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

# FORM 10-Q

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

**For the quarterly period ended September 30, 2018**

**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 [X] No [ ]

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted 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 such files). Yes [X] 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 [X] |
| Non-accelerated filer [ ] (Do not check if a smaller reporting company) | Smaller reporting company [ ] |
| | Emerging growth company [X] |

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.[X]

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

As of November 6, 2018 112,385,590 shares of common stock, $0.0001 par value per share, were outstanding.

MATINAS BIOPHARMA HOLDINGS, INC
FORM 10-Q
Quarter Ended September 30, 2018

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**PART - I FINANCIAL INFORMATION**

**Item 1. FINANCIAL STATEMENTS**

**Matinas BioPharma Holdings Inc.**
**Consolidated Balance Sheets**

| | September 30, 2018 | December 31, 2017 |
|---|---|---|
| | Unaudited | Audited |
| ASSETS | | |
| CURRENT ASSETS | | |
| Cash and cash equivalents | $ 6,632,468 | $ 7,306,507 |
| Restricted cash – security deposit | 200,000 | 155,431 |
| Prepaid expenses | 692,400 | 502,032 |
| Total current assets | 7,524,868 | 7,963,970 |
| Leasehold improvements and equipment - net | 2,097,149 | 1,569,858 |
| In-process research and development | 3,017,377 | 3,017,377 |
| Goodwill | 1,336,488 | 1,336,488 |
| Restricted cash – security deposit | 436,000 | 535,999 |
| TOTAL ASSETS | $ 14,411,882 | $ 14,423,692 |
| LIABILITIES AND STOCKHOLDERS' EQUITY | | |
| CURRENT LIABILITIES | | |
| Accounts payable | $ 303,360 | $ 582,867 |
| Note payable | 319,746 | 170,236 |
| Accrued expenses | 758,340 | 959,147 |
| Stock dividends payable | 1,174,286 | - |
| Deferred revenue | - | 29,937 |
| Lease liability | 83,341 | 26,975 |
| Total current liabilities | 2,639,073 | 1,769,162 |
| LONG TERM LIABILITIES | | |
| Deferred tax liability | 848,185 | 848,185 |
| Deferred rent liability | 501,816 | 455,554 |
| Lease liability - net of current portion | 122,578 | 67,683 |
| Stock dividends payable - long term | - | 601,143 |
| TOTAL LIABILITIES | 4,111,652 | 3,741,727 |
| STOCKHOLDERS' EQUITY | | |
| Series A Convertible preferred stock, stated value $5 per share, 1,600,000 shares authorized as of September 30, 2018 and December 31, 2017, respectively; 1,467,858 and 1,502,858 shares outstanding at September 30, 2018 and December 31, 2017, respectively (liquidation preference - $8,513,576 at September 30, 2018) | 5,583,686 | 5,716,825 |
| Series B Convertible preferred stock, stated value $1,000 per share, 8,000 shares authorized and 7,003 shares outstanding as of September 30, 2018 (liquidation preference - $7,003,000 at September 30, 2018) No shares authorized or issued at December 31,2017 | 6,098,447 | - |
| Common stock par value $0.0001 per share, 250,000,000 shares authorized at September 30, 2018 and December 31, 2017, respectively; 97,697,243 issued and outstanding as of September 30, 2018; 93,371,129 issued and outstanding as of December 31, 2017 | 9,769 | 9,335 |
| Additional paid in capital | 60,926,628 | 56,230,347 |
| Accumulated deficit | (62,318,300) | (51,274,542) |

| | | |
|---|---|---|
| Total stockholders' equity | 10,330,230 | 10,681,965 |
| TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY | $ 14,411,882 | $ 14,423,692 |

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 September 30, | |
|---|---|---|
| | 2018 | 2017 |
| Revenue: | | |
| Contract research revenue | $ - | $ 44,906 |
| Costs and Expenses: | | |
| Research and development | 1,379,525 | 2,013,063 |
| General and administrative | 1,574,712 | 1,440,141 |
| Total costs and expenses | 2,954,237 | 3,453,204 |
| Loss from operations | (2,954,237) | (3,408,298) |
| Other income/(expense), net | 18,660 | 13,584 |
| **Net loss** | **$ (2,935,577)** | **$ (3,394,714)** |
| Preferred stock series A accumulated dividends | (146,786) | (150,786) |
| Preferred stock series B accumulated dividends | (175,075) | - |
| Net loss attributable to common shareholders | $ (3,257,438) | $ (3,545,500) |
| Net loss available for common shareholders per share - basic and diluted | $ (0.03) | $ (0.04) |
| Weighted average common shares outstanding: | | |
| Basic and diluted | 94,697,049 | 92,222,601 |

| | Nine Months Ended September 30, | |
|---|---|---|
| | **2018** | **2017** |
| Revenue: | | |
| Contract research revenue | $ 119,750 | $ 104,781 |
| Costs and Expenses: | | |
| Research and development | 5,095,110 | 6,711,997 |
| General and administrative | 5,504,559 | 5,264,609 |
| Total costs and expenses | 10,599,669 | 11,976,606 |
| Loss from operations | (10,479,919) | (11,871,825) |
| Other income/(expense), net | 23,304 | 13,354 |
| **Net loss** | **$ (10,465,615)** | **$ (11,858,471)** |
| Preferred stock series A accumulated dividends | (440,857) | (462,186) |
| Preferred stock series B accumulated dividends | (196,924) | - |
| Inducement charge from exercise of warrants | - | (16,741,356) |
| Net loss attributable to common shareholders | $ (11,094,396) | $ (29,062,013) |
| Net loss available for common shareholders per share - basic and diluted | $ (0.12) | $ (0.32) |
| Weighted average common shares outstanding: | | |
| Basic and diluted | 94,098,372 | 89,468,153 |

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

**MATINAS BIOPHARMA HOLDINGS, INC.**
**STATEMENT OF STOCKHOLDER'S EQUITY**
**September 30, 2018**

| | Convertible Preferred Stock A | | Convertible Preferred Stock B | | Common Stock | | Additional Paid - in | Accumulated | Total Stockholders' |
|---|---|---|---|---|---|---|---|---|---|
| | (Shares) | (Amount) | (Shares) | (Amount) | (Shares) | (Amount) | Capital | Deficit | Equity |
| Balance as of December 31, 2017 | 1,502,858 | $ 5,716,825 | - | $ - | 93,371,129 | $ 9,335 | $ 56,230,347 | $ (51,274,542) | $ 10,681,965 |
| Stock Based Compensation | - | - | - | - | - | - | 2,317,801 | - | 2,317,801 |
| Issuance of Common Stock as Compensation for services | - | - | - | - | 713,266 | 73 | 534,743 | - | 534,816 |
| Issuance of Common Stock in exchange for preferred shares A | (35,000) | (133,139) | - | - | 350,000 | 35 | 133,104 | - | - |
| Issuance of Common Stock in exchange for preferred shares B | - | - | (997) | (868,221) | 1,994,000 | 199 | 868,022 | - | - |
| Stock Dividends Issued in Common Stock | - | - | - | - | 28,000 | 3 | 13,997 | - | 14,000 |
| ATM Stock Sales (net) | - | - | - | - | 1,240,848 | 124 | 739,032 | | 739,156 |
| Issuance of Preferred Series B net of issuance costs | - | - | 8,000 | 6,966,668 | - | - | - | - | 6,966,668 |
| Issue of warrants to placement agent | - | - | - | - | - | - | 89,582 | - | 89,582 |
| Preferred dividends accrued | - | - | - | - | - | - | - | (587,143) | (587,143) |
| Net Loss for the nine months ended September 30, 2018 | - | - | - | - | - | - | - | (10,456,615) | (10,456,615) |
| Balance as of September 30, 2018 | 1,467,858 | $ 5,583,686 | 7,003 | $ 6,098,447 | 97,697,243 | $ 9,769 | $ 60,926,628 | $ (62,318,300) | $ 10,300,230 |

