UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-Q

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

For the quarterly period ended June 30, 2017

OR

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

Commission File Number: 001-38022

MATINAS BIOPHARMA HOLDINGS, INC.
(Exact name of registrant as specified in its charter)

Delaware	**No. 46-3011414**
(State or other jurisdiction of incorporation or Organization)	(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)

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 whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an 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. (Check one):

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 pursuant to Section 7(a)(2)(B) of the Securities Act. ☒

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

As of August 7, 2017, 91,972,323 shares of common stock, $0.0001 par value per share, were outstanding.

MATINAS BIOPHARMA HOLDINGS, INC
FORM 10-Q
Quarter Ended June 30, 2017

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Matinas BioPharma Holdings Inc.
Condensed Consolidated Balance Sheets

	June 30, 2017 (Unaudited)	December 31, 2016 (Audited)
ASSETS		
CURRENT ASSETS		
Cash and cash equivalents	$ **11,266,433**	$ **4,105,451**
Restricted cash	**155,377**	**155,610**
Prepaid expenses	**317,254**	**304,427**
Total current assets	**11,739,064**	**4,565,488**
Leasehold improvements and equipment - net	**1,170,983**	**356,143**
In-process research and development	**3,017,377**	**3,017,377**
Goodwill	**1,336,488**	**1,336,488**
Other assets including long term security deposit	**536,001**	**540,845**
TOTAL ASSETS	$ **17,799,913**	$ **9,816,341**
LIABILITIES AND STOCKHOLDERS' EQUITY		
CURRENT LIABILITIES		
Accounts payable	$ **453,220**	$ **475,602**
Note payable	**-**	**118,046**
Accrued expenses	**731,671**	**829,724**
Deferred revenue	**119,750**	**-**
Deferred rent liability	**11,758**	**11,485**
Lease liability	**18,752**	**9,936**
Total current liabilities	**1,335,151**	**1,444,793**
LONG TERM LIABILITIES		
Deferred tax liability	**1,205,141**	**1,205,141**
Lease liability - net of current portion	**51,362**	**16,446**
TOTAL LIABILITIES	**2,591,654**	**2,666,380**
STOCKHOLDERS' EQUITY		
Series A Convertible preferred stock, stated value $5.00 per share, 1,600,000 shares authorized as of June 30, 2017 and December 31, 2016; 1,524,000 and 1,600,000 shares issued and outstanding as of June 30, 2017 and December 31, 2016, respectively (liquidation preference – $8,178,800 at June 30, 2017).	**5,797,248**	**6,086,350**
Common stock par value $0.0001 per share, 250,000,000 and 250,000,000 shares authorized at June 30, 2017 and December 31, 2016, respectively; 91,972,323 issued and outstanding as of June 30, 2017; 58,159,495 issued and outstanding as of December 31, 2016	**9,194**	**5,817**
Additional paid in capital	**53,045,284**	**36,237,504**
Accumulated deficit	**(43,643,467)**	**(35,179,710)**
Total stockholders' equity	**15,208,259**	**7,149,961**
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	$ **17,799,913**	$ **9,816,341**

The accompanying notes are an integral part of these condensed consolidated financial statements.

Matinas BioPharma Holdings, Inc.
Condensed Consolidated Statements of Operations
(Unaudited)

	Three Months Ended June 30,	
	2017	2016
Revenue:		
Contract research revenue	$ 44,906	$ -
Costs and Expenses:		
Research and development	2,314,716	642,576
General and administrative	1,706,493	977,653
Total costs and expenses	4,021,209	1,620,229
Loss from operations	(3,976,303)	(1,620,229)
Other income/(expense), net	8,663	(3,656)
Net loss	**$ (3,967,640)**	**$ (1,623,885)**
Net loss attributable to common shareholders	$ (3,967,640)	$ (1,623,885)
Net loss available for common shareholders per share - basic and diluted	$ (0.04)	$ (0.03)
Weighted average common shares outstanding:		
Basic and diluted	91,611,531	57,593,414

	Six Months Ended June 30,	
	2017	**2016**
Revenue:		
Contract research revenue	$ 59,875	$ -
Costs and Expenses:		
Research and development	4,698,934	1,564,287
General and administrative	3,824,468	2,293,430
Total costs and expenses	8,523,402	3,857,717
Loss from operations	(8,463,527)	(3,857,717)
Other expense, net	(230)	(10,778)
Net loss	$ **(8,463,757)**	$ **(3,868,495)**
Inducement charge from exercise of warrants	(16,741,356)	-
Net loss attributable to common shareholders	$ (25,205,113)	$ (3,868,495)
Net loss available for common shareholders per share - basic and diluted	$ (0.29)	$ (0.07)
Weighted average common shares outstanding:		
Basic and diluted	88,285,929	57,440,685

The accompanying notes are an integral part of these condensed consolidated financial statements.

Matinas BioPharma Holdings Inc.
Condensed Consolidated Statements of Cash Flow
(Unaudited)

	Six Months Ended June 30,	
	2017	**2016**
Cash flows from operating activities:		
Net loss	$ (8,463,757)	$ (3,868,495)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	24,800	26,298
Deferred rent	273	1,742
Share based compensation expense	1,687,690	793,471
Changes in operating assets and liabilities:		
Prepaid expenses	(12,828)	163,962
Other assets	5,076	105,295
Accounts payable	(22,382)	(21,979)
Accrued expenses	21,696	163,050
Net cash used in operating activities	(6,759,432)	(2,636,656)
Cash flows from investing activities:		
Capital expenditures	(789,705)	-
Net cash used in investing activities	(789,705)	-
Cash flows from financing activities:		
Net proceeds from exercise of warrants	14,834,367	-
Payment of capital lease liability	(6,202)	(12,028)
Payment of note payable	(118,046)	-
Net cash provided by (used in) financing activities	14,710,119	(12,028)
Net increase (decrease) in cash	7,160,982	(2,648,684)
Cash and cash equivalents at beginning of period	4,105,451	3,226,997
Cash and cash equivalents at end of period	$ 11,266,433	$ 578,313
Supplemental non-cash financing and investing activities:		
Accrued issuance cost for private placement 2016	$ -	$ 71,805
Preferred stock conversion	$ 289,102	$ -
Additional paid-in-capital for modification of warrants	$ 16,741,356	$ -
Equipment acquired under capital lease	$ 49,935	$ 31,064

The accompanying notes are an integral part of these condensed consolidated financial statements

NOTE A – Nature of Business

[1] Corporate History

Matinas BioPharma Holdings Inc. ("Holdings") is a Delaware corporation formed in 2013. Holdings is the parent company of Matinas BioPharma, Inc. ("BioPharma"), and Matinas BioPharma Nanotechnologies, Inc. ("Nanotechnologies," formerly known as Aquarius Biotechnologies, Inc.), its operating subsidiaries ("Nanotechnologies", and together with "Holdings" and "BioPharma", "the Company" or "we" or "our" or "us"). The Company is a development stage biopharmaceutical company with a focus on identifying and developing novel pharmaceutical products.

On January 29, 2015, we completed the acquisition of Nanotechnologies (the "2015 Merger"), a New Jersey-based, early-stage pharmaceutical company focused on the development of differentiated and orally delivered therapeutics based on a proprietary, lipid-based, drug delivery platform called "cochleate delivery technology." Following the 2015 Merger, we are a clinical-stage biopharmaceutical company focused on identifying and developing safe and effective broad spectrum antifungal and anti-bacterial therapeutics for the treatment of serious and life-threatening infections, using our innovative lipid-crystal nano-encapsulation drug delivery platform.

On September, 13, 2016, the Company completed the closing of an $8.0 million private placement equity financing. The Company sold to accredited investors an aggregate of 1,600,000 Series A Preferred Shares at a purchase price of $5.00 per share resulting in net proceeds of approximately $6.9 million. Each Series A Preferred Share is convertible into ten shares of common stock based on the current conversion price.

On January 13, 2017, the Company completed its tender offer to amend and exercise certain categories of existing warrants. Pursuant to the Offer to Amend and Exercise, an aggregate of 30,966,350 warrants were tendered by their holders and were amended and exercised in connection herewith. 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.

[2] Proprietary Products and Technology Portfolios

We leveraged our platform cochleate delivery technology to develop two clinical-stage products that we believe have the potential to become best-in-class drugs. Our lead product candidate MAT2203 is an orally-administered cochleate formulation of a broad spectrum anti-fungal drug called amphotericin B. We are initially developing MAT2203 for the treatment of serious fungal infections as well as the prevention of invasive fungal infections (IFIs) due to immunosuppressive therapy. In early June, 2017 Company reported interim data from NIH-Conducted Phase 2a Clinical Study of Orally-Administered MAT2203 for the Treatment of Chronic Refractory Mucocutaneous Candidiasis. Later that month, the Company reported topline results from our Phase 2 study of MAT2203 in Vulvovaginal Candidiasis

Our second clinical stage product candidate is MAT2501, an orally administered, encochleated formulation of the broad spectrum aminoglycoside antibiotic amikacin which may be used to treat different types of multidrug-resistant bacteria, including non-tuberculous mycobacterium infections (NTM), as well as various multidrug-resistant gram negative and intracellular bacterial infections. We recently completed and announced topline results from a Phase 1 single escalating dose clinical trial of MAT2501 in healthy volunteers in which no serious adverse events were reported and where oral administration of MAT2501 at all tested doses yielded blood levels that were well below the safety levels recommended for injected amikacin, supporting further development of MAT2501 for the treatment of NTM infections.

NOTE B – Liquidity and Plan of Operations

The accompanying financial statements have been prepared in conformity with generally accepted accounting principles.

The Company has experienced net losses and negative cash flows from operations each period since its inception. Through June 30, 2017, the Company had an accumulated deficit of approximately $43.6 million. The Company's operations have been financed primarily through the sale of equity securities. The Company's net loss for the six months ended June 30, 2017 and 2016 was approximately $8.5 million and $3.9 million, respectively.

The Company has been engaged in developing a pipeline of product candidates since 2011. To date, the Company has not obtained regulatory approval for any of its product candidates nor generated any revenue from products and the Company expects to incur significant expenses to complete development of its product candidates. The Company may never be able to obtain regulatory approval for the marketing of any of its product candidates in any indication in the United States or internationally and there can be no assurance that the Company will generate revenues or ever achieve profitability.

Assuming the Company obtains FDA approval for one or more of its product candidates, which the Company does not expect to receive until 2022 at the earliest, the Company expects that its expenses will continue to increase once the Company reaches commercial launch. The Company also expects that its research and development expenses will continue to increase as it moves forward with additional clinical studies for its current product candidates and developing additional product candidates. As a result, the Company expects to continue to incur substantial losses for the foreseeable future, and that these losses will be increasing.

