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

FORM S-8

**REGISTRATION STATEMENT UNDER
THE SECURITIES ACT OF 1933**

MATINAS BIOPHARMA HOLDINGS, INC.

(Exact Name of Registrant as Specified in its Charter)

Delaware
(State or Other Jurisdiction
of Incorporation or Organization)

46-3011414
(I.R.S. Employer Identification No.)

**1545 Route 206 South, Suite 302
Bedminster, New Jersey 07921
(908) 443-1860**
(Address of Principal Executive Offices)

**MATINAS BIOPHARMA HOLDINGS, INC. 2013 EQUITY COMPENSATION PLAN
(as amended and restated)**
(Full Title of the Plan)

**Roelof Rongen
Chief Executive Officer
Matinas BioPharma Holdings, Inc.
1545 Route 206 South, Suite 302
Bedminster, New Jersey 07921**
(Name and Address Including Zip Code, of Agent For Service)
(908) 443-1860
Telephone Number, Including Area Code

With copies to:

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

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer or a smaller reporting company. See definitions of "large accelerated filer," "accelerated filer," and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer ☐

Accelerated filer ☐

Non-accelerated filer ☐
(Do not check if a smaller reporting company)

Smaller Reporting Company ☒

CALCULATION OF REGISTRATION FEE

Title of Securities to be Registered	Amount to be Registered(1)	Proposed Maximum Offering Price per Share(2)	Proposed Maximum Aggregate Offering Price(2)	Amount of Registration Fee(2)
Common Stock, \$0.01 par value per share	2,287,206	\$ 0.70	\$ 1,589,608	\$ 160.07

(1) Covers 2,287,206 shares of common stock issuable under the Matinas BioPharma Holdings, Inc. 2013 Equity Compensation Plan, as amended and restated effective as of May 1, 2014 (the “2013 Plan”). In addition, pursuant to Rule 416(c) under the Securities Act of 1933, as amended, this registration statement also covers an indeterminable number of shares of common stock issuable under the 2013 Plan, as these amounts may be adjusted as a result of stock splits, stock dividends and antidilution provisions.

(2) Pursuant to Rule 457(c) and Rule 457(h) under the Securities Act of 1933, as amended, the proposed maximum offering price per share and the proposed maximum aggregate offering price are estimated for the purpose of calculating the amount of the registration fee and are based on the average of the high and low price as reported on the by the OTC Bulletin Board on March 28, 2016.

EXPLANATORY NOTE

Pursuant to General Instruction E to Form S-8 under the Securities Act, this Registration Statement is filed by Matinas BioPharma Holdings, Inc. (the “Company”) for the purpose of registering additional shares of the Company’s common stock, par value \$0.0001 per share (the “Common Stock”) under the 2013 Plan. The number of shares of Common Stock available for issuance under the Plan is subject to an automatic annual increase on January 1 of each year beginning in 2015 equal to 4% of the number of shares of Common Stock outstanding on December 31 of the preceding calendar year or a lesser number of shares of Common Stock determined by the Board of Directors of the Company (the “Evergreen Provision”). This Registration Statement registers an aggregate of 2,287,206 additional shares of Common Stock available for issuance under the Plan as a result of the Evergreen Provision.

The shares of Common Stock registered pursuant to this Registration Statement are of the same class of securities as the shares of Common Stock registered for issuance under the Plan pursuant to the currently effective Registration Statement on Form S-8 (Registration No. 333-198488) filed on August 29, 2014 and Form S-8 (Registration No. 333-203141) filed on March 31, 2015. The information contained in the Registrant’s registration statements on Form S-8 (Registration Nos. 333-198488 and 333-203141) is hereby incorporated by reference pursuant to General Instruction E.

Part II

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation of Documents by Reference.

The following documents, which have been filed by the Matinas BioPharma Holdings, Inc. (the “Company”) with the Commission, are hereby incorporated by reference in this Registration Statement:

- our Annual Report on Form 10-K for the year ended December 31, 2015, filed with the SEC on March 30, 2016;
- our Current Report on Form 8-K filed with the SEC on March 9, 2016 (other than any portions thereof deemed furnished and not filed); and
- the description of the Company’s common stock contained in its Prospectus dated May 21, 2014 filed pursuant to Rule 424(b)(3) of the Securities Act of 1933, as amended (the “Securities Act”) (Registration No. 333-193455).

All documents subsequently filed by the Company pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act, after the date of this Registration Statement and prior to the filing of a post-effective amendment to this Registration Statement which indicates that all securities offered hereby have been sold or which deregisters all securities then remaining unsold, shall be deemed to be incorporated by reference in this Registration Statement and to be a part hereof from the date of filing of such documents. Any statement contained in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for purposes of this Registration Statement to the extent that a statement contained herein or in any other subsequently filed document which also is or is deemed to be incorporated by reference herein modifies or supersedes such statement. Any such statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this Registration Statement.

Item 8. Exhibits.

For a list of exhibits, see the Exhibit Index in this Registration Statement, which is incorporated into this Item by reference.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the city of Bedminster, State of New Jersey, on this 30th day of March, 2016.

MATINAS BIOPHARMA HOLDINGS, INC.