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

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

| | For the Nine Months Ended September 30, | |
|---|---|---|
| | **2018** | **2017** |
| **Cash flows from operating activities:** | | |
| Net loss | $ (10,456,615) | $ (11,858,471) |
| Adjustments to reconcile net loss to net cash used in operating activities: | | |
| Depreciation and amortization | 156,565 | 56,229 |
| Deferred rent | 46,262 | 97,415 |
| Share based compensation expense | 2,803,018 | 2,239,259 |
| Changes in operating assets and liabilities: | | |
| Prepaid expenses | 258,914 | 51,418 |
| Other assets | - | 5,081 |
| Accounts payable | (279,416) | (134,009) |
| Accrued expenses - other liabilities | (230,744) | (1,120) |
| Net cash used in operating activities | (7,702,016) | (9,544,198) |
| | | |
| **Cash flows from investing activities:** | | |
| Purchases of leasehold improvements and lab equipment | (535,916) | (823,886) |
| Net cash used in investing activities | (535,916) | (823,886) |
| | | |
| **Cash flows from financing activities:** | | |
| Net proceeds from issuance of series B convertible preferred stock | 7,056,250 | - |
| Net proceeds from exercise of warrants | - | 14,834,344 |
| Net proceeds from ATM sales | 739,155 | 641,510 |
| Payments of capital lease liability | (36,769) | (9,383) |
| Payments on note payable | (250,173) | (203,164) |
| Net cash provided by financing activities | 7,508,463 | 15,263,307 |
| | | |
| Net increase (decrease) in cash, cash equivalents and restricted cash | (729,469) | 4,895,223 |
| Cash, cash equivalents and restricted cash at beginning of period | 7,997,937 | 4,797,060 |
| | | |
| Cash, cash equivalents and restricted cash at end of period | $ 7,268,468 | $ 9,692,283 |
| | | |
| Supplemental non-cash financing and investing activities: | | |
| Conversion of preferred stock – Series A | $ 133,139 | $ 350,412 |
| Conversion of preferred stock – Series B | $ 868,022 | $ - |
| Warrants issued to placement agent | $ 89,581 | $ - |
| Stock dividend accrual | $ 587,143 | $ 608,343 |
| Stock dividends issued and converted to common stock | $ 14,000 | $ 5,200 |
| Note payable for insurance premiums | $ 399,683 | $ 383,030 |
| Additional paid-in-capital for modification of warrants | $ - | $ 16,741,356 |
| Equipment acquired under capital lease | $ 147,940 | $ 49,935 |
| Liability of payment of leasehold improvements by landlord | $ - | $ 286,720 |
| Unearned restricted stock grants | $ 126,100 | $ 381,333 |

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

**Matinas BioPharma Holdings, Inc.**
Notes to Unaudited Condensed Consolidated Financial Statements
(Tabular dollars and shares in thousands, except per share data)

**NOTE A – Nature of Business**

**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.

**NOTE B – Liquidity, Plan of Operations and Going Concern**

The Company has experienced net losses and negative cash flows from operations each period since its inception. Through September 30, 2018, the Company had an accumulated deficit of approximately $62.3 million and for the nine months ended September 30, 2018, cash used in operations of $7.7 million. The Company's operations have been financed primarily through the sale of equity securities. The Company's net loss for the nine months ended September 30, 2018 was $10.5 million. As a result, substantial doubt exists about the company's ability to continue as a going concern.

The Company has been engaged in developing its lipid-based cardiovascular product, MAT9001 and its lipid nano-crystal ("LNC") platform delivery technology and a related 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, 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 development of 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.

To continue to fund its operations, on January 13, 2017, the Company completed a warrant tender offer, with gross cash proceeds of $13.5 million and net proceeds of approximately $12.7 million. Additionally, in April 2017, the Company entered into a Controlled Equity Offering℠ 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. As of September 30, 2018, the Company has sold approximately 2,112,000 shares of common stock pursuant to the Controlled Equity Offering℠ Sales Agreement with Cantor generating gross proceeds of over $1.9 million. Through October 31, 2018, the Company has sold approximately 13,221,000 shares of common stock pursuant to the Controlled Equity Offering Sales Agreement with Cantor raising over $10.7 million (see Footnote C).

In June of 2018, the Company completed a Series B Preferred Stock financing and received gross proceeds of approximately $8.0 million.

As of September 30, 2018, the Company had cash and cash equivalents of approximately $6.6 million. We believe the cash and cash equivalents on hand as of September 30, 2018 were sufficient to fund planned operations into April 2019. Subsequent to September 30, 2018, the Company sold approximately 11,109,000 additional shares of common stock, raising approximately $8.8 million in gross proceeds. We believe the total cash and cash equivalents on hand as of the date of this filing are sufficient to fund planned operations through November 2019.

The ability of the Company to continue as a going concern is dependent upon control over our operating expenses, anticipated proceeds from future sales of our common stock through the Controlled Equity Offering and securing additional financing. While the Company believes in the viability of this strategy and believes that the actions presently being taken by the Company provide the opportunity for it to continue as a going concern, there can be no assurance that the Company will be successful in its implementation. In particular, the utilization of the Controlled Equity Offering may not be viable due to market condition and new financing may not be available on acceptable terms, or at all. These consolidated financial statements do not include any adjustments related to the recoverability and classification of asset amounts or the amounts and classification of liabilities that might be necessary if the Company is unable to continue as a going concern.

**NOTE C – Controlled Equity Offering**

On April 28, 2017, the Company entered into a Controlled Equity Offering℠ Sales Agreement, or "sales agreement", with "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 will be acting as sales agent and be paid a 3% commission on each sale.

As of September 30, 2018, the Company has sold approximately 2,112,000 shares raising over $1.9 million in net proceeds. Subsequent to September 30, 2018, approximately 11,109,000 shares have been sold raising approximately $8.5 million in net proceeds.

