

**INITIAL STATEMENT OF BENEFICIAL OWNERSHIP OF SECURITIES**

OMB APPROVAL	
OMB Number:	3235-0104
Estimated average burden hours per response:	0.5

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934 or Section 30(h) of the Investment Company Act of 1940

1. Name and Address of Reporting Person* <u>IONIS PHARMACEUTICALS INC</u>  (Last) (First) (Middle) <u>2855 GAZELLE COURT</u>  (Street) <u>CARLSBAD CA 92010</u>  (City) (State) (Zip)	2. Date of Event Requiring Statement (Month/Day/Year) <u>07/13/2017</u>	3. Issuer Name and Ticker or Trading Symbol <u>AKCEA THERAPEUTICS, INC. [ AKCA ]</u>	
		4. Relationship of Reporting Person(s) to Issuer (Check all applicable)  Director <input checked="" type="checkbox"/> 10% Owner  Officer (give title below) Other (specify below)	5. If Amendment, Date of Original Filed (Month/Day/Year)  6. Individual or Joint/Group Filing (Check Applicable Line) <input checked="" type="checkbox"/> Form filed by One Reporting Person  Form filed by More than One Reporting Person

**Table I - Non-Derivative Securities Beneficially Owned**

1. Title of Security (Instr. 4)	2. Amount of Securities Beneficially Owned (Instr. 4)	3. Ownership Form: Direct (D) or Indirect (I) (Instr. 5)	4. Nature of Indirect Beneficial Ownership (Instr. 5)
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**Table II - Derivative Securities Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)**

1. Title of Derivative Security (Instr. 4)	2. Date Exercisable and Expiration Date (Month/Day/Year)		3. Title and Amount of Securities Underlying Derivative Security (Instr. 4)	4. Conversion or Exercise Price of Derivative Security	5. Ownership Form: Direct (D) or Indirect (I) (Instr. 5)	6. Nature of Indirect Beneficial Ownership (Instr. 5)
	Date Exercisable	Expiration Date				
<u>Series A Preferred Stock</u>	<u>(I)</u>	<u>(I)</u>	<u>Common Stock</u> 28,884,540	<u>(I)</u>	<u>D</u>	

**Explanation of Responses:**

1. The shares of Series A Preferred Stock have no expiration date and are convertible at any time at the election of the holder. Each share of Series A Preferred Stock will automatically convert on a one-for-one basis into shares of Common Stock upon the closing of the Issuer's initial public offering.

**Remarks:**

/s/ Elizabeth L. Hougen, Chief  
Financial Officer of Ionis      07/13/2017  
Pharmaceuticals, Inc.

\*\* Signature of Reporting Person      Date

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

\* If the form is filed by more than one reporting person, see Instruction 5 (b)(v).

\*\* Intentional misstatements or omissions of facts constitute Federal Criminal Violations See 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, see Instruction 6 for procedure.

Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB Number.