

**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

**FORM 10-K/A**

(Amendment No. 2)

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2017

OR

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from to

Commission File Number: 001-38022

**MATINAS BIOPHARMA HOLDINGS, INC.**

(Exact name of registrant as specified in its charter)

Delaware  
(State or other jurisdiction of  
incorporation or organization)

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

1545 Route 206 South, Suite 302  
Bedminster, New Jersey 07921  
(Address of principal executive offices) (Zip Code)

908-443-1860  
(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act: None

**Title of Class:**

**Name of Each Exchange on Which Registered:**

Common Stock, par value \$0.0001

NYSE American

Securities registered pursuant to Section 12(g) of the Act:  
None.

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.

Yes  No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act.

Yes  No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes  No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files).

Yes  No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§ 229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

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

Large accelerated filer

Accelerated filer

Non-accelerated filer  (Do not check if a smaller reporting company) Smaller reporting company   
Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes  No

The aggregate market value of the registrant's voting and non-voting common stock held by non-affiliates of the registrant computed by reference to the price at which the common stock was last sold on June 30, 2017 was approximately \$123.1 million.

As of March 2, 2018 there were 93,478,602 shares of the registrant's common stock, \$0.0001 par value, outstanding.

**DOCUMENTS INCORPORATED BY REFERENCE**

None.

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## EXPLANATORY NOTE

This Amendment No. 2 on Form 10-K/A hereby amends the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2017, as amended by Amendment No. 1 on Form 10-K/A filed on May 25, 2018 (the "Annual Report"), which the Registrant filed with the Securities and Exchange Commission on March 16, 2018. This amendment is being filed solely to update certain biographical information in Mr. DiPaolo's biography in Part III, Item 10 of the Annual Report. In addition, pursuant to Rule 13a-14(a) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), we are including with this Amendment No. 2 certain currently dated certifications. Because no financial statements have been included in this Amendment No. 2 and this Amendment No. 2 does not contain or amend any disclosure with respect to Items 307 and 308 of Regulation S-K, paragraphs 3, 4 and 5 of the certifications have been omitted. We are not including the certifications under Section 906 of the Sarbanes-Oxley Act of 2002 as no financial statements are being filed with this Amendment No. 2.

Except as described above, this Amendment does not reflect events occurring after the March 16, 2018 filing of the Annual Report and does not affect any other parts of or exhibits to the Annual Report, and those unaffected parts or exhibits are not included in this Amendment. Except as described above, no other portion of the Annual Report for the fiscal year ended December 31, 2017 is amended hereby and the Annual Report continues to speak as of the date of the original filing of the Annual Report. No modification or update is otherwise being made to any other disclosure or exhibits to such Annual Report. Accordingly, this Amendment No. 2 should be read in conjunction with such Annual Report and the Registrant's filings made with the Securities and Exchange Commission subsequent to the date of such Annual Report.

### Item 10. Directors, Executive Officers And Corporate Governance

All directors hold office for one-year terms until the election and qualification of their successors. Officers are appointed by our board of directors and serve at the discretion of the board, subject to applicable employment agreements. The following table sets forth information regarding our executive officers and the members of our board of directors.

<u>Name</u>	<u>Age</u>	<u>Position(s)</u>
Herbert Conrad	85	Chairman of the Board, Director
Jerome D. Jabbour	44	Chief Executive Officer and President, Director
Dominick M. DiPaolo	42	Senior Vice President of Quality and Regulatory Compliance
Raphael J. Mannino	71	Senior Vice President and Scientific Officer
Gary Gaglione	66	Vice President of Finance and Accounting, Acting Chief Financial Officer
Eric Ende	50	Director
James S. Scibetta	53	Director
Adam K. Stern	54	Director
Matthew Wikler	68	Director

### Management

**Jerome D. Jabbour, JD** was appointed Chief Executive Officer in March 2018. He has served as our President since March 2016. Prior to that he served as our Executive Vice President, Chief Business Officer, General Counsel and Secretary since October 2013 and as one of our directors from April 2012 until November 2013. Mr. Jabbour is also a Co-founder of Matinas BioPharma. Prior to joining our management team, he was the Executive Vice President and General Counsel of MediMedia USA, or MediMedia, from 2012 to October 2013, a privately held diversified health care services company. Prior to MediMedia, he was the Senior Vice President, Head of Global Legal Affairs of Wockhardt Limited (2008-2012) and Senior Counsel and Assistant Secretary at Reliant (2004-2008). Earlier in his career, he held positions as Commercial Counsel at Alpharma, Inc. (2003-2004) and as a Corporate Associate at Lowenstein Sandler LLP (1999-2003). Mr. Jabbour earned his J.D. from Seton Hall University School of Law in New Jersey and a B.A. in Psychology from Loyola University in Baltimore.