**NOTE D - Summary of Significant Accounting Policies**

**[1] Basis of Presentation**

The accompanying unaudited consolidated financial statements include the consolidated accounts of Holdings and its wholly owned subsidiaries, BioPharma Inc., and Nanotechnologies, the operational subsidiaries of Holdings. The accompanying unaudited 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, 2017, which are included in the Form 10-K filed with the SEC on March 16, 2018. 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 nine months ended September 30, 2018 are not necessarily indicative of the results that may be expected for any future interim periods or for the year ending December 31, 2018. 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, 2017.

**[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 and goodwill and the valuation and assumptions of Level 3 fair value measurement of financial instruments and determination of stock-based compensation, contingent consideration and all acquired assets and liabilities.

**[3] Cash, Cash Equivalents and Restricted Cash**

The Company considers all highly liquid instruments purchased with original maturity of three months or less to be cash equivalents to the extent the funds are not being held for investment purposes. Cash and cash equivalents include cash on hand, bank demand deposits and overnight sweep accounts used in the Company's cash management program.

Restricted Cash

The Company presents restricted cash with cash and cash equivalents in the Consolidated Statements of Cash Flows. The following table provides a reconciliation of cash and cash equivalents and restricted cash reported in the Consolidated Balance Sheets to the total of the amounts in the Consolidated Statements of Cash Flows as of September 30, 2018, December 31, 2017, September 30, 2017 and December 31, 2016.

| (Dollars in thousands) | September 30, 2018 | December 31, 2017 | September 30, 2017 | December 31, 2016 |
|---|---|---|---|---|
| Cash and cash equivalents | $ 6,632 | $ 7,307 | $ 9,001 | $ 4,105 |
| Restricted cash included in current/long term assets | 636 | 691 | 691 | 692 |
| Cash, cash equivalents and restricted cash in the statement of cash flows | $ 7,268 | $ 7,998 | $ 9,692 | $ 4,797 |

**[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 nine months ended September 30, 2018, the Company's cash balances exceeded the FDIC insurance limit. The Company has not experienced any losses in such accounts.

**[5] Leasehold Improvements and Equipment**

Equipment is stated at cost less accumulated depreciation and amortization. Depreciation and amortization is computed using the straight-line method over the estimated useful lives of the assets. The estimated useful lives of the Company equipment range 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 Accounting Standard Codification 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 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 September 30, 2018.

Since the Company incurred net operating losses in every tax year since inception, all income tax returns are subject to examination and adjustments by the IRS for at least three years following the year in which the tax attributes are utilized.

**[7] Stock-Based Compensation**

Stock-based compensation to employees consist of stock option grants and restricted shares that are recognized in the consolidated statement of operations based on their fair values at the date of grant.

Restricted stock grants are valued at the date of grant using the market price of the stock. It is amortized over the applicable service period.

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 employee option grants utilizing the Black-Scholes pricing model and estimates the fair value of 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 Company accounts for forfeitures as they occur. The term “forfeitures” is distinct from “cancellations” or “expirations” and represents only the unvested portion of the surrendered stock option or warrant.

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, note payable, lease liability 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 net loss per share is computed by dividing net loss available to common shareholders by the weighted average number of shares outstanding during the period. Net loss available to common shareholders represents our net loss plus Series A and Series B Convertible Preferred Stock accumulated dividends. Convertible Preferred Stock accumulated dividends include dividends accumulated for the period (regardless of whether or not the dividends have been declared). For the nine months ended September 30, 2018 and 2017, $637,781 and $462,186 of dividends for the Convertible Preferred Stock are included in the Net loss attributable to common shareholders. Diluted earnings per common share is the same as basic earnings per common share because, as the Company incurred a net loss during each period presented, the potentially dilutive securities from the assumed exercise of all outstanding stock options and warrants and conversion of preferred stock, 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 nine months ended September 30, 2018 and 2017:

| | Three month period Ended September 30, | | Nine month period Ended September 30, | |
|---|---|---|---|---|
| | **2018** | **2017** | **2018** | **2017** |
| Stock options | 11,455 | 11,526 | 11,455 | 11,526 |
| Common stock issuable upon conversion of preferred stock | 28,685 | 15,078 | 28,685 | 15,078 |
| Warrants | 5,802 | 5,961 | 5,802 | 5,961 |
| **Total** | **45,942** | **32,565** | **45,942** | **32,565** |

**[10] Revenue Recognition**

The Company applies ASC 606 to its current research grant. The Company currently has a research grant with its customer, the Cystic Fibrosis Foundation (“CFF”). There are no contract assets or liabilities associated with this grant. The contract has a single performance obligation which is the provision of research and development services related to the Company’s Cystic Fibrosis development program (the “Program”). The Company provides CFF with progress reports for each study it performs, summarizing the progress toward achieving the goals of the Program, and is required to submit a final progress report within 30 days after the completion of the Program. Subject to the submission and acceptance of milestone progress reports, the Company may be entitled to an additional payments of $0.1 million in the aggregate. As this contract is currently the Company’s only contract with a customer, disaggregation of revenue is not required.

**[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 are included as part of general and administrative expenses in our consolidated statements of operations.

**[12] Recent Accounting Pronouncements**

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. The Company is in the process of implementing changes to its systems and processes in conjunction with its review of lease agreements. The Company will adopt ASU 2016-02 effective January 1, 2019 and expects to elect certain available transitional practical expedients.

In August 2016, the FASB issued ASU No. 2016-15, “Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments”, 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 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 adopted the guidance in the first quarter of 2018. The adoption did not have a material impact on our consolidated financial statements.

In November 2016, the FASB issued ASU No. 2016-18 “Statement of Cash Flows (Topic 230): Restricted Cash” which requires that restricted cash and restricted cash equivalents be included as components of total cash and cash equivalents as presented on the statement of cash flows. This amendment is effective for periods beginning after December 15, 2017 for public entities. The Company adopted the guidance in the first quarter of 2018 on a retrospective basis and provided the required disclosure in Note D (3).

In January 2017, the FASB issued ASU No. 2017-04 “Intangibles – Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment”. The amendment simplifies 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 for the 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 statements.

In May 2017, the FASB issued ASU No. 2017-09 “Compensation – Stock Compensation (Topic 718): Scope of Modification Accounting”, which provides clarity and reduces both diversity in practice and cost and complexity when applying guidance in Topic 718. This amendment provides guidance about which changes to the terms or conditions of a share-based payment award require an entity to apply modification accounting in Topic 718. The amendments are effective for all entities for annual periods beginning after December 15, 2017. The Company adopted the guidance in the first quarter of 2018. The adoption did not have a material impact on our consolidated financial statements.

In June 2018, the FASB issued ASU No. 2018-07, “Compensation - Stock Compensation (Topic 718): Improvements to Nonemployee Share-Based Payment Accounting.” These amendments expand the scope of Topic 718, Compensation - Stock Compensation (which currently only includes share-based payments to employees) to include share-based payments issued to nonemployees for goods or services. Consequently, the accounting for share-based payments to nonemployees and employees will be substantially aligned. The ASU supersedes Subtopic 505-50, Equity - Equity-Based Payments to Non-Employees. This standard is effective for public companies for annual periods beginning after December 15, 2018, including interim periods within those fiscal years, with early adoption permitted as long as ASU 2014-09 has been adopted. We are currently considering the impact of adoption but preliminarily believes that it will not have a material impact on our consolidated financial statements.

