt trust under a section 403(b) plan or section 457(g) plan

**Note:** You may wish to consult with the financial institution requesting this form to determine whether the FATCA code and/or exempt payee code should be completed.

**Line 5**

Enter your address (number, street, and apartment or suite number). This is where the requester of this Form W-9 will mail your information returns. If this address differs from the one the requester already has on file, write NEW at the top. If a new address is provided, there is still a chance the old address will be used until the payor changes your address in their records.

**Line 6**

Enter your city, state, and ZIP code.

**Part I. Taxpayer Identification Number (TIN)**

**Enter your TIN in the appropriate box.** If you are a resident alien and you do not have and are not eligible to get an SSN, your TIN is your IRS individual taxpayer identification number (ITIN). Enter it in the social security number box. If you do not have an ITIN, see *How to get a TIN* below.

If you are a sole proprietor and you have an EIN, you may enter either your SSN or EIN.

If you are a single-member LLC that is disregarded as an entity separate from its owner, enter the owner's SSN (or EIN, if the owner has one). Do not enter the disregarded entity's EIN. If the LLC is classified as a corporation or partnership, enter the entity's EIN.

**Note:** See *What Name and Number To Give the Requester*, later, for further clarification of name and TIN combinations.

**How to get a TIN.** If you do not have a TIN, apply for one immediately. To apply for an SSN, get Form SS-5, Application for a Social Security Card, from your local SSA office or get this form online at [www.SSA.gov](http://www.SSA.gov). You may also get this form by calling 1-800-772-1213. Use Form W-7, Application for IRS Individual Taxpayer Identification

Number, to apply for an ITIN, or Form SS-4, Application for Employer Identification Number, to apply for an EIN. You can apply for an EIN online by accessing the IRS website at [www.irs.gov/Businesses](http://www.irs.gov/Businesses) and clicking on Employer Identification Number (EIN) under Starting a Business. Go to [www.irs.gov/Forms](http://www.irs.gov/Forms) to view, download, or print Form W-7 and/or Form SS-4. Or, you can go to [www.irs.gov/OrderForms](http://www.irs.gov/OrderForms) to place an order and have Form W-7 and/or SS-4 mailed to you within 10 business days.

If you are asked to complete Form W-9 but do not have a TIN, apply for a TIN and write "Applied For" in the space for the TIN, sign and date the form, and give it to the requester. For interest and dividend payments, and certain payments made with respect to readily tradable instruments, generally you will have 60 days to get a TIN and give it to the requester before you are subject to backup withholding on payments. The 60-day rule does not apply to other types of payments. You will be subject to backup withholding on all such payments until you provide your TIN to the requester. **Note:** Entering "Applied For" means that you have already applied for a TIN or that you intend to apply for one soon.

**Caution:** A disregarded U.S. entity that has a foreign owner must use the appropriate Form W-8.

**Part II. Certification**

To establish to the withholding agent that you are a U.S. person, or resident alien, sign Form W-9. You may be requested to sign by the withholding agent even if item 1, 4, or 5 below indicates otherwise.

For a joint account, only the person whose TIN is shown in Part I should sign (when required). In the case of a disregarded entity, the person identified on line 1 must sign. Exempt payees, see *Exempt payee code*, earlier.

**Signature requirements.** Complete the certification as indicated in items 1 through 5 below.

**1. Interest, dividend, and barter exchange accounts opened before 1984 and broker accounts considered active during 1983.** You must give your correct TIN, but you do not have to sign the certification.

**2. Interest, dividend, broker, and barter exchange accounts opened after 1983 and broker accounts considered inactive during 1983.** You must sign the certification or backup withholding will apply. If you are subject to backup withholding and you are merely providing your correct TIN to the requester, you must cross out item 2 in the certification before signing the form.

**3. Real estate transactions.** You must sign the certification. You may cross out item 2 of the certification.

**4. Other payments.** You must give your correct TIN, but you do not have to sign the certification unless you have been notified that you have previously given an incorrect TIN. "Other payments" include payments made in the course of the requester's trade or business for rents, royalties, goods (other than bills for merchandise), medical and health care services (including payments to corporations), payments to a nonemployee for services, payments made in settlement of payment card and third party network transactions, payments to certain fishing boat crew members and fishermen, and gross proceeds paid to attorneys (including payments to corporations).

**5. Mortgage interest paid by you, acquisition or abandonment of secured property, cancellation of debt, qualified tuition program payments (under section 529), ABL accounts (under section 529A), IRA, Coverdell ESA, Archer MSA or HSA contributions or distributions, and pension distributions.** You must give your correct TIN, but you do not have to sign the certification.

**What Name and Number To Give the Requester**

For this type of account:	Give name and SSN of:
1. Individual	The individual
2. Two or more individuals (joint account) other than an account maintained by an FFI	The actual owner of the account or, if combined funds, the first individual on the account <sup>1</sup>
3. Two or more U.S. persons (joint account maintained by an FFI)	Each holder of the account
4. Custodial account of a minor (Uniform Gift to Minors Act)	The minor <sup>2</sup>
5. a. The usual revocable savings trust (grantor is also trustee) b. So-called trust account that is not a legal or valid trust under state law	The grantor-trustee <sup>1</sup> The actual owner <sup>1</sup>
6. Sole proprietorship or disregarded entity owned by an individual	The owner <sup>3</sup>
7. Grantor trust filing under Optional Form 1099 Filing Method 1 (see Regulations section 1.671-4(b)(2)(i)(A))	The grantor <sup>*</sup>
For this type of account:	Give name and EIN of:
8. Disregarded entity not owned by an individual	The owner
9. A valid trust, estate, or pension trust	Legal entity <sup>4</sup>
10. Corporation or LLC electing corporate status on Form 8832 or Form 2553	The corporation

11. Association, club, religious, charitable, educational, or other tax-exempt organization	The organization
12. Partnership or multi-member LLC	The partnership
13. A broker or registered nominee	The broker or nominee
14. Account with the Department of Agriculture in the name of a public entity (such as a state or local government, school district, or prison) that receives agricultural program payments	The public entity
15. Grantor trust filing under the Form 1041 Filing Method or the Optional Form 1099 Filing Method 2 (see Regulations section 1.671-4(b)(2)(i)(B))	The trust

<sup>1</sup> List first and circle the name of the person whose number you furnish. If only one person on a joint account has an SSN, that person's number must be furnished.

<sup>2</sup> Circle the minor's name and furnish the minor's SSN.

<sup>3</sup> You must show your individual name and you may also enter your business or DBA name on the "Business name/disregarded entity" name line. You may use either your SSN or EIN (if you have one), but the IRS encourages you to use your SSN.

<sup>4</sup> List first and circle the name of the trust, estate, or pension trust. (Do not furnish the TIN of the personal representative or trustee unless the legal entity itself is not designated in the account title.) Also see *Special rules for partnerships*, earlier.

**\*Note:** The grantor also must provide a Form W-9 to trustee of trust.

**Note:** If no name is circled when more than one name is listed, the number will be considered to be that of the first name listed.

**Secure Your Tax Records From Identity Theft**

Identity theft occurs when someone uses your personal information such as your name, SSN, or other identifying information, without your permission, to commit fraud or other crimes. An identity thief may use your SSN to get a job or may file a tax return using your SSN to receive a refund.

To reduce your risk:

- Protect your SSN.
- Ensure your employer is protecting your SSN, and
- Be careful when choosing a tax preparer.

If your tax records are affected by identity theft and you receive a notice from the IRS, respond right away to the name and phone number printed on the IRS notice or letter.

If your tax records are not currently affected by identity theft but you think you are at risk due to a lost or stolen purse or wallet, questionable credit card activity or credit report, contact the IRS Identity Theft Hotline at 1-800-908-4490 or submit Form 14039.

For more information, see Pub. 5027, Identity Theft Information for Taxpayers.

Victims of identity theft who are experiencing economic harm or a systemic problem, or are seeking help in resolving tax problems that have not been resolved through normal channels, may be eligible for Taxpayer Advocate Service (TAS) assistance. You can reach TAS by calling the TAS toll-free case intake line at 1-877-777-4778 or TTY/TDD 1-800-829-4059.

**Protect yourself from suspicious emails or phishing schemes.** Phishing is the creation and use of email and websites designed to mimic legitimate business emails and websites. The most common act is sending an email to a user falsely claiming to be an established legitimate enterprise in an attempt to scam the user into surrendering private information that will be used for identity theft.

The IRS does not initiate contacts with taxpayers via emails. Also, the IRS does not request personal detailed information through email or ask taxpayers for the PIN numbers, passwords, or similar secret access information for their credit card, bank, or other financial accounts.

If you receive an unsolicited email claiming to be from the IRS, forward this message to [phishing@irs.gov](mailto:phishing@irs.gov). You may also report misuse of the IRS name, logo, or other IRS property to the Treasury Inspector General for Tax Administration (TIGTA) at 1-800-366-4484. You can forward suspicious emails to the Federal Trade Commission at [spam@uce.gov](mailto:spam@uce.gov) or report them at [www.ftc.gov/complaint](http://www.ftc.gov/complaint). You can contact the FTC at [www.ftc.gov/idtheft](http://www.ftc.gov/idtheft) or 877-IDTHEFT (877-438-4338). If you have been the victim of identity theft, see [www.IdentityTheft.gov](http://www.IdentityTheft.gov) and Pub. 5027.

Visit [www.irs.gov/IdentityTheft](http://www.irs.gov/IdentityTheft) to learn more about identity theft and how to reduce your risk.

**Privacy Act Notice**

Section 6109 of the Internal Revenue Code requires you to provide your correct TIN to persons (including federal agencies) who are required to file information returns with the IRS to report interest, dividends, or certain other income paid to you; mortgage interest you paid; the acquisition or abandonment of secured property; the cancellation of debt; or contributions you made to an IRA, Archer MSA, or HSA. The person collecting this form uses the information on the form to file information returns with the IRS, reporting the above information. Routine uses of this information include giving it to the Department of Justice for civil and criminal litigation and to cities, states, the District of Columbia, and U.S. commonwealths and possessions for use in administering their laws. The information also may be disclosed to other countries under a treaty, to federal and state agencies to enforce civil and criminal laws, or to federal law enforcement and intelligence agencies to combat terrorism. You must provide your TIN whether or not you are required to file a tax return. Under section 3406, payers must generally withhold a percentage of taxable interest, dividend, and certain other payments to a payee who does not give a TIN to the payer. Certain penalties may also apply for providing false or fraudulent information.

**YOU MAY COMPLETE THE FOLLOWING CERTIFICATE IN LIEU OF  
COMPLETING IRS FORM W-9 IF YOU HAVE APPLIED FOR OR INTEND TO  
APPLY FOR A TIN**

**PAYER'S NAME: American Stock Transfer & Trust Company, LLC**

**CERTIFICATE OF AWAITING TAXPAYER IDENTIFICATION NUMBER**

I certify, under penalties of perjury, that a taxpayer identification number has not been issued to me, and either (a) I have mailed or delivered an application to receive a taxpayer identification number to the appropriate Internal Revenue Service Center or Social Security Administration Office or (b) I intend to mail or deliver an application in the near future. I understand that if I do not provide a taxpayer identification number before payment is made, a portion of such reportable payment will be withheld, but any such withheld amount will be refunded to me if I provide a certified taxpayer identification number within 60 days.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

NOTE: FAILURE TO COMPLETE AND RETURN THIS FORM MAY RESULT IN BACKUP WITHHOLDING OF A PORTION OF ANY PAYMENT MADE TO YOU PURSUANT TO THE OFFER OR THE MERGER AND THE IMPOSITION OF PENALTIES BY THE IRS. PLEASE REVIEW THE ENCLOSED INSTRUCTIONS TO IRS FORM W-9 FOR ADDITIONAL DETAILS.

**Purpose of this Certification**

This Certification relates to the U.S. federal income tax treatment of the acquisition by Avalanche Merger Sub, Inc., a Delaware corporation (“Purchaser”) and a wholly-owned subsidiary of Ionis Pharmaceuticals, Inc., a Delaware corporation (“Parent”), of shares of common stock (collectively, the “Shares”), par value \$0.001 per share, of Akcea Therapeutics, Inc., a Delaware corporation (“Akcea”), at a price of \$18.15 per Share, net to the seller in cash (the “Cash Consideration”), without interest and less any applicable withholding taxes, on the terms and subject to the conditions set forth in the Offer to Purchase. An Akcea stockholder who completes this Certification is certifying whether the Cash Consideration should be treated as a payment in exchange for Akcea common stock or as a distribution to which Section 301 of the Internal Revenue Code of 1986, as amended (the “Code”), applies. Capitalized terms used in this Certification and not otherwise defined herein have the meaning ascribed to such terms in the Offer to Purchase.

**Completing and Submitting this Certification**

Any Akcea stockholder entitled to Cash Consideration (“Owner”) should complete this Certification. Owners must complete and submit this Certification with the Letter of Transmittal in accordance with the instructions in the Letter of Transmittal.

See the accompanying instructions for further information. Owners should consult their tax advisors regarding any questions about completing this Certification and the consequences of selecting Certification A or Certification B below.

**Certification A: Payment in Exchange for Akcea Common Stock**

**CHECK APPLICABLE BOX:**

**Certification A1:** Owner's Cash Consideration should be treated for U.S. federal income tax purposes as a payment in exchange for Owner's Shares because Owner (i) will not be a beneficial owner of Parent stock immediately prior to the Effective Time, (ii) will not acquire Parent stock in connection with the Offer and the Merger and (iii) will not be deemed to own Parent stock through attribution from another person (or as a result of owning options) immediately prior to, immediately following, or at, the Effective Time of the Offer or the Merger.

**Certification A2:** Owner's Cash Consideration should be treated for U.S. federal income tax purposes as a payment in exchange for Owner's Shares, rather than as a distribution to which Section 301 of the Code applies, because either (1) such payment will be substantially disproportionate with respect to such Owner, or (2) Owner's proportionate interest in the Akcea common stock will be meaningfully reduced as a result of the payment (taking into account its direct and constructive ownership in Akcea common stock, including as a result of its actual or constructive ownership of Parent stock), as reflected in the following calculations (fill in required information). (Note that this Certification A2 only potentially applies to an Owner that will actually or constructively be treated as owning Parent stock immediately prior to, at, or immediately following, the Effective Time of the Offer or the Merger.)

Prior Interest: At or immediately prior to the Effective Time, Owner will own \_\_\_\_\_(U) shares of Parent common stock (taking into account shares owned directly by Owner and shares Owner is deemed to own pursuant to attribution rules under Sections 304 and 318 of the Code (including as a result of owning options)). Immediately prior to the Effective Time, Parent will own 77,094,682 shares of Akcea common stock. Parent will have approximately 139,761,136 (Z) shares of common stock outstanding immediately prior to the Effective Time. Accordingly, for purposes of Sections 304 and 318 of the Code, Owner will be deemed to own \_\_\_\_\_(V) Shares of Akcea common stock by attribution as a result of Owner's ownership of Parent common stock (where  $V=U/Z*77,094,682$ ).