The Company will need to secure additional capital in order to fund its continuing operations. The Company can provide no assurances that such additional financing will be available to the Company on acceptable terms, or at all. On January 13, 2017, the Company completed its warrant tender offer, with gross cash proceeds of $13.5 million and net proceeds estimated at $12.7 million (see Footnote D for additional details). The Company anticipates that current cash on hand at June 30, 2017 and anticipated proceeds from future sales of our common stock through the Controlled Equity Offering Sales Agreement would be sufficient to meet its operating obligations through August 2018. The Company has entered into a Controlled Equity Offering^{SM} Sales Agreement with Cantor Fitzgerald & Co. "Cantor", which allows the Company, subject to certain limited restrictions and daily sales limits, to sell shares of common stock having an offering price of up to $30 million, which if fully utilized would finance the Company's operations into 2019.

Through August 7, 2017, the Company has sold zero shares of common stock pursuant to the Controlled Equity Offering^{SM} Sales Agreement with Cantor.

Management believes it can control the timing and amount of certain expenditures and it can utilize the Sales agreement to fund the continuing operations of the Company beyond August 2018. A registration statement (Form S-3) was filed on April 3, 2017 as well as a prospectus covering the possible sales of these shares.

NOTE C – Summary of Significant Accounting Policies

[1] Basis of Presentation

The accompanying unaudited condensed consolidated financial statements include the consolidated accounts of Holdings and its wholly owned subsidiaries, BioPharma, and Nanotechnologies, the operational subsidiaries of Holdings. The accompanying unaudited condensed consolidated financial statements have been prepared by the Company in accordance with accounting principles generally accepted in the United States of America ("U.S. GAAP") and reflect the operations of the Company and its wholly-owned subsidiaries. All intercompany transactions have been eliminated in consolidation.

These interim unaudited financial statements do not include all the information and footnotes required by U.S. GAAP for annual financial statements and should be read in conjunction with the audited financial statements for the year ended December 31, 2016, which are included in the Form 10-K filed with the SEC on March 31, 2017. In the opinion of management, the interim unaudited financial statements reflect all normal recurring adjustments necessary to fairly state the Company's financial position and results of operations for the interim periods presented. The year-end condensed consolidated balance sheet data presented for comparative purposes was derived from audited financial statements, but does not include all disclosures required by U.S. GAAP.

Operating results for the six months ended June 30, 2017 are not necessarily indicative of the results that may be expected for any future interim periods or for the year ending December 31, 2017. For further information, refer to the consolidated financial statements and notes thereto included in the Company's Form 10-K for the year ended December 31, 2016.

[2] Use of Estimates

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenses during the reporting period. Actual results could differ from those estimates.

Certain accounting principles require subjective and complex judgments to be used in the preparation of financial statements. Accordingly, a different financial presentation could result depending on the judgments, estimates, or assumptions that are used. Such estimates and assumptions include, but are not specifically limited to, those required in the assessment of the impairment of intangible assets, the valuation of Level 3 financial instruments and determination of stock-based compensation.

[3] Cash and Cash Equivalents

The Company considers all highly liquid instruments purchased with original maturity of three months or less to be cash and cash equivalents to the extent the funds are not being held for investment purposes.

[4] Concentration of Credit Risk

The Company's financial instruments that are exposed to concentrations of credit risk consist primarily of cash. Cash balances are maintained principally at two major U.S. financial institutions and are insured by the Federal Deposit Insurance Corporation ("FDIC") up to regulatory limits. At all times throughout the six months ended June 30, 2017, the Company's cash balances exceeded the FDIC insurance limit. The Company has not experienced any losses in such accounts.

[5] Equipment

Equipment is stated at cost less accumulated depreciation and amortization. Depreciation is computed using the straight-line method over the estimated useful lives of the assets. The estimated useful lives of the Company equipment ranges from three to ten years. Capitalized costs associated with leasehold improvements are amortized over the lesser of the useful life of the asset or the remaining life of the lease.

[6] Income Taxes

Deferred taxes are provided on a liability method whereby deferred tax assets are recognized for deductible temporary differences and operating loss and tax credit carry forwards and deferred tax liabilities are recognized for taxable temporary differences. Temporary differences are the differences between the reported amounts of assets and liabilities and their tax bases. Deferred tax assets are reduced by a valuation allowance when, in the opinion of management, it is more likely than not that some portion or all of the deferred tax assets will not be realized. Deferred tax assets and liabilities are adjusted for the effects of changes in tax laws and rates.

The Company adopted the provisions of ASC 740-10 and has analyzed its filing positions in jurisdictions where it may be obligated to file returns. The Company believes that its income tax filing position and deductions will be sustained on an audit and does not anticipate any adjustments that will result in a material change to its financial position. Therefore, no reserves for uncertain income tax positions have been recorded. The Company's policy is to recognize interest and/or penalties related to income tax matters in income tax expense. The Company had no accrual for interest or penalties as of June 30, 2017.

[7] Stock-Based Compensation

The Company accounts for stock-based compensation to employees in conformity with the provisions of ASC Topic 718, "*Stock Based Compensation*". Stock-based compensation to employees consist of stock options grants and restricted shares that are recognized in the statement of operations based on their fair values at the date of grant.

The Company accounts for equity instruments issued to non-employees in accordance with the provisions of ASC Topic 505, subtopic 50, "*Equity-Based Payments to Non-Employees*" based upon the fair-value of the underlying instrument. The equity instruments, consisting of stock options granted to consultants, are valued using the Black-Scholes valuation model. The measurement of stock-based compensation is subject to periodic adjustments as the underlying equity instruments vest and is recognized as an expense over the period which services are received.

The Company calculates the fair value of option grants utilizing the Black-Scholes pricing model, and estimates the fair value of the restricted stock based upon the estimated fair value of the common stock. The amount of stock-based compensation recognized during a period is based on the value of the portion of the awards that are ultimately expected to vest.

The resulting stock-based compensation expense for both employee and non-employee awards is generally recognized on a straight- line basis over the requisite service period of the award.

[8] Fair Value Measurements

ASC 820 "Fair Value Measurements" defines fair value, establishes a framework for measuring fair value in GAAP and expands disclosures about fair value measurements. ASC 820 defines fair value as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. ASC 820 establishes a fair value hierarchy that distinguishes between (1) market participant assumptions developed based on market data obtained from independent sources (observable inputs) and (2) an entity's own assumptions about market participant assumptions developed based on the best information available in the circumstances (unobservable inputs). The fair value hierarchy consists of three broad levels, which gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1) and the lowest priority to unobservable inputs (Level 3). The three levels of the fair value hierarchy under ASC 820 are described below:

- Level 1 - Quoted prices (unadjusted) in active markets that are accessible at the measurement date for assets or liabilities. The fair value hierarchy gives the highest priority to Level 1 inputs.

- Level 2 - Directly or indirectly observable inputs as of the reporting date through correlation with market data, including quoted prices for similar assets and liabilities in active markets and quoted prices in markets that are not active. Level 2 also includes assets and liabilities that are valued using models or other pricing methodologies that do not require significant judgment since the input assumptions used in the models, such as interest rates and volatility factors, are corroborated by readily observable data from actively quoted markets for substantially the full term of the financial instrument.

- Level 3 - Unobservable inputs that are supported by little or no market activity and reflect the use of significant management judgment. These values are generally determined using pricing models for which the assumptions utilize management's estimates of market participant assumptions.

In determining fair value, the Company utilizes valuation techniques that maximize the use of observable inputs and minimize the use of unobservable inputs to the extent possible as well as considers counterparty credit risk in its assessment of fair value.

The carrying amounts of cash and cash equivalents, restricted cash, accounts payable and accrued expenses approximate fair value due to the short-term nature of these instruments.

[9] Basic Net Loss per Common Share

Basic and diluted loss per share is computed by dividing net loss available to common stockholders by the weighted average number of shares outstanding during the period. Diluted earnings per common share is the same as basic earnings per common share because the Company incurred a net loss during each period presented, the potentially dilutive securities from the assumed exercise of all outstanding stock options, preferred stock and warrants would have an anti-dilutive effect. The following schedule details the number of shares issuable upon the exercise of stock options, warrants and conversion of preferred stock, which have been excluded from the diluted loss per share calculation as the inclusion would be anti-dilutive for the three and six month periods ended June 30, 2017 and 2016:

	Three month period Ended June 30,		Six month period Ended June 30,	
	2017	**2016**	**2017**	**2016**
Stock options	11,026	8,271	11,026	8,271
Preferred Stock issuable upon conversion	15,240	—	15,240	—
Warrants	5,961	39,250	5,961	39,250
Total	**32,227**	**47,521**	**32,227**	**47,521**

[10] Revenue Recognition

The Company recognizes revenue from grants and contracts when the specified performance milestones are achieved.

[11] Research and Development

Research and development costs are charged to operations as they are incurred. Legal fees and other direct costs incurred in obtaining and protecting patents are also expensed as incurred, due to the uncertainty with respect to future cash flows resulting from the patents and our included as part of general and administrative expenses.

[12] Recent Accounting Pronouncements

In January 2017, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update ("ASU") 2017-04 *"Intangibles – Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment"* The Board is issuing the amendments in this update to simplify the subsequent measurement of goodwill by eliminating Step 2 from the goodwill impairment test. Instead an entity should perform its goodwill impairment test by comparing the fair value of a reporting unit with its carrying amount. An entity should recognize an impairment charge for the amount by which the carrying amount exceeds the reporting unit's fair value; however, the loss recognized should not exceed the total amount of goodwill allocated to that reporting unit. We are required to apply the amendments in this for its annual or any interim goodwill impairment tests in fiscal years beginning after December 15, 2019. We have evaluated this standard and believe it will not have a material impact on our consolidated financial position or results of operation.

In August 2016, the FASB issued 2016-15, *Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments* ("ASU 2016-15"), which amended the existing accounting standards for the statement of cash flows. The amendments provide guidance on eight classification issues related to the statement of cash flows. The Company is required to adopt the guidance in the first quarter of 2018 and early adoption is permitted. The amendments should be applied retrospectively to all periods presented. For issues that are impracticable to apply retrospectively, the amendments may be applied prospectively as of the earliest date practicable. The Company does not believe the adoption will have a material impact on the Company's consolidated statements of cash flows.