In July 2018, the FASB issued Accounting Standards Update No. 2018-10, “Codification Improvements to Topic 842, Leases”. The amendments provide additional clarification and implementation guidance on certain aspects of the previously issued ASU No. 2016-02 and have the same effective and transition requirements as ASU 2016-02. Upon the effective date, ASU 2016-02 will supersede the current lease guidance in ASC Topic 840, *Leases*. 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.

In August 2018, the FASB issued ASU 2018-13, “Changes to Disclosure Requirements for Fair Value Measurements”, which will improve the effectiveness of disclosure requirements for recurring and nonrecurring fair value measurements. The standard removes, modifies, and adds certain disclosure requirements, and is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2019. We will be evaluating the impact this standard will have 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 further analysis 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, further analysis 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 September 30, 2018, we assessed goodwill impairment by performing a qualitative test for our reporting unit. During our qualitative reviews, 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 assessments, it was determined that it is more-likely- than-not that the fair value of the reporting units is greater than their carrying amounts. There was no impairment of goodwill during the nine months ended September 30, 2018 and 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 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 during the nine months ended September 30, 2018 and 2017, respectively.

**[14] Deferred Rent**

The Company records rent on a straight line basis. Differences between monthly rent expenses and rent payments are recorded as deferred rent. Deferred rent is recorded in either an asset account (e.g., other current or noncurrent assets) when the cumulative difference between rent expenses and rent payments as of a balance sheet date is negative or a liability account (e.g., other current or noncurrent liabilities) when the cumulative difference is positive. Due to our escalating rents, the Company is currently recording a deferred rent liability. Deferred rent balances are classified as long-term liabilities in the accompanying consolidated balance sheets based upon the period when reversal of the liability is expected to occur.

**NOTE E – Leasehold Improvements and Equipment**

Leasehold improvements and equipment, summarized by major category, consist of the following ($ in thousands) for the nine months ended September 30, 2018 and year ended December 31, 2017:

| | September 30, 2018 | December 31, 2017 |
|---|---|---|
| Lab equipment | $ 1,054 | 577 |
| Furniture and fixtures | 20 | 20 |
| Equipment under capital lease | 264 | 117 |
| Leasehold improvements | 1,156 | 1,097 |
| Total | 2,494 | 1,811 |
| Less: accumulated depreciation and amortization | 397 | 241 |
| Leasehold improvements and equipment, net | $ 2,097 | $ 1,570 |

Depreciation and amortization expense for the nine months ended September 30, 2018 and year ended December 31, 2017 was approximately $156,000 and $100,000, respectively.

The Company has entered into capital leases for lab equipment. During the nine months ended September 30, 2018 and 2017 the Company recognized interest expense of approximately $9,400 and $2,500, respectively, associated with the lease payments.

**NOTE F – Accrued Expenses**

Accrued Expenses, summarized by major category, consist of the following for the nine months ended September 30, 2018 and year ended December 31, 2017:

| | September 30, 2018 | December 31, 2017 |
|---|---|---|
| Accrued payroll and incentives | $ 461 | $ 721 |
| Other accruals | 297 | 238 |
| Total | $ 758 | $ 959 |

**NOTE G – Stockholders' Equity**

**Preferred Stock**

In accordance with the Certificate of Incorporation, there are 10,000,000 authorized preferred shares at a par value of $0.0001. In connection with the 2016 Private Placement, on July 26, 2016, the Company filed the Series A Certificate of Designation with the Secretary of the State of Delaware to designate the preferences, rights and limitations of the Series A Preferred Shares. Pursuant to the Series A Certificate of Designation, the Company designated 1,600,000 shares of the Company's previously undesignated preferred stock as Series A Preferred Stock. In connection with the 2018 offering, on June 19, 2018, the Company filed the Series B Certificate of Designation with the Secretary of the State of Delaware to designate the preferences, rights and limitations of the Series B Preferred Shares. Pursuant to the Series B Certificate of Designation, the Company designated 8,000 shares of the Company's previously undesignated preferred stock as Series B Preferred Stock.

**Series A**

As of September 30, 2018, the Company had 1,467,858 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 Series A Certificate of Designation, the Series A Preferred Shares accrue dividends at a rate of 8.0% once per year on the anniversary date of the Initial Closing, payable and only payable to the holders of such Series A Preferred Shares in shares of common stock upon conversion. Dividends of approximately $1,174,000 have been accrued as paid-in-kind through September 30, 2018 and approximately $21,000 has been earned and converted into common stock at the election of the holders. 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.

Pursuant to the Series A Certificate of Designation, the liquidation value of a Series A Preferred Share is equal to the stated value of $5.00 per share (as adjusted for stock splits, stock dividends, combinations or other recapitalizations of the Series A Preferred Stock) plus any earned but unpaid dividends.

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, subject in all cases to a respective to a cap of $ 25 million per calendar year, 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"), subject in all cases to a cap of $ 10 million per year. 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 September 30, 2018, 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*.

**Series B**

On June 19, 2018, the Company entered into a placement agency agreement with ThinkEquity, a Division of Fordham Financial Management, Inc., as placement agent , relating to the offering, issuance and sale of up to 8,000 shares of the Company's Series B Convertible Preferred Stock, par value $0.0001 per share with a stated value of $1,000 per share which are convertible into an aggregate of up to 16,000,000 shares of the Company's common stock, par value $0.0001 per share at an initial conversion price of $0.50 per share of Common Stock and an additional up to 7,200,000 shares of Common Stock issuable upon payment of dividends under the Series B Preferred Stock . The offering closed on June 21, 2018 raising a gross amount of $8 million with a net raise of $7.1 million after deducting issuance costs. The placement agent received 7% commission on the gross proceeds, 1% of the gross proceeds to cover non- accountable expenses and 240,000 warrants fair valued at approximately $89,000, that are exercisable over a 5 year period at an exercise price of $0.75 per share "2018 Placement Agent Warrants". As of September 30, 2018 there were 7,003 Series B Preferred Shares outstanding.

Conversion

*Optional Conversion*. Subject to the Beneficial Ownership Limitation, each share of Series B Preferred will be convertible into shares of common stock at any time at the option of the holder at an initial conversion price of $0.50 per share subject to adjustment for reverse splits, stock combinations and similar changes as provided in the certificate of designation. Dividends will not accrue and will not be paid following optional conversion.

*Automatic Conversion.* Subject to the Beneficial Ownership Limitation described below, each share of Series B Preferred shall automatically convert into 2,000 shares of common stock at an initial conversion price of $0.50 per share upon the earlier of (i) the first FDA approval of one of our product candidates, (ii) the 36-month anniversary of the COD Effective Date or (iii) the consent to conversion by holders of at least 50.1% of the outstanding shares of Series B Preferred. In the event the Series B Preferred automatically converts into common stock prior to the 36 month anniversary of the COD Effective Date, the holder on the date of such conversion shall also be entitled to receive those dividends which would have been payable after the conversion date, as if the shares of Series B Preferred had remained unconverted and outstanding through the 36 month anniversary of the COD Effective Date. Such dividend amount shall be payable as set forth above in shares of common stock upon such automatic conversion.