Immediately prior to the Effective Time, Owner will own \_\_\_\_\_(W) Shares of Akcea common stock (taking into account Shares owned directly by Owner and Shares Owner is deemed to own pursuant to attribution rules under Sections 304 and 318 of the Code (including as a result of owning options), *other than* the (V) shares deemed owned by attribution as a result of Owner's ownership of Parent common stock).

Accordingly, immediately prior to the Effective Time, Owner will own approximately \_\_\_\_\_  $((V+W)/X*100)$  percent of the outstanding Akcea common stock.

Subsequent Interest: Owner's percentage ownership of Akcea common stock following the Offer and Merger is equal to its percentage ownership of Parent for purposes of this calculation. Immediately following the Effective Time, Owner will own \_\_\_\_\_(Y) shares of Parent common stock (taking into account (i) shares Owner acquires or sells in connection with the Offer and the Merger and (ii) shares Owner is deemed to own under attribution rules under Sections 304 and 318 of the Code (including as a result of owning options)), which is approximately \_\_\_\_\_  $(Y/Z*100)$  percent of the outstanding Parent common stock.

The following key can be used in completing the calculations above:

U = shares of Parent common stock Owner will own at or immediately prior to the Effective Time (taking into account shares owned directly by Owner and shares Owner is deemed to own under Sections 304 and 318 of the Code (including as a result of owning options))

$$V = U/Z * 77,094,682$$

W = shares of Akcea common stock Owner will own immediately prior to the Effective Time (taking into account shares owned directly by Owner and shares Owner is deemed to own under Sections 304 and 318 of the Code (including as a result of owning options), other than (V) shares deemed owned by attribution as a result of Owner's ownership of Parent common stock))

X = 101,759,772 (approximate shares of Akcea common stock that will be outstanding immediately prior to the Effective Time)

Y = shares of Parent common stock that Owner will own immediately following the Effective Time (taking into account (i) shares Owner acquires or sells in connection with the Offer and the Merger and (ii) shares Owner is deemed to own under attribution rules under Sections 304 and 318 of the Code (including as a result of owning options))

Z = 139,761,136 (approximate shares of Parent common stock that will be outstanding immediately prior to and immediately following the Effective Time)

*See the accompanying instructions for rules regarding the determination of which shares an Owner is deemed to own. Percentages should be rounded to an appropriate number of decimal places to indicate Subsequent Interest is smaller than Prior Interest.*

<input type="checkbox"/> <b>Certification B: Distribution to which Section 301 of the Code Applies</b> (in lieu of Certification A above)  Owner's Cash Consideration should be treated for U.S. federal income tax purposes as a distribution to which Section 301 of the Code applies. Note that this Certification B only potentially applies to an Owner that actually or constructively is treated as owning Parent stock immediately prior to, at, or immediately following, the Effective Time of the Offer or the Merger, and that is unable to make Certification A1 or A2, above.
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Under penalties of perjury, I declare that I have examined the information in this Certification and, to the best of my knowledge and belief, it is true, correct and complete. I further certify under penalties of perjury that I am the Owner (or authorized to sign for the Owner) of the Cash Consideration to which this Certification relates and was the Owner (or am authorized to sign for the Owner) of the Akcea common stock to whom payment of such Cash Consideration was (or is to be) made.

Owner's Name \_\_\_\_\_

Signature of owner or person authorized to sign for Owner

Date (mm/dd/yyyy)

Capacity in which signing

**INSTRUCTIONS FOR COMPLETING CERTIFICATION  
REGARDING TAX TREATMENT**

These instructions and the accompanying certification (“Certification”) concern the U.S. federal income tax treatment of the of the acquisition by Avalanche Merger Sub, Inc., a Delaware corporation (“Purchaser”) and a wholly-owned subsidiary of Ionis Pharmaceuticals, Inc., a Delaware corporation (“Parent”), of shares of common stock (collectively, the “Shares”), par value \$0.001 per share, of Akcea Therapeutics, Inc., a Delaware corporation (“Akcea”), at a price of \$18.15 per Share, net to the seller in cash (the “Cash Consideration”), without interest and less any applicable withholding taxes, on the terms and subject to the conditions set forth in the Offer to Purchase.

An Akcea stockholder who completes this Certification is certifying whether the Cash Consideration should be treated as a payment in exchange for Akcea common stock or as a distribution to which Section 301 of the Internal Revenue Code of 1986, as amended (the “Code”), applies. Capitalized terms used in this Certification and not otherwise defined herein have the meaning ascribed to such terms in the Offer to Purchase.

Any Akcea stockholder entitled to Cash Consideration (“Owner”) should complete this Certification. Owners must complete and submit this Certification with the Letter of Transmittal in accordance with the instructions in the Letter of Transmittal.

**The information reporting consequences and the amount, if any, of tax required to be withheld for U.S. federal income tax purposes will be based on the information provided in the Certification. If the Certification is not received by the specified deadline, your Cash Consideration generally will be treated in accordance with the default rules described below. Cash Consideration payable to a Non-U.S. Holder who fails to timely submit a properly completed Certification generally will be subject to withholding tax.**

**U.S. Federal Income Tax Consequences**

As described in the Offer to Purchase, while Owners who do not own shares of Parent common stock, directly or indirectly, will generally recognize taxable gain or loss equal to the difference between (1) such Owner’s adjusted tax basis in the Shares surrendered in the exchange, and (2) the amount of cash received by such Owner in the Offer and/or the Merger, Section 304 of the Code is expected to apply to the Offer and the Merger because Parent currently owns more than 50 percent of the Akcea common stock. Parent and Akcea intend to take the position for information reporting and withholding purposes that Section 304 of the Code applies to the Offer and the Merger. Accordingly, your Cash Consideration may be treated either as a payment in exchange for Akcea common stock for U.S. federal income tax purposes (if you do not own any Parent common stock, directly, indirectly, or constructively, or if you do and certain tests under Sections 302 and 304 of the Code are met), or as a distribution to which Section 301 of the Code applies (if you do own Parent common stock and certain tests under Sections 302 and 304 of the Code are not met).

A distribution to which Section 301 of the Code applies will be treated as a dividend to the extent of Parent’s and Akcea’s current and accumulated earnings and profits, as determined under U.S. federal income tax principles. Dividends paid to Non-U.S. Holders generally are subject to withholding tax at a rate of 30 percent (or such lower rate as may be provided under an applicable income tax treaty). Non-U.S. Holders should read the section entitled “Procedures Applicable to Non-U.S. Holders” below.

For further discussion of the U.S. federal income tax consequences of the Offer and the Merger, please see the section entitled “Certain U.S. Federal Income Tax Consequences of the Offer and the Merger” in the Offer to Purchase. Because individual circumstances may differ, you should consult your tax advisor regarding the specific tax consequences of the Offer and the Merger to you in light of your particular circumstances, including the applicability and effect of federal, state, local and foreign income and other tax laws.



## Completing the Certification

Please complete and submit the Certification to indicate how your Cash Consideration should be treated for U.S. federal income tax purposes. Check the appropriate box to indicate if your Cash Consideration should be treated (a) as a payment in exchange for Akcea common stock because either (1) you (i) will not be a beneficial owner of Parent stock immediately prior to the Effective Time, (ii) will not acquire Parent stock in connection with the Offer and the Merger and (iii) will not be deemed to own Parent stock through attribution from another person (or as a result of owning options) immediately prior to, during, or immediately following, the Offer and the Merger (Certification A1), or (2) (i) such payment will be substantially disproportionate with respect to you, or (ii) your proportionate interest in Akcea will be meaningfully reduced as a result of the payment (Certification A2) or (b) as a distribution to which Section 301 of the Code applies (Certification B). If you select Certification A, please fill in the information regarding your "Prior Interest" in Akcea (including any deemed Prior Interest in Akcea resulting from a prior interest in Parent) and your "Subsequent Interest" in Parent, unless you are eligible to check the box under Certification A1 and do so.

If you select Certification A2 and fill in information regarding your Prior Interest and your Subsequent Interest, please note that Parent will (i) review the reduction in proportionate interest reflected in the Certification, (ii) reach an independent judgment as to whether (A) such payment was substantially disproportionate with respect to you, or (B) your proportionate interest in Parent was meaningfully reduced, and (iii) only treat your Cash Consideration as a payment in exchange for Akcea common stock if Parent agrees that such payment was substantially disproportionate with respect to you or your proportionate interest in Parent was meaningfully reduced.

The information contained in these instructions is intended to assist you in completing the Certification but is not tax advice. Parent's determination (including the application of the default tax treatment if you fail to respond by the specified deadline or submit an incomplete or incorrect Certification) is required to satisfy U.S. federal income tax information reporting and withholding obligations, but is not binding on you for all tax purposes. You should consult your tax advisor regarding the appropriate U.S. federal income tax treatment of your Cash Consideration in light of your particular circumstances, including whether it may be appropriate to take a contrary position on your U.S. federal income tax return and your potential eligibility for a refund of taxes withheld (if any) if you fail to respond by the specified deadline, submit an incomplete or incorrect Certification or otherwise disagree with the determination.

### *Default Tax Treatment if Your Certification Is Not Timely Received, Is Incomplete or Is Completed Improperly*

If your Certification is not timely received by the Depository, or your Certification is incomplete or is completed improperly, Parent and the Depository will generally treat the payment of your Cash Consideration as a distribution to which Section 301 of the Code applies.

### *Certification A: Payment in Exchange for Akcea Common Stock*

By selecting Certification A1 or A2, you are certifying that your Cash Consideration should be treated as a payment in exchange for Akcea common stock, rather than as a distribution to which Section 301 of the Code applies, because either (1) you (i) will not be a beneficial owner of Parent stock immediately prior to the Effective Time, (ii) will not acquire Parent stock prior to, at, or immediately after the Effective Time of the Offer and the Merger and (iii) will not be deemed to own Parent stock through attribution from another person (or as a result of owning options) immediately prior to, during, or immediately following, the Offer and the Merger, or (2) you will actually or constructively own Parent stock prior to, at, or immediately after, the Effective Time of the Offer and the Merger, and either (i) the payment of Cash Consideration will be substantially disproportionate with respect to you, or (ii) your proportionate interest in Akcea will be meaningfully reduced as a result of the Offer and Merger and such payment. See the Offer to Purchase for additional information regarding whether a payment is substantially disproportionate or results in a meaningful reduction. To calculate whether your proportionate interest in Akcea will be reduced as a result of the Offer and the Merger, you must first calculate

your percentage ownership of Akcea common stock immediately prior to the Effective Time (i.e., the total number of shares of Akcea common stock that you will own immediately prior to the Effective Time, divided by the approximate total number of shares of Akcea common stock outstanding immediately prior to the Effective Time). It is important to be mindful that certain constructive ownership rules under the Code may attribute ownership of shares of Akcea common stock to you that you do not own directly for purposes of these tests. For example, in applying these tests, if you own Parent stock immediately before the Effective Time, you are treated as owning a proportionate share of the Akcea common stock that is owned by Parent immediately before the Effective Time. Before completing the Certification, you should verify the number of shares of Parent stock and Akcea common stock that you will own immediately prior to the Effective Time.

In the "Prior Interest" paragraph:

- enter the number of shares of Parent common stock that you will own immediately prior to the Effective Time in the first space provided in Prior Interest (including shares that you are deemed to own under Sections 304 and 318 of the Code (as described below)) (as specified under Certification A2 as "U"); then
- calculate the number of shares of Akcea common stock you will own by attribution as a result of your ownership of Parent common stock, by dividing such shares of Parent common stock (U) by the approximate total number of shares of Parent common stock outstanding immediately prior to the Effective Time (as specified under Certification A2 as "Z") and multiplying the result by the total number of shares of Akcea common stock owned by Parent immediately prior to the Effective Time (i.e., 77,094,682), and enter such number of shares (as specified under Certification A2 as "V") in the second space provided in Prior Interest; then
- enter the total number of shares of Akcea common stock that you will own immediately prior to the Effective Time, in the third space provided in Prior Interest (including shares that you are deemed to own under Sections 304 and 318 of the Code (as described below), but excluding shares you are deemed to own by attribution as a result of your ownership of Parent common stock (V), computed as described above) (as specified under Certification A2 as "W"); and then
- calculate your percentage ownership of Akcea common stock immediately prior to the Effective Time, by adding the shares of Akcea common stock you are deemed to own by attribution as a result of your ownership of Parent common stock (V), plus the total number of other shares of Akcea common stock that you will own or be deemed to own immediately prior to the Effective Time (W), and dividing the sum by the approximate total number of shares of Akcea common stock outstanding immediately prior to the Effective Time (as specified under Certification A2 as "X"), and enter this percentage in the final space provided in Prior Interest.

Example Calculation:

50,000 shares of Parent common stock owned by you immediately prior to the Effective Time (U)

139,761,136 approximate shares of Parent common stock outstanding immediately prior to the Effective Time (Z)

This represents  $(50,000/139,761,136 * 77,094,682)$  = approximately 27,580.8727 shares of Akcea common stock you are deemed to own by attribution as a result of your ownership of Parent common stock (V)

20,000 shares of Akcea common stock owned by you immediately prior to the Effective Time, including shares that you are deemed to own under Sections 304 and 318 of the Code, excluding the 27,580.8727 (V) shares you are deemed to own by attribution as a result of your ownership of Parent common stock (W)

101,759,772 approximate shares of Akcea common stock outstanding immediately prior to the Effective Time (X)

Your Prior Interest =  $((27,580.8727 + 20,000)/101,759,772 * 100)$  = approximately 0.0468% of the outstanding Akcea common stock

Next, you must calculate your percentage ownership of Parent common stock immediately following the Effective Time (i.e., the number of shares of Parent common stock that you will own immediately following the Effective Time, divided by the approximate total number of shares of Parent common stock outstanding immediately following the Effective Time).

In the “Subsequent Interest” paragraph:

- enter the number of shares of Parent common stock that you will own immediately following the Effective Time in the first space provided in Subsequent Interest (including shares that you acquire or sell in connection with the Offer or the Merger and shares that you are deemed to own under Sections 304 and 318 of the Code (as described below)) (as specified under Certification A2 as “Y”), and then
- calculate your percentage ownership of Parent common stock immediately following the Effective Time, based on the approximate number of shares of Parent common stock outstanding immediately following the Effective Time (as specified under Certification A2 as “Z”), and enter this percentage in the second space.

Example Calculation:

50,000 shares of Parent common stock owned by you immediately following the Effective Time (Y)

139,761,136 approximate shares of Parent common stock outstanding immediately following the Effective Time (Z)

Your Subsequent Interest =  $(50,000/139,761,136 * 100)$  = approximately 0.0358% of the outstanding Parent common stock

The approximate number of shares of Akcea common stock that will be outstanding immediately prior to the Effective Time (X) and the approximate number of shares of Parent common stock that will be outstanding immediately prior to and immediately following the Effective Time (Z) are approximations of the actual numbers of shares of Akcea common stock and Parent common stock expected to be outstanding at such times. The actual number of shares of Akcea common stock that will be outstanding immediately prior to the Effective Time and the actual number of shares of Parent common stock that will be outstanding immediately prior to and immediately following the Effective Time may differ from the approximations used for purposes of this Certification. You should consult your tax advisor regarding the impact to you of any such differences.

