

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

**AMENDMENT NO. 1 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. 1 (“**Amendment No. 1**”) amends and supplements the Tender Offer Statement on Schedule TO originally filed with the Securities and Exchange Commission on December 14, 2016 (together with the exhibits thereto, this “**Schedule TO**”) 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.

The Offer to Amend and Exercise and Items 1 through 11 of the Schedule TO, to the extent such Items incorporate by reference the information contained in the Offer to Amend and Exercise, are hereby amended and supplemented as follows:

1. Immediately following the first sentence in the second paragraph on page 2 of the Offer to Amend and Exercise, the following sentence is added:

“We do not view the representations and warranties to be made by warrant holders tendering their warrants that they have ‘review[ed] the current business prospects, financial condition and operating history of the Company’, ‘had the opportunity to ask questions and receive answers from the Company regarding the terms and conditions of the Offer to Amend and Exercise’, and ‘received all the information [they] consider[ed] necessary or appropriate for deciding whether to accept the Offer to Amend and Exercise’ as a waiver of any potential liability that we may have under federal securities laws, and we agree not to assert that these provisions constitute a waiver of any such liability if a claim is made against us.”

2. In each of (a) the last full paragraph on page 2, (b) the first full paragraph on page 8 and (c) the first full paragraph under the heading “Section 10. Withdrawal Rights” on page 52 of the Offer to Amend and Exercise, “February 13, 2017” should be deleted and replaced with “February 10, 2017”.

3. The last paragraph on page 14 of the Offer to Amend and Exercise is hereby amended to delete “6,251,492” and replace it with “6,551,492”.

4. Each of (a) the first full paragraph under the heading “Conditions” on page 6 of the Offer to Amend and Exercise and (b) the first full paragraph under “Section 6 Conditions to the Offer to Amend and Exercise” on page 50 is hereby amended and restated in its entirety as follows:

(i) As part of the Election to Participate and Exercise Warrant, the holders of the Original Warrants must complete an Accredited Investor Questionnaire. In addition, as part of the Election to Participate and Exercise Warrant, the holders of the Original Warrants are asked to make certain representations and warranties upon which the Company will rely in establishing that the transactions contemplated by the Offer to Amend and Exercise are exempt from the registration requirements of the Securities Act. The holders of the Original Warrants, other than the holders of the Placement Agent Warrants, previously made substantially the same representations and warranties to the Company, including a representation that they were “accredited investors”, in connection with the private placement transactions in which such holders acquired the Original Warrants. The Company has included with this Offer to Amend and Exercise an exhibit titled “Supplemental Company Information” that contains additional information that holders of Original Warrants, particularly holders who are no longer “accredited investors,” if any, should consider before making an investment decision.

Holders of the Original Warrants are not prohibited from tendering their Original Warrants, even if such holders are unable to make the representations and warranties on page 5 of the Election to Participate and Exercise Warrant. However, the Company will not accept any Election to Participate and Exercise Warrant from or on behalf of, any Original Warrant holders if the Company determines that a valid exemption from registration of all the securities to be issued pursuant to the Offer to Amend and Exercise is not available under the Securities Act and therefore the Company may not consummate the transactions contemplated by the Offer to Amend and Exercise in such case.

Item 12. EXHIBITS.

The following are attached as exhibits to this Schedule TO:

- (a) (1)(A)* Letter to Holders of Original Warrants
- (1)(B)* Offer to Amend and Exercise
- (1)(C)* Form of Election to Participate and Exercise Warrant
- (1)(D)* Form of Notice of Withdrawal
- (1)(E)* Form of Formation Amended Warrant
- (1)(F)* Form of Merger Amended Warrant
- (1)(G)* Form of Private Placement Amended Warrant
- (1)(H)* Form of 2013 Investor Amended Warrant
- (1)(I)* Form of 2015 Investor Amended Warrant
- (1)(J)* Form of \$2.00 PA Amended Warrant
- (1)(K)* Form of \$1.00 PA Amended Warrant
- (1)(L)* Form of \$0.75 PA Amended Warrant
- (1)(M)* Company Supplemental Information, dated December 14, 2016
- (1)(N) Letter to Holders of Original Warrants dated January 5, 2017
- (5)(A)* Annual Report on Form 10-K containing audited financial statements for the fiscal years ended December 31, 2015 and 2014 (as filed with the SEC on March 30, 2016 and incorporated herein by reference)
- (5)(B)* Report on Form 10-Q for the quarter ended March 31, 2016 (as filed with the SEC on May 13, 2016 and incorporated herein by reference)
- (5)(C)* Report on Form 10-Q for the quarter ended June 30, 2016 (as filed with the SEC on August 15, 2016 and incorporated herein by reference)
- (5)(D)* Report on Form 10-Q for the quarter ended September 30, 2016 (as filed with the SEC on November 14, 2016 and incorporated herein by reference)
- (5)(E)* Form of Warrant of Matinas BioPharma Holdings, Inc. (incorporated by reference to Exhibit 4.1 to the Company's Registration Statement on Form S-1, as filed with the SEC on February 7, 2014)
- (5)(F)* Form of Placement Agent Warrant of Matinas BioPharma Holdings, Inc. (incorporated by reference to Exhibit 4.2 to the Company's Registration Statement on Form S-1, as filed with the SEC on February 7, 2014)
- (5)(G)* Form of 2015 Investor Warrant of Matinas BioPharma Holdings, Inc. (incorporated by reference to Exhibit 4.4 to the Company's Post-Effective Amendment to Registration Statement on Form S-1, as filed with the SEC on April 17, 2015)
- (5)(H)* Form of 2015 Placement Agent Warrant of Matinas BioPharma Holdings, Inc. (incorporated by reference to Exhibit 4.5 to the Company's Post-Effective Amendment to Registration Statement on Form S-1, as filed with the SEC on April 17, 2015)