In March and April 2016, the FASB issued ASU No. 2016-08 " *Revenue from Contracts with Customers (Topic 606): Principal versus Agent Consideration (Reporting Revenue Gross versus Net)"* and ASU No. 2016-10 "*Revenue from Contracts with Customers (Topic 606): Identifying Performance Obligations and Licensing",* respectively*,* which clarifies the guidance on reporting revenue as a principal versus agent, identifying performance obligations and accounting for intellectual property licenses. In addition, in May 2016, the FASB issued ASU No. 2016-12 " *Revenue from Contracts with Customers (Topic 606): Narrow-Scope Improvements and Practical Expedients",* which amends certain narrow aspects of Topic 606. We will adopt this standard once we begin to generate revenue from operations. We do not believe these standards will have a material impact on our consolidated financial position or results of operation.

In May 2014, the FASB issued ASU No. 2014-09, *Revenue from Contracts with Customers"* ("ASU 2014-09"). ASU 2014-09 represents a comprehensive new revenue recognition model that requires a company to recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the Partnership expects to be entitled to receive in exchange for those goods or services. This ASU sets forth a new five-step revenue recognition model which replaces the prior revenue recognition guidance in its entirety and is intended to eliminate numerous industry-specific pieces of revenue recognition guidance that have historically existed. In August 2015, the FASB issued ASU No. 2015-14, " *Revenue from Contracts with Customers (Topic 606): Deferral of the Effective Date",* which defers the effective date of ASU 2014-09 by one year, but permits companies to adopt one year earlier if they choose (i.e., the original effective date). As such, this ASU is effective for annual reporting periods beginning after December 15, 2017 for public companies and 2018 for private companies. Companies may use either a full retrospective or a modified retrospective approach to adopt this ASU. We will adopt this standard once we begin to generate revenue from operations and successful adoption of ASU 2014-09 is contingent upon the commencement of the marketing of our products after obtaining FDA approval.

In March 2016, the FASB issued ASU 2016-09 "Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting." This ASU simplifies several aspects of the accounting for share–based payment award transactions. The ASU is effective for interim and annual periods beginning after December 15, 2016. Early application is permitted. The Company has adopted this standard with an effective date January 1, 2017 which had an immaterial impact on our consolidated financial position or results of operation.

In February 2016, the FASB issued ASU No. 2016-02, "Leases". The new standard will require most leases to be recognized on the balance sheet which will increase reported assets and liabilities. Lessor accounting remains substantially similar to current guidance. The new standard is effective for annual and interim periods in fiscal years beginning after December 15, 2018, which for us is the first quarter of 2019 and mandates a modified retrospective transition method. We do not intend to early adopt and are currently assessing the impact of this update, but preliminarily believe that its adoption will not have a material impact on our consolidated financial statements.

[13] Goodwill and Other Intangible Assets

Goodwill is assessed for impairment at least annually on a reporting unit basis, or more frequently when events and circumstances occur indicating that the recorded goodwill may be impaired. In accordance with the authoritative accounting guidance we have the option to perform a qualitative assessment to determine whether it is more-likely-than-not that the fair value of a reporting unit is less than its carrying amount. If we determine this is the case, we are required to perform the two-step goodwill impairment test to identify potential goodwill impairment and measure the amount of goodwill impairment loss to be recognized, if any. If we determine that it is more-likely-than-not that the fair value of the reporting unit is greater than its carrying amounts, the two-step goodwill impairment test is not required.

As defined in the authoritative guidance, a reporting unit is an operating segment, or one level below an operating segment. Historically, we conducted our business in a single operating segment and reporting unit. In the quarter ended June 30, 2017, we assessed goodwill impairment by performing a qualitative test for our reporting unit. During our qualitative review, we considered the Company's cash position and our ability to obtain additional financing in the near term to meet our operational and strategic goals and substantiate the value of our business. Based on the results of our assessment, it was determined that it is more-likely-than-not that the fair value of the reporting units are greater than their carrying amounts. There was no impairment of goodwill for the quarter ended June 30, 2017.

We review other intangible assets for impairment whenever events or changes in business circumstances indicate that the carrying amount of the assets may not be fully recoverable or that the useful lives of these assets are no longer appropriate. The authoritative accounting guidance allows a qualitative approach for testing indefinite-lived intangible assets for impairment, similar to the impairment testing guidance for goodwill. It allows the option to first assess qualitative factors (events and circumstances) that could have affected the significant inputs used in determining the fair value of the indefinite-lived intangible asset. The qualitative factors assist in determining whether it is more-likely-than-not (i.e. > 50% chance) that the indefinite-lived intangible asset is impaired. An organization may choose to bypass the qualitative assessment for any indefinite-lived intangible asset in any period and proceed directly to calculating its fair value. Our indefinite-lived intangible assets are IPR&D intangible assets. In all other instances we used the qualitative test and concluded that it was more-likely-than-not that all other indefinite-lived assets were not impaired and therefore, there were no impairments in quarter ended June 30, 2017.

[14] Beneficial Conversion Feature of Convertible Preferred Stock

The Company accounts for the beneficial conversion feature on its convertible preferred stock in accordance with ASC 470-20, *Debt with Conversion and Other Options*. The Beneficial Conversion Feature ("BCF") of convertible preferred stock is normally characterized as the convertible portion or feature that provides a rate of conversion that is below market value or in-the-money when issued. We record a BCF related to the issuance of convertible preferred stock when issued. Beneficial conversion features that are contingent upon the occurrence of a future event are recorded when the contingency is resolved.

To determine the effective conversion price, we first allocate the proceeds received to the convertible preferred stock and then use those allocated proceeds to determine the effective conversion price. If the convertible instrument is issued in a basket transaction (i.e., issued along with other freestanding financial instruments), the proceeds should first be allocated to the various instruments in the basket. Any amounts paid to the investor when the transaction is consummated (e.g., origination fees, due diligence costs) represent a reduction in the proceeds received by the issuer. The intrinsic value of the conversion option should be measured using the effective conversion price for the convertible preferred stock on the proceeds allocated to that instrument. The effective conversion price represents proceeds allocable to the convertible preferred stock divided by the number of shares into which it is convertible. The effective conversion price is then compared to the per share fair value of the underlying shares on the commitment date.

The accounting for a BCF requires that the BCF be recognized by allocating the intrinsic value of the conversion option to additional paid-in capital, resulting in a discount on the convertible preferred stock. This discount should be accreted from the date on which the BCF is first recognized through the earliest conversion date for instruments that do not have a stated redemption date. The intrinsic value of the BCF is recognized as a deemed dividend on convertible preferred stock over a period specified in the guidance.

NOTE D – 2017 Warrant Tender Offer

On January 13, 2017, the Company completed its tender offer to amend and exercise certain categories of existing warrants.

Pursuant to the Offer to Amend and Exercise, an aggregate of 30,966,350 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 Placement Agent (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). 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. Immediately following the Offer to Amend and Exercise (after the effect of certain cash and cashless exercises), the Company issued in exchange for the warrants 29,666,782 common shares.

The Company considers the warrant amendment to be of an equity nature as the amendment allowed the warrant holder to exercise a warrant and receive a common share which represents an equity for equity exchange. Therefore, the change in the fair value before and after the modification of approximately $16.7 million will be treated as a change in additional paid in capital (APIC) as an inducement charge. The cash received upon exercise in excess of par is also accounted through APIC.

The Company retained Aegis Capital Corp. (“Aegis Capital”) to act as its Warrant Agent for the Offer to Amend and Exercise pursuant to a Warrant Agent Agreement. Aegis Capital received a fee equal to 5% of the cash exercise prices paid by holders of the warrants (excluding the placement agent warrants) who participated in the Offer to Amend and Exercise. In addition, the Company agreed to reimburse Aegis Capital for its reasonable out-of-pocket expenses and attorney’s fees, including a $35,000 non-accountable expense allowance.

NOTE E – Leasehold improvements and equipment

Fixed assets, summarized by major category, consist of the following ($ in thousands) for the six months ended June 30, 2017 and year ended December 31, 2016:

	June 30, 2017	December 31, 2016
Lab equipment	$ 438	438
Furniture and fixtures	20	20
Equipment under capital lease	81	31
Leasehold improvements	797	7
Total	1,336	496
Less: accumulated depreciation and amortization	165	140
Equipment, net	$ 1,171	$ 356

Depreciation and amortization expense for the three and six months ended June 30, 2017 was $12 thousand and $25 thousand, respectively. Depreciation and amortization expense for the three and six months ended June 30, 2016 was $13 thousand and $26 thousand, respectively.

On February 12, 2016, the Company entered in a new 36 month capital lease for lab equipment. On May 15, 2017 the Company entered into a second 36 month capital lease for lab equipment. The payments under the leases are accounted for as interest and payments under capital lease using 3 year amortization. During the three and six months ended June 30, 2017 the Company recognized interest expense of $1,194 and $1,697, respectively, associated with the lease payments.

NOTE F – Stock Holders Equity

Preferred Stock
In accordance with the Certificate of Incorporation, there are 10,000,000 authorized preferred shares at a par value of $ 0.001. In connection with the 2016 Private Placement, on July 26, 2016, the Company filed a Certificate of Designation (the "Certificate of Designations") with the Secretary of the State of Delaware to designate the preferences, rights and limitations of the Series A Preferred Shares. Pursuant to the Certificate of Designations, the Company designated 1,600,000 shares of the Company's previously undesignated preferred stock as Series A Preferred Stock. As of June 30, 2017, the Company had 1,524,000 shares of Series A Preferred Stock outstanding.

Conversion:

Each Series A Preferred Share is convertible at the option of the holder into such number of shares of the Company's common stock equal to the number of Series A Preferred Shares to be converted, multiplied by the stated value of $5.00 (the "Stated Value"), divided by the Conversion Price in effect at the time of the conversion (the initial conversion price will be $0.50, subject to adjustment in the event of stock splits, stock dividends, and fundamental transactions). Based on the current conversion price, each share of the Series A Preferred Stock is convertible into ten shares of common stock. A fundamental transaction means: (i) our merger or consolidation with or into another entity, (ii) any sale of all or substantially all of our assets in one transaction or a series of related transactions, or (iii) any reclassification of our Common Stock or any compulsory share exchange by which Common Stock is effectively converted into or exchanged for other securities, cash or property. Each Series A Preferred Share will automatically convert into common stock upon the earlier of (i) notice by the Company to the holders that the Company has elected to convert all outstanding Series A Preferred Shares; provided however that in the event the Company elects to force automatic conversion pursuant to this clause (i), the conversion date for purposes of calculating the accrued Dividend (as defined below) is deemed to be July 29, 2019, which is the third anniversary of the Initial Closing, (ii) three years from the Initial Closing, (iii) the approval of the Company's MAT2203 product candidate by the U.S. Food and Drug Administration or the European Medicines Agency (the "Regulatory Approval") or (iv) the Regulatory Approval of the Company's MAT2501 product candidate.