Percentages should be rounded to an appropriate number of decimal places to indicate that your Subsequent Interest is smaller than your Prior Interest. Please note that if it cannot be determined that either (1) such payment was substantially disproportionate with respect to you, or (2) your proportionate interest in Parent was meaningfully reduced as a result of the payment (as reflected in the comparison of your Prior Interest with your Subsequent Interest), then Parent and the Depository will treat your Cash Consideration generally as a distribution to which Section 301 of the Code applies, not as a payment in exchange for Akcea common stock, and in the case of a Non-U.S. Holder, this amount may be subject to U.S. withholding tax.

In lieu of these calculations, you may be able to certify that Cash Consideration paid to you should be treated for U.S. federal income tax purposes as a payment in exchange for your Shares by checking Certification A1. To qualify for this option, you must be able to certify that you (i) will not be a beneficial owner of Parent stock immediately prior to the Effective Time, (ii) will not acquire any Parent stock in connection with the Offer or the Merger, and (iii) will not be deemed to own Parent stock through attribution from another person (or as a result of owning options) immediately prior to, during, or immediately following the Offer or the Merger.

You should consult your tax advisor regarding the standard for determining whether such payment was substantially disproportionate with respect to you or your proportionate interest in Parent was meaningfully reduced as a result of the payment. The preamble to proposed U.S. Treasury Regulation Section 1.1441-31 states that “[i]f after the transaction the [minority] shareholder’s percentage ownership is less than it was before the transaction, the shareholder generally has experienced a ‘meaningful reduction’ in the shareholder’s proportionate interest in the corporation.”

If you do not qualify for Certification A, please check the box for Certification B to indicate that your Cash Consideration should be treated as a distribution to which Section 301 of the Code applies.

*Determining Number of Shares Owned*

When determining the number of shares of stock that you own for purposes of Certification A1 or A2, you must include all shares that you hold directly or indirectly through a financial institution or otherwise, as well as all shares that you are deemed to own through the operation of various attribution rules under Sections 304 and 318 of the Code (including by attribution through ownership of Parent stock), and account for any shares that you acquire or sell immediately prior to, at, or immediately following, the Effective Time of the Offer or the Merger. You should consult your tax advisor for more information regarding the attribution rules. In general, however, the following attribution rules apply:

1. A person is deemed to own shares owned (directly or indirectly) by the person's spouse (other than a spouse who is legally separated from the person under a decree of divorce or separate maintenance), children (including adopted children), grandchildren and parents.
2. A person is deemed to own shares owned (directly or indirectly) by a partnership or estate of which the person is a partner or beneficiary, in proportion to the person's interest in the partnership or estate.
3. A person is deemed to own shares owned (directly or indirectly) by a grantor trust (or portion thereof) of which the person is considered the owner.
4. A person is deemed to own shares owned (directly or indirectly) by a non-grantor trust of which the person is a beneficiary, in proportion to the person's actuarial interest in the trust (but not if the trust is an employee benefit trust under Section 401(a) of the Code).
5. A person might be deemed to own any shares owned (directly or indirectly) by or for a corporation in which the person owns (directly or indirectly) stock, in the proportion that the value of the stock owned by or for the person bears to the value of all the stock of the corporation.
6. A partnership or estate is deemed to own any shares owned (directly or indirectly) by or for a partner or beneficiary.
7. A non-grantor trust (other than an employee benefit trust under Section 401(a) of the Code) is deemed to own any shares owned (directly or indirectly) by or for a beneficiary, unless the beneficiary's interest is a remote contingent interest. A contingent interest of a beneficiary in a trust is considered remote if, under the maximum exercise of discretion by the trustee in favor of such beneficiary, the value of such interest, computed actuarially, is 5 percent or less of the value of the trust property.
8. A grantor trust is deemed to own shares owned (directly or indirectly) by or for the owner of the trust (or portion thereof).
9. A corporation might be deemed to own any shares owned (directly or indirectly) by or for a person who owns (directly or indirectly) stock of the corporation.
10. Any person who has an option to acquire shares is deemed to own such shares.
11. An S corporation generally is treated as a partnership for purposes of the above rules (and any shareholder of the S corporation generally will be treated as a partner of such partnership).

For purposes of applying the above rules, a person generally is considered to actually own any shares that the person is deemed to own under any of the rules. As a consequence, such shares may be further attributed to another person under the rules, subject to the following exceptions:

- Shares constructively owned under the "family" attribution rules of paragraph 1 will not be deemed to be owned by one member of a family in order to attribute ownership to another member of the family.

For example, the shares of a taxpayer's sister cannot be attributed to the taxpayer through their mother's constructive ownership of the sister's shares. However, if shares can be considered owned by a person under both the family rules of paragraph 1 and the option rule of paragraph 10, this exception does not apply.

- Shares constructively owned by a partnership, estate, trust or corporation under the rules of paragraphs 6-9 will not be deemed to be owned by that entity to make another the constructive owner of the shares under the rules of paragraphs 2-5. For example, the shares held by partner A of a partnership cannot be attributed to partner B through the partnership's constructive ownership of A's shares.

As an example to illustrate how certain attribution rules apply, assume you own 100 shares of Akcea common stock directly and Corporation A also owns 100 shares of Akcea common stock. If you own 40 percent of the value of the stock of Corporation A directly, and you are the grantor of a grantor trust that owns another 20 percent of the value of the stock of Corporation A, you are considered to own 60 percent of the value of Corporation A's stock, as provided in paragraph 3 above. You are therefore considered to own 160 shares of Akcea common stock—the 100 shares you actually own and 60 percent of the shares owned by Corporation A, as provided in paragraph 5 above. In addition, Corporation A is considered to own 200 shares of Akcea common stock—the 100 shares that it actually owns and all of the 100 shares you own directly, as provided in paragraph 9 above.

#### **Signature, Date and Capacity**

Please sign and date the Certification, and state the capacity in which you are signing.

#### **Procedures Applicable to Non-U.S. Holders**

If you are a Non-U.S. Holder and you indicate on your Certification that your Cash Consideration should be treated as a payment in exchange for Akcea common stock (by selecting Certification A1 or A2) and Parent agrees (or if Parent otherwise makes this determination), then the Depository generally will pay all of your Cash Consideration to you (subject to the application of the backup withholding rules) and report your Cash Consideration as a payment in exchange for Akcea common stock.

If you are a Non-U.S. Holder and you indicate on your Certification that your Cash Consideration should be treated as a distribution to which Section 301 of the Code applies (by selecting Certification B) and Parent agrees (or if Parent otherwise makes this determination), then the Depository generally will withhold 30% (or such lower rate as may be specified by an applicable income tax treaty) of any Cash Consideration payable to you and remit the withheld portion of your Cash Consideration to the IRS and report the amount as a dividend for U.S. federal information reporting purposes.

If you are a Non-U.S. Holder and you fail to timely provide a Certification to the Depository, the Depository generally will withhold 30% (or such lower rate as may be specified by an applicable income tax treaty) of any Cash Consideration payable to you and remit the withheld portion of your Cash Consideration to the IRS and report the amount as a dividend for U.S. federal information reporting purposes.

You may be entitled to a refund from the IRS of all or a portion of the withheld amount by timely filing for a refund with the IRS.

The information reporting and withholding procedures may be different for any shares of Akcea common stock held in "street name" through your bank, broker or other nominee. You should consult your bank, broker or other nominee to find out if similar information reporting and withholding procedures will be implemented for any shares of Akcea common stock held in street name.

*The Depository for the Offer to Purchase is:*



If delivering by hand, express mail, courier,  
or other expedited service:

American Stock Transfer & Trust Company, LLC  
Operations Center  
Attn: Reorganization Department  
6201 15th Avenue  
Brooklyn, New York 11219

By mail:

American Stock Transfer & Trust Company, LLC  
Operations Center  
Attn: Reorganization Department  
6201 15th Avenue  
Brooklyn, New York 11219

**DELIVERY OF THIS LETTER OF TRANSMITTAL TO AN ADDRESS OTHER THAN AS SET FORTH ABOVE WILL NOT  
CONSTITUTE A VALID DELIVERY TO THE DEPOSITORY.**

Any questions or requests for assistance may be directed to the Information Agent at its telephone number and location listed below. Requests for additional copies of this Offer to Purchase and the Letter of Transmittal may be directed to the Information Agent at its telephone number and location listed below. You may also contact your broker, dealer, commercial bank or trust company or other nominee for assistance concerning the Offer.

*The Information Agent for the Offer is:*



**Alliance Advisors, LLC  
200 Broadacres Drive, 3rd Floor  
Bloomfield, New Jersey 07003  
(833) 934-2735**

NOTICE OF GUARANTEED DELIVERY  
For Tender of Shares of Common Stock  
of

**AKCEA THERAPEUTICS, INC.**

a Delaware corporation  
at

\$18.15 NET PER SHARE

Pursuant to the Offer to Purchase dated September 14, 2020

by

**AVALANCHE MERGER SUB, INC.**

a wholly owned subsidiary of

**IONIS PHARMACEUTICALS, INC.**

THE OFFER AND WITHDRAWAL RIGHTS WILL EXPIRE AT ONE MINUTE AFTER  
11:59 P.M., EASTERN TIME, ON OCTOBER 9, 2020,  
UNLESS THE OFFER IS EXTENDED OR EARLIER TERMINATED.

This Notice of Guaranteed Delivery, or one substantially in the form hereof, must be used to accept the Offer (as defined below) if (i) certificates representing shares of common stock, par value \$0.001 per share (the "Shares"), of Akcea Therapeutics, Inc., a Delaware corporation, are not immediately available, (ii) the procedure for book-entry transfer cannot be completed prior to the expiration of the Offer or (iii) time will not permit all required documents to reach American Stock Transfer & Trust Company, LLC (the "Depository") prior to the expiration of the Offer. This Notice of Guaranteed Delivery may be delivered by overnight courier or mailed to the Depository. See Section 13 of the Offer to Purchase (as defined below).

*The Depository for the Offer is:*



*By Mail:*

American Stock Transfer & Trust Company, LLC  
Operations Center  
Attention: Reorganization Department  
6201 15th Avenue  
Brooklyn, NY 11219

*By Overnight Courier:*

American Stock Transfer & Trust Company, LLC  
Operations Center  
Attention: Reorganization Department  
6201 15th Avenue  
Brooklyn, NY 11219

FACSIMILE: (718) 234-5001  
CONFIRM: (877) 248-6417

The above number is for confirmation of facsimiles only. Do NOT call this number for questions on the Offer. All questions on the Offer should be directed to the Information Agent listed in the Offer to Purchase.

**DELIVERY OF THIS NOTICE OF GUARANTEED DELIVERY TO AN ADDRESS OTHER THAN AS SET FORTH ABOVE WILL NOT CONSTITUTE A VALID DELIVERY.**

**THIS NOTICE OF GUARANTEED DELIVERY IS NOT TO BE USED TO GUARANTEE SIGNATURES. IF A SIGNATURE ON A LETTER OF TRANSMITTAL IS REQUIRED TO BE GUARANTEED BY AN ELIGIBLE INSTITUTION (AS DEFINED IN SECTION 13 OF THE OFFER TO PURCHASE) UNDER THE INSTRUCTIONS THERETO, SUCH SIGNATURE GUARANTEE MUST APPEAR IN THE APPLICABLE SPACE PROVIDED IN THE SIGNATURE BOX ON THE APPROPRIATE LETTER OF TRANSMITTAL.**

**The Eligible Institution that completes this Notice of Guaranteed Delivery must communicate the guarantee to the Depository and must deliver the Letter of Transmittal (as defined below) or an Agent's Message (as defined in Section 13 of the Offer to Purchase) and certificates for Shares (or Book-Entry Confirmation, as defined in Section 13 of the Offer to Purchase) to the Depository within the time period shown herein. Failure to do so could result in a financial loss to such Eligible Institution.**

Ladies and Gentlemen:

The undersigned hereby tenders to Avalanche Merger Sub, Inc., a Delaware corporation and a wholly owned subsidiary of Ionis Pharmaceuticals, Inc., a Delaware corporation, upon the terms and subject to the conditions set forth in the Offer to Purchase, dated September 14, 2020 (as it may be amended or supplemented from time to time, the "Offer to Purchase"), and the related Letter of Transmittal (as it may be amended or supplemented from time to time, the "Letter of Transmittal" and, together with the Offer to Purchase, the "Offer"), receipt of which is hereby acknowledged, the number of Shares specified below, pursuant to the guaranteed delivery procedure set forth in Section 13 of the Offer to Purchase.

Number of Shares and Certificate No(s)  
(if available)

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Check here if Shares will be tendered by book-entry transfer.

Name of Tendering Institution:

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DTC Account Number:

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Dated:

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Name(s) of Record Holder(s):

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(Please type or print)

Address(es):

(Zip Code)

Area Code and Tel. No.

(Daytime telephone number)

Signature(s):

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**Notice of Guaranteed Delivery**



**GUARANTEE**

(Not to be used for signature guarantee)

The undersigned, an Eligible Institution, hereby (i) represents that the tender of Shares effected hereby complies with Rule 14e-4 under the Securities Exchange Act of 1934, as amended, and (ii) within TWO (2) Nasdaq trading days after the date hereof, (A) guarantees delivery to the Depository, at one of its addresses set forth above, of certificates representing the Shares tendered hereby, in proper form for transfer, together with a properly completed and duly executed Letter of Transmittal and any other documents required by the Letter of Transmittal or (B) guarantees a Book-Entry Confirmation of the Shares tendered hereby into the Depository's account at The Depository Trust Company (pursuant to the procedures set forth in Section 13 of the Offer to Purchase), together with a properly completed and duly executed Letter of Transmittal, or an Agent's Message (defined in Section 13 of the Offer to Purchase) in lieu of such Letter of Transmittal, and any other documents required by the Letter of Transmittal.

