FORM 4

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Machinaton	D C	20540
Washington,	D.C.	20049

STATEMENT	OF	CHANGES	IN E	BENEFIC	CIAL	OWNER	SHIP

OMB APPROVAL										
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Estimated average burden										
hours per response:	0.5									

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

Date (Month/Day/Year) Execution Date, if any (Month/Day/Year) Code V Amount (A) or Or Price (D) or Indirect (D) or	1. Name and Address of Reporting Person* <u>HERMAN JOAN E</u>					2. Issuer Name and Ticker or Trading Symbol IONIS PHARMACEUTICALS INC [IONS]							ck all applica	able)	erson(s) to Iss	
(Street) CARLSBAD CA 92010 Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned 1. Title of Security (Instr. 3) 2. Transaction Date (Month/Day/Year) (Month/Day/Year) (Month/Day/Year) Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned (Securities Beneficially Owned Following Reported (Instr. 4) Table II - Derivative Securities Acquired, Disposed of (D) (Instr. 3, 4 and 5) (Instr. 4) Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned Following Reported (Instr. 3 and 4) Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities) 1. Title of Securities Acquired, Disposed of, or Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities) 1. Title of Securities Acquired, Disposed of, or Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities) 1. Title of Securities Acquired, Disposed of, or Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities) 1. Title of Securities Acquired, Disposed of, or Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities) 1. Title of Securities Acquired, Disposed of, or Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities) 2. Title and Amount of Securities Derivative Securities (Instr. 3) 3. Transaction Date Securities Acquired, Disposed of, or Beneficially Owned (instr. 4) 4. Securities Acquired (A) or Disposed of (D) (Instr. 3 and 4) 5. Amount of Securities Conversions (Instr. 4) 6. Ownership (Instr. 4) 6. Ownership (Instr. 4) 7. Title of Securities (Instr. 3 and 4) 8. Price of Derivative Securities (Instr. 4) 8. Price of Derivative Securities (Instr. 4) 8. Ownership (Instr. 3) 8. Price of Securities (Instr. 4) 9. Ownership (Instr. 4		,	,	(Middle)										give title		specify
1. Title of Security (Instr. 3) 2. Transaction Date (Month/Day/Year) 2. Transaction Date (Month/Day/Year) 2. Transaction Date (Month/Day/Year) 3. Transaction (Month/Day/Year) 4. Securities Acquired (A) or Disposed Of (D) (Instr. 3, 4 and 5) 5. Amount of Securities Beneficially Owned Following Reported (Instr. 4) 7. Title of Derivative Securities Acquired (B) or Organization (Instr. 4) 8. Deemed Execution Date (e.g., puts, calls, warrants, options, convertible securities) 1. Title of Derivative Organization Date (Month/Day/Year) 1. Title of Derivative Securities Acquired (B) or Organization Date (Instr. 3) 1. Title of Derivative Securities Acquired (B) or Organization Date (B) organization (B) organization Date (B) organization (B) organization Date (B) organization Date (B) organization (B) organization Date (B) o	CARLSE					4. If Amendment, Date of Original Filed (Month/Day/Year)					Line)	ine) X Form filed by One Reporting Person Form filed by More than One Reporting				
