FORM 4

# **UNITED STATES SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

OMB APPROVAL

| OMB Number:             | 3235-0287 |
|-------------------------|-----------|
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#### Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. See Instruction 1(b).

Check this box to indicate that a transaction was made pursuant to a contract, instruction or written plan for the purchase or sale of equity securities of the issuer that is intended to satisfy the affirmative defense conditions of Rule

### 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

| 10b5-1(c). See Instru   | uction 10. |       |  |  |   |                       |  |  |  |
|---|------------|-------|--|--|---|-----------------------|--|--|--|
| Name and Address of Reporting Person*     Ferguson James J. III |            |       | 2. Issuer Name and Ticker or Trading Symbol  Matinas BioPharma Holdings, Inc. [ MTNB ] | Relationship of Reporting Person(s) to Issuer (Check all applicable)  Director 10% Owner |   |                       |  |  |  |
| (Last) (First) (Middle) C/O MATINAS BIOPHARMA HOLDINGS, INC.    |            | ` ,   | 3. Date of Earliest Transaction (Month/Day/Year) 12/15/2023                            | X  | Officer (give title below)  Chief Medica  | Other (specify below) |  |  |  |
| 1545 ROUTE 206 SOUTH SUITE 302  (Street)  BEDMINSTER NJ 07921   |            |       | 4. If Amendment, Date of Original Filed (Month/Day/Year)                               | 6. Indiv   | vidual or Joint/Group Filing<br>Form filed by One Repo<br>Form filed by More than | orting Person         |  |  |  |
| (City)  | (State)    | (Zip) |  |  |   |                       |  |  |  |

## Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned

| ( | 2. Transaction<br>Date<br>(Month/Day/Year) | 2A. Deemed<br>Execution Date,<br>if any<br>(Month/Day/Year) | 3.<br>Transac<br>Code (In<br>8) | tion | 4. Securities Acquired (A) or<br>Disposed Of (D) (Instr. 3, 4 and 5) |               |       | 5. Amount of<br>Securities<br>Beneficially Owned<br>Following Reported | Form: Direct (D)<br>or Indirect (I)<br>(Instr. 4) | 7. Nature of<br>Indirect<br>Beneficial<br>Ownership<br>(Instr. 4) |
|---|--|---|---------------------------------|------|--|---------------|-------|--|---|---|
|   |  |   | Code                            | v    | Amount   | (A) or<br>(D) | Price | Transaction(s)<br>(Instr. 3 and 4)                                     |   | (instr. 4)  |

# Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)

| 1. Title of<br>Derivative<br>Security (Instr.<br>3) | 2.<br>Conversion<br>or Exercise<br>Price of<br>Derivative<br>Security |            | 3A. Deemed<br>Execution Date,<br>if any<br>(Month/Day/Year) | 4.<br>Transac<br>Code (In<br>8) |   | Disposed  | erivative E |                     | 6. Date Exercisable and<br>Expiration Date<br>(Month/Day/Year) |                 | 7. Title and Amount of<br>Securities Underlying<br>Derivative Security (Instr.<br>3 and 4) |     | 9. Number of<br>derivative<br>Securities<br>Beneficially<br>Owned<br>Following<br>Reported | Form:<br>Direct (D) | 11. Nature<br>of Indirect<br>Beneficial<br>Ownership<br>(Instr. 4) |
|---|---|------------|---|---------------------------------|---|-----------|-------------|---------------------|--|-----------------|--|-----|--|---------------------|--|
|   |   |            |   | Code                            | v | (A)       | (D)         | Date<br>Exercisable | Expiration<br>Date   | Title           | Amount or<br>Number of<br>Shares   |     | Transaction(s)<br>(Instr. 4)   |                     |  |
| Stock Option<br>(right to Buy)                      | \$0.247   | 12/15/2023 |   | A                               |   | 1,200,000 |             | (1)                 | 12/15/2033   | Common<br>Stock | 1,200,000  | \$0 | 1,200,000  | D                   |  |

#### Explanation of Responses:

1. The option award was made in accordance with the terms of the Issuer's Amended and Restated 2013 Equity Incentive Plan. The option vests as to 25% of the shares on December 15, 2024 with the remaining shares to vest in equal monthly installments on the last day of each month over a period of 36 months commencing December 31, 2024.

/s/ Keith A. Kucinski, attorney-in fact for James J. Ferguson III

12/15/2023

\*\* Signature of Reporting Person

Date

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

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.

 $<sup>^{\</sup>star}$  If the form is filed by more than one reporting person, see Instruction 4 (b)(v).

<sup>\*\*</sup> Intentional misstatements or omissions of facts constitute Federal Criminal Violations See 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).