*Beneficial Ownership Limitation*. We may not effect any optional or automatic conversion of the Series B Preferred, or issue shares of common stock as dividends and a holder does not have the right to convert any portion of the Series B Preferred to the extent that, after giving effect to such conversion such holder would beneficially own in excess of the Beneficial Ownership Limitation, or such holder, together with such holder's affiliates, and any persons acting as a group together with such holder or affiliates, would beneficially own in excess of the Beneficial Ownership Limitation. The "Beneficial Ownership Limitation" is 4.99% of the number of shares of common stock outstanding immediately after giving effect to the issuance of shares of common stock issuable upon conversion of Series B Preferred held by the applicable holder. A holder may, prior to issuance of the Series B Preferred or, with 61 days prior notice to us, elect to increase or decrease the Beneficial Ownership Limitation; provided, however, that in no event may the Beneficial Ownership Limitation exceed 9.99%.

Liquidity Value and Dividends:

*Dividends*. Subject to the Beneficial Ownership Limitation described above, holders of the Series B Preferred will be entitled to receive dividends payable only to the holders of Series B preferred shares in common stock upon conversion as follows: (i) a number of shares of common stock equal to 10% of the shares of common stock underlying the Series B Preferred then held by such holder on the 12 month anniversary of the filing of the certificate of designation for the Series B Preferred with the Secretary of State of the State of Delaware ("COD Effective Date" which is June 19, 2018), (ii) a number of shares of common stock equal to 15% of the shares of common stock underlying the Series B Preferred then held by such holder on the 24-month anniversary of the COD Effective Date and (iii) a number of shares of common stock equal to 20% of the shares of common stock underlying the Series B Preferred then held by such holder on the 36-month anniversary of the COD Effective Date. In the event a purchaser in this offering no longer holds Series B Preferred as of the 12-month anniversary, the 24-month anniversary or the 36-month anniversary, such purchaser will not be entitled to receive any dividends on such anniversary date.

In the event a fundamental transaction is consummated prior to the automatic conversion of the Series B Preferred, the dividends will be accelerated and paid to the extent not previously paid. In addition, holders of Series B Preferred will be entitled to receive dividends equal, on an as-if-converted to shares of common stock basis, and in the same form as dividends actually paid on shares of the common stock when, as, and if such dividends are paid on shares of the common stock. Notwithstanding the foregoing, to the extent that a holder's right to participate in any dividend in shares of common stock to which such holder is entitled would result in such Holder exceeding the Beneficial Ownership Limitation, then such holder shall not be entitled to participate in any such dividend to such extent and the portion of such shares that would cause such holder to exceed the Beneficial Ownership Limitation shall be held in abeyance for the benefit of such holder until such time, if ever, as such holder's beneficial ownership thereof would not result in such holder exceeding the Beneficial Ownership Limitation.

Pursuant to the Series B Certificate of Designation, the liquidation value of a Series B Preferred Share is equal to the stated value of $1,000 per share (as adjusted for stock splits, stock dividends, combinations or other recapitalizations of the Series A Preferred Stock) plus any earned but unpaid dividends.

Classification:

These Series B 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 September 30, 2018, the Company had outstanding warrants to purchase an aggregate of 5,802,256 shares of common stock at exercise prices ranging from $0.50 to $2.00 per share, which includes warrants to purchase an aggregate of 240,000 shares of "2018 Placement Agent Warrants".

The Warrants, other than the 2018 Placement Agent Warrants, were exercisable immediately upon issuance and have a five-year term. The 2018 Placement Agent Warrants are exercisable on the 1-year anniversary of the issuance date, June 21, 2019, and have a five-year term. Once exercisable, 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 September 30, 2018 is presented below, all of which are fully vested. During the three months ended September 30, 2018, 395,575 of these warrants have expired.

| | Shares (in thousands) |
|---|---|
| **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) |
| **Warrants exercised third quarter, 2017** | - |
| **Warrants exercised fourth quarter, 2017** | (3) |
| **Total Warrants Outstanding at December 31, 2017** | 5,958 |
| **Warrants exercised first and second quarters, 2018** | - |
| **Warrants issued second quarter, 2018** | 240 |
| **Warrants exercised third quarter, 2018** | - |
| **Warrants expired third quarter, 2018** | (396) |
| **Total Warrants Outstanding at September 30, 2018** | 5,802* |
| ***Weighted average of exercise price for outstanding warrants is $ 0.70** | |

After the effect of certain cash and cashless exercises of warrants, the Company received net cash proceeds of approximately $12.7 million from the warrants tendered on January 13, 2017 and approximately $2.1 million for warrants exercised outside the tender offer, for a total of approximately $14.8 million of proceeds in the first quarter of 2017. No warrants were exercised in the first, second and third quarters of 2018.

**NOTE H – 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 approximately 4.9 million shares of common stock available 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 ($ and shares in thousands):

| | Three Months Ended September 30, | | Nine Months Ended September 30, | |
|---|---|---|---|---|
| | 2018 | 2017 | 2018 | 2017 |
| Research and Development | $ 101 | $ 280 | $ 787 | $ 785 |
| General and Administrative | 404 | 271 | 2,016 | 1,454 |
| Total | $ 505 | $ 551 | $ 2,803 | $ 2,239 |

| | Reserved for Issuance | Awards Issued | Awards Available for Grant |
|---|---|---|---|
| **2013 Equity Compensation Plan** | 17,890 | 13,000* | 4,890 |

* includes both restricted stock grants and option grants

The following table summarizes the Company' stock option activity and related information for the period from December 31, 2017 to September 30, 2018 (number of options in thousands):

| | Number of Options | Weighted Average Exercise Price |
|---|---|---|
| Outstanding at December 31, 2017 | 11,433 | $ 1.40 |
| Granted | 2,032 | 0.77 |
| Forfeited | 1,013 | 2.31 |
| Cancelled | 997 | 1.31 |
| Outstanding at September 30, 2018 | 11,455 | $ 1.21 |

As of September 30, 2018, the number of vested and exercisable shares underlying outstanding options was 8,531,493 at a weighted average exercise price of $1.18. The aggregate intrinsic value of in the-money options outstanding as of September 30, 2018 was approximately $1.5 million. The aggregate intrinsic value is calculated as the difference between the Company's closing stock price of $0.92 on September 30, 2018, and the exercise price of options, multiplied by the number of options. As of September 30, 2018, there was approximately $2.6 million of total unrecognized share-based compensation. Such costs are expected to be recognized over a weighted average period of approximately 2.27 years.