Name of Firm:	_____
Address:	_____
	_____
	(Zip Code)
Area Code and Telephone No.:	_____
	_____
	(Authorized Signature)
Name:	_____
	(Please type or print)
Title:	_____
Date:	_____

**NOTE: DO NOT SEND CERTIFICATES REPRESENTING TENDERED SHARES WITH THIS NOTICE. CERTIFICATES REPRESENTING TENDERED SHARES SHOULD BE SENT WITH YOUR LETTER OF TRANSMITTAL.**

Offer To Purchase For Cash  
All Outstanding Shares of Common Stock  
of  
**AKCEA THERAPEUTICS, INC.**  
a Delaware corporation  
at  
**\$18.15 NET PER SHARE**  
Pursuant to the Offer to Purchase dated September 14, 2020  
by  
**AVALANCHE MERGER SUB, INC.**  
a wholly owned subsidiary of  
**IONIS PHARMACEUTICALS, INC.**

<p><b>THE OFFER AND WITHDRAWAL RIGHTS WILL EXPIRE AT ONE MINUTE AFTER 11:59 P.M., EASTERN TIME, ON OCTOBER 9, 2020, UNLESS THE OFFER IS EXTENDED OR EARLIER TERMINATED.</b></p>
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September 14, 2020

To Brokers, Dealers, Commercial Banks, Trust Companies and Other Nominees:

We have been engaged by Avalanche Merger Sub, Inc., a Delaware corporation (“Purchaser”) and a wholly owned subsidiary of Ionis Pharmaceuticals, Inc., a Delaware corporation (“Parent”), to act as Information Agent in connection with Purchaser’s Offer to Purchase, dated September 14, 2020 (the “Offer to Purchase”), subject to certain conditions, including the satisfaction of the Minimum Condition (as defined in the Offer to Purchase), any and all of the outstanding shares of common stock, par value \$0.001 per share (the “Shares”), of Akcea Therapeutics, Inc., a Delaware corporation (“Akcea”), that Parent does not already own, at a price of \$18.15 per Share, net to the seller in cash, without interest (the “Offer Price”) and subject to any withholding of taxes, upon the terms and subject to the conditions set forth in the Offer to Purchase, and the related Letter of Transmittal (the “Letter of Transmittal” and which, together with the Offer to Purchase, each as may be amended or supplemented from time to time, constitute the “Offer”) enclosed herewith. Please furnish copies of the enclosed materials to those of your clients for whom you hold Shares registered in your name or in the name of your nominee.

**THE BOARD OF DIRECTORS OF AKCEA, ACTING ON THE UNANIMOUS RECOMMENDATION OF AN AFFILIATE TRANSACTIONS COMMITTEE COMPRISED SOLELY OF INDEPENDENT DIRECTORS, HAS RECOMMENDED THAT STOCKHOLDERS ACCEPT THE OFFER AND TENDER THEIR SHARES PURSUANT TO THE OFFER.**

**The Offer is not subject to any financing condition. The conditions to the Offer are described in Section 22 of the Offer to Purchase.**

For your information and for forwarding to your clients for whom you hold Shares registered in your name or in the name of your nominee, we are enclosing the following documents:

1. The Offer to Purchase;
2. The Letter of Transmittal for your use in accepting the Offer and tendering Shares and for the information of your clients, together with the included Internal Revenue Service Form W-9;
3. A Notice of Guaranteed Delivery to be used to accept the Offer if Shares and all other required documents cannot be delivered to American Stock Transfer & Trust Company, LLC (the “Depository”) by the expiration of the Offer or if the procedure for book-entry transfer cannot be completed by the expiration of the Offer (the “Notice of Guaranteed Delivery”);

4. A form of letter which may be sent to your clients for whose accounts you hold Shares registered in your name or in the name of your nominee, with space provided for obtaining such clients' instructions with regard to the Offer; and
5. Akcea's Solicitation/Recommendation Statement on Schedule 14D-9, dated September 14, 2020.

**We urge you to contact your clients as promptly as possible. Please note that the Offer and withdrawal rights will expire at one minute after 11:59 p.m., Eastern Time, on October 9, 2020, unless the Offer is extended or earlier terminated.**

The Offer is being made in connection with the Agreement and Plan of Merger, dated as of August 30, 2020 (together with any amendments or supplements thereto, the "Merger Agreement"), among Akcea, Parent and Purchaser, pursuant to which, after the completion of the Offer and the satisfaction or waiver of certain conditions, Purchaser will be merged with and into Akcea, without a meeting of Akcea's stockholders in accordance with Section 251(h) of the General Corporation Law of the State of Delaware (the "DGCL"), and Akcea will be the surviving corporation and a wholly owned subsidiary of Parent (such merger, the "Merger"). At the effective time of the Merger, each Share issued and then outstanding (other than Shares held by Akcea, Parent, Purchaser, any wholly owned subsidiary of Parent or Purchaser, or by stockholders of Akcea who have perfected their statutory rights of appraisal under the DGCL) will be converted into the right to receive consideration equal to the Offer Price, without interest and subject to any withholding of taxes, upon the terms and subject to the conditions set forth in the Offer to Purchase.

For Shares to be properly tendered pursuant to the Offer, (a) the share certificates or confirmation of receipt of such Shares under the procedure for book-entry transfer, together with a properly completed and duly executed Letter of Transmittal, including any required signature guarantees, or, in the case of book-entry transfer, either such Letter of Transmittal or an Agent's Message (as defined in the Offer to Purchase) in lieu of such Letter of Transmittal, and any other documents required in the Letter of Transmittal, must be timely received by the Depository, or (b) the tendering stockholder must comply with the guaranteed delivery procedures, all in accordance with the Offer to Purchase and the Letter of Transmittal. You may gain some additional time by making use of the Notice of Guaranteed Delivery.

Except as set forth in the Offer to Purchase, Purchaser will not pay any fees or commissions to any broker or dealer or other person, other than to us, as the information agent, and American Stock Transfer & Trust Company, LLC, as the Depository, for soliciting tenders of Shares pursuant to the Offer. Purchaser will, however, upon request, reimburse brokers, dealers, commercial banks, trust companies and other nominees for customary mailing and handling expenses incurred by them in forwarding the offering material to their customers. Purchaser will pay all stock transfer taxes applicable to its purchase of Shares pursuant to the Offer, subject to Instruction 6 of the Letter of Transmittal.

Any inquiries you may have with respect to the Offer should be addressed to, and additional copies of the enclosed materials may be obtained from, the undersigned at the address and telephone numbers set forth below.

Very truly yours,

**Alliance Advisors, LLC**

Nothing contained herein or in the enclosed documents shall render you the agent of Parent, Purchaser, the Information Agent or the Depository or any affiliate of any of them or authorize you or any other person to use any document or make any statement on behalf of any of them in connection with the Offer other than the enclosed documents and the statements contained therein.

*The Information Agent for the Offer is:*



Alliance Advisors, LLC  
200 Broadacres Drive, 3rd Floor  
Bloomfield, New Jersey 07003  
(833) 934-2735

**Offer To Purchase For Cash**  
**All Outstanding Shares of Common Stock**  
of  
**AKCEA THERAPEUTICS, INC.**  
a Delaware corporation  
at  
**\$18.15 NET PER SHARE**  
Pursuant to the Offer to Purchase dated September 14, 2020  
by  
**AVALANCHE MERGER SUB, INC.**  
a wholly owned subsidiary of  
**IONIS PHARMACEUTICALS, INC.**

**THE OFFER AND WITHDRAWAL RIGHTS WILL EXPIRE AT ONE MINUTE AFTER  
11:59 P.M., EASTERN TIME, ON OCTOBER 9, 2020,  
UNLESS THE OFFER IS EXTENDED OR EARLIER TERMINATED.**

September 14, 2020

To Our Clients:

Enclosed for your consideration are the Offer to Purchase, dated September 14, 2020 (the "Offer to Purchase"), and the related Letter of Transmittal (the "Letter of Transmittal" and which, together with the Offer to Purchase, each as may be amended or supplemented from time to time, constitute the "Offer") in connection with the offer by Avalanche Merger Sub, Inc., a Delaware corporation ("Purchaser") and a wholly owned subsidiary of Ionis Pharmaceuticals, Inc., a Delaware corporation ("Parent"), to purchase, subject to certain conditions, including the satisfaction of the Minimum Condition, as defined in the Offer to Purchase, any and all of the outstanding shares of common stock, par value \$0.001 per share (the "Shares"), of Akcea Therapeutics, Inc., a Delaware corporation ("Akcea"), at a price of \$18.15 per Share, net to the seller in cash, without interest (the "Offer Price") and subject to any withholding of taxes, upon the terms and subject to the conditions of the Offer.

**THE BOARD OF DIRECTORS OF AKCEA, ACTING ON THE UNANIMOUS RECOMMENDATION OF AN AFFILIATE TRANSACTIONS COMMITTEE COMPRISED SOLELY OF INDEPENDENT DIRECTORS, HAS RECOMMENDED THAT YOU ACCEPT THE OFFER AND TENDER YOUR SHARES PURSUANT TO THE OFFER.**

We or our nominees are the holder of record of Shares held for your account. A tender of such Shares can be made only by us as the holder of record and pursuant to your instructions. The Letter of Transmittal accompanying this letter is furnished to you for your information only and cannot be used by you to tender Shares held by us for your account.

**We request instructions as to whether you wish us to tender any or all of the Shares held by us for your account, upon the terms and subject to the conditions set forth in the enclosed Offer to Purchase and the Letter of Transmittal.**

Please note carefully the following:

1. The offer price for the Offer is \$18.15 per Share, net to you in cash, without interest and subject to any withholding of taxes.
2. The Offer is being made for all outstanding Shares.

3. The Offer is being made in connection with the Agreement and Plan of Merger, dated as of August 30, 2020 (together with any amendments or supplements thereto, the "Merger Agreement"), among Akcea, Parent and Purchaser, pursuant to which, after the completion of the Offer and the satisfaction or waiver of certain conditions, Purchaser will be merged with and into Akcea, without a meeting of Akcea's stockholders in accordance with Section 251(h) of the General Corporation Law of the State of Delaware (the "DGCL"), and Akcea will be the surviving corporation and a wholly owned subsidiary of Parent (such merger, the "Merger"). At the effective time of the Merger, each Share issued and then outstanding (other than Shares held by Akcea, Parent, Purchaser, any wholly owned subsidiary of Parent or Purchaser, or by stockholders of Akcea who have perfected their statutory rights of appraisal under the DGCL) will be cancelled and converted automatically into the right to receive the Offer Price, without interest and subject to any withholding of taxes, upon the terms and subject to the conditions set forth in the Offer to Purchase.

4. The Offer and withdrawal rights will expire at one minute after 11:59 p.m., Eastern Time, on October 9, 2020, unless the Offer is extended by Purchaser or earlier terminated.

5. The Offer is subject to the conditions described in Section 22 of the Offer to Purchase. The Offer is not subject to any financing condition.

**6. The Board of Directors of Akcea, acting on the unanimous recommendation of an affiliate transactions committee comprised solely of independent directors, has recommended that you accept the Offer and tender your shares pursuant to the Offer.**

7. Tendering stockholders who are record owners of their Shares and who tender directly to American Stock Transfer & Trust Company, LLC, the depository for the Offer, will not be obligated to pay brokerage fees, commissions or similar expenses or, except as otherwise provided in Instruction 6 of the Letter of Transmittal, stock transfer taxes with respect to the purchase of Shares by Purchaser pursuant to the Offer.

If you wish to have us tender any or all of your Shares, then please so instruct us by completing, executing, detaching and returning to us the Instruction Form on the detachable part hereof. An envelope to return your instructions to us is enclosed. If you authorize tender of your Shares, then all such Shares will be tendered unless otherwise specified on the Instruction Form.

**Your prompt action is requested. Your Instruction Form should be forwarded to us in ample time to permit us to submit the tender on your behalf before the expiration of the Offer, which is currently scheduled to be one minute after 11:59 p.m., Eastern Time, on October 9, 2020.**

The Offer is being made to all holders of Shares. Purchaser is not aware of any jurisdiction in which the making of the Offer or the acceptance thereof would be prohibited by securities, "blue sky" or other valid laws of such jurisdiction. If Purchaser becomes aware of any U.S. state in which the making of the Offer or the acceptance of Shares pursuant thereto would not be in compliance with an administrative or judicial action taken pursuant to a U.S. state statute, Purchaser will make a good faith effort to comply with any such law. If, after such good faith effort, Purchaser cannot comply with any such law, the Offer will not be made to (nor will tenders be accepted from or on behalf of) the holders of Shares in such state. In any jurisdictions where applicable laws require the Offer to be made by a licensed broker or dealer, the Offer shall be deemed to be made on behalf of Purchaser by one or more registered brokers or dealers licensed under the laws of such jurisdiction to be designated by Purchaser.

INSTRUCTION FORM  
With Respect to the Offer to Purchase for Cash  
All Outstanding Shares of Common Stock  
of  
**AKCEA THERAPEUTICS, INC.**  
a Delaware corporation  
at  
**\$18.15 NET PER SHARE**  
Pursuant to the Offer to Purchase dated September 14, 2020  
by  
**AVALANCHE MERGER SUB, INC.**  
a wholly owned subsidiary of  
**IONIS PHARMACEUTICALS, INC.**

The undersigned acknowledge(s) receipt of your letter and the enclosed Offer to Purchase, dated September 14, 2020 ("Offer to Purchase"), and the related Letter of Transmittal (the "Letter of Transmittal" and which, together with the Offer to Purchase, each as may be amended or supplemented from time to time, constitute the "Offer"), in connection with the offer by Avalanche Merger Sub, Inc., a Delaware corporation ("Purchaser") and a wholly owned subsidiary of Ionis Pharmaceuticals, Inc., a Delaware corporation, to purchase, subject to certain conditions, including the satisfaction of the Minimum Condition, as defined in the Offer to Purchase, any and all of the outstanding shares of common stock, par value \$0.001 per share (the "Shares"), of Akcea Therapeutics, Inc., a Delaware corporation, at a price of \$18.15 per Share, net to the seller in cash, without interest and subject to any withholding of taxes, upon the terms and subject to the conditions of the Offer.

The undersigned hereby instruct(s) you to tender to Purchaser the number of Shares indicated below or, if no number is indicated, all Shares held by you for the account of the undersigned, upon the terms and subject to the conditions set forth in the Offer. The undersigned understand(s) and acknowledge(s) that all questions as to validity, form and eligibility of the surrender of any certificate representing Shares submitted on my/our behalf will be determined by Purchaser and such determination shall be final and binding.

ACCOUNT NUMBER: \_\_\_\_\_  
NUMBER OF SHARES BEING TENDERED HEREBY: \_\_\_\_\_ SHARES\*

The method of delivery of this document is at the election and risk of the tendering stockholder. If delivery is by mail, then registered mail with return receipt requested, properly insured, is recommended. In all cases, sufficient time should be allowed to ensure timely delivery by the Expiration Date (as defined in the Offer to Purchase).

Dated: \_\_\_\_\_  
Signature(s) \_\_\_\_\_  
Please Print Name(s) \_\_\_\_\_

Address: \_\_\_\_\_  
(Include Zip Code)

Area code and Telephone no. \_\_\_\_\_

Tax Identification or Social Security No. \_\_\_\_\_

\* Unless otherwise indicated, it will be assumed that all Shares held by us for your account are to be tendered.

