Instruction 1(b)

FORM 4

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, [D.C. 20549
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Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. See

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP

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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* Monia Brett P					<u>IO</u>	2. Issuer Name and Ticker or Trading Symbol IONIS PHARMACEUTICALS INC									Relationship of Reporting Person(s) to Issue (Check all applicable) X Director 10% Owner					
							IONS]										er (give title		Other (specify
(Last) (First) (Middle) 2855 GAZELLE COURT						3. Date of Earliest Transaction (Month/Day/Year) 02/03/2023										below C	ow) Chief Executiv		below) Officer	
(Street) CARLSBAD CA 92010						4. If Amendment, Date of Original Filed (Month/Day/Year)									6. Individual or Joint/Group Filing (Check Applicable Line)					
CARLSI	3AD C.	A 9	201												X	Form filed by One Reporting Person Form filed by More than One Reporting				
(City)	(S	tate) (Ž	Zip)													Perso		e illa	iii Olie ivepi	orung
		Table	1-1	Non-Deriva	tive	Secı	ritie	s A	cqu	ired,	Dis	sposed o	f, or l	Benefi	cially	Own	ed			
1. Title of Security (Instr. 3)				2. Transaction Date (Month/Day/Ye	Execute (ear) if any		emed tion Date, n/Day/Year)		3. Transaction Code (Inst		ı D	4. Securities Acquired (ADISPOSED OF (D) (Instr. 3			d 5)	Securi Benefi Owned	Securities For Example 1 For Formula Following In		n: Direct or rect (I)	7. Nature of Indirect Beneficial Ownership
						Code	e V	A	mount	(A) or (D)	Price		Transa	ir. 3 and 4)		tr. 4)	(Instr. 4)			
Common	Common Stock				3	3						6,511(1)	A	\$0.0		127,374			D	
Common Stock				02/03/202	23				A]	17,210(2)	A	\$0.0		144,584			D	
Common Stock 02				02/03/202	23				A		2	25,372(3)	A	\$0.0		169,956			D	
Common Stock 02/0				02/06/202	3							24,651	D	\$40.6942(4)		145,305			D	
		Tal	ble	II - Derivati (e.g., pu								osed of, converti)wne	t			
1. Title of Derivative Security (Instr. 3)	2. Conversion or Exercise Price of Derivative Security	3. Transaction Date (Month/Day/Year)	Exe if a	Deemed scution Date, ny onth/Day/Year)		action (Instr.	of Deri Seci Acq (A) o Disp of (E	osed)) :r. 3, 4	Expiration (Month/Dast)			ay/Year) Expiration		7. Title and Amount of Securities Underlying Derivative Security (Instr 3 and 4) Amoun or Numbe of Title Shares		rice of vative urity tr. 5)	9. Number of derivative Securities Beneficially Owned Following Reported Transaction (Instr. 4)	,	10. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	11. Nature of Indirect Beneficial Ownership (Instr. 4)

Explanation of Responses:

- 1. Represents shares earned upon the vesting of performance-based restricted stock units ("PRSUs") for the final performance period of the grant to the reporting person reported on January 17, 2020. The Compensation Committee certified achievement of the pre-established performance goal based on the Issuer's relative total shareholder return as compared to a peer group of companies at a level resulting in a vest of 100% of target shares and a true-up of 72.24% of target shares pursuant to the alternative calculation. Since this PRSU award paid out less than 100% of target for tranche 1 and tranche 2 of such PRSU award, the alternative calculation applies, resulting in an additional payout of 1,146 shares under tranche 1 and 1,586 shares under tranche 2, yielding in the aggregate a total tranche 3 payout of 6,511 shares, or 172.24% of target
- 2. Represents shares earned upon the vesting of performance-based restricted stock units ("PRSUs") for the second performance period of the grant to the reporting person reported on January 20, 2021. The Compensation Committee certified achievement of the pre-established performance goal based on the Issuer's relative total shareholder return as compared to a peer group of companies at a level resulting in a vest of 100% of target shares. As reported at grant, the PRSUs could result in a payout of 0% to 150% based on actual achievement of the goal.
- 3. Represents shares earned upon the vesting of performance-based restricted stock units ("PRSUs") for the first performance period of the grant to the reporting person reported on January 19, 2022. The Compensation Committee certified achievement of the pre-established performance goal based on the Issuer's relative total shareholder return as compared to a peer group of companies at a level resulting in a vest of 150% of target shares. As reported at grant, the PRSUs could result in a payout of 0% to 150% based on actual achievement of the goal.
- 4. The price reported in Column 4 is a weighted average price. These shares were sold in multiple transactions at prices ranging from \$40.37 to \$40.95 inclusive. The reporting person undertakes to provide to Ionis Pharmaceuticals, Inc. any security holder of Ionis Pharmaceuticals, Inc. or the staff of the Securities and Exchange Commission, upon request, full information regarding the number of shares sold at each separate price within the ranges set forth in footnote (4) on this Form 4.

By: Patrick R. O'Neil. 02/07/2023 attorney-in-fact For: Brett P. Monia

** 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 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).

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

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