All options expire ten years from date of grant. The majority of the options granted to employees vest entirely and evenly over three years. The Company changed its standard vesting terms at the end of 2017 and recent option grants to employees vest over four years with 25% of the shares vesting on the first annual anniversary and the remaining shares vesting in 36 equal monthly installments. 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 months and nine months ended September 30, 2018 and 2017:

| | For the Three Months Ended September 30, | | For the Nine Months Ended September 30, | |
|---|---|---|---|---|
| | 2018 | 2017 | 2018 | 2017 |
| Volatility | 105.85-109.95% | 67.09%-70.70% | 105.85-109.95% | 67.09%-82.26% |
| Risk-free interest rate | 2.84-3.00% | 2.015%-2.75% | 2.29-3.00% | 1.89%-2.22% |
| 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. The Company uses the "simplified method" described in Staff Accounting Bulletin (SAB) 107 to estimate expected term of share option grants for employees. For non-employee options, the expected term is the contractual term.

The expected stock price volatility assumption is based on the historical volatility of the Company's common stock price.

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.

Detailed below is the restricted stock grant activity since the inception of the Company through September 30, 2018:

| | Shares | Expense | Weighted Average Grant Date Fair Value | Weighted Average Remaining Term (years) |
|---|---|---|---|---|
| Unvested at December 31, 2017 | - | - | - | - |
| Granted | 713,266 | $ 534,804 | 0.75 | |
| Vested | 521,044 | $ 413,704 | 0.79 | |
| Forfeited | - | $ - | - | |
| Unvested at September 30, 2018 | 192,222 | $ 121,100 | 0.63 | 0.5 |

As of September 30, 2018, there was $121,100 of total unrecognized compensation cost related to non-vested restricted stock grants, which are expected to be recognized over a weighted-average period of 0.5 years.

**NOTE I – PREPAID EXPENSES**

Prepaid expenses, summarized by major category, consist of the following ($ in thousands) for the nine months ended September 30, 2018 and year ended December 31, 2017:

| | September 30, 2018 | December 31, 2017 |
|---|---|---|
| Insurance premium | $ 450 | $ 296 |
| Non-employee stock compensation | 121 | 71 |
| Vendor services/other | 121 | 135 |
| | $ 692 | $ 502 |

**NOTE J – 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.

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. The lease started on August 1, 2017, upon completion of construction. The monthly rent starts at approximately $43,000, increasing to approximately $64,000 in the final year.

The Company records rent expense on a straight-line basis. Rent expense for the nine months ended September 30, 2018 and 2017 was approximately $559,000 and $317,000, respectively.

Listed below is a summary of future minimum rental payments:

| Year Ending December 31, | Lease Commitments ($ in thousands) |
|---|---|
| Remainder of 2018 | $ 174 |
| 2019 | 707 |
| 2020 | 732 |
| 2021 | 657 |
| 2022 | 610 |
| Total future minimum lease payments | $ 2,880 |

The Company was obligated to provide a security deposit of $300,000 to obtain the office lease space. This deposit was reduced by $100,000 in 2016 and 2015 and reduced down to approximately $50,000 (including interest) in 2018 ($55,457 was collected in April of 2018). The balance of $50,000 is accounted for as a long term asset, since it is not recoverable until the end of the lease in 2021.

To obtain the laboratory and facility site, the Company was obligated to provide a security deposit of approximately $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. As of September 30, 2018, $200,000 of this deposit is classified as a current asset with the balance of the deposit classified as a long term asset.

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 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 Series A Certificate of Designation 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 2020, 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 Series A Certificate of Designation), 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 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 per year, beginning in the fourth quarter 2016 and each quarter during 2017 and 2018.

In August 2018, the Company entered into a Finance Agreement in the amount of $399,683, to fund the premium payments for the Director and Officer Liability policy. The term of this agreement is ten months and ends May 2019. Monthly payments including interest at 2.4% are $40,409.

Through our acquisition of Aquarius, 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 LNC platform delivery technology. The Amended and Restated Exclusive License Agreement between Aquarius 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.

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.

**NOTE K – RELATED PARTY**

Mr. Adam Stern, a director of the Company, has been Head of Private Equity Banking at Aegis Capital Corp. and CEO of SternAegis Ventures since 2012. The Company has contracted with Aegis Capital in all of its finance raises from 2013 through 2017. Each of these transactions have been disclosed in our previous 10K filings. A summary of these transactions are as follows:

- Aegis Capital Corp. acted as the Placement Agent for the Company's 2013 Private Placement which raised gross proceeds of $15 million. As the Placement Agent, Aegis Capital Corp. received an agent fee of $1.5 million and a non-accountable expense allowance of $450,000. In addition, the Placement Agent was issued 750,000 warrants at an exercise price of $2.00 per share and 1,500,000 warrants at an exercise price of $1.00 per share.

- Aegis Capital Corp. acted as the Placement Agent for the Company's 2015 Private Placement which raised gross proceeds of $10 million. The Placement Agent received a cash fee of $1 million and a non-accountable expense allowance of $300,000. The Placement agent was issued 2 million warrants to purchase shares at $ 0.50 per share and 2 million warrants to purchase shares at $0.75 a share.

- Aegis Capital Corp. acted as the Placement Agent for the Company's 2016 Series A Preferred Share private placement which raised gross proceeds of $8 million. The Placement Agent was paid a cash fee of $800,000 and non-accountable expenses of $240,000. In addition, 1,600,000 warrants were issued to the Placement Agent at an exercise price of $0.50 per share.

- Aegis Capital Corp. was retained as our Warrant Agent for the Company's 2017 Offer to Amend and Exercise warrants, which raised approximately gross proceeds of $13.5 million. The Warrant Agent received a fee of 5% of the cash exercise prices paid by the holders of the warrants, excluding placement agent warrants. In addition, Aegis capital was reimbursed for reasonable out-of-pocket expenses and attorney's fees, including a $35,000 non-accountable expense allowance.

Aegis Capital Corp. acted as a selected dealer for our public offering in June 2018. ThinkEquity, a division of Fordham Financial Management, Inc., acted as the Company's exclusive placement agent in connection with this offering. The Company agreed to pay the placement agent a total cash fee equal to 7% of the public offering price for the Series B Preferred plus a non-accountable expense allowance equal to 1.0% of the gross proceeds raised in this offering. In addition, the Company agreed to issue placement agent warrants to the placement agent to purchase that number of shares of common stock equal to 1.5% of the aggregate number of shares of common stock underlying the shares of Series B Preferred sold in the offering (not including any shares payable pursuant to the contemplated dividend thereunder). The placement agent warrants will be exercisable at any time and from time to time, in whole or in part, during the four-year period commencing one year from the effective date of the offering, at a price per share equal to $0.75. The placement agent warrants provide for registration rights (including a one-time demand registration right and unlimited piggyback rights), a cashless exercise option, customary anti-dilution provisions (for stock dividends and splits and recapitalizations) consistent with FINRA Rule 5110, and further, the number of shares underlying the placement agent warrants shall be reduced if necessary to comply with FINRA rules or regulations. The Company also reimbursed the placement agent for its legal fees and expense in the amount of up to $75,000.

