

**UNITED STATES SECURITIES AND EXCHANGE  
COMMISSION**

Washington, D.C. 20549

**INITIAL STATEMENT OF BENEFICIAL OWNERSHIP OF  
SECURITIES**

**OMB APPROVAL**

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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*<br><u>Baroldi Joseph</u><br><br>(Last) (First) (Middle)<br><u>2855 GAZELLE COURT</u><br><br>(Street)<br><u>CARLSBAD CA 92010</u><br><br>(City) (State) (Zip) | 2. Date of Event Requiring Statement (Month/Day/Year)<br><u>01/31/2022</u> | 3. Issuer Name and Ticker or Trading Symbol<br><u>IONIS PHARMACEUTICALS INC [ IONS ]</u>   |  |
|   |  | 4. Relationship of Reporting Person(s) to Issuer (Check all applicable)<br>Director 10% Owner<br><input checked="" type="checkbox"/> Officer (give title below) Other (specify below)<br><u>Chief Business Officer</u> | 5. If Amendment, Date of Original Filed (Month/Day/Year)<br><br>6. Individual or Joint/Group Filing (Check Applicable Line)<br><input checked="" type="checkbox"/> Form filed by One Reporting Person<br><input type="checkbox"/> Form filed by More than One Reporting Person |

**Table I - Non-Derivative Securities Beneficially Owned**

| 1. Title of Security (Instr. 4) | 2. Amount of Securities Beneficially Owned (Instr. 4) | 3. Ownership Form: Direct (D) or Indirect (I) (Instr. 5) | 4. Nature of Indirect Beneficial Ownership (Instr. 5) |
|---------------------------------|---|--|---|
| Common Stock                    | 3,613   | D  |   |
| Common Stock                    | 322   | I  | by Spouse   |

**Table II - Derivative Securities Beneficially Owned  
(e.g., puts, calls, warrants, options, convertible securities)**

| 1. Title of Derivative Security (Instr. 4) | 2. Date Exercisable and Expiration Date (Month/Day/Year) |                 | 3. Title and Amount of Securities Underlying Derivative Security (Instr. 4) |                            | 4. Conversion or Exercise Price of Derivative Security | 5. Ownership Form: Direct (D) or Indirect (I) (Instr. 5) | 6. Nature of Indirect Beneficial Ownership (Instr. 5) |
|--|--|-----------------|---|----------------------------|--|--|---|
|  | Date Exercisable   | Expiration Date | Title   | Amount or Number of Shares |  |  |   |
| Non-Qualified Stock Option (right to buy)  | 01/03/2023 <sup>(1)</sup>                                | 01/02/2032      | Common Stock  | 2,849                      | 32.6   | I  | by Spouse   |
| Non-Qualified Stock Option (right to buy)  | 01/04/2022 <sup>(2)</sup>                                | 01/03/2028      | Common Stock  | 4,924                      | 56.78  | I  | by Spouse   |
| Restricted Stock Unit                      | (3)  | (3)             | Common Stock  | 3,066                      | 0.0 <sup>(4)</sup>                                     | I  | by Spouse   |

**Explanation of Responses:**

- Grant on 01/03/2022 to reporting person's spouse of stock options under the Ionis Pharmaceuticals, Inc. Amended and Restated 2011 Equity Incentive Plan. 25% of the shares subject to the option will be vested and become exercisable on 01/03/2023. Thereafter, the remaining shares subject to the option will vest and become exercisable in 36 equal monthly installments, at a rate of 712 shares per year. The option is exercisable as to 0 shares on 01/31/2022.
- Grant on 01/04/2021 to reporting person's spouse of stock options under the Ionis Pharmaceuticals, Inc. Amended and Restated 2011 Equity Incentive Plan. 25% of the shares subject to the option vested and became exercisable on 01/04/2022. Thereafter, the remaining shares subject to the option will vest and become exercisable in 36 equal monthly installments, at a rate of 1,231 shares per year. The option is exercisable as to 1,231 shares on 01/31/2022.
- Grants to reporting person's spouse of Restricted Stock Units under the Ionis Pharmaceuticals, Inc. 2011 Equity Incentive Plan on January 15, 2021 and January 15, 2022. The 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 the Company.
- Each Restricted Stock Unit represents a contingent right to receive one share of Ionis common stock, or its equivalent cash value.

By: Patrick R. O'Neil,  
attorney-in-fact For:  
Joseph T. Baroldi

02/01/2022

\*\* 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 5 (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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