Beneficial Conversion Feature- Series A Preferred Stock (deemed dividend):

Each share of Series A Preferred Stock is convertible into shares of common stock, at any time at the option of the holder at a conversion price of $0.50 per share. On July 29, 2016, August 16, 2016, and September 12, 2016, the date of issuances of the Series A, the publicly traded common stock prices were $0.67, $0.70, and $1.00 per share, respectively.

Based on the guidance in ASC 470-20-20, the Company determined that a beneficial conversion feature exists, as the effective conversion price for the Series A preferred shares at issuance was less than the fair value of the common stock into which the preferred shares are convertible. A beneficial conversion feature based on the intrinsic value of the date of issuances for the Series A was approximately $4.4 million. The beneficial conversion amount of approximately $4.4 million was then accreted back to the preferred stock as a deemed dividend and charged to accumulated deficit as the conversion rights were 100% effective at the time of issuance in the third quarter of 2016.

Liquidity Value and Dividends:

Pursuant to the Certificate of Designations, the Series A Preferred Shares accrue dividends at a rate of 8.0% per year, payable to the holders of such Series A Preferred Shares in shares of common stock upon conversion. Dividends which have been earned but not declared through June 30, 2017 are approximately $559,000. The Series A Preferred Shares vote on an as converted basis with the Company's common stock. Upon any dissolution, liquidation or winding up, whether voluntary or involuntary, holders of Series A Preferred Shares are entitled to (i) first receive distributions out of our assets in an amount per share equal to the Stated Value plus all accrued and unpaid dividends, whether capital or surplus before any distributions shall be made on any shares of common stock and (ii) second, on an as-converted basis alongside the common stock.

Royalty:

The Series A Preferred Shares include the right, as a group, to receive: (i) 4.5% of the net sales of MAT2203 and MAT2501, in each case from and after the date, respectively, such candidate has received FDA or EMA approval, and (ii) 7.5% of the proceeds, if any, received by the Company in connection with the licensing or other disposition by the Company of MAT2203 and/or MAT2501 ("Royalty Payment Rights"). The royalty is payable so long as the Company has valid patents covering MAT2203 and MAT2501, as applicable. The Royalty Payment Rights are unsecured obligations of the Company. The royalty payment will be allocated to the holders based on their pro rata ownership of vested Series A Preferred Shares. The royalty rights that are part of the Series A Preferred Shares will vest, in equal thirds, upon each of the July 29, 2017, July 29, 2018, and July 29, 2019, which are the first, second and third anniversary dates of the Initial Closing, (each a "Vesting Date"); provided however, if the Series A Preferred Shares automatically convert into common stock prior to the 36 month anniversary of the initial closing, then the royalty rights that are part of the outstanding Series A Preferred Shares shall be deemed to be fully vested as of the date of conversion. Even if the Series A Preferred Shares are purchased after the initial closing, the vesting periods for the royalty rights that are part of the Series A Preferred Shares shall still be based on the Vesting Dates. During the first 36 months following the initial closing, the right to receive a royalty will follow the Series A Preferred Shares; after July 29, 2019 the royalty payment rights may be transferred separately from the Series A Preferred Stock subject to available exemption from registration under applicable securities laws. The Company believes that such rights are not separable free standing instruments requiring bifurcation at the date of transaction. The Company may recognize a deemed dividend for the estimated fair value of the vested portion of the royalty rights in future periods. As of June 30, 2017, no accrual has been recorded for royalty payments as it is not probable at this time that any amount will be paid.

Classification:

These Series A Preferred Shares are classified within permanent equity on the Company's condensed consolidated balance sheet as they do not meet the criteria that would require presentation outside of permanent equity under ASC 480 *Distinguishing Liabilities from Equity*.

Warrants

As of June 30, 2017, the Company had outstanding warrants to purchase an aggregate of 5,961,269 shares of common stock at exercise prices ranging from $0.50 to $2.00 per share

The Warrants were exercisable immediately upon issuance and have a five-year term. The Warrants may be exercised at any time in whole or in part upon payment of the applicable exercise price until expiration of the Warrants. No fractional shares will be issued upon the exercise of the Warrants. The exercise price and the number of warrant shares purchasable upon the exercise of the Investor Warrants (as opposed to Placement Agent Warrants) are subject to adjustment upon the occurrence of certain events, which include stock dividends, stock splits, combinations and reclassifications of the Company capital stock or similar "organic changes" to the equity structure of the Company (see Warrant table below). Accordingly, pursuant to ASC 815, the warrants are classified as equity.

The Company may call the Warrants, other than the Placement Agent Warrants, at any time the common stock trades above $5.00 (for warrants issued in 2013) or above $ 3.00 (for warrants issued in 2015) for twenty (20) consecutive days following the effectiveness of the registration statement covering the resale of the shares of common stock underlying the Warrants, provided that the Warrants can only be called if such registration statement is current and remains effective at the time of the call and provided further that the Company can only call the Investor Warrants for redemption, if it also calls all other Warrants for redemption on the terms described above. The Placement Agent Warrants do not have a redemption feature. The Placement Agent warrants may be exercised on a "cashless" basis. Such term is a contingent feature and within the control of the Company, therefore does not require liability classification.

A summary of equity warrants outstanding as of June 30, 2017 is presented below, all of which are fully vested.

	Shares
Total Warrants Outstanding at December 31, 2016	40,255
Warrants tendered on January 13, 2017	(30,966)
Warrants exercised first quarter, 2017 outside of tender offer	(2,916)
Warrants exercised second quarter, 2017	(412)
Total Warrants Outstanding at June 30, 2017	5,961

After the effect of certain cash and cashless exercises of warrants, the Company received net cash proceeds of $12.7 million from the warrants tendered on January 13, 2017 and $2.1 million for warrants exercised outside the tender offer, for a total of $14.8 million of proceeds in the first quarter. All warrants tendered in the second quarter were cashless warrants.

NOTE G – Stock Based Compensation

In August 2013, the Company adopted the 2013 Equity Compensation Plan (the "Plan"), which provides for the granting of incentive stock options, nonqualified stock options, restricted stock units, performance units, and stock purchase rights. Options under the Plan may be granted at prices not less than 100% of the fair value of the shares on the date of grant as determined by the Board Committee. The Board Committee determines the period over which the options become exercisable subject to certain restrictions as defined in the Plan, with the current outstanding options generally vesting over three years. The term of the options is no longer than ten years. The Company currently has available 14,155,292 shares of common stock for issuance under the plan.

With the approval of the Board of Directors and majority Shareholders, effective May 8, 2014, the Plan was amended and restated. The amendment provides for an automatic increase in the number of shares of common stock available for issuance under the Plan each January (with Board approval), commencing January 1, 2015 in an amount up to four percent (4%) of the total number of shares of common stock outstanding on the preceding December 31st.

The Company recognized stock-based compensation expense (options, and restricted share grants) in its condensed consolidated statements of operations as follows ($ in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2017	2016	2017	2016
Research and Development	$ 70	$ 140	$ 505	$ 271
General and Administrative	246	261	1183	523
Total	$ 316	$ 401	$ 1688	$ 794

	Reserved for Issuance	**Awards Issued**	**Awards Available for Grant**
2013 Equity Compensation Plan	14,155	12,358*	1,797

* includes both stock grants and option grants

The following table summarizes the Company' stock option activity and related information for the period from December 31, 2016 to June 30, 2017 (number of options in thousands):

	Number of Options	Weighted average Exercise Price
Outstanding at December 31, 2016	8,290	$ 0.93
Granted	2,736	3.21
Outstanding at June 30, 2017	11,026	$ 1.44

As of June 30, 2017, the number of vested shares underlying outstanding options was 7,393,521 at a weighted average exercise price of $2.90. The aggregate intrinsic value of in the-money options outstanding as of June 30, 2017 was $7.0 million. The aggregate intrinsic value is calculated as the difference between the Company's closing stock price of $1.69 on June 30, 2017, and the exercise price of options, multiplied by the number of options. As of June 30, 2017, there was $5.6 million of total unrecognized share-based compensation. Such costs are expected to be recognized over a weighted average period of approximately 0.95 years.

All options expire ten years from date of grant. Except for options granted to consultants, all remaining options vest entirely and evenly over three years. A portion of options granted to consultants vests over four years, with the remaining vesting being based upon the achievement of certain performance milestones, which are tied to either financing or drug development initiatives.

The Company recognizes compensation expense for stock option awards on a straight-line basis over the applicable service period of the award. The service period is generally the vesting period, with the exception of options granted subject to a consulting agreement, whereby the option vesting period and the service period defined pursuant to the terms of the consulting agreement may be different. Stock options issued to consultants are revalued quarterly until fully vested, with any change in fair value expensed. The following weighted-average assumptions were used to calculate share based compensation for the three and six months ended June 30, 2017 and 2016:

	For the Three Months Ended June 30,		**For the Six Months Ended June 30,**	
	2017	**2016**	**2017**	**2016**
Volatility	67.09%-77.56%	68.38% - 89.15%	69.22%-82.26%	68.38%-89.15%
Risk-free interest rate	2.015%-2.09%	1.150%-1.375%	1.89%-2.22%	1.15%-1.375%
Dividend yield	0.0%	0.0%	0.0%	0.0%
Expected life	6.0 years	6.0 years	6.0 years	6.0 years

The Company does not have sufficient historical information to develop reasonable expectations about future exercise patterns and post-vesting employment termination behavior. Hence, the Company uses the "simplified method" described in Staff Accounting Bulletin (SAB) 107 to estimated expected term of share option grants.

The expected stock price volatility assumption was determined by examining the historical volatilities for industry peers, as the Company has limited history for the Company's common stock. The Company will continue to analyze the historical stock price volatility and expected term assumptions as more historical data for the Company's common stock becomes available.

The risk-free interest rate assumption is based on the U.S treasury instruments whose term was consistent with the expected term of the Company's stock options.

The expected dividend assumption is based on the Company's history and expectation of dividend payouts. The Company has never paid dividends on its common stock and does not anticipate paying dividends on its common stock in the foreseeable future. Accordingly, the Company has assumed no dividend yield for purposes of estimating the fair value of the Company share-based compensation.

The Company accounts for forfeitures as they occur.

NOTE H – COMMITMENTS

On November 1, 2013, the Company entered into a 7-year lease for office space in Bedminster, New Jersey which commenced in June, 2014 at a monthly rent of $12,723, increasing to approximately $14,200 per month toward the end of the term, June, 2021.

