FORM 4

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP

OMB APP	ROVAL
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Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. See Instruction 1(b).

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934

or Section 30(h) of the Investment Company Act of 1940 2. Issuer Name and Ticker or Trading Symbol 5. Relationship of Reporting Person(s) to Issuer 1. Name and Address of Reporting Person (Check all applicable) **IONIS PHARMACEUTICALS INC** [IONS] PARSHALL B LYNNE X Director 10% Owner Officer (give title Other (specify X below) below) (Last) (First) (Middle) 3. Date of Earliest Transaction (Month/Day/Year) 01/01/2017 COO C/O IONIS PHARMACEUTICALS, INC. 2855 GAZELLE COURT 6. Individual or Joint/Group Filing (Check Applicable 4. If Amendment, Date of Original Filed (Month/Day/Year) (Street) X Form filed by One Reporting Person **CARLSBAD** 92010 CA Form filed by More than One Reporting Person (City) (State) (Zip) Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned 4. Securities Acquired (A) or Disposed Of (D) (Instr. 3, 4 and 5) 1. Title of Security (Instr. 3) 2. Transaction 2A. Deemed 5. Amount of 7. Nature of 6. Ownership Indirect Beneficial Execution Date, Transaction Securities Beneficially Form: Direct (Month/Day/Year) if any (Month/Dav/Year) Code (Instr. (D) or Indirect Owned Following 8) (I) (Instr. 4) Ownership (Instr. 4) Transaction(s) (A) or (D) Code ν Amount Price (Instr. 3 and 4)

Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned						
(e.g., puts, calls, warrants, options, convertible securities)						

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 $171^{(1)}$

01/01/2017

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1. Title of Derivative Security (Instr. 3)	2. Conversion or Exercise Price of Derivative Security	3. Transaction Date (Month/Day/Year)	3A. Deemed Execution Date, if any (Month/Day/Year)	4. Transaction Code (Instr. 8)		5. Number of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5)		6. Date Exercisable and Expiration Date (Month/Day/Year)		7. Title and Amount of Securities Underlying Derivative Security (Instr. 3 and 4)		8. Price of Derivative Security (Instr. 5)	9. Number of derivative Securities Beneficially Owned Following Reported Transaction(s)	10. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	11. Nature of Indirect Beneficial Ownership (Instr. 4)
				Code	v	(A)	(D)	Date Exercisable	Expiration Date	Title	Amount or Number of Shares		(Instr. 4)		
Employee Stock Option (right to buy)	\$47.34	01/03/2017	01/03/2017	A		117,638		01/03/2018 ⁽²⁾	01/02/2024	Common Stock	117,638	\$0	117,638	D	

Explanation of Responses:

Common Stock

- 1. Reporting 171 shares acquired under the Ionis Pharmaceuticals, Inc. Amended and Restated 2000 Employee Stock Purchase Plan on January 1, 2017. These 171 shares may not be sold until July 2, 2017.
- 2. Grant of 1/3/2017 to reporting person of stock options under the Ionis Pharmaceuticals, Inc. 2011 Equity Incentive Plan. 25% of the shares subject to the option vest and become exercisable on 1/3/2018. Thereafter, the remaining shares subject to the option vest and become exercisable in 36 equal monthly installments, at the rate of 29,410 shares per year. Following this transaction, the option was exercisable as to 0 on 1/3/2017.

Remarks:

/s/B. Lynne Parshall

01/04/2017

** Signature of Reporting Person

\$20.757

Α

16,864

D

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 4 (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).

01/01/2017

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.