*This announcement is neither an offer to purchase nor a solicitation of an offer to sell Shares (as defined below). The Offer (as defined below) is made solely pursuant to the Offer to Purchase, dated September 14, 2020, and the related Letter of Transmittal, and any amendments or supplements to such Offer to Purchase or Letter of Transmittal. Purchaser (as defined below) is not aware of any state where the making of the Offer is prohibited by any administrative or judicial action pursuant to any valid state statute. If Purchaser becomes aware of any valid state statute prohibiting the making of the Offer or the acceptance of the Shares pursuant thereto, Purchaser will make a good faith effort to comply with that state statute or seek to have such statute declared inapplicable to the Offer. If, after a good faith effort, Purchaser cannot do so, Purchaser will not make the Offer to, nor will tenders be accepted from or on behalf of, the holders of Shares in that state. Except as set forth above, the Offer is being made to all holders of Shares. In any jurisdiction where the securities, "blue sky" or other laws require the Offer to be made by a licensed broker or dealer, the Offer will be deemed to be made on behalf of Purchaser by one or more registered brokers or dealers that are licensed under the laws of such jurisdiction.*

**Notice of Offer to Purchase**  
**All Outstanding Shares of Common Stock**  
of  
**Akcea Therapeutics, Inc.**  
at  
**\$18.15 Net Per Share**  
**Pursuant to the Offer to Purchase dated September 14, 2020**  
by  
**Avalanche Merger Sub, Inc.**  
a wholly owned subsidiary of  
**Ionis Pharmaceuticals, Inc.**

Avalanche Merger Sub, Inc., a Delaware corporation ("Purchaser"), is offering to purchase all outstanding shares of common stock, par value \$0.001 per share (the "Shares"), of Akcea Therapeutics, Inc., a Delaware corporation ("Akcea"), at a price per Share of \$18.15, net to the seller in cash, without interest (the "Offer Price") and subject to any withholding of taxes, upon the terms and subject to the conditions described in the Offer to Purchase, dated September 14, 2020 (together with any amendments or supplements thereto, the "Offer to Purchase"), and in the related Letter of Transmittal (together with any amendments or supplements thereto, the "Letter of Transmittal") and, together with the Offer to Purchase, the "Offer"). Purchaser is a wholly owned subsidiary of Ionis Pharmaceuticals, Inc., a Delaware corporation ("Ionis").

The Offer is being made in connection with the Agreement and Plan of Merger, dated as of August 30, 2020 (together with any amendments or supplements thereto, the "Merger Agreement"), among Akcea, Ionis and Purchaser, pursuant to which, after the completion of the Offer and the satisfaction or waiver of certain conditions, Purchaser will be merged with and into Akcea, and Akcea will be the surviving corporation and a wholly owned subsidiary of Ionis (such merger, the "Merger"). At the effective time of the Merger, each Share issued and then outstanding (other than Shares held by Akcea, Ionis, Purchaser, any wholly owned subsidiary of Ionis or Purchaser, or by stockholders of Akcea who have perfected their statutory rights of appraisal under the General Corporation Law of the State of Delaware (the "DGCL")) will be converted automatically into the right to receive the Offer Price. Upon the terms and subject to the conditions specified in the Merger Agreement, the Merger will become effective as soon as practicable after the consummation of the Offer, without a meeting of Akcea's stockholders to adopt the Merger Agreement, in accordance with Section 251(h) of the DGCL. Accordingly, if the Offer is consummated, Purchaser does not anticipate seeking the approval of Akcea's remaining public stockholders before effecting the Merger. The Merger Agreement is more fully described in the Offer to Purchase.

**THE OFFER AND WITHDRAWAL RIGHTS WILL EXPIRE AT ONE MINUTE AFTER 11:59 P.M., EASTERN TIME, ON OCTOBER 9, 2020 (SUCH DATE, OR ANY SUBSEQUENT DATE TO WHICH THE EXPIRATION OF THE OFFER IS EXTENDED, THE "EXPIRATION DATE"), UNLESS THE OFFER IS EXTENDED OR EARLIER TERMINATED.**

The Offer is conditioned upon, among other things, (a) the Merger Agreement not having been terminated in accordance with its terms (the "Termination Condition") and (b) the satisfaction of the Minimum Condition (as described below). The Minimum Condition requires that there shall have been validly tendered and not validly withdrawn Shares that, excluding the Shares beneficially owned by Ionis, its affiliates, their respective directors and executive officers and Damien McDevitt, Akcea's chief executive officer (collectively, the "Excluded Holders"), represent at least one more Share than 50% of the Shares not beneficially owned by the Excluded Holders outstanding at the time of the expiration of the Offer. The Offer is also subject to other conditions as described in the Offer to Purchase (collectively, the "Offer Conditions"). See Section 22—"Conditions of the Offer" of the Offer to Purchase.

**After careful consideration, the Akcea board of directors, acting on the unanimous recommendation of an affiliate transactions committee comprised solely of independent directors, has: (i) determined that the Merger Agreement and the transactions contemplated thereby (the "Transactions"), including the Offer and the Merger, are fair to and in the best interest of Akcea and its stockholders (other than the Excluded Holders), (ii) approved and declared advisable the Merger Agreement and the Transactions, including the Offer and the Merger, (iii) resolved that the Merger Agreement and the Merger be governed by Section 251(h) of the DGCL and that the Merger be consummated as soon as practicable following consummation of the Offer and (iv) resolved to recommend that the stockholders of Akcea accept the Offer and tender their Shares pursuant to the Offer.**

The Merger Agreement contains provisions that govern the circumstances in which Purchaser is permitted or required to extend the Offer and in which Ionis is permitted or required to cause Purchaser to extend the Offer. Specifically, the Merger Agreement provides that: (i) if, as of the then-scheduled expiration date, any of the Offer Conditions is not satisfied and has not been waived by Ionis or Purchaser (to the extent waivable by either of them), then Ionis and Purchaser in their sole discretion may (and, at the request of Akcea, shall) extend the Offer on one or more occasions, in each case for an additional period of up to 10 business days per extension, to permit such Offer Condition to be satisfied; (ii) Purchaser has agreed to extend the Offer for any period required by any law, rule, regulation or requirement or by any interpretation or position of the United States Securities and Exchange Commission (the "SEC") or Nasdaq applicable to the Offer; (iii) Ionis and Purchaser are not required to extend the Offer on more than two occasions in consecutive periods of 10 business days each if the Minimum Condition is the only Offer Condition that is not satisfied or waived as of then-scheduled expiration date (other than conditions which by their nature are to be satisfied at the expiration of the Offer) and none of the tender offer documents is still being reviewed or commented on by the SEC; and (iv) in no event will Ionis and Purchaser be required or permitted (without the prior written consent of Akcea) to extend the Offer beyond the earlier to occur of the valid termination of the Merger Agreement or December 30, 2020.

On the terms and subject to the conditions of the Merger Agreement and the applicable rules and regulations of the SEC, Purchaser expressly reserves the right to (a) increase the Offer Price, (b) waive any Offer Condition and (c) make any other changes in the terms and conditions of the Offer that are consistent with the terms of the Merger Agreement, except that Akcea's prior written approval is required for Ionis or Purchaser to: (i) decrease the Offer Price; (ii) change the form of consideration payable in the Offer; (iii) decrease the maximum number of Shares sought to be purchased in the Offer; (iv) impose conditions to the Offer in addition to the Offer Conditions; (v) amend, modify or waive the Termination Condition or the condition that no governmental body shall have (A) issued a final and non-appealable order preventing the acquisition of or payment for Shares pursuant to the Offer or the consummation of the Merger, or (B) promulgated or deemed applicable to the Offer or the Merger any final and non-appealable law, regulation or other requirement that prohibits or makes illegal the acquisition of or payment for Shares pursuant to the Offer or the consummation of the Merger; (vi) otherwise amend or modify any of the other terms of the Offer in a manner that adversely affects, or would reasonably be expected to adversely affect, any holder of Shares (other than Ionis and its affiliates) in their capacity as such; (vii) terminate the Offer or accelerate, extend or otherwise change the Expiration Date except as provided in the Merger Agreement; or (viii) provide any "subsequent offering period" within the meaning of Rule 14d-11 under the Securities Exchange Act; provided that Ionis and Purchaser shall not amend, modify or waive the Minimum Condition.

Any extension, waiver or amendment of the Offer or termination of the Offer will be followed, as promptly as practicable, by public announcement thereof. In the case of an extension, the announcement will be issued no later than 9:00 a.m., Eastern Time, on the next business day after the previously scheduled Expiration Date.



For purposes of the Offer, Purchaser will be deemed to have accepted for payment Shares validly tendered and not properly withdrawn prior to the expiration of the Offer if and when Purchaser gives oral or written notice to the Depository of Purchaser's acceptance for payment of such Shares pursuant to the Offer. Upon the terms and subject to the conditions of the Offer, payment for Shares accepted for payment pursuant to the Offer will be made by deposit of the aggregate Offer Price for such Shares with the Depository, which will act as paying agent for the tendering stockholders for the purpose of receiving payments from Purchaser and transmitting such payments to the tendering stockholders. **Under no circumstances will interest be paid on the Offer Price for Shares, regardless of any extension of the Offer or any delay in making payment for Shares.**

In all cases, payment for Shares tendered and accepted for payment pursuant to the Offer will be made only after timely receipt by the Depository of (a) certificates for such Shares ("Share Certificates") or timely confirmation of the book-entry transfer of such Shares ("Book-Entry Confirmations") into the Depository's account at The Depository Trust Company pursuant to the procedures set forth in the Offer to Purchase, (b) a Letter of Transmittal, properly completed and duly executed, with any required signature guarantees (or, in the case of a book-entry transfer, an Agent's Message (as defined in the Offer to Purchase) in lieu of the Letter of Transmittal) and (c) any other documents required by the Letter of Transmittal. Accordingly, tendering stockholders may be paid at different times depending upon when Share Certificates or Book-Entry Confirmations with respect to Shares are actually received by the Depository.

Shares tendered pursuant to the Offer may be withdrawn at any time prior to the expiration of the Offer and, unless theretofore accepted for payment by Purchaser pursuant to the Offer, may also be withdrawn at any time after November 12, 2020, which is the 60th day after the date of the commencement of the Offer. See Section 14—"Withdrawal Rights" of the Offer to Purchase.

The information required to be disclosed by paragraph (d)(1) of Rule 14d-6 under the Securities and Exchange Act of 1934, as amended, is contained in the Offer to Purchase and is incorporated herein by reference.

Akcea has provided Purchaser and its representatives with Akcea's stockholder list and security position listings for the purpose of disseminating the holders of Shares information regarding the Offer. The Offer to Purchase and related Letter of Transmittal will be mailed to record holders of Shares whose names appear on Akcea's stockholder list and will be furnished to brokers, dealers, commercial banks, trust companies and similar persons whose names, or the names of whose nominees, appear on the stockholder list or, if applicable, who are listed as participants in a clearing agency's security position listing, for subsequent transmittal to beneficial owners of Shares.

The receipt of the Offer Price for Shares in the Offer or consideration for Shares in the Merger will be a taxable transaction for U.S. federal income tax purposes. Stockholders should consult with their tax advisors as to the particular tax consequences of the Offer and the Merger to them. For a more complete description of the principal U.S. federal income tax consequences of the Offer and the Merger, see the Offer to Purchase.

**The Offer to Purchase, the related Letter of Transmittal and Akcea's Solicitation/Recommendation Statement on Schedule 14D-9 (which contains the recommendation of the Akcea board of directors and the reasons therefor) contain important information and should be read carefully and in their entirety before any decision is made with respect to the Offer.**

Questions and requests for assistance may be directed to the Information Agent at the address and telephone number set forth below. Requests for copies of the Offer to Purchase and the related Letter of Transmittal, the Notice of Guaranteed Delivery and other tender offer materials may be directed to the Information Agent or to brokers, dealers, commercial banks or trust companies. Such copies will be furnished promptly at Purchaser's expense. Except as set forth in the Offer to Purchase, neither Purchaser nor Ionis will pay any fees or commissions to any broker or dealer or any other person for soliciting tenders of Shares pursuant to the Offer.

*The Information Agent for the Offer is:*



Alliance Advisors, LLC  
200 Broadacres Drive, 3rd Floor  
Bloomfield, New Jersey 07003  
(833) 934-2735

September 14, 2020

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**Confidential Treatment Requested. Confidential portions of this document have been redacted and have been separately filed with the Securities and Exchange Commission.**

## Project Avalanche

### **Finance Committee Update – Supporting Analysis**

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*August 7, 2020*



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# Goldman Sachs Disclaimer

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Goldman Sachs has not made an independent evaluation or appraisal of the assets and liabilities (including any contingent, derivative or other off-balance sheet assets and liabilities) of the Company or any other party to any transaction or any of their respective affiliates and has no obligation to evaluate the solvency of the Company or any other party to any transaction under any state or federal laws relating to bankruptcy, insolvency or similar matters. The analyses contained in the Confidential Information do not purport to be appraisals nor do they necessarily reflect the prices at which businesses or securities actually may be sold or purchased. Goldman Sachs' role in any due diligence review is limited solely to performing such a review as it shall deem necessary to support its own advice and analysis and shall not be on behalf of the Company. Analyses based upon forecasts of future results are not necessarily indicative of actual future results, which may be significantly more or less favorable than suggested by these analyses, and Goldman Sachs does not assume responsibility if future results are materially different from those forecast.

The Confidential Information does not address the underlying business decision of the Company to engage in any transaction, or the relative merits of any transaction or strategic alternative referred to herein as compared to any other transaction or alternative that may be available to the Company. The Confidential Information is necessarily based on economic, monetary, market and other conditions as in effect on, and the information made available to Goldman Sachs as of, the date of such Confidential Information and Goldman Sachs assumes no responsibility for updating or revising the Confidential Information based on circumstances, developments or events occurring after such date. The Confidential Information does not constitute any opinion, nor does the Confidential Information constitute a recommendation to the Board, any security holder of the Company or any other person as to how to vote or act with respect to any transaction or any other matter. The Confidential Information, including this disclaimer, is subject to, and governed by, any written agreement between the Company, the Board and/or any committee thereof, on the one hand, and Goldman Sachs, on the other hand.