Our former CEO, as part of his separation agreement (disclosed in our 2017 10K filing), is eligible to receive 15 months of severance at his former salary. The total severance expense of $400,000 has been accounted for during the nine months ended September 30, 2018.

**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, 2017 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, including MAT9001 and MAT2203;
- 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 dependence on product candidates, which are still in an early development stage;
- our reliance on proprietary LNC drug delivery technology platform, which is licensed to us by Rutgers University;
- our ability to manufacture GMP 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 product candidates and obtain approval from the FDA or other regulatory agents in different jurisdictions;
- our expectations of the attributes of our product and development candidates, including pharmaceutical properties, efficacy, safety and dosing regimens;
- our dependence on third-parties, including third-parties to manufacture and third-party CROs (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 retain and recruit 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, whether alone or through potential future collaborators;

- our ability to successfully commercialize, and our expectations regarding future therapeutic and commercial potential with respect to, our product candidates;

- the accuracy of our estimates regarding expenses, ongoing losses, future revenue, capital requirements and our needs for or ability to obtain additional financing;

- developments and projections relating to our competitors or our industry;

- our ability to adequately support growth; and

- the factors listed under the headings "Risk Factors" in our Annual Report on Form 10-K for the year ended December 31, 2017, 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 currently focused on (i) the development of MAT9001 for abnormalities in blood lipids, referred to as dyslipidemia, and the treatment of cardiovascular and metabolic disease, and (ii) enabling the delivery of life-changing medicines using our unique and proprietary, lipid nano-crystal ("LNC") platform technology, including development of MAT2203, our lead antifungal platform drug candidate.

Our lead cardiovascular product is MAT9001, a uniquely engineered, prescription-only omega-3 fatty acid medication comprising docosa-pentaenoic acid (DPA) and other omega-3 fatty acids. We have specifically designed MAT9001 with a goal of providing a differentiated pharmacotherapy for the treatment of dyslipidemia and cardiovascular disease. We submitted an Investigational New Drug application, or IND, to the Food and Drug Administration (FDA) for MAT9001 in October 2014 and a comparative PK/PD Phase 2-like study with 42 enrolled patients was completed in June 2015. The study showed that MAT9001 demonstrated superiority versus Vascepa® (icosapent ethyl) in reducing lipids, triglycerides, apolipoproteins and PCSK9 levels without an associated increase in LDL cholesterol. Following Amarin Corporation's recent announcement of topline data from its REDUCE-IT outcomes study of Vascepa, we are evaluating potential development pathways for MAT9001 in order to capitalize on its potentially differentiated and best-in-class product profile. We expect to pursue an initial indication for the treatment of highly elevated triglycerides (greater than or equal to 500 mg/dL) or severe hypertriglyceridemia, and additional potential indications are being discussed with key opinion leaders and regulatory experts.

Our LNC delivery technology platform, licensed from Rutgers University on an exclusive worldwide basis, utilizes lipid nano-crystals which can encapsulate small molecules, nucleic acid polymers such as oligonucleotides, vaccines, peptides, proteins and other medicines potentially making them safer, more tolerable, less toxic and orally bioavailable. The ability of our LNC delivery technology to efficiently deliver drugs intracellularly results in the targeted and safe delivery of pharmaceuticals directly to the site of infection or inflammation as well as the potential to treat a variety of cell-based pathogens, diseases and conditions. We believe our LNC delivery technology provides us with a stable, safe, 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 focused on leveraging our delivery platform in developing MAT2203, a novel formulation of the potent antifungal drug amphotericin B within the anti-infective space and on identifying strategic partners whose drug candidates and molecules, in combination with our delivery technology, present the greatest value and innovation while addressing significant markets of unmet medical need, specifically in the gene therapy space.

We believe initially focusing our internal development on MAT2203 within the anti-infective market has distinct advantages for the development of products, 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, particularly for systemic disease;

- 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.

MAT2203 is being positioned for further development for the treatment and prevention of invasive fungal infections (IFIs). We further believe that pursuing strategic collaborations to broaden application of our LNC delivery technology into areas of innovative medicine, such as gene therapy, provides the most efficient and cost-effective strategy to increase the utilization of our platform.

We have incurred losses for each period from inception. For the nine months ended September 30, 2018 and 2017 our net loss was

approximately $10.5 million and $11.9 million, respectively. As of September 30, 2018, our accumulated deficit was approximately $62.3 million. 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, MAT9001, and MAT2501 and any other product candidates we choose to develop based upon our LNC delivery technology platform. Accordingly, we will need additional financing to support our 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. As a result, substantial doubt exists about the Company's ability to continue as a going concern. 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.

**Financial Operations Overview**

***Revenue***

We generated Contract Research Revenue in the amount of approximately $120 thousand for the nine months ended September 30, 2018 versus $105 thousand in the same period of 2017. 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 the fourth quarter of 2018 or the conclusion of the study.

***Research and Development Expenses***

Research and development expenses consist of costs incurred for the development of our product candidates MAT9001, MAT2203 and MAT2051 as well as for the development of our LNC delivery technology and, which include:

- the cost of conducting pre-clinical and clinical study 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 nine months ended September 30, 2018 and 2017. 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 September 30, | | Nine months ended September 30, | |
|---|---|---|---|---|
| | 2018 | 2017 | 2018 | 2017 |
| | ($ in thousands) | | ($ in thousands) | |
| Direct research and development expenses: | | | | |
| Manufacturing process development | $ 58 | $ 56 | $ 398 | $ 218 |
| Preclinical trails | 249 | 261 | 856 | 603 |
| Clinical development | 6 | 467 | 441 | 2,642 |
| Regulatory | 19 | 53 | 111 | 181 |
| Internal staffing, overhead and other | 1,048 | 1,176 | 3,289 | 3,068 |
| Total research and development | $ 1,380 | $ 2,013 | $ 5,095 | $ 6,712 |

Manufacturing process development expenses increased in both period comparisons due to expenses related to the development of an enhanced dosage delivery form for MAT2203. Preclinical trials also increased over the nine-month period due to additional MAT2203 animal studies. The decline in clinical development was due to a major human study that ended in the prior year.

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. However, there was a decline in overhead and regulatory expenses during the three month period due to employee terminations and reduction in clinical work, respectively. In addition, we will look to strategically expand the use of our drug platform technology through additional development work. During 2018, we are focused on enhancing our dosage formulation for MAT2203, starting new Phase II studies for MAT2203 and moving our delivery platform forward in development.

***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, insurance, investor relations expenses, professional fees for legal, patent review, consulting and accounting/audit services.

We anticipate that our general and administrative expenses will increase during 2018 due to the increased expenses related to our status as a publicly traded company, including expenses in support of compliance with the requirements of Section 404 of the Sarbanes Oxley Act, an increase in investor relations, protection of our intellectual property and insurance costs.

***Other income/(expense), net***

Other income/(expense), net is largely comprised of interest income, interest expense and franchise taxes.