On December 15, 2016, the Company entered into a 10 year, 3-month lease to consolidate our locations while expanding our laboratory and manufacturing facilities. We estimate that the lease will begin during the third quarter of 2017, upon completion and approval of construction. The monthly rent will start at approximately $43,000, increasing to approximately $64,000 in the final year. The rental payments total approximately $6.4 million over the life of the lease which is scheduled to end late 2027.

The Company records rent expense on a straight-line basis. Rent expense for the three months ended June 30, 2017 and 2016 was $73,000 and $62,000, respectively. Rent expense for the six months ended June 30, 2017 and 2016 was $176,000 and $125,000, respectively.

Listed below is a summary of future minimum rental payments (including the remainder of 2017) as of June 30, 2017:

Year Ending December 31,	Lease Commitments
Remainder of 2017	$ 167
2018	683
2019	707
2020	731
2021	671
Total future minimum lease payments	$ 2,959

The Company was obligated to provide a security deposit of $300,000 to obtain the headquarter office lease space located in Bedminster, New Jersey. This deposit was reduced by $100,000 in 2016 and 2015 and can be reduced down to $50,000 in 2017, as long as the Company makes timely rental payments.

To obtain the laboratory and facility site located in Bridgewater, New Jersey, the Company was obligated to provide a security deposit of $586,000. This security deposit can be reduced $100,000 on each of the first three anniversaries of the rent commencement date. On the fourth anniversary, it can be reduced another $86,000, with the balance over the remaining life of the lease.

On February 18, 2016 the Company entered into a Cooperative Research and Development Agreement (CRADA) with the National Institute of Allergy and Infectious Diseases to support NIH investigators in the conduct of clinical research to investigate the safety, efficacy, and pharmacokinetics of encochleated drug products in patients with fungal, bacterial, or viral infections at an annual funding of $200,000 per year for 3 years.

On November 10, 2016 the Company entered into a Cooperative Research and Development Agreement (CRADA) with the National Institute of Allergy and Infectious Diseases to support NIH investigators to acquire technical, statistical and administrative support for research activities as well as to pay for supplies and travel expenses for a total amount of $132,568 paid in 4 equal quarterly installments beginning in the fourth quarter 2016 and each quarter during 2017.

Through the 2015 Merger, we acquired a license from Rutgers University, The State University of New Jersey (successor in interest to the University of Medicine and Dentistry of New Jersey) for the cochleate delivery technology. The Amended and Restated Exclusive License Agreement between Nanotechnologies and Rutgers provides for, among other things, (1) royalties on a tiered basis between low single digits and the mid-single digits of net sales of products using such licensed technology, (2) a one-time sales milestone fee of $100,000 when and if sales of products using the licensed technology reach the specified sales threshold and (3) an annual license fee of initially $10,000, increasing to $50,000 over the term of the license agreement.

On September 12, 2016 the Company conducted a final closing of a private placement offering to accredited investors shares of the Company's Series A Preferred Stock. As part of this offer, the investors received royalty payment rights if and when the Company generates sales of MAT2203 or MAT2501. Pursuant to the terms of the Certificate of Designations of Preferences, Rights and Limitations (the "Certificate of Designations") for our outstanding Series A Preferred Stock, we may be required to pay royalties of up to $35 million per year. If and when we obtain FDA or EMA approval of MAT2203 and/or MAT2501, which we do not expect to occur before 2021, if ever, and/or if we generate sales of such products, or we receive any proceeds from the licensing or other disposition of MAT2203 or MAT2501, we are required to pay to the holders of our Series A Preferred Stock, subject to certain vesting requirements, in aggregate, a royalty equal to (i) 4.5% of Net Sales (as defined in the Certificate of Designations), subject in all cases to a cap of $25 million per calendar year, and (ii) 7.5% of Licensing Proceeds (as defined in the Certificate of Designations), subject in all cases to a cap of $10 million per calendar year. The Royalty Payment Rights will expire when the patents covering the applicable product expire, which is currently expected to be in 2033.

On June 1, 2017 the Company entered into an agreement with Medpace, a clinical research organization, to provide services in a Phase II clinical trial. The overall cost is estimated to be $1.4 million through August 2018.

The Company also has employment agreements with certain employees which require the funding of a specific level of payments, if certain events, such as a change in control, termination without cause or retirement, occur.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

The following discussion and analysis of our financial condition and results of operations should be read together with our financial statements and the related notes and the other financial information included elsewhere in this Quarterly Report. This discussion contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those anticipated in these forward-looking statements as a result of various factors, including those discussed below and elsewhere in this Quarterly Report, in our Annual Report on Form 10-K for the year ended December 31, 2016 and in other reports we file with the Securities and Exchange Commission, particularly those under "Risk Factors." Dollars in tabular format are presented in thousands, except per share data, or otherwise indicated.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This report on Form 10-Q contains forward-looking statements made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995 under Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. Forward-looking statements include statements with respect to our beliefs, plans, objectives, goals, expectations, anticipations, assumptions, estimates, intentions and future performance, and involve known and unknown risks, uncertainties and other factors, which may be beyond our control, and which may cause our actual results, performance or achievements to be materially different from future results, performance or achievements expressed or implied by such forward-looking statements. All statements other than statements of historical fact are statements that could be forward-looking statements. You can identify these forward-looking statements through our use of words such as "may," "can," "anticipate," "assume," "should," "indicate," "would," "believe," "contemplate," "expect," "seek," "estimate," "continue," "plan," "point to," "project," "predict," "could," "intend," "target," "potential" and other similar words and expressions of the future.

There are a number of important factors that could cause the actual results to differ materially from those expressed in any forward-looking statement made by us. These factors include, but are not limited to:

- our ability to raise additional capital to fund our operations and to develop our product candidates;
- our ability to raise additional capital, in light of the significant number of shares issuable upon conversion of our Series A Preferred Stock (including paying dividends in the form of common stock), upon exercise of outstanding warrants and options and upon achievement of certain milestones pursuant to the Matinas BioPharma Nanotechnologies, Inc. acquisition agreement;
- our obligation to pay royalties to holders of our Series A Preferred Stock;
- our anticipated timing for preclinical development, regulatory submissions, commencement and completion of clinical trials and product approvals;
- our history of operating losses in each year since inception and the expectation that we will continue to incur operating losses for the foreseeable future;
- our reliance on proprietary cochleate drug delivery technology, which is licensed to us by Rutgers University;
- our ability to manufacture GMP (Good Manufacturing Practices) batches of our product candidates which are required for pre-clinical and clinical trials and, subsequently, if regulatory approval is obtained for any of our products, our ability to manufacture commercial quantities;
- our ability to complete required clinical trials for our lead product candidate and other product candidates and obtain approval from the FDA or other regulatory agents in different jurisdictions;
- our dependence on third-parties, including third-parties to manufacture and third-party CROs (Clinical Research Organizations) including, without limitation, the National Institutes of Health (NIH) to conduct our clinical trials;
- our ability to maintain or protect the validity of our patents and other intellectual property;
- our ability to recruit and retain key executive members and key personnel;
- our ability to internally develop new inventions and intellectual property;
- interpretations of current laws and the passages of future laws;
- our lack of a sales and marketing organization and our ability to commercialize products, if we obtain regulatory approval;
- acceptance of our business model by investors;

- the accuracy of our estimates regarding expenses and capital requirements and our ability to obtain additional financing;
- our ability to adequately support growth;
- developments of projections relating to our competitors or our industry; and
- the factors listed under the headings "Risk Factors" in our Annual Report on Form 10-K for the year ended December 31, 2016, elsewhere in this report and other reports that we file with the Securities and Exchange Commission.

All forward-looking statements are expressly qualified in their entirety by this cautionary notice. You are cautioned not to place undue reliance on any forward-looking statements, which speak only as of the date of this report or the date of the document incorporated by reference into this report. We have no obligation, and expressly disclaim any obligation, to update, revise or correct any of the forward-looking statements, whether as a result of new information, future events or otherwise. We have expressed our expectations, beliefs and projections in good faith and we believe they have a reasonable basis. However, we cannot assure you that our expectations, beliefs or projections will result or be achieved or accomplished.

Overview

We are a clinical-stage biopharmaceutical company focused on developing innovative anti-infectives for orphan indications. Our product and development candidates are derived using our unique and proprietary lipid-crystal nano-particle, or cochleate, formulation platform delivery technology. Our proprietary cochleate delivery technology platform, licensed from Rutgers University on an exclusive worldwide basis, nano-encapsulates drugs and is designed to make these drugs orally bioavailable, well tolerated and safer and less toxic while providing targeted and safe delivery of pharmaceuticals directly to the site of infection or inflammation. We believe our cochleate technology provides us with an efficient and broadly applicable drug delivery platform, with particular utility in diseases and conditions in which the immune system plays a significant modulation role and where the immune system facilitates the active transport of our lipid crystal nano-particles throughout the body.

Currently, we are focused on the anti-infective market and on drug candidates which we believe demonstrate the value and innovation associated with our unique cochleate delivery platform technology while potentially providing significant health economic benefit to the health care system. We believe initially focusing on the anti-infective market has distinct advantages for the development of products which meet significant unmet medical need, including:

- a current regulatory environment which provides small development and clinical stage companies incentives such as significant periods of regulatory marketing exclusivity and opportunities to reduce development cost and timeline to market for anti-infective drug candidates;
- traditional high correlation between efficacy and safety data in preclinical animal models and the outcome of human clinical trials with anti-infective product candidates;
- attractive commercial opportunities for anti-infective product differentiated in safety profile, mode of action and oral bioavailability positioned against current therapies with significant side effects, or drug to drug interactions, limited efficacy and intravenous delivery resulting in lack of convenience, compliance and at a significant burden to the cost of healthcare; and
- an ability to commercialize anti-infective products with a focused and cost-efficient sales and marketing organization.

MAT2203 and MAT2501

We have leveraged our platform cochleate delivery technology to develop two clinical-stage products that we believe have the potential to become best-in-class drugs. Our lead product candidate MAT2203 is an orally-administered cochleate formulation of a broad spectrum anti-fungal drug called amphotericin B. We are initially developing MAT2203 for the prevention of invasive fungal infections (IFIs) due to immunosuppressive therapy, as well as for the treatment of serious fungal infections.

