

FORM 3

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

OMB APPROVAL

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INITIAL STATEMENT OF BENEFICIAL OWNERSHIP OF SECURITIES

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

(Print or Type Responses)

1. Name and Address of Reporting Person * MANNINO RAPHAEL J		2. Date of Event Requiring Statement (Month/Day/Year) 03/01/2017	3. Issuer Name and Ticker or Trading Symbol Matinas BioPharma Holdings, Inc. [MTNB]	
(Last) C/O MATINAS BIOPHARMA HOLDINGS, INC., 1545 ROUTE 206 SOUTH SUITE 302	(First) (Middle) BEDMINSTER, NJ 07921		4. Relationship of Reporting Person(s) to Issuer (Check all applicable) <input type="checkbox"/> Director <input type="checkbox"/> 10% Owner <input checked="" type="checkbox"/> Officer (give title below) <input type="checkbox"/> Other (specify below) Chief Scientific Officer	5. If Amendment, Date Original Filed(Month/Day/Year)
(City) (State) (Zip)	6. Individual or Joint/Group Filing(Check Applicable Line) <input checked="" type="checkbox"/> Form filed by One Reporting Person <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, par value \$0.0001 per share	1,419,565	D	

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

SEC 1473 (7-02)

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 control number.

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 of Derivative Security: 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			
Option (right to buy)	09/02/2015	02/27/2025	Common Stock	11,112	\$ 0.48 (1)	D	
Option (right to buy)	(2)	09/01/2025	Common Stock	338,888	\$ 0.945 (2)	D	
Option (right to buy)	(3)	02/14/2026	Common Stock	60,000	\$ 0.43 (3)	D	
Option (right to buy)	(4)	02/20/2027	Common Stock	125,000	\$ 3.32 (4)	D	

Reporting Owners

Reporting Owner Name / Address	Relationships			
	Director	10% Owner	Officer	Other
MANNINO RAPHAEL J C/O MATINAS BIOPHARMA HOLDINGS, INC.				

1545 ROUTE 206 SOUTH SUITE 302
BEDMINSTER, NJ 07921

Chief Scientific Officer

Signatures

/s/ Raphael J. Mannino	03/01/2017
<small>**Signature of Reporting Person</small>	<small>Date</small>

Explanation of Responses:

* 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).

The option award was made in accordance with the terms of the issuer's Matinas BioPharma Holdings, Inc. Amended and Restated 2013

(1) Equity Incentive Plan. The exercise price is based on the average of the closing bid and asked prices for the shares of the Common Stock on the OTC.QB on the date of grant in accordance with the terms of the 2013 Plan.

The option award was made in accordance with the terms of the issuer's Matinas BioPharma Holdings, Inc. Amended and Restated 2013

(2) Equity Incentive Plan (the "2013 Plan"). The option vests in equal monthly installments over a period of 36 months commencing on September 1, 2015. The exercise price is based on the average of the closing bid and asked prices for the shares of the Common Stock on the OTC.QB on the date of grant in accordance with the terms of the 2013 Plan.

The option award was made in accordance with the terms of the issuer's Matinas BioPharma Holdings, Inc. Amended and Restated 2013

(3) Equity Incentive Plan. The option vests in equal monthly installments over a period of 36 months commencing on February 15, 2016. The exercise price is based on the average of the closing bid and asked prices for the shares of the Common Stock on the OTC.QB on the date of grant in accordance with the terms of the 2013 Plan.

The option award was made in accordance with the terms of the issuer's Matinas BioPharma Holdings, Inc. Amended and Restated 2013

(4) Equity Incentive Plan. The option vests in equal monthly installments over a period of 36 months commencing on February 21, 2017. The exercise price is based on the average of the closing bid and asked prices for the shares of the Common Stock on the OTC.QB on the date of grant in accordance with the terms of the 2013 Plan.

Remarks:

Exhibit 24 - Power of Attorney

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, *See* Instruction 6 for procedure.

Potential persons who are to respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB number.

POWER OF ATTORNEY

Know all by these presents, that the undersigned hereby constitutes and appoints each of Jerome D. Jabbour, Gary Gaglione, Michael J. Lerner and Meredith Prithviraj his true and lawful attorney-in-fact to:

1. execute for and on behalf of the undersigned Schedules 13D and 13G, Form ID, and Forms 3, 4 and 5 in accordance with Sections 13 and 16(a) of the Securities Exchange Act of 1934 (the "Exchange Act") and the rules thereunder;
2. do and perform any and all acts for and on behalf of the undersigned which may be necessary or desirable to complete the execution of any such Schedules 13D or 13G, Form ID application for EDGAR codes, and Forms 3, 4 or 5, and the timely filing of such Forms with the United States Securities and Exchange Commission and any other authority; and
3. take any other action of any type whatsoever in connection with the foregoing which, in the opinion of such attorney-in-fact, may be of benefit to, in the best interest of, or legally required by, the undersigned, including, without limitation, the execution and filing of a Form 4 with respect to a transaction which may be reported on a Form 5, it being understood that the documents executed by such attorney-in-fact on behalf of the undersigned pursuant to this Power of Attorney shall be in such form and shall contain such terms and conditions as such attorney-in-fact may approve in his discretion.

The undersigned hereby grants to each such attorney-in-fact full power and authority to do and perform all and every act and thing whatsoever requisite, necessary and proper to be done in the exercise of any of the rights and powers herein granted, as fully and to all intents and purposes as he might or could do in person, with full power of substitution and resubstitution, hereby ratifying and confirming all that such attorney-in-fact, or his substitute or substitutes, shall lawfully do or cause to be done by virtue of this Power of Attorney and the rights and powers herein granted. The undersigned acknowledges that the foregoing attorneys-in-fact, in serving in such capacity at the request of the undersigned, are not assuming any of the undersigned's responsibilities to comply with Sections 13 and 16 of the Exchange Act.

This Power of Attorney shall remain in full force and effect until the undersigned is no longer required to file any Schedules 13D and 13G and Forms 3, 4 and 5 in accordance with Sections 13 and 16(a) of the Exchange Act and the rules thereunder with respect to the undersigned's holdings of and transactions in securities issued by Matinas BioPharma Holdings, Inc., unless earlier revoked by the undersigned in a signed writing delivered to the foregoing attorneys-in-fact.

IN WITNESS WHEREOF, the undersigned has caused this Power of Attorney to be executed as of this 1st day of March, 2017.

/s/ Raphael J. Mannino, Ph.D.
By: Raphael J. Mannino, Ph.D.