## Stifel Disclaimer

This presentation and the information contained herein is confidential and has been prepared exclusively for the benefit and internal use of the Stifel client to whom it is directly addressed and delivered (including such client's subsidiaries, the "Company"). In connection with the preparation and provision of these materials, Stifel has relied upon and assumed, without independent investigation or verification, the accuracy and completeness of all financial and other information that was made available, supplied, or otherwise communicated to Stifel by or on behalf of the Company and other publicly available information, and Stifel expressly disclaims any responsibility for, or liability in connection with, such information or the Company's use of these materials. Any analyses of any potential strategic alternatives or transactions that may be available to the Company reflected in these materials (and the other contents hereof) are preliminary and are subject to the assumptions and qualifications set forth herein, as well as further review and modification by Stifel. Any valuation ranges or other estimates are solely illustrative and do not purport to be valuation advice in respect of the Company or any other entity (including any potential counterparty to any strategic alternative or transaction) and should not be relied upon as such. Any such advice would only be provided pursuant to an engagement letter or other definitive written agreement entered into between the Company and Stifel. 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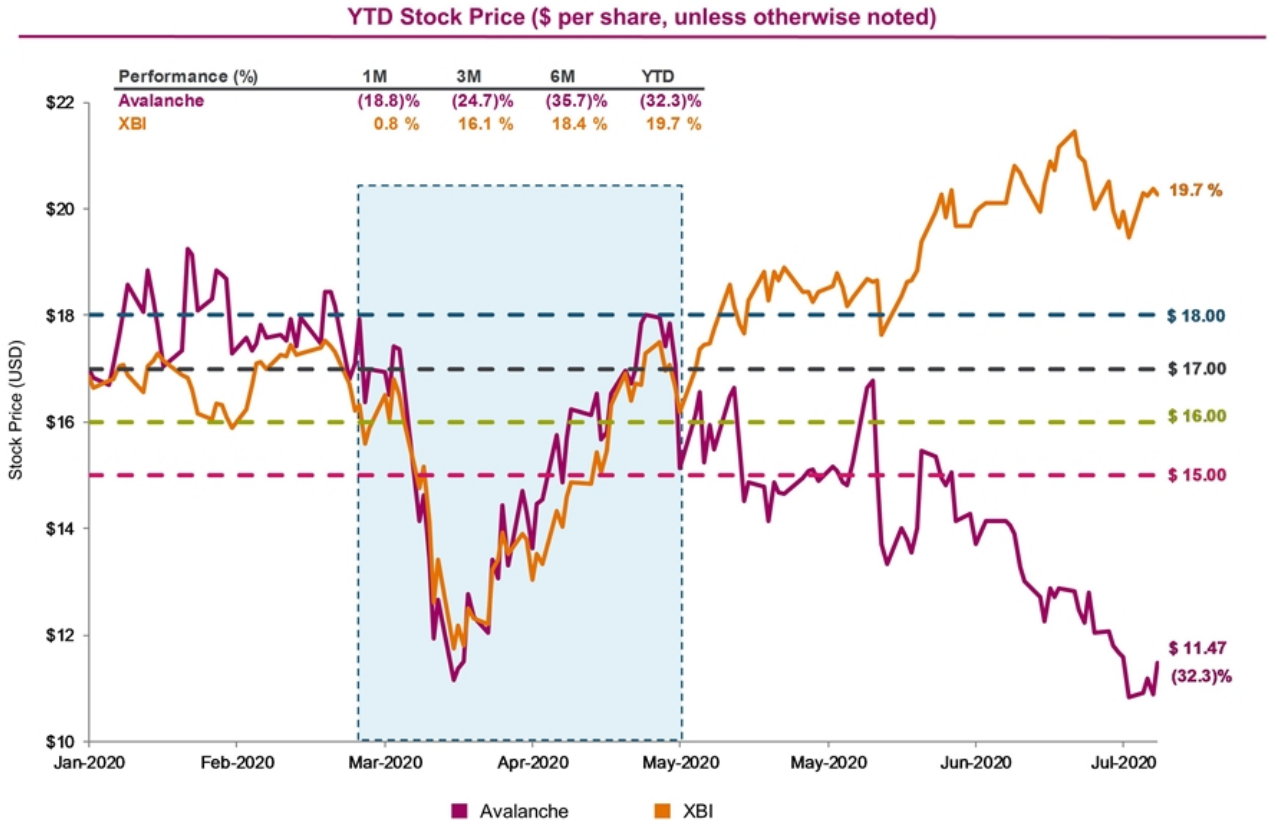
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# Avalanche's Share Price Performance Year-to-Date



Source: Bloomberg; market data as of August 6, 2020.



# Avalanche Summary of Illustrative Financial Analyses

	Financial Analyses	Illustrative Price per Share		Comments
Financial Valuation	1 Sum-of-the-Parts (SOTP)	\$ 14.46	\$ 17.95	<ul style="list-style-type: none"> <li>Avalanche management projections through 2029; extrapolation until 2040<sup>1</sup> based on Islanders Management guidance</li> <li>No terminal value</li> <li>8.0% - 10.0% WACC</li> </ul>
	2 Precedent Squeeze-Out Transactions	\$ 14.75	\$ 16.83	<ul style="list-style-type: none"> <li>Premia to undisturbed price (full bar) and 52-week high (dotted bar) based on select minority squeeze-out transactions &gt;\$200mm deal value</li> <li>Low: 28.6% (full) / (4.8)% (dotted), based on 25<sup>th</sup>ile premium at final bid</li> <li>High: 46.7% (full) / 17.2% (dotted), based on 75<sup>th</sup>ile premium at final bid</li> </ul>
Public Market Perspectives	3 52-Week Trading Range	\$ 10.84	\$ 22.47	<ul style="list-style-type: none"> <li>52-week low of \$10.84 as of 31-Jul-2020</li> <li>52-week high of \$22.47 as of 19-Sep-2019</li> </ul>
	4 Analyst Price Targets	\$ 16.00	\$ 41.00	<ul style="list-style-type: none"> <li>High: \$41 (Analyst B)</li> <li>Low: \$16 (Analyst C)</li> </ul>
		<b>Current Share Price: \$11.47</b>		

Source: Avalanche Management projections (including adjustments from Islanders Management), Bloomberg, IBES, public filings, market data as of August 6, 2020.  
 Note: Confidential. Illustrative, for discussion purposes only. Assumes June 30, 2020 closing date and 101.6mm basic shares outstanding. <sup>1</sup> Extrapolation until [\*] for ANGPTL3-L given LOE in [\*]. <sup>2</sup> See page 10. Excludes upside from (i) [\*\*\*] and (ii) and terminal value methodology.

# Avalanche Valuation Review

Methodology	Implied Price Per Share	Commentary
Sum-of-the-Parts (SOTP)	<p>Current Price: \$11.47</p> <p>\$11.59, \$15.79, \$24.53, \$29.92</p> <p>Islanders Case. (1)</p>	<ul style="list-style-type: none"> <li>Avalanche management projections including adjustments from Islanders Management</li> <li>SOTP based on each of Avalanche's products</li> <li>9.0% - 12.0% WACC (Avalanche Case); 7.0% - 9.0% (Islanders Case)</li> </ul>
Precedent-Squeeze Out Transactions	<p>\$14.75, \$16.83, \$21.39, \$26.33</p>	<ul style="list-style-type: none"> <li>Based on selected majority-owned precedent transactions with deal value at least \$200mm</li> <li>Premiums based on 1st and 3rd quartiles of 1-day unaffected stock price of 28.6% and 46.7%, respectively</li> <li>Dashed box represents premiums based on 1st and 3rd quartiles of 52-week high stock price of (4.8%) and 17.2%, respectively</li> </ul>
52-Week Trading Range	<p>\$10.84, \$22.47</p>	<ul style="list-style-type: none"> <li>52-week high of \$22.47 as of September 19, 2019</li> <li>52-week low of \$10.84 as of July 31, 2020</li> </ul>
Analyst Consensus	<p>\$16.00, \$25.00, \$26.00, \$41.00</p>	<ul style="list-style-type: none"> <li>Based on analyst price target estimates</li> </ul>

Source: Avalanche Management projections (including adjustments from Islanders Management), Wall Street research and FactSet as of August 5, 2020.  
 (1) Includes the net impact of Islanders adjustments to Avalanche's management projections using a WACC of 7.0% - 9.0%.

# Analysis at Various Prices

(\$ and shares in millions, except for per share values)

	Current				Illustrative Share Price								
	\$11.47	\$12.00	\$13.00	\$14.00	\$15.00	\$16.00	\$17.00	\$18.00	\$19.00	\$20.00	\$21.00	\$22.00	
Offer Price	\$11.47	\$12.00	\$13.00	\$14.00	\$15.00	\$16.00	\$17.00	\$18.00	\$19.00	\$20.00	\$21.00	\$22.00	
% Premium to Current		4.6%	13.3%	22.1%	30.8%	39.5%	48.2%	56.9%	65.6%	74.4%	83.1%	91.8%	
Basic Shares	101.6	101.6	101.6	101.6	101.6	101.6	101.6	101.6	101.6	101.6	101.6	101.6	
RSUs	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	
Options	0.4	0.5	0.6	0.7	0.8	1.0	1.1	1.2	1.4	1.6	1.8	1.9	
Total Diluted Shares	103.5	103.6	103.7	103.8	103.9	104.1	104.2	104.3	104.5	104.7	104.9	105.0	
(-) Islanders Shares	77.1	77.1	77.1	77.1	77.1	77.1	77.1	77.1	77.1	77.1	77.1	77.1	
Minority Shares	26.4	26.5	26.6	26.7	26.8	27.0	27.1	27.2	27.4	27.6	27.8	27.9	
Equity Value	\$1,188	\$1,243	\$1,348	\$1,453	\$1,559	\$1,665	\$1,771	\$1,878	\$1,986	\$2,094	\$2,202	\$2,311	
Implied Equity Value of Minority Stake	\$303	\$318	\$345	\$374	\$403	\$432	\$460	\$490	\$521	\$552	\$583	\$615	
(-) Cash	(389.9)	(389.9)	(389.9)	(389.9)	(389.9)	(389.9)	(389.9)	(389.9)	(389.9)	(389.9)	(389.9)	(389.9)	
(+) Debt	-	-	-	-	-	-	-	-	-	-	-	-	
Enterprise Value	\$798	\$853	\$958	\$1,063	\$1,169	\$1,275	\$1,381	\$1,488	\$1,596	\$1,704	\$1,812	\$1,921	
Premium to Current EV		6.9 %	20.1 %	33.3 %	46.6 %	59.9 %	73.1 %	86.6 %	100.1 %	113.7 %	127.2 %	140.8 %	
<b>Implied Premiums:</b>													
30 Day VWAP	\$ 13.00	(11.8)%	(7.7)%	(0.0)%	7.7%	15.4%	23.1%	30.7%	38.4%	46.1%	53.8%	61.5%	69.2%
60 Day VWAP	\$ 13.93	(17.7)%	(13.9)%	(6.7)%	0.5%	7.7%	14.8%	22.0%	29.2%	36.4%	43.5%	50.7%	57.9%
90 Day VWAP	\$ 14.47	(20.7)%	(17.1)%	(10.2)%	(3.3)%	3.6%	10.5%	17.5%	24.4%	31.3%	38.2%	45.1%	52.0%
180 Day VWAP	\$ 15.96	(28.1)%	(24.8)%	(18.5)%	(12.3)%	(6.0)%	0.3%	6.5%	12.8%	19.1%	25.3%	31.6%	37.9%
LTM VWAP	\$ 16.87	(32.0)%	(28.9)%	(23.0)%	(17.0)%	(11.1)%	(5.2)%	0.7%	6.7%	12.6%	18.5%	24.4%	30.4%
52-Week High	\$ 22.47	(49.0)%	(46.6)%	(42.1)%	(37.7)%	(33.2)%	(28.8)%	(24.3)%	(19.9)%	(15.4)%	(11.0)%	(6.5)%	(2.1)%
52-Week Low	\$ 10.84	5.8%	10.7%	19.9%	29.2%	38.4%	47.6%	56.8%	66.1%	75.3%	84.5%	93.7%	103.0%
Median Target Price	\$ 25.50	(55.0)%	(52.9)%	(49.0)%	(45.1)%	(41.2)%	(37.3)%	(33.3)%	(29.4)%	(25.5)%	(21.6)%	(17.6)%	(13.7)%
IPO Price	\$ 8.00	43.4%	50.0%	62.5%	75.0%	87.5%	100.0%	112.5%	125.0%	137.5%	150.0%	162.5%	175.0%

Source: CapIQ, company filings, market data as of August 6, 2020.



# Analysis at Various Prices

\$15.00 to \$16.00 per Avalanche Share | (\$ and shares in millions, except for per share values)

	Current	Illustrative Share Price					
Offer Price	\$11.47	\$15.00	\$15.25	\$15.50	\$15.75	\$16.00	
% Premium to Current		30.8%	33.0%	35.1%	37.3%	39.5%	
Basic Shares	101.6	101.6	101.6	101.6	101.6	101.6	
RSUs	1.5	1.5	1.5	1.5	1.5	1.5	
Options	0.4	0.8	0.9	0.9	0.9	1.0	
<b>Total Diluted Shares</b>	<b>103.5</b>	<b>103.9</b>	<b>104.0</b>	<b>104.0</b>	<b>104.0</b>	<b>104.1</b>	
(-) Islanders Shares	77.1	77.1	77.1	77.1	77.1	77.1	
<b>Minority Shares</b>	<b>26.4</b>	<b>26.8</b>	<b>26.9</b>	<b>26.9</b>	<b>26.9</b>	<b>27.0</b>	
<b>Equity Value</b>	<b>\$1,188</b>	<b>\$1,559</b>	<b>\$1,586</b>	<b>\$1,612</b>	<b>\$1,639</b>	<b>\$1,665</b>	
<i>Implied Equity Value of Minority Stake</i>	\$303	\$403	\$410	\$417	\$424	\$432	
(-) Cash	(389.9)	(389.9)	(389.9)	(389.9)	(389.9)	(389.9)	
(+) Debt	-	-	-	-	-	-	
<b>Enterprise Value</b>	<b>\$798</b>	<b>\$1,169</b>	<b>\$1,196</b>	<b>\$1,222</b>	<b>\$1,249</b>	<b>\$1,275</b>	
<i>Premium to Current EV</i>		46.6 %	49.9 %	53.2 %	56.5 %	59.9 %	
<b>Implied Premiums:</b>							
30 Day VWAP	\$ 13.00	(11.8)%	15.4%	17.3%	19.2%	21.1%	23.1%
60 Day VWAP	\$ 13.93	(17.7)%	7.7%	9.4%	11.2%	13.0%	14.8%
90 Day VWAP	\$ 14.47	(20.7)%	3.6%	5.4%	7.1%	8.8%	10.5%
180 Day VWAP	\$ 15.96	(28.1)%	(6.0)%	(4.4)%	(2.9)%	(1.3)%	0.3%
LTM VWAP	\$ 16.87	(32.0)%	(11.1)%	(9.6)%	(8.1)%	(6.7)%	(5.2)%
52-Week High	\$ 22.47	(49.0)%	(33.2)%	(32.1)%	(31.0)%	(29.9)%	(28.8)%
52-Week Low	\$ 10.84	5.8%	38.4%	40.7%	43.0%	45.3%	47.6%
Median Target Price	\$ 25.50	(55.0)%	(41.2)%	(40.2)%	(39.2)%	(38.2)%	(37.3)%
IPO Price	\$ 8.00	43.4%	87.5%	90.6%	93.8%	96.9%	100.0%

Source: CapIQ, company filings, market data as of August 6, 2020.

## Illustrative Bidding Strategy

(\$ in millions, except for per share values)

	Initial Bid	2 <sup>nd</sup> Bid	3 <sup>rd</sup> Bid	Final Bid
<i>Median Price Increase from Prior Bid</i>		6.9 %	3.8 %	2.0 %
	\$ 15.00	\$ 16.04	\$ 16.64	\$ 16.98
<i>Impl. Eq. Value of Minority Stake</i>	\$ 403	\$ 433	\$ 450	\$ 460
	\$ 15.25	\$ 16.30	\$ 16.92	\$ 17.26
<i>Impl. Eq. Value of Minority Stake</i>	\$ 410	\$ 440	\$ 458	\$ 468
	\$ 15.50	\$ 16.57	\$ 17.20	\$ 17.54
<i>Impl. Eq. Value of Minority Stake</i>	\$ 417	\$ 448	\$ 466	\$ 477
	\$ 15.75	\$ 16.84	\$ 17.48	\$ 17.83
<i>Impl. Eq. Value of Minority Stake</i>	\$ 424	\$ 456	\$ 475	\$ 485
	\$ 16.00	\$ 17.10	\$ 17.75	\$ 18.11
<i>Impl. Eq. Value of Minority Stake</i>	\$ 432	\$ 463	\$ 483	\$ 494

Source: CapIQ, company filings, market data as of August 6, 2020.