In early June 2017, the Company reported interim data from the NIH-Conducted Phase 2a Clinical Study of Orally-Administered MAT2203 for the Treatment of Chronic Refractory Mucocutaneous Candidiasis. At that time, two out of the two patients with long-standing azole resistant mucocutaneous candidiasis met the primary endpoint of the Phase 2a study, achieving ≥ 50% clinical response with treatment of MAT2203. Patient #01 achieved a 57% reduction in clinical symptoms after 8 weeks on therapy while patient #02 achieved an 85% reduction in such clinical symptoms after 6 weeks of treatment. MAT2203 was well tolerated with majority of adverse events observed being mild in severity and mostly unrelated to study drug. Importantly, for both patients renal and liver function parameters remained well within normal ranges during the core study as well as during the first 6-month extension of this study. In July 2017, the NIH/NIAID institutional review board approved continuation of treatment of patients in the study-extension for an additional 6 months, for total extension of up to one year.

In late June 2017, we announced the topline data from our Phase 2 study in Vulvovaginal Candidiasis (VVC) using MAT2203. In the context of our overall program for MAT2203 with the aim to develop our lead product for the prevention of invasive fungal infections in patients who are immunocompromised due to immunosuppressive therapy, our goal was, in addition to further establishing the safety and tolerability of MAT2203, to demonstrate efficacy of MAT2203 through a mechanism involving systemic absorption in a non-life threatening fungal infection. This study concept is consistent with early human efficacy studies in the development of other anti- fungal therapies. This Phase 2 study was not designed or powered to support an indication for the treatment of VVC and therefore supplant fluconazole as the standard of care. While we were advised to utilize fluconazole as the standard of care in VVC as an active control as part of the study design, comparison to fluconazole in the treatment of VVC is of limited relevance given our ultimate development goals for MAT2203 in uses where fluconazole is contraindicated or inferior. The key data generated from this study includes additional safety and tolerability data as well as evidence of systemic absorption and distribution resulting in efficacy reflected by dose response effects and improvement in disease severity scores.

In this VVC study, the Company met its primary endpoint and was able to demonstrate that oral delivery of encochleated amphotericin B is safe and well tolerated without the severe kidney and liver toxicities typically seen with administration of intravenous amphotericin B. Drug-related treatment emergent adverse events in this study were mostly of mild and gastro-intestinal nature and were seen at a rate of 20%, 18% and 2% respectively for MAT2203 200mg, MAT2203 400mg, and fluconazole. Consistent with the safety observations in the NIH study, in this VVC study no drug-related effects on liver function were observed and kidney function parameters stayed within normal ranges during the entire study for all 91 patients treated with MAT2203 for 5 days.

Following our announcement of topline data in late June 2017, we continued to receive data from the study in the following weeks and also were able to more fully analyze the complete data set in light of our overall development objectives for MAT2203. In this particular study, 137 patients with moderate-to-severe VVC were randomized to MAT2203 200mg (46 patients), MAT2203 400mg (45 patients), or fluconazole (46 patients), with a respective disease score of 10.9, 10.0, and 10.8 established as the composite score of six disease severity attributes, which were each scored as 0, 1, 2, or 3. On day five after initiation of treatment, the disease severity score had declined significantly for all three treatment groups with approximately 60% reduction for both MAT2203 treatment groups and 80% for the fluconazole group. On day twelve after initiation of treatment (the test of cure visit), treatment severity score had further declined for all three treatment groups with approximately 80% reduction for both MAT2203 treatment groups (mean scores of 2.2 and 1.8 respectively for the 200mg and 400mg dose groups) and 94% for the fluconazole group (mean score of 0.5).

On the more stringent criterion of clinical cure (the primary evaluation endpoint in the most recent FDA guidance on the treatment of VVC), the clinical cure rates for MAT2203 200mg, MAT2203 400mg, and fluconazole in the modified intent-to-treat (mITT) population were 52%, 55%, and 75% respectively. In the larger population of all randomized patients based on clinical diagnosis by the KOH method, the clinical cure rates for MAT2203 200mg, MAT2203 400mg, and fluconazole were 57%, 64%, and 76% respectively. Finally, in the per-protocol (PP) population, the clinical cure rates for MAT2203 200mg, MAT2203 400mg, and fluconazole were 52%, 65%, and 75% respectively. This additional data analyses revealed a consistent trend of a better cure rate with the MAT2203 400mg dose group as compared to the 200mg dose group, importantly indicating a dose-response effect.

Furthermore, in evaluating the criterion of eradication rate for both doses of MAT2203 studied, there appears to be a more rapid onset of the eradication effect in the modified intent to treat (mITT) population on day-5 after treatment initiation with the MAT2203 400mg dose group (13%) as compared to the 200mg dose group (4%), again indicating a dose-response effect.

Considering the data generated from the VVC study contrasted with the data from our ongoing NIH Phase 2 study, it appears that both higher doses and longer duration of therapy, which yielded a significant clinical response in the immunocompromised patients in the NIH study, could be important factors in demonstrating additional efficacy in mucosal candidiasis, especially with respect to eradication. Accordingly, we believe that utilizing a higher dose for a longer duration in this study may have resulted in improvement in overall clinical and mycological responses in VVC. An observed dose-response effect is a well-established manner to uncover drug effects during the early drug development stage prior to optimizing the dosing/treatment regimen. The observed improvements in disease severity scores, as well as the dose-response effects in clinical cure rates and onset of mycological eradication in this VVC study, we believe bring together the support for the proof-of-concept of systemic delivery of MAT2203 to the site of infection in humans.

Based on the overall data set we have generated to date, we plan to seek an FDA meeting in the near term to discuss the data and the development path forward toward commencing a registration trial for an indication for the prevention of invasive fungal infections in patients with ALL (Acute Lymphoblastic Leukemia) as the next step in our overall development program for MAT2203 following the conclusion of our planned and announced Phase 2 PK/Tolerability study of MAT2203 in leukemia patients.

We are pursuing a first indication for the prevention of invasive fungal infections in patients with ALL because the risk for invasive fungal infections (IFIs) in patients being treated for ALL is high, with an associated high risk of lethality. Currently, there is no standard of care for preventing these high risk IFIs in ALL patients. The established treatment regimens for ALL are highly sensitive to liver-metabolized drug-drug interactions, causing serious concerns for drug-drug interaction induced side-effects. Amphotericin B is not liver metabolized and when incorporated in the lipid-crystal nano-particle structure of MAT2203, this otherwise toxic IV only compound can now be safely orally administered (providing patient convenience over ~12 weeks prophylactic treatment duration), without the typical kidney and liver toxicity associated with other Amphotericin B formulations.

Our second clinical stage product candidate is MAT2501, an orally administered, encochleated formulation of the broad spectrum aminoglycoside antibiotic amikacin which may be used to treat different types of multidrug-resistant bacteria, including non-tuberculous mycobacterium infections (NTM), as well as various multidrug-resistant gram negative and intracellular bacterial infections. We recently completed and announced topline results from a Phase 1 single escalating dose clinical trial of MAT2501 in healthy volunteers in which no serious adverse events were reported and where oral administration of MAT2501 at all tested doses yielded blood levels that were well below the safety levels recommended for injected amikacin, supporting further development of MAT2501 for the treatment of NTM infections.

Financial Operations Overview

We are a development stage company and have generated $60 thousand in contract research revenues during the six months ended June 30, 2017 and no revenue in the six months ended June 30, 2016. We have incurred losses for each period from inception. Our net loss was approximately $8.5 million and $3.9 million for the six months ended June 30, 2017 and 2016, respectively and $4.0 million and $1.6 million for the three months ended June 30, 2017 and 2016, respectively. We expect to incur significant expenses and increasing operating losses for the foreseeable future. We expect our expenses to increase significantly in connection with our ongoing activities to develop, seek regulatory approval and commercialization of MAT2203 and MAT2501 and any other product candidates we choose to develop based upon our platform technology. Accordingly, we will need additional financing to support our long term continuing operations. We will seek to fund our operations through public or private equity or debt financings or other sources, which may include collaborations with third parties. Adequate additional financing may not be available to us on acceptable terms, or at all. Our failure to raise capital as and when needed would impact our going concern and would have a negative impact on our financial condition and our ability to pursue our business strategy and continue as a going concern. We will need to generate significant revenues to achieve profitability, and we may never do so.

Revenue

We generated Contract Research Revenue in the amount of $60 thousand for the six months ended June 30, 2017 versus zero in the same period of 2016. This revenue is directly related to our grant with the Cystic Fibrosis Foundation Therapeutics Inc. to study MAT2501, for the treatment of nontuberculous mycobacterium infection (NTM) in preclinical models. The contract will last into 2018.

Research and Development Expenses

Research and development expenses consist of costs mainly incurred for the development of MAT2203 and MAT2501 which include:

- the cost of conducting pre-clinical work;
- the cost of acquiring, developing and manufacturing pre-clinical and human clinical trial materials;
- costs for consultants and contractors associated with Chemistry and Manufacturing Controls (CMC), pre-clinical and clinical activities and regulatory operations;
- expenses incurred under agreements with contract research organizations, or CROs, including the National Institutes of Health (NIH), that conduct our pre-clinical or clinical trials; and
- employee-related expenses, including salaries and stock-based compensation expense for those employees involved in the research and development process.

The table below summarizes our direct research and development expenses for our product candidates for the three and six months ended June 30, 2017 and 2016. Our direct research and development expenses consist principally of external costs, such as fees paid to contractors, consultants, analytical laboratories and CROs and/or the NIH, in connection with our development work. We typically use our employee and infrastructure resources for manufacturing clinical trial materials, conducting product analysis, study protocol development and overseeing outside vendors. Included in "Internal Staffing, Overhead and Other" below is the cost of laboratory space, supplies, R&D employee costs (including stock option expenses), travel and medical education.

	Three months ended June 30,		Six months ended June 30,	
	2017	2016	2017	2016
	($ in thousands)		($ in thousands)	
Direct research and development expenses:				
Manufacturing process development	$ 137	$ 11	$ 162	$ 39
Preclinical trails	45	-	342	13
Clinical development	1,226	106	2,175	310
Regulatory	53	3	128	39
Internal staffing, overhead and other	854	523	1,892	1,163
Total research and development	$ 2,315	$ 643	$ 4,699	$ 1,564

Research and development activities are central to our business model. Product candidates in later stages of clinical development generally have higher development costs than those in earlier stages of clinical development, primarily due to the increased size and duration of later-stage human trials.

We expect our R&D expenses to increase during 2017 and into 2018 as we implement our additional Phase II studies and assuming the start of Phase III with MAT2203 as well as start our Phase II studies with MAT2501. In addition, we have and will increase our headcount to support our ongoing product development and incur additional rental expense with our new laboratory and manufacturing facility.

General and Administrative Expenses

General and administrative expenses consist principally of salaries and related costs for personnel in executive and finance functions. Other general and administrative expenses include facility costs, communication expenses, and professional fees for legal, patent review, consulting and accounting services.

