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

(Amendment No. 5)

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
# F : 110	

- * 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), (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: \$69,559.83 Filing Party: Avalanche Merger Sub, Inc. and Ionis Pharmaceuticals, Inc.

Form or Registration No.: Schedule TO Date Filed: September 14, 2020

☐ 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:

	issuer tender offer subject to Rule 13e-4.
\boxtimes	going-private transaction subject to Rule 13e-3.
	amendment to Schedule 13D under Rule 13d-2.
Check the fo	llowing box if the filing is a final amendment reporting the results of the tender offer.

This Amendment No. 5 amends and supplements the Tender Offer Statement on Schedule TO, filed by Avalanche Merger Sub, Inc., a Delaware corporation ("Purchaser"), and Ionis Pharmaceuticals, Inc., a Delaware corporation ("Parent"), with the U.S. Securities and Exchange Commission on September 14, 2020 (together with any subsequent amendments and supplements thereto, the "Schedule TO"). The Schedule TO relates to the offer by Purchaser 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"), copies of which are incorporated by reference to Exhibits (a)(1)(i) and (a)(1)(ii) of the Schedule TO respectively.

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 the 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. Capitalized terms used but not defined herein have the applicable meanings ascribed to them in the Schedule TO or the Offer to Purchase.

Item 1 through 9, Item 11 and Item 13.

The information set forth in Items 1 through 9, Item 11 and Item 13 of the Schedule TO, to the extent such Items incorporate by reference the information contained in the Offer to Purchase, are hereby amended and supplemented as follows:

At one minute after 11:59 p.m., Eastern Time, on October 9, 2020, the Offer expired. The Depository advised Purchaser that, as of the expiration of the Offer, 21,201,937 Shares (excluding (i) Shares beneficially owned and tendered by Excluded Holders and (ii) Shares with respect to which Notices of Guaranteed Delivery were delivered) were tendered and not validly withdrawn pursuant to the Offer, representing approximately 85.5% of the Shares outstanding as of the expiration of the Offer, excluding the Shares beneficially owned by the Excluded Holders. In addition, the Depository advised Purchaser that Notices of Guaranteed Delivery have been delivered with respect to 919,068 additional Shares, representing approximately 3.7% of the Shares outstanding as of the expiration of the Offer, excluding the Shares beneficially owned by the Excluded Holders.

As of the expiration of the Offer, the number of Shares tendered and not validly withdrawn pursuant to the Offer satisfied the Minimum Condition, and all other conditions to the Offer were satisfied or waived. Immediately after the expiration of the Offer, Purchaser irrevocably accepted for payment, and will promptly pay for, all Shares tendered and not validly withdrawn pursuant to Offer.

Parent and Purchaser completed the acquisition of Akcea on October 12, 2020 by consummating the Merger pursuant to the Merger Agreement without a vote of Akcea's shareholders in accordance with Section 251(h) of the DGCL. At the effective time of the Merger, each issued and 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) was converted into the right to receive \$18.15 in cash, without any interest thereon and subject to any withholding of taxes.

Following consummation of the Merger, the Shares will be delisted and will cease to trade on Nasdaq. Parent intends to take steps to cause the termination of the registration of the Shares under the Exchange Act and suspend all of Akcea's reporting obligations under the Exchange Act as promptly as practicable.

Item 12. Exhibits.

Item 12 of the Schedule TO is hereby amended and supplemented by adding the following exhibits:

Exhibit No.

(a)(2)(vii) Solicitation/Recommendation Statement (Amendment No. 6) on Schedule 14D-9 (incorporated by reference to the Solicitation/Recommendation Statement on Schedule 14D-9 filed by Akcea with the Securities and Exchange Commission on October 13, 2020).

(a)(5)(xv) Press Release, dated October 12, 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 October 13, 2020).

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: October 13, 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.