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

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

| affirmative defense 10b5-1(c). See Inst | | | | | | |
|--|----------------------|-------|--|----------|--|-----------------------|
| 1. Name and Address <u>Kucinski Keitl</u> | of Reporting Person* | | 2. Issuer Name and Ticker or Trading Symbol Matinas BioPharma Holdings, Inc. [MTNB] | | tionship of Reporting Perso all applicable) Director | on(s) to Issuer |
| (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 Financia | Other (specify below) |
| 1545 ROUTE 206 | SOUTH SUITE 30 | 2 | 4. If Amendment, Date of Original Filed (Month/Day/Year) | 6. Indiv | idual or Joint/Group Filing Form filed by One Repo | ` '' ' |
| (Street) BEDMINSTER | NJ | 07921 | | | Form filed by More than | · · |
| (City) | (State) | (Zip) | | | | |

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

| 1. Title of Security (Instr. 3) | 2. Transaction Date (Month/Day/Year) | 2A. Deemed 3. Transaction Date, if any (Month/Day/Year) 8) | | 4. Securities Acquired (A) or Disposed Of (D) (Instr. 3, 4 and 5) | | | 5. Amount of Securities Beneficially Owned Following Reported | Form: Direct (D) or Indirect (I) (Instr. 4) | 7. Nature of Indirect Beneficial Ownership (Instr. 4) | |
|---------------------------------|--|--|------|---|--------|---------------|--|---|---|-----------|
| | | | Code | v | Amount | (A) or (D) | Price | Transaction(s) (Instr. 3 and 4) | | (mstr. 4) |

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

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

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.

 $^{^{\}star}$ 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).