We anticipate that our general and administrative expenses to increase for the full year 2017 compared to 2016 due to increased expenses related to our status as a publicly traded company, including increased compensation expense (including stock based compensation), headcount to support our expanded operations and expenses in support of compliance with the requirements of Section 404 of the Sarbanes Oxley Act.

Other Expense, net

Other expense, net is largely comprised of interest expense and franchise taxes.

Application of Critical Accounting Policies

Our critical accounting policies are more fully described in Note C to our financial statements included in our annual report on Form 10-K for the year ended December 31, 2016, there have been no material changes to our critical accounting policies.

Stock-Based Compensation

Option Grants

We account for all share-based compensation payments issued to employees, directors, and non-employees using an option pricing model for estimating fair value. Accordingly, share-based compensation expense is measured based on the estimated fair value of the awards on the date of grant. We recognize compensation expense for the portion of the award that is ultimately expected to vest over the period during which the recipient renders the required services to us using the straight-line single option method. In accordance with authoritative guidance, we re-measure the fair value of non-employee share-based awards as the awards vest, and recognize the resulting value, if any, as expense during the period the related services are rendered.

Significant Factors, Assumptions and Methodologies Used in Determining Fair Value

We apply the fair value recognition provisions of ASC Topic 718, Compensation-Stock Compensation, which we refer to as ASC 718. Determining the amount of share-based compensation to be recorded required us to develop estimates of the fair value of stock options as of their grant date before operating as a public company. We recognize share-based compensation expense ratably over the requisite service period, which in most cases is the vesting period of the award. Calculating the fair value of share-based awards requires that we make highly subjective assumptions.

We use the Black-Scholes option pricing model to value our stock option awards. Use of this valuation methodology requires that we make assumptions as to the volatility of our common stock, the expected term of our stock options, and the risk free interest rate for a period that approximates the expected term of our stock options and our expected dividend yield. As a publicly-held company with a limited operating history, we utilized data from a representative group of companies to estimate expected stock price volatility. We selected companies from the biopharmaceutical industry with similar characteristics to us, including those in the early stage of product development and with a therapeutic focus.

We use the simplified method as prescribed by the Securities and Exchange Commission Staff Accounting Bulletin No. 107, *Share-Based Payment*, to calculate the expected term of stock option grants to employees as we do not have sufficient historical exercise data to provide a reasonable basis upon which to estimate the expected term of stock options granted to employees.

We recognize compensation expense for stock option awards on a straight-line basis over the applicable service period of the award. The service period is generally the vesting period, with the exception of options granted subject to a consulting agreement, whereby the option vesting period and the service period defined pursuant to the terms of the consulting agreement may be different. Stock options issued to consultants are revalued quarterly until fully vested, with any change in fair value expensed. For awards subject to performance conditions, the Company recognizes stock-based compensation expense using the accelerated attribution recognition method when it is probable that the performance condition will be achieved. The following range of assumptions were used to value options granted for the three and six months ended June 30, 2017 and 2016 and to re-measure stock options issued to consultants.

	For the Three Months Ended June 30,		For the Six Months Ended June 30,	
	2017	2016	2017	2016
Volatility	67.09%-77.57%	68.38% - 89.15%	69.22%-82.26%	68.38%-89.15%
Risk-free interest rate	2.015%-2.09%	1.15%-1.375%	1.89%-2.22%	1.15%-1.375%
Dividend yield	0.0%	0.0%	0.0%	0.0%
Expected life	6.0 years	6.0 years	6.0 years	6.0 years

The expected term of stock options represents the weighted average period the stock options are expected to remain outstanding and is based on the options vesting term, contractual terms, and industry peers as we did not have sufficient historical information to develop reasonable expectations about future exercise patterns and post-vesting employment termination behavior.

The expected stock price volatility assumption was determined by examining the historical volatilities for industry peers, as our stock has not been trading long enough to calculate its own volatility. We will continue to analyze the historical stock price volatility and expected term assumptions as more historical data for our common stock becomes available. The risk-free interest rate assumption is based on the U.S. Treasury instruments whose term was consistent with the expected term of our stock options. The expected dividend assumption is based on our history and expectation of dividend payouts.

We have never paid dividends on our common stock and do not anticipate paying dividends on our common stock in the foreseeable future. Accordingly, we have assumed no dividend yield for purposes of estimating the fair value of our share-based compensation.

The closing price of our stock (on the date of a grant) is used as an input in the measurement of stock-based compensation.

Share-based compensation expense associated with stock options and restricted stock granted to employees and non-employees for the three months ended June 30, 2017 and 2016 was $0.3 million and $0.4 million, respectively; for the six months ended June 30, 2017 and 2016 was $1.7 million and $.8 million, respectively. As of June 30, 2017, we had $5.6 million of total unrecognized share-based compensation expense, which we expect to recognize over a weighted-average remaining vesting period of approximately ..9 years. In future periods, our share-based compensation expense is expected to increase as a result of recognizing our existing unrecognized share-based compensation for awards that will vest and as we issue additional share-based awards to attract and retain our employees.

We have included stock based compensation as part of our operating expenses in our statement of operation for the three and six months ended June 30 ($ in thousands) as follows:

	Three months ended		Six months ended	
	2017	2016	2017	2016
Research and development	70	140	505	271
General and administrative	246	261	1,183	523
Total	$ 316	$ 401	$ 1,688	$ 794

The 2013 Equity Compensation Plan, or the Plan, is the only active plan pursuant to which options to acquire common stock or restricted stock awards can be granted and are currently outstanding. As of June 30, 2017, there were 1,797,606 shares of our common stock available for issuance under the Plan.

As of June 30, 2017, we had outstanding options to purchase an aggregate of 11,026,027 shares of our common stock with a weighted average exercise price of $1.44. The computation of the aggregate intrinsic value is based upon the difference between the original exercise price of the options and our estimate of the fair value of our common stock at June 30, 2017.

Emerging Growth Company Status

Under Section 107(b) of the Jumpstart Our Business Startups Act of 2012, emerging growth companies can delay adopting new or revised accounting standards until such time as those standards apply to private companies. We have irrevocably elected not to avail ourselves of this exemption from new or revised accounting standards and, therefore, we will be subject to the same new or revised accounting standards as other public companies that are not emerging growth companies.

Results of Operations ($ in Thousands)

Comparison of Three Months Ended June 30, 2017 and 2016.

	2017	2016	Increase (Decrease)
Revenues	$ 45	-	45
Cost and expenses:			
Research and development	$ 2,315	$ 642	$ 1,673
General and administrative	1,706	978	728

Total cost and expenses	$ 4,021	$ 1,620	$ 2,401

Revenues. Revenue for the three months ended June 30, 2017 were $45, compared to $0 for the prior period. Revenue consists of revenue earned under the Cystic Fibrosis Foundation Therapeutics Inc. grant to study MAT2501, for the treatment of pre-clinical nontuberculous mycobacterium infection (NTM). The grant will last into 2018.

Research and Development expenses. Research and Development expense for the three months ended June 30, 2017 increased approximately $1,673 compared to the prior year period. This increase is primarily due to an increase in spending on clinical studies for MAT2203(VVC study), headcount addition, lab operations and analytical development costs. In the longer term, we expect R&D expenses to increase as we implement our development programs.

General and Administrative expenses. General and Administrative expenses for the three month period ending June 30, 2017 were approximately $1,706 an increase of $ 728, largely due to an increase in professional fees associated with legal, strategic consulting and investor relations as well as an increase in employee compensation and benefits. G&A expenses are expected to increase for remainder of 2017 to meet the requirements of a public company and explore possible business development opportunities.

Comparison of Six Months Ended June 30, 2017 and 2016.

	2017	2016	Increase (Decrease)
Revenues	$ 60	-	60
Cost and expenses:			
Research and development	$ 4,699	$ 1,564	$ 3,135
General and administrative	3,824	2,293	1,531
Total cost and expenses	$ 8,523	$ 3,857	$ 4,666

Revenues. Revenue for the six months ended June 30, 2017 were $60, compared to $0 for the six months ended June 30, 2016. Revenue consists of revenue earned under the Cystic Fibrosis Foundation Therapeutics Inc. grant to study MAT2501, for the treatment of pre-clinical nontuberculous mycobacterium infection (NTM). The grant will last into 2018.

Research and Development expenses. Research and Development expense for the six months ended June 30, 2017 increased $3.1 million compared to the prior year period. This increase is primarily due to an increase in spending on clinical studies and preclinical studies, associated with both MAT2203 and MAT2505, increased in headcount, stock based compensation and increase in laboratory operations costs. In the longer term, we expect R&D expenses to increase as we implement our development programs.

General and Administrative expenses. General and Administrative expenses for the six month period ending June 30, 2017 were $3.8 million, an increase of $1.5 million over the same period in 2016. This increase is mainly due to increases in professional fees associated with legal services, accounting services, strategic consulting and investment relations services, as well an increase in employee compensation benefit expenses.

Sources of Liquidity

We have funded our operations since inception through private placements of our equity instruments, and most recently through a warrant tender offering. As of June 30, 2017, we have raised approximately $41 million in net proceeds from sales of our equity securities.

On April 3, 2017, the Company filed a shelf registration statement on Form S-3 with the Securities and Exchange Commission which allows us to offer, issue and sell from time to time together or separately, in one or more offerings, any combination of (i) our common stock, (ii) our preferred stock, which we may issue in one or more series, (iii) warrants, (iv) senior or subordinated debt securities, (v) subscription rights and (vi) units, consisting of any combination of the securities listed above. We will describe in a prospectus supplement the securities we are offering and selling, as well as the specific terms of the securities. The aggregate public offering price of the securities that we may offer from time to time pursuant to the shelf registration statement will not exceed $150.0 million. We will offer the securities in an amount and on terms that market conditions will determine at the time of the offering.

On April 28, 2017, the Company entered into a Controlled Equity Offering[SM] Sales Agreement, or sales agreement, with Cantor Fitzgerald & Co., or “Cantor”, pursuant to which the Company may issue and sell, from time to time, shares of our common stock having an aggregate offering price of up to $30.0 million. Cantor Fitzgerald will be acting as sales agent and be paid a 3% commission on each sale.

As of June 30, 2017, we had an accumulated deficit of $43.6 million, working capital of $10.4 million and cash and cash equivalents totaling $11.3 million.

2017 Warrant Tender

On January 13, 2017, the Company completed its tender offer to amend and exercise certain categories of existing warrants.

Pursuant to the Offer to Amend and Exercise, an aggregate of 30,966,350 warrants were tendered by their holders and were amended and exercised in connection therewith for an aggregate exercise price of approximately $15.5 million. The aggregate gross cash proceeds 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.

