

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549**

**AMENDMENT NO. 2 TO
SCHEDULE TO
TENDER OFFER STATEMENT UNDER SECTION 14(d)(1) OR 13(e)(1)
OF THE SECURITIES EXCHANGE ACT OF 1934**

MATINAS BIOPHARMA HOLDINGS, INC.
(Name of Subject Company (Issuer) and Filing Person (Offeror))

**WARRANTS TO PURCHASE COMMON STOCK
(Title of Class of Securities)**

**576810 105
(CUSIP Number of Common Stock Underlying Warrants)**

**Roelof Rongen
Chief Executive Officer
Matinas BioPharma Holdings, Inc.
1545 Route 206 South, Suite 302
Bedminster, New Jersey 07921**

**Telephone: 908-443-1860 (Name, Address and Telephone Number of Person Authorized to Receive Notices and Communications on
Behalf of Filing Person)**

**WITH COPY TO:
Michael Lerner, Esq.
Steven Skolnick, Esq.
Lowenstein Sandler LLP
1251 Avenue of the Americas
New York, New York 10020
Telephone: (212) 262-6700**

CALCULATION OF FILING FEE:

Transaction valuation⁽¹⁾	Amount of filing fee⁽¹⁾⁽²⁾
\$50,685,485	\$5,874.45

- (1) Estimated for purposes of calculating the amount of the filing fee only. An offer to amend and exercise warrants to purchase an aggregate of 36,728,612 shares of common stock (the “**Offer to Amend and Exercise**”), including: (i) outstanding warrants to purchase 4,000,000 shares of the Company’s common stock issued to investors in connection with our formation in June 2013, with an exercise price of \$2.00 per share (the “Formation Warrants”); (ii) outstanding warrants to purchase 1,000,000 shares of the Company’s common stock issued to former stockholders of Matinas BioPharma, Inc. in connection with the merger of Matinas BioPharma, Inc. and Matinas BioPharma Holdings, Inc. in July 2013, with an exercise price of \$2.00 per share (the “Merger Warrants”); (iii) outstanding warrants to purchase 7,500,000 shares of the Company’s common stock issued to investors participating in the Company’s private placement financings closed in July and August 2013, with an exercise price of \$2.00 per share (the “2013 Investor Warrants”); (iv) outstanding warrants to purchase 500,000 shares of the Company’s common stock issued to investors in the Company’s warrant private placement transaction completed in July 2013, with an exercise price of \$2.00 per share (the “Private Placement Warrants”); (v) outstanding warrants to purchase 19,580,000 shares of the Company’s common stock issued to investors participating in the Company’s private placement financings closed in March and April 2015, with an exercise price of \$0.75 per share (the “2015 Investor Warrants”); (vi) outstanding warrants to purchase 750,000 shares of the Company’s common stock issued to the placement agent in the private placement financings closed in July and August 2013, with an exercise price of \$2.00 per share (the “\$2.00 PA Warrants”); (vii) outstanding warrants to purchase 1,427,937 shares of the Company’s common stock issued to the placement agent in the private placement financings closed in July and August 2013, with an exercise price of \$1.00 per share (the “\$1.00 PA Warrants”); and (viii) outstanding warrants to purchase 1,970,675 shares of the Company’s common stock issued to the placement agent in the private placement financings closed in March and April 2015, with an exercise price of \$0.75 per share (the “\$0.75 PA Warrants” and collectively with the Formation Warrants, the Merger Warrants, the 2013 Investor Warrants, the Private Placement Warrants, the 2015 Investor Warrants, the \$2.00 PA Warrants and the \$1.00 PA Warrants, the “Original Warrants”). The transaction value is calculated pursuant to Rule 0-11 using \$1.38 per share of common stock, which represents the average of the high and low sales price of the common stock on December

13, 2016.

(2) Calculated by multiplying the transaction value by 0.0001159.

- Check the box if any part of the fee is offset as provided by Rule 0-11(a)(2) and identify the filing with which the offsetting fee was previously paid. Identify the previous filing by registration statement number or the Form or Schedule and the date of its filing.

Amount Previously Paid: \$5,874.45
Form or Registration Number: Schedule TO

Filing Party: Matinas BioPharma Holdings, Inc.
Date Filed: December 14, 2016

- Check the box if the filing relates solely to preliminary communications made before the commencement of a tender offer.