**Dominick M. DiPaolo** has served as our Senior Vice President of Quality and Regulatory Compliance since April 2017. Previously from October 2015 until April 2017, Mr. DiPaolo served as Senior Vice President of Quality, Compliance and Regulatory Affairs at Cyalume Technologies Holdings, Inc. (OTCQB: CYLU), a diversified pharmaceutical and medical device company. Prior to Cyalume, from August 2011 until July 2015, Mr. DiPaolo served as Senior Vice President, Quality, Compliance and Regulatory Affairs at Tris Pharma, a specialty pharmaceutical company of both branded and generic products. Prior to Tris Pharma, Mr. DiPaolo served as Vice President of Quality and Regulatory for G&W Laboratories, Inc., a niche pharmaceutical company. Earlier in his career, he held various senior quality positions at Barr Laboratories, Pfizer Inc., Novartis, Hoffmann-La Roche and Johnson & Johnson. Mr. DiPaolo is both a Certified Quality Engineer ("CQE") as well as a Certified Quality Auditor ("CQA") from the American Society for Quality. Mr. DiPaolo earned his B.S. in Biotechnology and Microbiology from Rutgers University in New Brunswick, New Jersey and completed his graduate course work in Microbiology at Seton Hall University in South Orange, New Jersey.

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In 2016, Mr. DiPaolo pled guilty to two felonies in New Jersey Superior Court for Monmouth County, Criminal Division Case No. 15-000952. On June 12, 2018, we were informed of Mr. DiPaolo's prior pleas and terminated Mr. DiPaolo's employment with us on June 14, 2018.

**Raphael J. Mannino** has served as our Senior Vice President and Chief Scientific Officer since September 2015. From 1990 until August 2015, Dr. Mannino was an Associate Professor of Pathology and Laboratory Medicine at Rutgers University, New Jersey Medical School. Dr. Mannino founded BioDelivery Sciences, Inc., and served as its President, Chief Executive Officer and Chief Scientific Officer and a member of its Board of Directors from 1995 to 2000, when it was acquired by BioDelivery Sciences International, Inc. (NASDAQ: BDSI). Dr. Mannino served as BDSI's Executive Vice President and Chief Scientific Officer from 2001 to 2009 and a member of its Board of Directors from 2000 to 2007. Dr. Mannino's previous experience includes positions as Assistant, then Associate Professor, Albany Medical College (1980 to 1990), and Instructor then Assistant Professor, Rutgers Medical School (1977 to 1980). His postdoctoral training was from 1973 to 1976 at the Biocenter in Basel, Switzerland. Dr. Mannino received his Ph.D. in Biological Chemistry in 1973 from the Johns Hopkins University, School of Medicine.

**Gary Gaglione, CPA** has served as our Acting Chief Financial Officer, Vice President of Finance & Accounting since April 2013. Prior to joining us as a full time employee, Mr. Gaglione was President of MCM Consulting LLC from 2011 until October 2013. Prior to MCM Consulting, Mr. Gaglione was Senior Director of Finance at Shionogi USA, Inc. (2011). In 2009 and 2010, he was Vice President of Finance and Controller for Phytomedics, Inc. Prior to Phytomedics, he was Controller for ProStrakan Inc.'s U.S. operations. From 2001 to 2008, Mr. Gaglione was an Executive Director at Reliant, initially as head of Planning, Budgets and Analysis, then, from 2006 on, as head of Internal Audit and Sarbanes Oxley Compliance in preparation for a potential Reliant initial public offering. Before Reliant, he held numerous finance positions of increasing responsibility at the U.S. subsidiary of Hoffmann-La Roche Inc. (1976-2001), including Vice President of R&D Finance (1997-2001). He started his finance career at KPMG LLP (1974-1976). Mr. Gaglione earned a B.S. degree in Business Administration with a major in Accounting from Villanova University and an MBA in Finance from Seton Hall University.

