FORM 4

## UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

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OMB APPROVAL

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|----------------------------------------|
| Section 16. Form 4 or Form 5           |
| obligations may continue. See          |
| Instruction 1(b).                      |

## STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP

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

| Name and Address of Reporting Person* <u>Cadoret-Manier Onaiza</u> |                                                                       |                                            |                                              |                                            | 2. Issuer Name and Ticker or Trading Symbol IONIS PHARMACEUTICALS INC [ IONS ] |                                                             |                                                             |                  |                  |                                                        |                    |                                                                                  | 5. Relationship of Reporting Person(s) to Issuer (Check all applicable)  Director 10% Owner  X Officer (give title Other (specify |       |                                                                                                                                              |                                                                                                                   |                                                                   |           |                                                                    |  |
|--------------------------------------------------------------------|-----------------------------------------------------------------------|--------------------------------------------|----------------------------------------------|--------------------------------------------|--------------------------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|------------------|------------------|--------------------------------------------------------|--------------------|----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|-------|----------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|-----------|--------------------------------------------------------------------|--|
| (Last) (First) (Middle) 2855 GAZELLE COURT                         |                                                                       |                                            |                                              |                                            |                                                                                | 3. Date of Earliest Transaction (Month/Day/Year) 01/18/2022 |                                                             |                  |                  |                                                        |                    |                                                                                  |                                                                                                                                   |       | EVP, Chf Corp Dev and Cml Offc                                                                                                               |                                                                                                                   |                                                                   |           |                                                                    |  |
| (Street) CARLSI (City)                                             |                                                                       |                                            | 92010<br>(Zip)                               |                                            | 4. If                                                                          | 4. If Amendment, Date of Original Filed (Month/Day/Year)    |                                                             |                  |                  |                                                        |                    |                                                                                  |                                                                                                                                   |       | . Individual or Joint/Group Filing (Check Applicable ine)  X Form filed by One Reporting Person Form filed by More than One Reporting Person |                                                                                                                   |                                                                   |           |                                                                    |  |
|                                                                    |                                                                       | Tab                                        | le I - No                                    | n-Deri\                                    | ative                                                                          | e Se                                                        | curiti                                                      | ies Ac           | quired           | , Dis                                                  | posed o            | of, or Be                                                                        | nefici                                                                                                                            | ally  | Owned                                                                                                                                        | ı                                                                                                                 |                                                                   |           |                                                                    |  |
| 1. Title of Security (Instr. 3)                                    |                                                                       |                                            |                                              | 2. Transaction<br>Date<br>(Month/Day/Year) |                                                                                | ar) E                                                       | 2A. Deemed<br>Execution Date,<br>if any<br>(Month/Day/Year) |                  | Code             | Transaction Disp<br>Code (Instr. 5)                    |                    | ecurities Acquired (A) o<br>osed Of (D) (Instr. 3, 4                             |                                                                                                                                   |       |                                                                                                                                              | es<br>ally<br>Following                                                                                           | 6. Ownership<br>Form: Direct<br>(D) or Indirect<br>(I) (Instr. 4) |           | 7. Nature<br>of Indirect<br>Beneficial<br>Ownership                |  |
|                                                                    |                                                                       |                                            |                                              |                                            |                                                                                |                                                             |                                                             |                  | Code             | v                                                      | Amount             | (A) or (D)                                                                       | Price                                                                                                                             |       | Reported Transaction(s) (Instr. 3 and 4)                                                                                                     |                                                                                                                   |                                                                   |           | (Instr. 4)                                                         |  |
| Common Stock 01/18/                                                |                                                                       |                                            |                                              | 3/2022                                     | 2022 01/18/2022                                                                |                                                             | M <sup>(1)</sup>                                            |                  | 6,057            | (1) A                                                  | \$0                | .0                                                                               | 10,687                                                                                                                            |       |                                                                                                                                              | D                                                                                                                 |                                                                   |           |                                                                    |  |
| Common Stock 01/18/                                                |                                                                       |                                            |                                              |                                            | 3/2022                                                                         | 022 01/18/2022                                              |                                                             | F <sup>(2)</sup> |                  | 2,305                                                  | (2) <b>D</b>       | \$30                                                                             | .12                                                                                                                               | 8,382 |                                                                                                                                              |                                                                                                                   | D                                                                 |           |                                                                    |  |
|                                                                    |                                                                       | Т                                          | able II -                                    |                                            |                                                                                |                                                             |                                                             |                  |                  |                                                        |                    | , or Ben<br>ible sec                                                             |                                                                                                                                   |       | wned                                                                                                                                         |                                                                                                                   | ,                                                                 | ,         |                                                                    |  |
| 1. Title of<br>Derivative<br>Security<br>(Instr. 3)                | 2.<br>Conversion<br>or Exercise<br>Price of<br>Derivative<br>Security | 3. Transaction<br>Date<br>(Month/Day/Year) | 3A. Deem<br>Executior<br>if any<br>(Month/Da | Date, Trans                                |                                                                                |                                                             | of E                                                        |                  | Expiration       | . Date Exercisabl<br>xpiration Date<br>Month/Day/Year) |                    | 7. Title an<br>Amount of<br>Securities<br>Underlyin<br>Derivative<br>(Instr. 3 a | nt of<br>ities<br>lying<br>ative Security                                                                                         |       | 8. Price of<br>Derivative<br>Security<br>(Instr. 5)                                                                                          | 9. Number<br>derivative<br>Securities<br>Beneficial<br>Owned<br>Following<br>Reported<br>Transactio<br>(Instr. 4) | Owners<br>Form:<br>Direct (<br>or Indir<br>(I) (Inst              | Ownership | 11. Nature<br>of Indirect<br>Beneficial<br>Ownership<br>(Instr. 4) |  |
|                                                                    |                                                                       |                                            |                                              |                                            | Code                                                                           | v                                                           | (A)                                                         | (D)              | Date<br>Exercisa |                                                        | Expiration<br>Date | Title                                                                            | Amoun<br>or<br>Numbe<br>of<br>Shares                                                                                              |       |                                                                                                                                              |                                                                                                                   |                                                                   |           |                                                                    |  |
| Restricted<br>Stock Unit                                           | \$0.0 <sup>(3)</sup>                                                  | 01/18/2022                                 | 01/18/                                       | 2022                                       | M                                                                              |                                                             |                                                             | 6,057            | (4)              |                                                        | (4)                | Common<br>Stock                                                                  | 6,057                                                                                                                             |       | \$0.0                                                                                                                                        | 51,730                                                                                                            | )                                                                 | D         |                                                                    |  |

## **Explanation of Responses:**

- $1.\ Acquired\ pursuant\ to\ vesting\ and\ release\ of\ shares\ in\ accordance\ with\ a\ Restricted\ Stock\ Unit\ award.$
- 2. Shares withheld to cover the required tax withholding obligations pursuant to the Ionis Pharmaceuticals, Inc. Amended and Restated 2011 Equity Incentive Plan.
- 3. Each Restricted Stock Unit represents a contingent right to receive one share of Ionis common stock, or its equivalent cash value.
- 4. Restricted Stock Units vest in four equal annual installments. Upon vesting, the Restricted Stock Units will be paid out in whole shares of Ionis common stock or cash as may be determined by Ionis.

By: Patrick R. O'Neil, attorney-

in-fact For: Onaiza Cadoret- 01/20/2022

Manier

\*\* Signature of Reporting Person Date

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

- $^{\star}$  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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