Check the appropriate boxes below to designate any transactions to which the statement relates:

- third party tender offer subject to Rule 14d-1.
 issuer tender offer subject to Rule 13e-4.
 going private transaction subject to Rule 13e-3.
 amendment to Schedule 13D under Rule 13d-2.

Check the following box if the filing is a final amendment reporting the results of a tender offer:

The alphabetical subsections used in the Item responses below correspond to the alphabetical subsections of the applicable items of Regulation M-A promulgated under the federal securities laws.

If applicable, check the appropriate box(es) below to designate the appropriate note provision(s):

- Rule 13e-4(i) (Cross-Border Issuer Tender Offer)
 Rule 14d-1(d) (Cross-Border Third-Party Tender Offer)
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This Amendment No. 2 (“**Amendment No. 2**”) amends and supplements the Tender Offer Statement on Schedule TO originally filed with the Securities and Exchange Commission (the “**SEC**”) on December 14, 2016 (together with the exhibits thereto, the “**Original Schedule TO**”), as previously amended by Amendment No. 1 filed with the SEC on January 5, 2017 (“**Amendment No. 1**”) relating to an offer by Matinas BioPharma Holdings, Inc. (“**Matinas**” or the “**Company**”) to amend and exercise certain outstanding warrants upon the terms and subject to the conditions set forth in the offer to amend and exercise, dated December 14, 2016 (the “**Offer to Amend and Exercise**”), which together with the Election to Participate and Exercise Warrant, Notice of Withdrawal, and Forms of Amended Warrants constitute the “**Offering Materials**”.

The information contained in the Offer to Amend and Exercise filed as Exhibit (a)(1)(B) to this Schedule TO is incorporated herein by reference in response to all of the items of this Schedule TO, except that such information is hereby amended and supplemented to the extent specifically provided herein.

This is the final amendment to the Schedule TO and is being filed to report the results of the Offer to Amend and Exercise. The following information is filed pursuant to Rule 13e-4(c) of the Securities Exchange Act of 1934, as amended (the “Exchange Act”). Except as otherwise set forth below, the information included in the Schedule TO, as amended by this Amendment No. 2, remains unchanged and is incorporated by reference herein as relevant to the items in this Amendment No. 2.

Pursuant to Rule 12b-15 under the Exchange Act, this Amendment No. 2 amends and supplements only the items of the Schedule TO that are being amended and supplemented, and unaffected items and exhibits are not included herein. Capitalized terms used herein and not otherwise specifically defined shall have the meanings given in the Offer to Amend and Exercise.

Item 4. TERMS OF THE TRANSACTION

Item 4 of the Schedule TO is hereby amended and supplemented by adding the following:

The Offer to Amend and Exercise expired at 5:00 p.m. Eastern Time on January 13, 2017. Pursuant to the Offer to Amend and Exercise, an aggregate of 30,966,350 Original Warrants were tendered by their holders and were amended and exercised in connection therewith for an aggregate exercise price of approximately \$15.5 million, including the following: 3,750,000 Formation Warrants; 754,000 Merger Warrants; 7,243,750 2013 Investor Warrants; 500,000 Private Placement Warrants; 14,750,831 2015 Investor Warrants; 722,925 \$2.00 PA Warrants (of which 721,987 were exercised on a cashless basis); 1,426,687 \$1.00 PA Warrants (of which 1,424,812 were exercised on a cashless basis); and 1,818,157 \$0.75 PA Warrants (of which 1,774,017 were exercised on a cashless basis). Such tendered Original Warrants represent approximately 84.31% of the Company’s outstanding Original Warrants as of December 14, 2016. The gross cash proceeds from such exercises were approximately \$13.5 million and the net cash proceeds after deducting warrant solicitation agent fees and other estimated offering expenses were approximately \$12.7 million. Prior to the Offer to Amend and Exercise, the Company had 58,159,495 shares of common stock outstanding and warrants to purchase an aggregate of 40,255,234 shares of common stock. Following the Offer to Amend and Exercise, the Company had 87,310,154 shares of common stock outstanding and warrants to purchase an aggregate of 9,288,884 shares of common stock.

SIGNATURE

After due inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

MATINAS BIOPHARMA HOLDINGS, INC.

Dated: January 19, 2017

By: /s/ Roelof Rongen

Name: Roelof Rongen

Title: Chief Executive Officer

(Principal Executive Officer)