## **Directors**

**Herbert Conrad** has served as our Chairman of the Board since July 2013 and as Chairman of the Board of Matinas BioPharma since October 2012. He also serves on the board of directors of Celldex Therapeutics, Inc. (NASDAQ: CLDX), Arbutus Biopharma Corporation (NASDAQ: ABUS) and as an Advisor to the Seaver Autism Center at Mount Sinai Hospital. Mr. Conrad was the President of the U.S. Pharmaceuticals Division of Hoffmann-La Roche, Inc. from 1982 until his retirement in 1993. Prior to that, he held many positions of increasing responsibility at Roche Pharmaceuticals in the United States. Mr. Conrad previously served on the board of directors of Pharmasset, Inc. (chairman), Savient Pharmaceuticals, Inc., (NASDAQ: SVNT) Dura Pharmaceuticals, Inc., UroCor, Inc., GenVec, Inc. (NASDAQ: GNVC) (chairman), Sicor, Inc., Bone Care International, Inc. (chairman), Sapphire Therapeutics, Inc. (chairman), the medical advisory board of Henry Schein Inc. (NASDAQ: HSIC), and he was a Director and Co-Founder of Reliant. Pharmasset was acquired by Gilead Sciences, Inc. for \$11 billion in 2011. He received B.S. and M.S. degrees from the Brooklyn College of Pharmacy and an honorary Doctorate in Humane Letters from Long Island University. We believe Mr. Conrad is qualified to serve on our board of directors due to his extensive expertise and experience in the life sciences industry and his extensive board experience.

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***Jerome D. Jabbour. See description under “Management.”***

***Eric Ende*** has served on our board of directors since April 2017. Dr. Ende is president of Ende BioMedical Consulting Group, a privately-held consulting company which is focused on helping life sciences companies raise capital, identify licensing partners, and optimize corporate structure as well as analyzing both private and public investment opportunities for clients within the life sciences industry, a position he has held since 2009. Dr. Ende serves as co-founder, chief executive and chief financial officer of WellFit Holdings, LLC, a private company focused on developing fitness technologies. In addition, Dr. Ende consulted with Icahn Enterprises in their efforts to appoint board members at Forest Labs, Genzyme, Biogen IDEC, and Amylin. Dr. Ende served on the board of directors and as a member of the audit and risk management committee of Genzyme Corp. (NASDAQ: GENZ) from 2010 until it was acquired by Sanofi (NYSE: SNY) in 2011. Dr. Ende is currently serving on the Technology Transfer Committee of Mount Sinai Innovation Partners and served as the Chairman of the Unsecured Creditor’s Committee overseeing the bankruptcy of Egenix, Inc. From 2002 through 2008, Dr. Ende was the senior biotechnology analyst at Merrill Lynch. From 2000 through 2002, Dr. Ende was the senior biotechnology analyst at Banc of America Securities and, from 1997 to 2000, he was a biotechnology analyst at Lehman Brothers. Dr. Ende received an MBA in Finance & Accounting from NYU – Stern Business School in 1997, an MD from Mount Sinai School of Medicine in 1994, and a BS in Biology and Psychology from Emory University in 1990. We believe Dr. Ende is qualified to serve on our board of directors due to his industry experience, including as president of Ende BioMedical Consulting Group and as a biotechnology analyst, and his prior public company board experience.

***James S. Scibetta*** has served as a member of our board of directors since November 2013. He is currently Chief Executive Officer of Maverick Therapeutics, a development stage immune-oncology company. Prior to Maverick, he was President and Chief Financial Officer of Pacira Pharmaceuticals, Inc. (NASDAQ: PCRX), a position he has held since October 2015. Prior to that, Mr. Scibetta was the Chief Financial Officer of Pacira since 2008. Prior to joining Pacira in August 2008, he served as a consultant to Genzyme Corporation following the sale of Bioenvision Inc. (NASDAQ: BIVN) to Genzyme in 2007. From 2006 to 2007 Mr. Scibetta was CFO of Bioenvision. From 2001 to 2006, he was Executive Vice President and Chief Financial Officer of Merrimack Pharmaceuticals Inc. (NASDAQ: MACK). Mr. Scibetta has previously served on the board of directors at the following life sciences companies: Nephros Inc. (NASDAQ: NEPH), Merrimack Pharmaceuticals and Labopharm Inc. Prior to his executive management experience, Mr. Scibetta spent over a decade in investment banking where he was responsible for sourcing and executing transactions for a broad base of public and private healthcare and life sciences companies. Mr. Scibetta received his Bachelor of Science in Physics from Wake Forest University and an MBA from the University of Michigan. We believe Mr. Scibetta is qualified to serve on our board of directors because of his extensive management experience in the pharmaceutical industry, his investment banking experience and his experience as a chief financial officer and audit committee member of several publicly traded companies.

