SEC For																			
FORM 4			UNITED STATES SECURITIES AND EXCHANGE COMMISSION Washington, D.C. 20549													OMB APPROVAL			
Section 16. Form 4 or Form 5 obligations may continue. See					ENT OF CHANGES IN BENEFICIAL OWNER ed pursuant to Section 16(a) of the Securities Exchange Act of 1934								ΗP	OMB Number: 3235-0287 Estimated average burden hours per response: 0.5					
				i neu				ne Investment				J 4							
1. Name and Address of Reporting Person [*] Diaz Allene M.													5. Relationship of Reporting Person(s) to Issuer (Check all applicable) X Director 10% Owner						
(Last) 2855 GA	(Last) (First) (Middle) 2855 GAZELLE COURT				3. Date of Earliest Transaction (Month/Day/Year) 07/01/2022								Officer (give title Other (specify below) below)				pecify		
(Street) CARLSBAD CA 92010 (City) (State) (Zip)					4. If Amendment, Date of Original Filed (Month/Day/Year) 4. If Amendment, Date of Original Filed (Month/Day/Year) X								Form fill	vidual or Joint/Group Filing (Check Applicable Form filed by One Reporting Person Form filed by More than One Reporting Person					
		Ta	able I - Noi	n-Deriva	ive S	ecuriti	es A	cquired, D)isp	osed of	, or Ben	eficially	Owned						
Date				2. Transac Date (Month/Da	Execution Da		te, Transaction Code (Instr.		4. Securities Acquired (A) Disposed Of (D) (Instr. 3, 4			Beneficial Owned Fo	For Iy (D)		Direct Indirect str. 4)	7. Nature of ndirect Beneficial Ownership			
								Code \	/	Amount	(A) or (D)	Price	Reported Transactio (Instr. 3 ar			1	(Instr. 4)		
								quired, Dis ts, options					Owned						
1. Title of Derivative Security (Instr. 3)	2. Conversion or Exercise Price of Derivative Security	3. Transaction Date (Month/Day/Year)	3A. Deemed Execution Da if any (Month/Day/	Code	4. Transaction Code (Instr.		ber ive ies ed ed instr. d 5)	6. Date Exercis: Expiration Date (Month/Day/Yea		le and	7. Title and Amount of Securities Underlying Derivative Security (Instr. 3 and 4)		8. Price of Derivative Security (Instr. 5)	9. Numbe derivative Securities Beneficia Owned Following Reported Transacti (Instr. 4)	e s illy	10. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	11. Nature of Indirect Beneficial Ownership (Instr. 4)		
				Code	v	(A)	(D)	Date Exercisable	Ex Da	piration	Title	Amount or Number of Shares							
Non- Qualified Stock Option (right to buy)	\$38.06	07/01/2022		А		12,000		07/01/2023 ⁽¹⁾	06.	/30/2032 ⁽¹⁾	Common Stock	12,000	\$0.0	12,00	0	D			
Restricted Stock Unit	\$0.0 ⁽²⁾	07/01/2022		А		5,333		(3)		(3)	Common Stock	5,333	\$0.0	13,33	3	D			

Explanation of Responses:

1. Grant on July 1, 2022 to reporting person of stock options under the Amended and Restated Ionis Pharmaceuticals, Inc. 2002 Non-Employee Directors' Stock Option Plan. 100% of the shares subject to the option vest and become exercisable on either the first anniversary of the date of grant or the next regularly scheduled annual meeting of stockholders of the Company, whichever occurs earlier. The option is exercisable to 0 shares on July 1, 2022.

2. Each Restricted Stock Unit represents a contingent right to receive one share of Ionis common stock, or its equivalent cash value.

3. Grant on July 1, 2022 to reporting person of Restricted Stock Unit award under the Amended and Restated Ionis Pharmaceuticals, Inc. 2002 Non-Employee Directors' Stock Option Plan. These Restricted Stock Units vest 100% on either the first anniversary of the date of grant or the next regularly scheduled annual meeting of stockholders of the Company, whichever occurs earlier, and will be delivered to the reporting person on the July 15th following the vesting date. The Restricted Stock Unit is vested as to 0 shares on July 1, 2022.

By: Patrick R. O'Neil, attorney-	07/05/2022	
in-fact For: Allene M. Diaz	07/05/202	

** 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.

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.