By: /s/ Roelof Rongen

Roelof Rongen

Chief Executive Officer

POWER OF ATTORNEY AND SIGNATURES

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoint Roelof Rongen and Jerome Jabbour, and each of them, his attorneys-in-fact, with full power of substitution for him in any and all capacities, to sign any amendments to this Registration Statement, including any and all pre-effective and post-effective amendments and to file such amendments thereto, with exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, hereby ratifying and confirming all that said attorneys-in-fact, or their substitute or substitutes, may do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act, this registration statement has been signed below by the following persons in the capacities and on the dates indicated.

Person	Capacity	Date
<u>/s/ Roelof Rongen</u> Roelof Rongen	Chief Executive Officer and Director (Principal Executive Officer)	March 30, 2016
<u>/s/ Gary Gaglione</u> Gary Gaglione	Acting Chief Financial Officer (Principal Financial and Accounting Officer)	March 30, 2016
<u>/s/ Herbert Conrad</u> Herbert Conrad	Chairman of the Board	March 30, 2016
<u>/s/ Stefano Ferrari</u> Stefano Ferrari	Director	March 30, 2016
<u>/s/ James S. Scibetta</u> James S. Scibetta	Director	March 30, 2016
<u>/s/ Adam K. Stern</u> Adam K. Stern	Director	March 30, 2016

EXHIBIT INDEX

Exhibit Number	Description of Exhibit
4.1	Certificate of Incorporation of Matinas BioPharma Holdings, Inc., filed as Exhibit 3.1 to Form S-1/A (File No. 333-193455) filed on February 7, 2014 and incorporated herein by reference.
4.2	Bylaws of Matinas BioPharma Holdings, Inc., filed as Exhibit 3.2 to Form S-1/A (File No. 333-193455) filed on February 7, 2014 and incorporated herein by reference.
10.1	Amended and Restated 2013 Equity Compensation Plan, filed as Exhibit 10.1 to Form S-8 (File No. 333-203141) filed on March 31, 2015 and incorporated herein by reference.
5.1	Opinion of Lowenstein Sandler LLP
23.1	Consent of EisnerAmper LLP
23.2	Consent of Lowenstein Sandler LLP (filed as part of Exhibit 5.1).
24.1	Power of Attorney (included on the signature page).

Letterhead of Lowenstein Sandler LLP

March 30, 2016

Matinas BioPharma Holdings, Inc.
1545 Route 206 South, Suite 302
Bedminster, New Jersey 07921

Re: Registration Statement on Form S-8**Matinas BioPharma Holdings, Inc. 2013 Equity Compensation Plan, as amended and restated effective as of May 8, 2014**

Ladies and Gentlemen;

We have acted as special counsel to Matinas BioPharma Holdings, Inc., a Delaware corporation (the "Company"), in connection with the Company's filing on the date hereof with the Securities and Exchange Commission of a Registration Statement on Form S-8 (the "Registration Statement") under the Securities Act of 1933, as amended. The Registration Statement relates to the registration of 2,287,206 shares (the "Shares") of the Company's common stock, par value \$0.0001 per share (the "Common Stock"), issuable pursuant to the Company's 2013 Equity Compensation Plan, as amended and restated effective as of May 8, 2014 (the "Plan").

In connection with rendering this opinion, we have examined or are familiar with the Certificate of Incorporation, as amended as of the date hereof, the Bylaws of the Company, as amended as of the date hereof, the corporate proceedings with respect to the authorization of the Registration Statement, and such other certificates, instruments and documents as we have considered necessary or appropriate for purposes of this opinion. In such examination, we have assumed the genuineness of all signatures, the authenticity of all documents submitted to us as originals, conformity to the original documents of all documents submitted to us as copies and the authenticity of the originals of such latter documents. As to any facts material to our opinion, we have, when relevant facts were not independently established, relied upon the Registration Statement and the aforesaid records, certificates and documents.

We assume that the Company has sufficient unissued and unreserved shares of Common Stock and (or will validly amend the Company's Certificate of Incorporation, as amended, to authorize a sufficient number of shares of Common Stock prior to the issuance thereof) available for issuance as provided in the Registration Statement and any related amendment thereto or prospectus supplement.

Based upon such examination and review, we are of the opinion that the Shares will, upon issuance and delivery as contemplated by the Plan, be validly issued, fully paid and nonassessable outstanding shares of Common Stock.

The opinion expressed herein is limited to the corporate laws of the State of Delaware (including the statutory provisions, all applicable provisions of the Delaware Constitution and reported judicial decisions interpreting the foregoing) and we express no opinion as to the effect on the matters covered by this letter of the laws of any other jurisdiction. We assume no obligation to advise you of facts or circumstances that come to our attention or changes in law that occur which could affect the opinions contained herein.

This Firm consents to the filing of this letter as an exhibit to the Registration Statement. In giving this consent, we do not admit that this Firm is in the category of persons whose consent is required under Section 7 of the Securities Act of 1933, as amended, or the rules and regulations of the SEC promulgated thereunder.

Very truly yours,

By: /s/ Lowenstein Sandler LLP

Lowenstein Sandler LLP

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in this Registration Statement of Matinas BioPharma Holdings, Inc. and Subsidiaries (the "Company") on Form S-8 to be filed on or about March 30, 2016 of our report dated March 30, 2016 on our audits of the consolidated financial statements as of December 31, 2015 and 2014 and for each of the years in the two-year period ended December 31, 2015, which report was included in the Company's annual report on Form 10-K filed on March 30, 2016. Our report includes an explanatory paragraph about the existence of substantial doubt concerning the Company's ability to continue as a going concern.

/s/ EisnerAmper LLP

Iselin, New Jersey
March 30, 2016