***Adam Stern*** has served as a member of our board of directors since July 2013. Mr. Stern has been the head Private Equity Banking at Aegis Capital Corp. and CEO of SternAegis Ventures since 2012 and became one of our directors in July 2013. Prior to Aegis, from 1997 to November 2012, he was with Spencer Trask Ventures, Inc., most recently as a Senior Managing Director, where he managed the structured finance group focusing primarily on the technology and life science sectors. Mr. Stern held increasingly responsible positions from 1989 to 1997 with Josephthal & Co., Inc., members of the New York Stock Exchange, where he served as Senior Vice President and Managing Director of Private Equity Marketing. He has been a FINRA licensed securities broker since 1987 and a General Securities Principal since 1991. Mr. Stern is a director of Dance Biopharm, Inc. Mr. Stern is a former director of InVivo Therapeutics Holdings Corp. (OTCQB: NVIV), Organovo Holdings, Inc. (NYSE MKT: ONVO), LabStyle Innovations Corporation (OTCBB: DRIO) and PROLOR Biotech Ltd., which was sold to Opko Health, Inc. (NYSE: OPK) for approximately \$600 million in 2013. Mr. Stern holds a Bachelor of Arts degree with honors from The University of South Florida in Tampa. We believe Mr. Stern is qualified to serve on our board of directors because of his extensive experience in corporate finance and experience in the life science industries.

***Matthew Wikler*** has served as a member of our board of directors since January 2018. Dr. Wikler currently serves as the Principal of Infectious Disease Technology Development Consulting (IDTD Consulting) where he provides clinical, medical and regulatory strategic insight to companies developing new technologies for the treatment and prevention of infectious diseases, a position he has held since 2015. Prior to that from 2012 to 2015, Dr. Wikler served at The Medicines Company (NASDAQ: MDCO) as VP, New Business Ventures and VP and Medical Director, Infectious Disease Care. Over the course of his career Dr. Wikler held senior leadership positions for a number of pharmaceutical companies, including as Chief Development Officer of Rib-X Pharmaceuticals, Inc., a privately-held biopharmaceutical company developing new antibiotics to provide superior coverage, safety and convenience for the treatment of serious and life-threatening infections, President and Chief Executive Officer of IASO Pharma Inc., a privately-held clinical stage biotechnology company focused on the development of antibacterial and antifungal therapeutics, the Institute for One World Health, a 501(c)(3) nonprofit drug development organization, Mpex Pharmaceuticals, Inc., a privately-held company focused on developing and manufacturing therapies for antibiotic resistance with focus on gram-negative organisms, Peninsula Pharmaceuticals, Inc., a privately held biopharmaceutical company focused on developing and commercializing antibiotics to treat life-threatening infections (acquired by Johnson & Johnson (NYSE: JNJ)), ViroPharma Incorporated (NASDAQ: VPHM), Bristol-Myers Squibb Company (NYSE: BMY), and Ortho-McNeil Pharmaceutical (a division of Johnson & Johnson). Dr. Wikler began his career at Smith Kline & French/Smith Kline Beecham where he held positions of increasing responsibilities over ten years. Dr. Wikler held a variety of positions at the FDA, including the Deputy Director of the Division of Anti-Infective Drug Products. Dr. Wikler earned a B.A. in Chemistry from Franklin and Marshall, an M.D. degree from Temple University School of Medicine, and his M.B.A. from the University Of Pennsylvania Wharton School Of Business. He completed his Infectious Diseases Fellowship at the Hospital of the University of Pennsylvania and is a Fellow of the Infectious Diseases Society of America.

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There are no family relationships among any of our directors or executive officers.

### **Scientific Advisory Board**

We believe in seeking and attracting scientific and clinical leaders in the field of infectious diseases to provide counsel and support our growth. We have established a Scientific Advisory Board which consist of individuals who are experts in their chosen fields and recipients of many academic honors and awards.

### **Board Committees**

Our board of directors has three standing committees — an Audit Committee, a Compensation Committee and a Nominating and Corporate Governance Committee.