# Precedent Squeeze Out Bid Analysis

Date	Target	Acquiror	Bid Increase <sup>(1)</sup>				Bid Premium <sup>(2)</sup>				Time Announce To		Final Offer Premium <sup>(2)</sup>		
			#1	#2	#3	#4	#1	#2	#3	#4	Offer (mos)	Close (mos)	1-Day	3-Month	6-Month <sup>(3)</sup>
11/27/19	AVX	Kyocera	NA	5.1%	2.4%	3.6%	29.7%	36.3%	39.6%	44.6%	3	1	44.6%	44.1%	32.1%
04/24/19	Speedway Motorsports	Sonic Financial	NA	6.9%	2.6%	NA	29.1%	38.1%	41.7%	NA	3	2	41.7%	23.7%	20.1%
11/16/18	EMC Insurance	Employers Mutual Casualty	NA	10.0%	9.1%	NA	25.1%	37.6%	50.1%	NA	6	4	50.1%	41.7%	33.0%
11/09/18	International Speedway	NASCAR	NA	1.2%	2.4%	1.1%	7.5%	8.8%	11.4%	12.6%	6	5	15.2%	6.9%	7.6%
06/18/18	Foundation Medicine	Roche	NA	1.5%	0.7%	0.7%	24.9%	26.8%	27.8%	28.7%	1	1	28.7%	70.2%	89.9%
01/09/18	AmTrust Financial Services	Evergreen Parent	NA	6.1%	3.8%	9.3%	20.7%	28.1%	33.0%	45.3%	2	9	45.3%	27.3%	13.3%
03/07/16	National Interstate	Great American Insurance	NA	2.5%	4.1%	1.6%	34.8%	38.1%	43.8%	46.0%	5	4	46.0%	26.5%	21.7%
02/29/16	Federal-Mogul	Icahn Enterprises	NA	14.3%	15.6%	8.1%	40.6%	60.6%	85.7%	100.8%	6	5	100.8%	56.8%	27.9%
12/13/12	Cleanwire	Sprint Nextel	NA	7.7%	3.6%	2.4%	22.6%	32.1%	36.8%	40.1%	1	7	40.1%	78.1%	62.1%
11/28/12	Sauer-Danfoss	Danfoss	NA	10.2%	4.6%	1.8%	24.4%	37.1%	43.5%	46.0%	3	1	48.6%	49.5%	39.5%
10/31/10	CNA Surety	CNA Financial	NA	19.1%	1.1%	0.2%	14.3%	36.1%	37.7%	37.9%	6	2	37.9%	53.9%	56.9%
08/26/10	Wesco Financial	Berkshire Hathaway	NA	NA	NA	NA	18.6%	NA	NA	NA	5	5	18.6%	11.2%	8.8%
04/04/10	Terra Industries	CF Industries	NA	16.0%	23.4%	NA	26.3%	46.5%	80.8%	NA	4	1	80.8%	50.8%	21.3%
09/03/09	Odyssey Re	Fairfax Financial	NA	3.4%	6.7%	1.6%	15.8%	19.8%	27.8%	29.8%	1	1	29.8%	50.9%	50.1%
07/21/08	Genentech	Roche	NA	(2.8%)	7.5%	2.2%	8.8%	5.7%	13.7%	16.1%	8	1	16.1%	27.5%	28.5%
03/09/08	Nationwide Financial Services	Nationwide Mutual Insurance	NA	7.3%	0.7%	2.5%	15.9%	24.4%	25.2%	28.3%	6	5	28.3%	17.0%	5.6%
<b>Summary Statistics (n=16):</b>															
Max			NA	19.1%	23.4%	9.3%	40.6%	60.6%	85.7%	100.8%	8	9	100.8%	78.1%	89.9%
Mean			NA	7.2%	5.9%	2.9%	22.4%	31.7%	39.9%	39.7%	4	3	42.0%	39.8%	32.4%
Median			NA	6.9%	3.8%	2.0%	23.5%	36.1%	37.7%	39.0%	5	3	40.9%	42.9%	28.2%
Min			NA	(2.8%)	0.7%	0.2%	7.5%	5.7%	11.4%	12.6%	1	1	15.2%	6.9%	5.6%

Source: FactSet as of August 6, 2020.

Note: "NA" indicates not applicable.

(1) Based on the percentage increase in price from prior bid.

(2) Based on the premium to the unaffected share price prior to announcement.

(3) Based on the 6-month volume-weighted average price.

**Confidential Treatment Requested. Confidential portions of this document have been redacted and have been separately filed with the Securities and Exchange Commission.**

## Project Avalanche

# **Discussion Materials for Islanders' Board of Directors**

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*August 30, 2020*



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# Overview of the Proposal

(\$ and shares in millions, except for per share values)

		Initial Offer Price Sent on Aug. 18th	Revised Offer Price Sent on Aug. 25th	Revised Offer Price Sent on Aug. 27th	Final Offer Price
<b>Offer Price per Share</b>		<b>\$16.00</b>	<b>\$17.00</b>	<b>\$17.75</b>	<b>\$18.15</b>
<i>Implied % Premium to Current</i>	\$ 11.38	40.6%	49.4%	56.0%	59.5%
Basic Number of Shares Outstanding (mm)		101.6	101.6	101.6	101.6
RSUs (mm)		1.5	1.5	1.5	1.5
Options (mm)		1.1	1.2	1.4	1.5
<b>Fully Diluted Shares Outstanding (mm)</b>		<b>104.2</b>	<b>104.4</b>	<b>104.5</b>	<b>104.6</b>
(-) Shares Owned by Islanders (mm)		77.1	77.1	77.1	77.1
<b>Shares Not Owned by Islanders (mm)</b>		<b>27.1</b>	<b>27.3</b>	<b>27.4</b>	<b>27.5</b>
<b>Implied Equity Value</b>		<b>\$1,667</b>	<b>\$1,774</b>	<b>\$1,855</b>	<b>\$1,899</b>
<i>Implied Equity Value of Minority Stake</i>		<i>\$433</i>	<i>\$463</i>	<i>\$487</i>	<i>\$500</i>
(-) Cash		(390)	(390)	(390)	(390)
(+) Debt		-	-	-	-
<b>Implied Total Enterprise Value</b>		<b>\$1,277</b>	<b>\$1,384</b>	<b>\$1,466</b>	<b>\$1,509</b>
<b>Implied Premiums:</b>					
30-Day VWAP	\$ 11.68	37.0%	45.6%	52.0%	55.4%
60-Day VWAP	\$ 13.46	18.9%	26.3%	31.9%	34.9%
90-Day VWAP	\$ 14.07	13.7%	20.9%	26.2%	29.0%
180-Day VWAP	\$ 15.51	3.2%	9.6%	14.5%	17.1%
IPO Price	\$ 8.00	100.0%	112.5%	121.9%	126.9%

Source: Bloomberg, CapitalIQ, company filings, market data as of August 28, 2020.

Note: Basic shares outstanding per company filings. Assumes 10.05mm options outstanding and 1.53mm RSUs outstanding per Avalanche Management.

## Avalanche's Share Price Performance Over Last 12 Months

Last Twelve Months Stock Price Performance



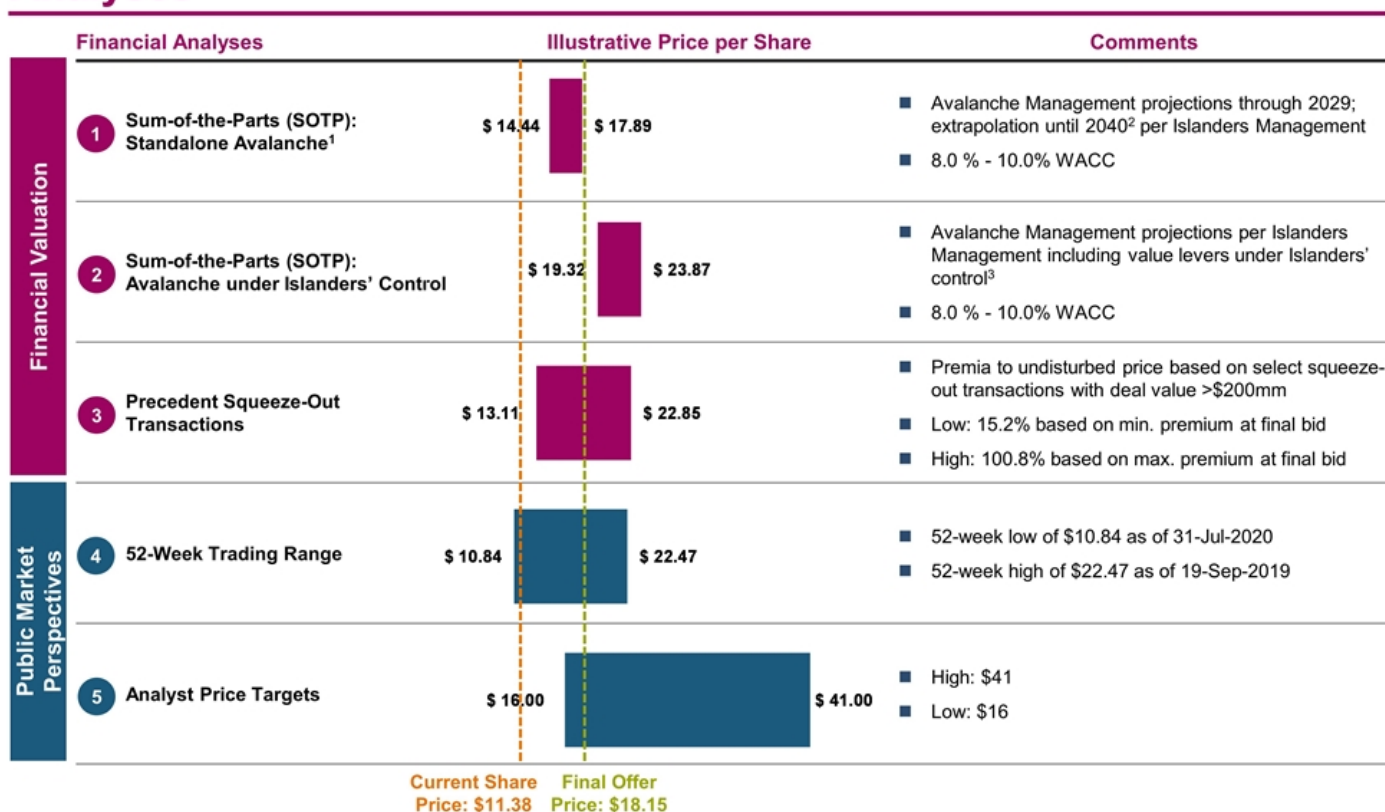
Notable Stock Price Reactions

Date	Event
24-Aug-2018 (25)%	FDA issues CRL on Wavivra in FCS
1 23-Sept-2019 (20)%	Announcement of CEO transition to interim CEO Damien McDevitt and departures of the Company's CEO, President and COO
2 07-Oct-2019 +31%	Avalanche and Pfizer announce licensing agreement for investigative antisense therapy ANGPTL3-L(Rx)
3 20-Nov-2019 +8%	Announces closing of licensing agreement with Pfizer for ANGPTL3-L(Rx) (Mkt. close 19-Nov)
4 10-Jan-2020 +3%	Announces initiation of the CARDIO-TTRansform Phase 3 cardiovascular outcomes study for TTR-LRx in patients with ATTR cardiomyopathy
5 22-Jan-2020 +11%	Reports positive topline Phase 2 results of APOCII-L Rx with demonstrated favorable safety and tolerability
6 8-Jun-2020 +11%	Announces appointment of Damien McDevitt to CEO
7 4-Aug-2020 (3)%	Reports Q2 2020 earnings; revenue miss; did not provide guidance on timing of Wavivra US refiling

Source: Bloomberg, company filings, Wall Street research; market data as of 28-Aug-2020



# Summary of Goldman Sachs' Illustrative Avalanche Financial Analyses



Source: Avalanche LRP projections used per instruction of Islanders Management, Bloomberg, company filings, market data as of August 28, 2020  
 Note: Confidential. Illustrative, for discussion purposes only. Valuation as of June 30, 2020. Assumes cash and cash equivalents of \$390mm as of June 30, 2020. Assumes 101.6mm basic shares outstanding, 10.05mm options outstanding and 1.53mm RSUs outstanding. <sup>1</sup> Assumes \$212mm follow-on in 2021 issued at a share price of \$16.35 and \$265mm follow-on in 2023 issued at a share price of \$18.96. <sup>2</sup> Extrapolation until [\*] for ANGPTL3-L given LOE in [\*]. <sup>3</sup> Includes (i) expected cost synergies, (ii) absence of future financing need, (iii) [\*\*\*] outlicensing, (iv) TTR-L go-it-alone scenario, (v) TTR-L launch at year-end [\*], (vi) APOCIII revised partnership terms, (vii) APO(a) extension of exclusivity period, and (viii) removal of Islanders' in-licensed asset.

# Stifel's Avalanche Valuation Review

Methodology	Implied Price Per Share	Commentary
Sum-of-the-Parts (SOTP) Standalone Avalanche <sup>(1)</sup>	<p>Current Price: \$11.38    Offer Price: \$18.15</p> <p>\$11.59    \$15.78</p>	<ul style="list-style-type: none"> <li>Avalanche Management projections through 2029; extrapolation until 2040<sup>(1)</sup> per Islanders Management</li> <li>SOTP based on each of Avalanche's products</li> <li>No terminal value</li> <li>9.0% - 12.0% WACC</li> </ul>
Sum-of-the-Parts (SOTP) Avalanche Under Islanders Control <sup>(2)</sup>	<p>\$21.16    \$26.00</p>	<ul style="list-style-type: none"> <li>Avalanche Management projections per Islanders Management including potential value levers under Islanders' control<sup>(2)</sup></li> <li>SOTP based on each of Avalanche's products</li> <li>No terminal value</li> <li>7.5% - 9.5% WACC</li> </ul>
Precedent-Squeeze Out Transactions <sup>(3)</sup>	<p>\$13.11    \$22.85</p>	<ul style="list-style-type: none"> <li>Based on selected majority-owned precedent transactions with deal value &gt;\$200mm</li> <li>Premia based on min and max premium to 1-day unaffected stock price of 15.2% and 100.8%, respectively</li> </ul>
52-Week Trading Range <sup>(4)</sup>	<p>\$10.84    \$22.47</p>	<ul style="list-style-type: none"> <li>52-week high of \$22.47 as of September 19, 2019</li> <li>52-week low of \$10.84 as of July 31, 2020</li> </ul>
Analyst Consensus <sup>(5)</sup>	<p>\$16.00    \$25.00    \$26.00    \$41.00</p>	<ul style="list-style-type: none"> <li>Based on analyst price target estimates</li> </ul>

Source: Avalanche Management projections (including adjustments from Islanders' Management), company filings, Bloomberg, Wall Street research and FactSet as of August 28, 2020.  
 Note: Confidential. Illustrative, for discussion purposes only. Valuation as of October 31, 2020, assumes mid-year discounting. Assumes cash and cash equivalents of \$370 million, projected as of October 31, 2020. Assumes 101.596mm basic shares outstanding, 10.053mm options outstanding at a weighted average strike price of \$18.53 per share and 1.526mm RSUs outstanding.