Cash Flows

The following table sets forth the primary sources and uses of cash for each of the period set forth below:

	Six months ended June 30,	
	2017	**2016**
Cash used in operating activities	$ (6,759)	$ (2,637)
Cash used in investing activities	(790)	-
Cash provided by financing activities	14,710	(12)
Net increase (decrease) in cash and cash equivalents	$ 7,161	$ (2,649)

Operating Activities

We have incurred significant costs in the area of research and development, including manufacturing, analytical, regulatory and clinical development costs and costs associated with being a public company. Net cash used in operating activities was approximately $6.8 million for the six months ended June 30, 2017 and $2.6 million for the six months ended June 30, 2016.

Investing Activities

There were investing activities for the six months ended June 30, 2017 of $790 thousand for leasehold improvements.

Financing Activities

Net cash provided by financing activities was $14.7 million for the six months ended June 30, 2017 due to net proceeds from warrant tender offer and warrants exercised by investors outside of this offer and additional capital leases offset by paid down of notes payable.

Funding Requirements and Other Liquidity Matters

MAT2203 and MAT2501 are still in development stages. We expect to continue to incur significant expenses and increasing operating losses for the foreseeable future. We anticipate that our expenses will increase substantially if and as we:

- conduct our planned Phase 2 and Phase 3 clinical trials of MAT2203, our lead product candidate;
- initiate and continue the research and development of our other product candidates and potential product candidates, including Phase 1 and Phase 2 clinical trials of MAT2501;
- seek to discover and develop additional product candidates using our cochleate lipid-crystal delivery technology platform;
- seek regulatory approvals for any product candidates that successfully complete clinical trials;

- establish a sales, marketing and distribution infrastructure in the future to commercialize any products for which we may obtain regulatory approval;

- require the manufacture of larger quantities of product candidates for clinical development and potentially commercialization;

- maintain, expand and protect our intellectual property portfolio;

- hire additional clinical, quality control and scientific personnel; and

- add operational, financial and management information systems and personnel, including personnel to support our product development and planned future commercialization efforts and personnel and infrastructure necessary to help us comply with our obligations as a public company.

We expect that our existing cash and anticipated proceeds from future sales of our common stock through the Controlled Equity Offering Sales Agreement will be sufficient to meet our operating obligations through August 2018. We will need additional financing to fund our operating expenses and to initiate and conduct our intended clinical programs, file additional patent applications and enhance our intellectual property position for lead compounds, and prepare for submission of an NDA for MAT2203 and MAT2501, and potentially conduct preclinical work in order to identify product candidates utilizing our cochleate delivery platform technology. We have entered into a Controlled Equity Offering^{SM} Sales Agreement, or sales agreement, with Cantor Fitzgerald & Co., or Cantor Fitzgerald to provide us with the potential of raising additional capital. If we are unable to raise additional funds when needed, we may be required to delay, limit, reduce or terminate our product development or future commercialization efforts or grant rights to develop and market any product candidates under our development that we would otherwise prefer to develop and market ourselves.

Until the time we can generate substantial product revenues from commercializing MAT2203, MAT2501 or any future product candidates, if ever, we expect to finance our cash needs through a combination of private and public equity offerings, debt financings, collaborations, strategic alliances and/or licensing arrangements. We do not have any committed external source of funds. To the extent that we raise additional capital through the sale of equity or convertible debt securities, the ownership interest of our stockholders will be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect your rights as a common stockholder. Debt financing, if available, may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures or declaring dividends and could increase our expenses and require that our assets secure such debt. If we raise additional funds through collaborations, strategic alliances or licensing arrangements with pharmaceutical partners, we may have to relinquish valuable rights to our technologies, future revenue streams, research programs or grant licenses on terms that may not be favorable to us. If we are unable to raise additional funds when needed, we may be required to delay, limit, reduce or terminate our product development or future commercialization efforts or grant rights to develop and market any product candidates under our development that we would otherwise prefer to develop and market ourselves.

Contractual Obligations and Commitments

Except for the Medpace contract entered into June 1, 2017, there have been no material changes from the disclosures relating to our contractual obligations reported in our Annual Report on Form 10-K for the year ended December 31, 2016.

Off-Balance Sheet Arrangements

We did not have during the periods presented, and we do not currently have, any off-balance sheet arrangements, as defined under SEC rules, such as relationships with unconsolidated entities or financial partnerships, which are often referred to as structured finance or special purpose entities, established for the purpose of facilitating financing transactions that are not required to be reflected on our balance sheets.

RECENT ACCOUNTING PRONOUNCEMENTS

Refer to Note (c)(12), "Recent Accounting Policies," in the accompanying notes to the condensed consolidated financial statements for a discussion of recent accounting pronouncements.

Item 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Not applicable.

Item 4. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures.

As of June 30, 2017, we evaluated, with the participation of our principal executive officer and principal financial officer, the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the "Exchange Act")). Based on that evaluation, our principal executive officer and principal financial officer concluded that our disclosure controls and procedures are effective at the reasonable assurance level as of June 30, 2017. Our disclosure controls and procedures are designed to provide reasonable assurance that information required to be disclosed in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within time periods specified by the SEC's rules and forms, and that such information is accumulated and communicated to our management, including principal executive officer and principal financial officer, as appropriate to allow timely decisions regarding required disclosure. In designing and evaluating our disclosure controls and procedures, management recognized that disclosure controls and procedures, no matter how well conceived and operated, can provide only reasonable, but not absolute, assurance that the objectives of the disclosure controls and procedures are met. The design of any disclosure control and procedure also is based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions.

Changes in internal control over financial reporting.

There were no changes in our internal control over financial reporting during the quarter ended June 30, 2017 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 1. LEGAL PROCEEDINGS

None.

Item 1A. Risk Factors

There were no material changes from the risk factors set forth under Part I, Item 1A., "Risk Factors" in our Annual Report on Form 10-K for the fiscal year ended December 31, 2016. You should carefully consider these factors in addition to the other information set forth in this report which could materially affect our business, financial condition or future results. The risks and uncertainties described in this report and in our Annual Report on Form 10-K for the year ended December 31, 2016, as well as other reports and statements that we file with the SEC, are not the only risks and uncertainties facing us. Additional risks and uncertainties not currently known to us or that we currently deem to be immaterial may also have a material adverse effect on our financial position, results of operations or cash flows.

Item 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS

Not applicable.

Item 3. DEFAULTS UNDER SENIOR SECURITIES

None.

Item 4. MINE SAFETY DISCLOSURES

Not applicable.

Item 5. OTHER INFORMATION

None.

Item 6. EXHIBITS

See the Exhibit Index following the signature page to this Quarterly Report on Form 10-Q for a list of exhibits filed or furnished with this report, which Exhibit Index is incorporated herein by reference.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

MATINAS BIOPHARMA HOLDINGS, INC.

BY:

/s/ Roelof Rongen

Dated: August 8, 2017

Roelof Rongen
Chief Executive Officer (Principal Executive Officer)

/s/ Gary Gaglione

Dated: August 8, 2017

Gary Gaglione
Acting Chief Financial Officer
(Principal Financial and Accounting Officer)

EXHIBIT INDEX

3.1	Certificate of Incorporation of the Company, incorporated by reference to Exhibit 3.1 of the Company's Registration Statement on Form S-1 (Reg. No. 333-193455), filed February 7, 2014 with the Securities and Exchange Commission.
3.2	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.
3.3	Bylaws of the Company, incorporated by reference to Exhibit 3.2 of the Company's Registration Statement on Form S-1 (Reg. No. 333-193455), filed February 7, 2014 with the Securities and Exchange Commission.
10.1 †	Employment Agreement, effective as of April 18, 2017, by and between the Company and Dominick M. DiPaolo (incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K, filed with the SEC on April 18, 2017.)
10.2	Controlled Equity Offering^{SM} Sales Agreement, dated April 28, 2017, by and between Matinas BioPharma Holdings, Inc. and Cantor Fitzgerald & Co. (incorporated by reference to Exhibit 1.1 to the Current Report on Form 8-K, filed with the SEC on April 28, 2017.)
*31.1	Certification of Chief Executive Officer
*31.2	Certification of Interim Chief Financial Officer
**32.1	Section 1350 Certifications
*101.1	XBRL Instance Document.
*101.2	XBRL Taxonomy Extension Schema Document.
*101.3	XBRL Taxonomy Extension Calculation Linkbase Document.
*101.4	XBRL Taxonomy Extension Definition Linkbase Document.
*101.5	XBRL Taxonomy Extension Label Linkbase Document.
*101.6	XBRL Taxonomy Extension Presentation Linkbase Document.

* Filed herewith.
** Furnished herewith.
† Indicates a management contract or compensation plan, contract or arrangement.

Exhibit 31.1

CERTIFICATION

I, Roelof Rongen, certify that:

1. I have reviewed this report on Form 10-Q of Matinas BioPharma Holdings, Inc.;

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;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 8, 2017

By /s/ Roelof Rongen
Name: Roelof Rongen
Title: Chief Executive Officer

Exhibit 31.2

CERTIFICATION

I, Gary Gaglione, certify that:

1. I have reviewed this report on Form 10-Q of Matinas BioPharma Holdings, Inc.;

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;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 8, 2017

By: /s/ Gary Gaglione
Name: Gary Gaglione
Title: Acting Chief Financial Officer
(Principal Financial and Accounting Officer)

Exhibit 32.1

SECTION 1350 CERTIFICATIONS

Pursuant to 18 U.S.C. §1350 as adopted pursuant to §906 of the Sarbanes-Oxley Act of 2002, the undersigned officers of Matinas BioPharma Holdings, Inc. (the "Company") hereby certify that to their knowledge and in their respective capacities that the Company's quarterly report on Form 10-Q to which this certification is attached (the "Report"), fully complies with the requirements of Section 13(a) or 15(d), as applicable, of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and that the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: August 8, 2017

By: /s/ Roelof Rongen
Name: Roelof Rongen
Title: Chief Executive Officer

Date: August 8, 2017

By: /s/ Gary Gaglione
Name: Gary Gaglione
Title: Acting Chief Financial Officer
(Principal Financial and Accounting Officer)

This certification shall not be deemed "filed" for any purpose, nor shall it be deemed to be incorporated by reference into any filing under the Securities Act of 1933 or the Exchange Act. A signed original of this written statement required by Section 906, or other document authenticating, acknowledging, or otherwise adopting the signature that appears in typed form within the electronic version of this written statement required by Section 906, has been provided to Matinas BioPharma Holdings, Inc. and will be retained by Matinas BioPharma Holdings, Inc. and furnished to the Securities and Exchange Commission or its staff upon request.