**Audit Committee.** The Audit Committee oversees and monitors our financial reporting process and internal control system, review and evaluate the audit performed by our registered independent public accountants and report to the Board any substantive issues found during the audit. The Audit Committee is directly responsible for the appointment, compensation and oversight of the work of our registered independent public accountants. The Audit Committee reviews and approves all transactions with affiliated parties. The Board adopted a written charter for the Audit Committee, which is available on our website. James Scibetta, Herbert Conrad, and Eric Ende currently serve as members of the Audit Committee with James Scibetta, serving as its chairman. All of the members of the Audit Committee have been determined to be financially literate and are considered independent directors as defined under The NYSE American's listing standards and applicable SEC rules and regulations. Mr. Scibetta qualifies as an audit committee "financial expert" as that term is defined by Commission regulations. The Audit Committee met four times during 2016. Our Board has adopted an Audit Committee Charter, which is available for viewing at [www.matinasbiopharma.com](http://www.matinasbiopharma.com).

**Compensation Committee.** The Compensation Committee provides advice and makes recommendations to the Board in the areas of employee salaries, benefit programs and director compensation. The Compensation Committee also reviews the compensation of our executive officers, including our chief executive officer, and makes recommendations in that regard to the Board as a whole. The Board adopted a written charter for the Compensation Committee, which is available on our website. Herbert Conrad, Eric Ende and James Scibetta and Matthew Wikler currently serve as members of the Compensation Committee, with Eric Ende serving as its chairman. All of the members of the Compensation Committee are considered independent directors as defined under The NYSE American's listing standards. The Compensation Committee met four times during 2016. Our Board has adopted a Compensation Committee Charter, which is available for viewing at [www.matinasbiopharma.com](http://www.matinasbiopharma.com).

**Nominating and Corporate Governance Committee.** The Nominating and Corporate Governance Committee nominates individuals to be elected to the full Board by our stockholders. The Nominating and Corporate Governance Committee considers recommendations from stockholders if submitted in a timely manner in accordance with the procedures set forth in our Bylaws and applies the same criteria to all persons being considered. The Board adopted a written charter for the Nominating and Corporate Governance Committee, which is available on our website. Herbert Conrad, Eric Ende and James Scibetta currently serve as members of the Nominating and Corporate Governance Committee, with Herbert Conrad serving as its chairman. All of the members of the Nominating and Corporate Governance Committee are considered independent directors as defined under The NYSE American's listing standards. The Nominating and Corporate Governance Committee met four times during 2016. Our Board has adopted a Nominating and Corporate Governance Charter, which is available for viewing at [www.matinasbiopharma.com](http://www.matinasbiopharma.com).

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## Code of Business Conduct and Ethics

We have adopted a written code of business conduct and ethics that applies to our directors, officers and employees, including our principal executive officer, principal financial and accounting officer, or persons performing similar functions. A copy of the code is posted on the corporate governance section of our website, which is located at [www.matinasbiopharma.com](http://www.matinasbiopharma.com). If we make any substantive amendments to, or grant waivers from, the code of business conduct and ethics for any officer or director, we will disclose the nature of such amendment or waiver on our website.

### Section 16(a) Beneficial Ownership Reporting Compliance

Section 16(a) of the Securities Exchange Act of 1934, as amended, requires our directors and executive officers, and persons who are beneficial owners of more than 10% of a registered class of our equity securities, to file reports of ownership and changes in ownership with the Securities and Exchange Commission (the "SEC"). These persons are required by SEC regulations to furnish us with copies of all Section 16(a) forms they file. To our knowledge, based solely on a review of the copies of such reports furnished to us and written representations that no other reports were required during the fiscal year ended December 31, 2017, all reports required to be filed under Section 16(a) were filed on a timely basis, except as set forth below.

In connection with his appointment to the board of directors and grant of an equity award, Eric Ende had a Form 3 and Form 4 filing due on April 5, 2017. Such Form 3 and Form 4 were filed on April 21, 2017. A form 4 for an option grant should have been filed on December 18, 2017. Such Form 4 was filed on February 27, 2018.

In connection with his appointment as an officer and grant of an equity award, Dominick M. DiPaolo had a Form 3 and Form 4 filing due on April 12, 2017. Such Form 3 and Form 4 were filed on April 21, 2017.

In connection with an open market purchase, Raphael Mannino had a Form 4 filing due on September 13, 2017. Such Form 4 was filed on September 15, 2017.