(e.g., puts, calls, warrants, options, convertible securities) 1. Title of Derivative Securities (Month/Day/Year) 1. Title of Derivative Securities (Month/Day/Year) Non-Qualified Stock Option (right to buy) Non-Qualified Stock (right to buy) Non-Qualified Stock (right to buy) Restricted (e.g., puts, calls, warrants, options, convertible securities) 3. Transaction Date (Execution Date, If any (Month/Day/Year) 3. Transaction Date (Execution Date, If any (Month/Day/Year) 3. Transaction Date (Securities) (Month/Day/Year) 3. Transaction Date (Securities) (Month/Day/Year) 4. Transaction Date (Month/Day/Year) 6. Date Exercisable and Expiration Date (Month/Day/Year) 9. Number of Securities Securities (Month/Day/Year) 9. Number of Securities Securities (Month/Day/Year) 9. Number of Securities Securities (Month/Day/Year) 9. Number of Securities (Month/Day/Year) 9. Number of Securities Securities (Month/Day/Year) 9. Number of Securities (Month/Day/Year) 10. Ownership Securities (Month/Day/Year) 9. Number of Securities (Month/Day/Year) 10. Ownership Securities (Month/Day/Year) 10. Ownership Securities (Month/Day/Year) 11. Nature of Securities (Month/Day/Year) 12. Nature of Securities (Month/Day/Year) 13. Transaction (Securities) 14. Nature of Securities (Month/Day/Year) 15. Number of Securities (Month/Day/Year) 16. Date Exercisable and Expiration Date (Month/Day/Year) 18. Price of Securities (Month/Day/Year) 19. Number of Securities (Month/Day/Year) 19. Number of Securities (Month/Day/Year) 10. Ownership Securities (Month/Day	1. Title of Security (Instr. 3) 2. Trans. Date					action 2A. Deemed Execution Date, if any			3. Transacti Code (Ins 8)	4. Securiti Disposed	es Acquired Of (D) (Instr.	(A) or 3, 4 and 5)	5. Amount of Securities Beneficially Owned Following Reported Transaction(s)		orm: Direct) or Indirect	Indirect Beneficial Ownership
Derivative Security Security Or Exercise (Month/Day/Year) Fransaction Date (Month/Day/Year) Or Exercise Price of Derivative Security (Instr. 3) Or Exercise Price of Derivative Security (Month/Day/Year) Or Exercise Price of Derivative Securities (Month/Day/Year) Or Exercise Price of Derivative Securities (Month/Day/Year) Or Exercise Price of Derivative Securities (Month/Day/Year) Or Exercise Price of Derivative Security (Instr. 3 and 4) Or Disposed of (D) (Instr. 3, 4 and 5) Or Or Date Expiration Date (Month/Day/Year) Or Exercise Price of Derivative Security (Instr. 3) Or Date Expiration Date (Month/Day/Year) Or Exercise Price of Derivative Security (Instr. 4) Or Or Indirect Price of Securities Security (Instr. 4) Or Indirect (D) Or Indirect (Instr. 4) Or Or Indirect Price of Securities Security (Instr. 4) Or Or Indirect Price of Securities Security (Instr. 5) Or Or Indirect (Instr. 4) Or Or Indirect Price of Securities Security (Instr. 5) Or Or Indirect (Instr. 4) Or Or Indirect Price of Securities Security (Instr. 5) Or Or Indirect (Instr. 4) Or Or Instr. 4) Or O		Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned														
Code V (A) (D) Date Expiration Title Shares	Derivative Conversion Date Security or Exercise (Month/D. Price of Derivative		Date	ate Execution Date, lonth/Day/Year) if any			of Derivative Securities Acquired (A) or Disposed of (D) (Instr.		Expiration Date		of Securities Underlying Derivative Security		Derivative Security	derivative Securities Beneficially Owned Following Reported Transaction(s)	Ownership Form: Direct (D) or Indirect (I) (Instr. 4	of Indirect Beneficial Ownership (Instr. 4)
Qualified Stock Option (right to buy) \$38.06 07/01/2022 A 12,000 07/01/2023(1) 06/30/2032(1) Common Stock 12,000 \$0.0 12,000 D Restricted \$0.0(2) 07/01/2023 A 5.333 (3) Common Stock 5.333 \$0.0 17.775 D					Code	e V	(A)	(D)			Title	or Number of				
	Qualified Stock Option (right to	\$38.06	07/01/2022		A		12,000		07/01/2023 ⁽¹⁾	06/30/2032 ⁽¹⁾		12,000	\$0.0	12,000	D	
Explanation of Responses:	Stock Unit				Α		5,333		(3)	(3)		5,333	\$0.0	17,775	D	

- 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
- 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, attorneyin-fact For: Joan E. Herman

07/05/2022

** 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.