(5)(I)* Registration Statement on Form S-1 (File No. 333-204825), which registers the resale of the shares of common stock underlying the 2015 Investor Warrants (as declared effective and filed with the SEC on April 27, 2016 and incorporated herein by reference)

(5)(J)* Registration Statement on Form S-1 (File No. 333-214391), which registers the resale of the shares of common stock underlying the Formation Warrants, the Merger Warrants, the Private Placement Warrants and the 2013 Investor Warrants (as declared effective and filed with the SEC on November 18, 2016 and incorporated herein by reference)

(b) Not applicable.

(d) (1) Warrant Agent Agreement, dated December 14, 2016, by and between the Company and Aegis Capital Corp.*

(g) None.

(h) None.

* Previously filed

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 5, 2017

By: /s/ Roelof Rongen

Name: Roelof Rongen

Title: Chief Executive Officer

(Principal Executive Officer)

MATINAS BIOPHARMA HOLDINGS, INC.

January 5, 2017

To the Holders of the Original Warrants:

This letter is to advise you that on January 5, 2017, the Company filed with the Securities and Exchange Commission an amended Schedule TO, a copy of which can be accessed electronically on the Securities and Exchange Commission's website at www.sec.gov, with respect to the offer to you, as a holder of certain warrants to purchase common stock of the Company (the "**Original Warrants**"), to amend and exercise such Original Warrants at a reduced exercise price of \$0.50 per share of Common Stock, subject to the terms and conditions set forth in the "Offer to Amend and Exercise Warrants to Purchase Common Stock of Matinas BioPharma Holdings, Inc." dated as of December 14, 2016 (the "**Offer**"). All terms not defined in this letter shall have the meanings set forth in the Offer. The terms of the Offer are more fully described in the Offering Materials previously mailed to you on or about December 14, 2016. The Offer expires on January 13, 2017 at 5:00 P.M. (Eastern time).

The amended Schedule TO provides, among other things, that (i) we do not view certain, specified representations and warranties to be made by warrant holders tendering their warrants as a waiver of any potential liability we may have under federal securities laws, and we agree not to assert that these provisions constitute a waiver of any such liability and (ii) holders of the Original Warrants are not prohibited from tendering their Original Warrants, even if such holders are unable to make the representations and warranties on page 5 of the Election to Participate and Exercise Warrant, provided however that the Company will use such representations and warranties to determine whether the transactions contemplated by the Offer to Amend and Exercise are exempt from the registration requirements of the Securities Act and if the Company determines that a valid exemption from registration of all the securities to be issued pursuant to the Offer is not available under the Securities Act, the Company may not consummate the transactions contemplated by the Offer to Amend and Exercise. The amended Schedule TO also corrects certain information with respect to withdrawal rights if the Offer is not consummated by February 10, 2017.

The Offering Materials previously mailed to you on or about December 14, 2016, together with the amended Schedule TO, provide information regarding the Offer and how you can participate. We recommend that holders of the Original Warrants review the Schedule TO, as amended, including the exhibits, and the Company's other materials that have been filed with the SEC and can be accessed electronically on the Securities and Exchange Commission's website at www.sec.gov before making a decision on whether to participate in the Offer to Amend and Exercise.

Thank you for your time in reviewing this opportunity.

Very truly yours,

/s/ Roelof Rongen

Matinas BioPharma Holdings, Inc.
Roelof Rongen
Chief Executive Officer