## PART IV

### Item 15. Exhibits And Financial Statement Schedules

<u>Exhibit No.</u>	<u>Description</u>
2.1	<a href="#"><u>Merger Agreement, dated July 11, 2013, by and among the Company, Matinas Merger Sub, Inc., and Matinas BioPharma, Inc. (incorporated by reference to Exhibit 2.1 to Amendment No. 1 to the Company's Registration Statement on Form S-1 filed with the SEC on February 7, 2014).</u></a>
2.2	<a href="#"><u>Agreement and Plan of Merger (the "Merger Agreement") with Aquarius Biotechnologies, Inc., a Delaware corporation ("Aquarius"), Saffron Merger Sub, Inc., a Delaware corporation and a wholly-owned subsidiary of the Company ("Merger Sub") and J. Carl Craft, as the stockholder representative (incorporated herein by reference to Exhibit 2.1 to the Company's Current Report on Form 8-K filed with the SEC on January 30, 2015).</u></a>
3.1	<a href="#"><u>Certificate of Incorporation (incorporated by reference to Exhibit 3.1 to Amendment No. 1 to the Company's Registration Statement on Form S-1 filed with the SEC on February 7, 2014).</u></a>
3.2	<a href="#"><u>Bylaws (incorporated by reference to Exhibit 3.2 to Amendment No. 1 to the Company's Registration Statement on Form S-1 filed with the SEC on February 7, 2014).</u></a>
3.3	<a href="#"><u>Certificate of Amendment, dated October 29, 2015 to Certificate of Incorporation. (incorporated herein by reference to the Company's Current Report on Form 8-K filed with the SEC on November 5, 2015).</u></a>