(1) Avalanche's Management projections including adjustments from Islanders' Management. Extrapolation until [ ] for ANGPTL3-L, given LOE in [ ]. Discount rate of 9.0% - 12.0% based on a weighted average cost of capital analysis using Avalanche's selected publicly traded comparable companies and Stifel judgement, refer to page 11.  
 (2) Includes potential value levers under Islanders' control, including: (i) expected cost synergies, (ii) [ ] outlicensing, (iii) TTR-L go-it-alone scenario, (iv) TTR-L launch at year-end [ ], (v) APOCII-L revised partnership terms, (vi) APO(a)-L extension of exclusivity period, and (vii) removal of Islanders' licensed asset. Discount rate of 7.5% - 9.5% based on a weighted average cost of capital analysis using Islanders' selected publicly traded comparable companies and Stifel judgement, refer to page 12.  
 (3) Includes 2008-present selected majority-owned precedent transactions greater than \$200 million in transaction value with a U.S. target.  
 (4) Market data per FactSet as of August 28, 2020.  
 (5) Based on analyst price target estimates as of August 28, 2020.

## Precedent Squeeze-Out Transactions Analysis

Announce Date	Target	Acquiror	Pre-Deal Ownership	Deal Value	Premiums		
					Initial Bid	Final Bid	
					1-Day <sup>(1)</sup>	1-Day <sup>(1)</sup>	20-Day <sup>(1)</sup>
11/27/19	AVX	Kyocera	72.0%	\$1,046.1	29.7%	44.6%	41.2%
04/24/19	Speedway Motorsports	Sonic Financial	71.3%	234.3	29.1%	41.7%	39.9%
11/16/18	EMC Insurance	Employers Mutual Casualty	54.3%	372.2	25.1%	50.1%	53.1%
11/09/18	International Speedway	NASCAR <sup>(2)</sup>	74.7%	1,128.4	7.5%	15.2%	25.0%
06/18/18	Foundation Medicine	Roche	55.9%	2,260.9	24.9%	28.7%	61.6%
01/09/18	AmTrust Financial Services	Evergreen Parent	54.9%	1,327.5	20.7%	45.3%	41.7%
03/07/16	National Interstate	Great American Insurance <sup>(3)</sup>	50.8%	311.6	34.8%	46.0%	31.0%
02/29/16	Federal-Mogul	Icahn Enterprises	82.0%	304.5	40.6%	100.8%	109.6%
12/13/12	Clearwire	Sprint Nextel	50.4%	3,329.8	17.9%	40.1%	53.1%
11/28/12	Sauer-Danfoss	Danfoss	75.6%	692.9	24.4%	48.6%	46.0%
10/31/10	CNA Surety	CNA Financial	62.0%	477.6	14.2%	37.9%	51.6%
08/26/10	Wesco Financial	Berkshire Hathaway	80.1%	545.4	18.6%	18.6%	14.2%
04/04/10	Terra Industries	CF Industries	85.7%	659.4	26.3%	80.8%	68.6%
09/03/09	Odyssey Re	Fairfax Financial	72.6%	1,050.0	15.8%	29.8%	39.7%
07/21/08	Genentech	Roche	55.7%	46,763.5	8.8%	16.1%	27.1%
03/09/08	Nationwide Financial Services	Nationwide Mutual Insurance	64.3%	2,449.9	15.9%	28.3%	28.7%
<b>Summary Statistics (n=16):</b>							
<b>Max</b>			<b>85.7%</b>	<b>\$46,763.5</b>	<b>40.6%</b>	<b>100.8%</b>	<b>109.6%</b>
<b>Mean</b>			<b>66.4%</b>	<b>\$3,934.6</b>	<b>22.1%</b>	<b>42.0%</b>	<b>45.8%</b>
<b>Median</b>			<b>64.3%</b>	<b>\$869.5</b>	<b>22.6%</b>	<b>40.9%</b>	<b>41.5%</b>
<b>Min</b>			<b>50.4%</b>	<b>\$234.3</b>	<b>7.5%</b>	<b>15.2%</b>	<b>14.2%</b>

Source: Company filings, press releases and FactSet. Note: \$ in millions.

(1) Based on the unaffected stock price prior to the transaction announcement.

(2) Pre-Deal ownership represents total voting power.

(3) Final bid to 1-Day premium includes a one-time \$0.50/share dividend payment.

## Appendix: Additional Materials

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# Goldman Sachs' Avalanche Illustrative Weighted Average Cost of Capital Analysis

Target Capital Structure		WACC Sensitivity Analysis				
Debt / (Debt - Cash + Equity)	0.0 %	Net Cash / Total Capitalization				
Equity / (Debt - Cash + Equity)	112.5 %	10.0 %	12.5 %	15.0 %		
WACC Calculation		Equity Beta				
Risk-Free Rate	1.3 %		1.10	8.2%	8.4%	8.6%
Equity Beta	1.20		1.20	8.8%	9.0%	9.2%
Equity Risk Premium	5.6 %		1.30	9.4%	9.6%	9.8%
<b>Cost of Equity</b>	<b>8.0 %</b>					
Pre-Tax Cost of Debt	5.00 %					
After-Tax Cost of Debt	3.95 %					
<b>Weighted-Average Cost of Capital</b>	<b>9.0 %</b>					

Avalanche Beta as of 19-Feb-20 (pre-COVID)	
Historical	1.65
Predicted	1.40

Company	Historical Beta	Predicted Beta	Net Cash / Cap	Market Cap	Total Cash	Total Debt	Net Debt	Tax Rate	IPO Date	Years Since IPO
<b>Avalanche</b>	<b>1.04</b>	<b>1.12</b>	<b>51 %</b>	<b>\$ 1,156</b>	<b>\$ 390</b>	<b>\$ —</b>	<b>\$(390)</b>	<b>21 %</b>	<b>14-Jul-17</b>	<b>3.1</b>
<b>Peers</b>										
Sage	1.74	1.12	39.1 %	\$ 2,582	\$ 757	\$ 31	\$(725)	21 %	21-Jul-14	6.1
Islanders	0.80	1.08	26.4	7,389	2,353	809	(1,544)	21	17-May-91	29.3
Sarepta	1.12	1.07	12.1	12,298	2,061	729	(1,332)	21	04-Jun-97	23.2
Neurocrine	0.65	1.07	4.1	11,045	948	513	(435)	21	23-May-96	24.3
Alnylam	0.74	1.15	13.9	15,832	1,926	(1)	(1,926)	21	28-May-04	16.3
Ultragenyx	1.23	0.94	18.0	5,340	813	0	(813)	21	31-Jan-14	6.6
Amicus	1.05	1.10	4.0	3,918	310	158	(152)	21	31-May-07	13.3
Intercept	1.37	1.17	(1.5)	1,626	534	559	24	21	11-Oct-12	7.9
PTC	0.69	1.04	3.8	3,455	499	372	(127)	21	20-Jun-13	7.2
Insmed	1.71	1.14	10.3	3,087	642	354	(288)	21	01-Jun-00	20.3
<b>Peer Median</b>	<b>1.08</b>	<b>1.09</b>	<b>11.2 %</b>							<b>16.3</b>

Source: Bloomberg, CapitalIQ, company filings, Axion; market data as of 28-Aug-2020  
Note: \$ in millions.

## Stifel's Avalanche Weighted Average Cost of Capital Summary

Unlevered Betas For Selected Companies						
Name	Ticker	Current Lev. Beta <sup>(1)</sup>	Equity Val. + Debt <sup>(2)</sup>	Equity Value	Debt/Equity Value	Unlevered Beta <sup>(3)</sup>
Sarepta Therapeutics Inc.	SRPT	1.091	\$12,396.4	\$11,576.4	7.1%	1.04
Ultragenyx Pharmaceutical, Inc.	RARE	1.169	\$5,191.9	\$5,191.9	0.0%	1.17
Amicus Therapeutics, Inc.	FOLD	1.063	\$3,972.5	\$3,819.7	4.0%	1.03
PTC Therapeutics, Inc.	PTCT	0.798	\$3,738.0	\$3,300.5	13.3%	0.73
GW Pharmaceuticals PLC	GWPH	1.178	\$3,200.3	\$3,200.3	0.0%	1.18
Insmid Incorporated	INSM	1.605	\$3,370.6	\$2,920.6	15.4%	1.44
Amarin Corporation Plc	AMRN	1.098	\$2,878.2	\$2,878.2	0.0%	1.10
Agios Pharmaceuticals, Inc.	AGIO	1.078	\$2,769.9	\$2,769.9	0.0%	1.08
Corcept Therapeutics Inc.	CORT	0.782	\$1,457.2	\$1,457.2	0.0%	0.78
Retrophin Incorporated	RTRX	1.010	\$1,260.5	\$984.5	28.0%	0.84
Pharming Group NV	PHARM	0.987	\$951.1	\$802.4	18.5%	0.87
Vanda Pharmaceuticals Inc.	VNDA	0.806	\$565.9	\$565.9	0.0%	0.81
<b>Mean</b>		<b>1.06</b>	<b>\$3,479.4</b>	<b>\$3,289.0</b>	<b>7.2%</b>	<b>1.00</b>
<b>Median</b>		<b>1.07</b>	<b>\$3,039.2</b>	<b>\$2,899.4</b>	<b>2.0%</b>	<b>1.03</b>

Capital Structure		Cost of Equity		Cost of Debt		WACC
Debt / (Equity Val.+Debt)	Debt / Equity Val.	Re-Levered Beta <sup>(3)</sup>	Cost of Equity <sup>(4)(5)</sup>	Before Tax	After Tax <sup>(6)</sup>	
0.0%	0.0%	1.00	9.9%	6.5%	4.8%	9.9%
5.0%	5.3%	1.04	10.2%	7.0%	5.2%	10.0%
10.0%	11.1%	1.09	10.5%	7.5%	5.6%	10.0%
15.0%	17.6%	1.14	10.9%	8.0%	5.9%	10.1%
20.0%	25.0%	1.19	11.3%	8.5%	6.3%	10.3%
25.0%	33.3%	1.25	11.7%	9.0%	6.7%	10.4%
30.0%	42.9%	1.32	12.2%	9.5%	7.0%	10.7%

(1) Bloomberg adjusted betas for 2 year weekly betas as of August 28, 2020.

(2) Public debt is valued at book value and assumes beta of debt is zero.

(3) Unlevered Beta = Levered Beta / [1 + (Debt/Equity Value)\*(1-Tax Rate)].

(4) Based on Capital Asset Pricing Model.

(5) Risk-free rate of return utilizes the 20-year Treasury yield of 1.29% as per www.treasury.gov, as of August 28, 2020. Market risk premium is calculated by using the 2019 Duff & Phelps Cost of Capital Navigator as of December 31, 2019 for a market risk premium of 7.15% and a 1.47% size premium for market capitalizations between \$994 million and \$1,668 million.

(6) Assumes a 26% tax per Avalanche Management.

## Stifel's Islanders Weighted Average Cost of Capital Summary

Unlevered Betas For Selected Companies						
Name	Ticker	Current Lev. Beta <sup>(1)</sup>	Equity Val. + Debt <sup>(2)</sup>	Equity Value	Debt/Equity Value	Unlevered Beta <sup>(3)</sup>
Astellas Pharma Inc.	4503	0.964	\$32,027.0	\$29,216.1	9.6%	0.90
Seattle Genetics, Inc.	SGEN	0.812	\$26,736.3	\$26,736.3	0.0%	0.81
Genmab A/S	GMAB	1.148	\$24,340.5	\$24,340.5	0.0%	1.15
Alexion Pharmaceuticals, Inc.	ALXN	0.848	\$25,898.5	\$23,449.3	10.4%	0.79
Incyte Corporation	INCY	0.769	\$20,554.7	\$20,535.8	0.1%	0.77
Alnylam Pharmaceuticals, Inc	ALNY	0.816	\$15,239.6	\$15,239.6	0.0%	0.82
BioMarin Pharmaceutical Inc.	BMRN	0.801	\$15,306.1	\$13,836.1	10.6%	0.74
Sarepta Therapeutics Inc.	SRPT	1.091	\$12,396.4	\$11,576.4	7.1%	1.04
Neurocrine Biosciences, Inc.	NBIX	0.765	\$11,178.4	\$10,660.9	4.9%	0.74
Exelixis, Inc.	EXEL	0.970	\$6,683.6	\$6,683.6	0.0%	0.97
Swedish Orphan Biovitrum AB	SOBI	0.784	\$7,879.9	\$6,491.9	21.4%	0.68
Nektar Therapeutics	NKTR	1.070	\$3,424.1	\$3,424.1	0.0%	1.07
<b>Mean</b>		<b>0.90</b>	<b>\$16,805.4</b>	<b>\$16,015.9</b>	<b>5.3%</b>	<b>0.87</b>
<b>Median</b>		<b>0.83</b>	<b>\$15,272.8</b>	<b>\$14,537.8</b>	<b>2.5%</b>	<b>0.81</b>

Capital Structure		Cost of Equity		Cost of Debt		WACC
Debt / (Equity Val.+Debt)	Debt / Equity Val.	Re-Levered Beta <sup>(3)</sup>	Cost of Equity <sup>(4)(5)</sup>	Before Tax	After Tax <sup>(6)</sup>	
0.0%	0.0%	0.87	8.3%	6.5%	4.8%	8.3%
5.0%	5.3%	0.91	8.5%	7.0%	5.2%	8.3%
10.0%	11.1%	0.94	8.8%	7.5%	5.6%	8.4%
15.0%	17.6%	0.99	9.1%	8.0%	5.9%	8.6%
20.0%	25.0%	1.03	9.4%	8.5%	6.3%	8.8%
25.0%	33.3%	1.09	9.8%	9.0%	6.7%	9.0%
30.0%	42.9%	1.15	10.2%	9.5%	7.0%	9.3%

(1) Bloomberg adjusted betas for 2 year weekly betas as of August 28, 2020.

(2) Public debt is valued at book value and assumes beta of debt is zero.

(3) Unlevered Beta = Levered Beta / [1 + (Debt/Equity Value)\*(1-Tax Rate)].

(4) Based on Capital Asset Pricing Model.

(5) Risk-free rate of return utilizes the 20-year Treasury yield of 1.29% as per www.treasury.gov, as of August 28, 2020. Market risk premium is calculated by using the 2019 Duff & Phelps Cost of Capital Navigator as of December 31, 2019 for a market risk premium of 7.15% and a 0.73% size premium for market capitalizations between \$6,619 million and \$13,100 million.

(6) Assumes a 26% tax per Islanders Management.