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- 3.4 [Certificate of Designation of Series A Preferred Stock \(incorporated by reference to Exhibit 3.1 of the Company's Current Report on Form 8-K filed August 1, 2016 with the Securities and Exchange Commission\)](#)
- 4.1 [Common Stock Specimen \(incorporated by reference to Exhibit 4.1 of the Company's Annual Report on Form 10-K filed March 31, 2017 with the Securities and Exchange Commission\).](#)
- 4.2 [Form of Warrant \(incorporated by reference to Exhibit 4.1 to Amendment No. 1 to the Company's Registration Statement on Form S-1 filed with the SEC on February 7, 2014\).](#)
- 4.3 [Form of Placement Agent Warrant \(incorporated by reference to Exhibit 4.2 to Amendment No. 1 to the Company's Registration Statement on Form S-1 filed with the SEC on February 7, 2014\).](#)
- 4.4 [Registration Rights Agreement dated July 30, 2013 \(incorporated by reference to Exhibit 4.3 to Amendment No. 1 to the Company's Registration Statement on Form S-1 filed with the SEC on February 7, 2014\).](#)
- 4.5 [Form of 2015 Investor Warrant. \(incorporated by reference to Exhibit 4.4 to the post-effective amendment No. 1 to Form S-1 filed with the SEC on April 17, 2015.\)](#)
- 4.6 [Form of 2015 Placement Agent Warrant. \(incorporated by reference to Exhibit 4.5 to the post-effective amendment No. 1 to Form S-1 filed with the SEC on April 17, 2015.\)](#)
- 4.7 [Registration Rights Agreement dated March 31, 2015 between the Company and the investors named therein. \(incorporated by reference to Exhibit 4.6 to the post-effective amendment No. 1 to Form S-1 filed with the SEC on April 17, 2015.\)](#)
- 4.8 [Form of 2016 Placement Agent Warrant \(incorporated by reference to Exhibit 4.7 to the Registration Statement on Form S-1 filed with the SEC on November 2, 2016.\)](#)
- 10.1 [Voting Agreement, dated July 30, 2013, by and among the Company and the stockholders named therein. \(incorporated by reference to Exhibit 10.5 to Amendment No. 1 to the Company's Registration Statement on Form S-1 filed with the SEC on February 7, 2014\).](#)
- 10.2 [Matinas BioPharma Holdings, Inc. Amended and Restated 2013 Equity Compensation Plan \(incorporated herein by reference to Exhibit 10.6 to the Company's Annual Report on Form 10-K filed on March 31, 2015.\) †](#)
- 10.3 [Form of Incentive Stock Option Agreement \(incorporated by reference to Exhibit 10.7 to Amendment No. 1 to the Company's Registration Statement on Form S-1 filed with the SEC on February 7, 2014\). †](#)
- 10.4 [Form of Non-Qualified Stock Option Agreement \(incorporated by reference to Exhibit 10.8 to Amendment No. 1 to the Company's Registration Statement on Form S-1 filed with the SEC on February 7, 2014\). †](#)
- 10.9 [Employment Agreement, dated July 30, 2013, between the Company and Roelof Rongen \(incorporated by reference to Exhibit 10.9 to Amendment No. 1 to the Company's Registration Statement on Form S-1 filed with the SEC on February 7, 2014\). †](#)
- 10.10 [Employment Agreement, dated July 30, 2013, between the Company and Abdel A. Fawzy. \(incorporated by reference to Exhibit 10.11 to Amendment No. 1 to the Company's Registration Statement on Form S-1 filed with the SEC on February 7, 2014\). †](#)
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- 10.11 [Employment Agreement effective as of October 4, 2013 between the Company and Jerome D. Jabbour \(incorporated by reference to Exhibit 10.12 to Amendment No. 1 to the Company's Registration Statement on Form S-1 filed with the SEC on February 7, 2014\).](#) †
- 10.12 [Offer Letter, dated October 31, 2013, between the Company and Gary Gaglione \(incorporated by reference to Exhibit 10.13 to Amendment No. 1 to the Company's Registration Statement on Form S-1 filed with the SEC on February 7, 2014\).](#) †
- 10.13 [Form of Indemnification Agreement \(incorporated by reference to Exhibit 10.14 to Amendment No. 1 to the Company's Registration Statement on Form S-1 filed with the SEC on February 7, 2014\).](#) †
- 10.14 [Lease, effective as of November 4, 2013, by and between the company and A-K Bedminster Associates, L.P. \(incorporated by reference to Exhibit 10.17 to Amendment No. 1 to the Company's Registration Statement on Form S-1 filed with the SEC on February 7, 2014\).](#)
- 10.15 [Amended and Restated Exclusive License Agreement dated as of January 29, 2015, by and between Rutgers, the State University of New Jersey and Aquarius Biotechnologies, Inc. \(incorporated herein by reference to Exhibit 10.18 to the Company's Annual Report on Form 10-K filed on March 31, 2015.\)](#) †.
- 10.16 [Employment Agreement, dated March 12, 2015, between Matinas BioPharma Holdings, Inc. and Douglas F. Kling. \(incorporated herein by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed with the SEC on March 19, 2015\).](#) †
- 10.17 [Placement Agency Agreement dated March 19, 2015 between the Company and Aegis Capital Corp. \(incorporated herein by reference to Exhibit 10.20 of the Company's Registration Statement on Form S-1 \(Reg. No. 333-193455\), filed with the SEC on April 17, 2015\).](#)
- 10.18 [Form of Subscription Agreement for the Company's 2015 private placement. \(incorporated herein by reference to Exhibit 10.21 of the Company's Registration Statement on Form S-1 \(Reg. No. 333-193455\), filed with the SEC on April 17, 2015\).](#)
- 10.19 [Employment Agreement, dated September 1, 2015, between Matinas Biopharma Holdings, Inc. and Raphael J. Mannino. \(incorporated herein by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed with the SEC on September 1, 2015\).](#)
- 10.20 [Separation and Consulting Agreement between George Bobotas and Matinas BioPharma Holdings, Inc., dated September 29, 2015. \(incorporated herein by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed with the SEC on October 1, 2015\).](#) †
- 10.21 [Placement Agency Agreement dated June 27, 2016 by and between Matinas BioPharma Holdings, Inc. and Aegis Capital Corp. \(incorporated by reference to Exhibit 10.21 to the Registration Statement on Form S-1 filed with the SEC on November 2, 2016.\)](#)
- 10.22 [Finder's Agreement dated July 29, 2016 by and between Matinas BioPharma Holdings, Inc. and Aegis Capital Corp. \(incorporated by reference to Exhibit 10.22 to the Registration Statement on Form S-1 filed with the SEC on November 2, 2016.\)](#)
- 10.23 [Employment Agreement, dated March 22, 2017, between Matinas Biopharma Holdings, Inc. and Roelof Rongen \(incorporated herein by reference to Exhibit 10.23 to the Company's Annual Report on Form 10-K filed on March 31, 2017.\)](#) †
- 10.24 [Employment Agreement, dated March 22, 2017, between Matinas Biopharma Holdings, Inc. and Abdel Fawzy \(incorporated herein by reference to Exhibit 10.24 to the Company's Annual Report on Form 10-K filed on March 31, 2017.\)](#) †
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- 10.25 [Lease Agreement, dated as of December 15, 2016, by and between CIP II/AR Bridgewater Holdings LLC, and Matinas BioPharma Holdings, Inc. \(incorporated herein by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed with the SEC on April 28, 2017\)](#)
- 10.26 [Employment Agreement, effective as of April 18, 2017, by and between the Company and Dominick M. DiPaolo \(incorporated herein by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed with the SEC on April 18, 2017\)†](#)
- 10.27 [Controlled Equity Offering<sup>SM</sup> Sales Agreement, dated April 28, 2017, by and between Matinas BioPharma Holdings, Inc. and Cantor Fitzgerald & Co. \(incorporated herein by reference to Exhibit 1.1 to the Company's Current Report on Form 8-K filed with the SEC on April 28, 2017\)](#)
- 10.28 [Separation Agreement between Abdel Fawzy and Matinas BioPharma Holdings, Inc., dated January 29, 2018. †\\*\\*](#)
- 21.1 [Subsidiaries Index\\*\\*](#)
- 23.1 [Consent of EisnerAmper LLP\\*\\*](#)
- 31.1 [Certification of President and Chief Executive Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002\\*](#)
- 31.2 [Certification of Acting Chief Financial Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002\\*](#)
- 32.1 [Section 1350 Certifications\\*\\*](#)
- 101 The following financial information from the Annual Report on Form 10-K for the fiscal year ended December 31, 2017, formatted in XBRL (eXtensible Business Reporting Language), is filed electronically herewith: (i) Consolidated Balance Sheets as of December 31, 2017 and 2015; (ii) Consolidated Statements of Operations and Comprehensive Loss for the Years Ended December 31, 2017 and 2015; (iii) Consolidated Statement of Changes in Stockholders' Equity (Deficit) for the Years Ended December 31, 2017 and 2015; (iv) Consolidated Statements of Cash Flows for the Years Ended December 31, 2017 and 2015; and (v) Notes to Consolidated Financial Statements.\*

+ Confidential treatment has been requested for certain provisions of this Exhibit pursuant to Rule 24b-2 promulgated under the Securities Exchange Act of 1934, as amended.

† Indicates a management contract or compensation plan, contract or arrangement.

\* Filed herewith.

\*\* Previously filed.

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**SIGNATURES**

Pursuant to the requirements of the Securities Act, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized, in the city of Bedminster, State of New Jersey on June 14, 2018.

**MATINAS BIOPHARMA HOLDINGS, INC.**

By: /s/ Jerome D. Jabbour

Name: Jerome D. Jabbour

Title: Chief Executive Officer

By: /s/ Gary Gaglione

Name: Gary Gaglione

Title: Acting Chief Financial Officer

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Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

<b>Person</b>	<b>Capacity</b>	<b>Date</b>
<u>/s/ Jerome D. Jabbour</u> Jerome D. Jabbour	Chief Executive Officer and Director (Principal Executive Officer)	June 14, 2018
<u>/s/ Gary Gaglione</u> Gary Gaglione	Acting Chief Financial Officer (Principal Financial and Accounting Officer)	June 14, 2018
<u>/s/ Herbert Conrad</u> Herbert Conrad	Chairman of the Board	June 14, 2018
<u>/s/ Matthew A. Wikler</u> Matthew A. Wikler	Director	June 14, 2018
<u>/s/ James S. Scibetta</u> James S. Scibetta	Director	June 14, 2018
<u>/s/ Adam K. Stern</u> Adam K. Stern	Director	June 14, 2018
<u>/s/ Eric Ende</u> Eric Ende	Director	June 14, 2018

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**CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER**

I, Jerome D. Jabbour, certify that:

1. I have reviewed this annual report on Form 10-K/A (Amendment No. 2 to Annual Report on Form 10-K for the fiscal year ended December 31, 2017) of Matinas BioPharma Holdings, Inc.; and

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report.

Date: June 14, 2018

*/s/ Jerome D. Jabbour*

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Jerome D. Jabbour  
Chief Executive Officer  
(Principal Executive Officer)

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**CERTIFICATION OF PRINCIPAL FINANCIAL OFFICER**

I, Gary Gaglione, certify that:

1. I have reviewed this annual report on Form 10-K/A (Amendment No. 2 to Annual Report on Form 10-K for the fiscal year ended December 31, 2017) of Matinas BioPharma Holdings, Inc.; and

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report.

Date: June 14, 2018

*/s/ Gary Gaglione*

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Gary Gaglione

Acting Chief Financial Officer

(Principal Financial and Accounting Officer)

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