**Application of Critical Accounting Policies**

Our discussion and analysis of our financial condition and results of operations are based on our financial statements, which have been prepared in accordance with U.S. generally accepted accounting principles, or U.S. GAAP. The preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities and expenses and the disclosure of contingent assets and liabilities in our financial statements. On an ongoing basis, we evaluate our estimates and judgments. We base our estimates on historical experience, known trends and events, and various other factors that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

Our significant accounting policies are described in more detail in the notes to our financial statements appearing elsewhere in this Quarterly Report.

***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 September 30, 2018 and 2017.

| | 2018 | 2017 | Increase (Decrease) |
|---|---|---|---|
| **Revenues** | $ - | 45 | (45) |
| **Cost and expenses:** | | | |
| Research and development | $ 1,380 | $ 2,013 | $ (633) |
| General and administrative | 1,574 | 1,440 | 134 |
| Total cost and expenses | $ 2,954 | $ 3,453 | $ (499) |

Comparison of Nine Months Ended September 30, 2018 and 2017.

| | 2018 | 2017 | Increase (Decrease) |
|---|---|---|---|
| **Revenues** | $ 120 | 105 | 15 |
| **Cost and expenses:** | | | |
| Research and development | $ 5,095 | $ 6,712 | $ (1,617) |
| General and administrative | 5,504 | 5,265 | 239 |
| Total cost and expenses | $ 10,599 | $ 11,977 | $ (1,378) |

**Revenues:** Revenue for the three months and nine months ended September 30, 2018 were approximately $0 and $120,000, respectively, compared to $45,000 and $105,000 for the prior periods. 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 lasts into the fourth quarter of 2018 or the conclusion of the study.

**Research and Development expenses:** Research and Development expense for the three months and nine months ended September 30, 2018 decreased approximately $663,000 and $1,600,000 compared to the prior year periods. This decrease was primarily due to a decrease in spending on clinical studies for MAT2203. In the longer term, we expect research and development expenses to increase as we conduct additional clinical studies for our product candidates.

**General and Administrative expenses:** General and Administrative expenses for the three months and nine months ended September 30, 2018 increased approximately $134,000 and $239,000, respectively, and due to an increase in compensation and severance costs. General and administrative expenses are expected to increase for remainder of 2018 primarily due to expenses associated with being a public company on a national stock exchange and costs related to our compliance with the Sarbanes Oxley Act as we grow our operations in 2019.

***Sources of Liquidity***

We have funded our operations since inception through sales of our preferred stock, our common stock, common stock warrants and ATM sales. As of September 30, 2018, we have raised a total of approximately $58.9 million in gross proceeds and $52.3 million net, from sales of our equity securities.

As of September 30, 2018, we had cash and cash equivalents totaling $6.6 million.

On April 28, 2017, the Company entered into a Controlled Equity Offering℠ 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. Through September 30, 2018, we raised approximately $1.9 million in net proceeds through sales of 2,112,110 shares of our common stock under our ATM. From October 1, 2018 through October 31, 2018, we raised approximately an additional $8.5 million in net proceeds through sales of 11,109,000 shares of common stock under our ATM.

As of October 31, 2018, we had cash and cash equivalents totaling $14.3 million.

As of September 30, 2018, we had an accumulated deficit of approximately $62.3 million, working capital of approximately $4.9 million and cash and cash equivalents totaling approximately $6.6 million.

***2017 Warrant Tender***

On January 13, 2017, we completed our 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.

***Series B Preferred Stock***

On June 21, 2018, we completed a sale of 8,000 shares of Series B Preferred Stock, raising a gross amount of $ 8.0 million and a net amount of approximately $7.1 million.

***Cash Flows***

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

| | Nine Months Ended September 30, | |
|---|---|---|
| | **2018** | **2017** |
| Cash used in operating activities | $ (7,702) | $ (9,544) |
| Cash used in investing activities | (536) | (824) |
| Cash provided by financing activities | 7,508 | 15,263 |
| Net decrease in cash, cash equivalents and restricted cash | $ (730) | $ 4,895 |

***Operating Activities***

We have incurred significant costs in the area of research and development, including clinical supply manufacturing, regulatory and clinical development costs and costs associated with being a public company. Net cash used in operating activities for the nine months ended September 30, 2018 was approximately $7.7 million, which includes a net loss of approximately $10.5 million, offset by non-cash expenses of approximately $3.0 million principally related to share based compensation expense of $2.8 million and depreciation and amortization of $0.1 million, and approximately $0.2 million of cash used in the change in net working capital items principally related to an decrease in accounts payable and accrued expenses of $0.5 million, partially offset by an increase in prepaid expenses of $0.3 million.

Net cash used in operating activities for the nine months ended September 30, 2017 was approximately $9.5 million, which includes a net loss of approximately $11.9 million, offset by non-cash expenses of approximately $2.4 million principally related to share based compensation expense of $2.2 million, and deferred rent of $0.1 million, and approximately $0.1 million of cash used in the change in net working capital items principally related to an decrease in accounts payable and accrued expenses of $0.1 million, partially offset by an increase in prepaid expenses of $0.05 million.

***Investing Activities***

Net cash used in investing activities for the nine months ended September 30, 2018 and 2017 of approximately $0.5 million and $0.8 million, respectively, was for equipment.

***Financing Activities***

Net cash provided by financing activities of $7.5 million for the nine months ended September 30, 2018 was primarily due to the Series B Preferred Share financing and sales of our common stock under our ATM partially offset by a reduction of payments of notes payables. Net cash provided by financing activities of $15.3 million for the nine months ended September 30, 2017 is primarily due to completion of our warrant tender over noted above.

***Funding Requirements and Other Liquidity Matters***

MAT9001, MAT2203, MAT2501 and our LNC delivery platform 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:

- Initiate and conduct preclinical and clinical studies of MAT9001, our lead cardiovascular and metabolic drug candidate;
- Initiate and conduct a planned Phase 2 clinical trial of MAT2203, our lead LNC-technology based product candidate;
- initiate and continue the research and development of our other product candidates and potential product candidates, including potential clinical trials of MAT2501;
- seek to discover and develop additional product candidates using our LNC 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, particularly after we exit "emerging growth company" status.

As of September 30, 2018, we had cash and cash equivalents of approximately $6.6 million. From October 1, 2018 through November 9, 2018, we raised an additional approximately $8.5 million in net proceeds through sales under our ATM. We believe the cash and cash equivalents on hand are sufficient to fund planned operations into September 2019. We will need additional financing to fund our operating expenses and to initiate and conduct our intended clinical programs, file additional patent applications and enhance our intellectual property position for lead compounds, and prepare for submission of an NDA for MAT9001 and MAT2203 and conduct preclinical work in order to identify product candidates utilizing our cochleate delivery platform technology. We have entered into a Controlled Equity Offering$^{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 MAT9001, MAT2203 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***

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, 2017.

***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**

Our exposure to market risk is limited to our cash and cash equivalents, all of which have maturities of one year or less. The primary objectives of our investment activities are to preserve principal, provide liquidity and maximize income without significantly increasing risk. Our primary exposure to market risk is interest income sensitivity, which is affected by changes in the general level of U.S. interest rates. However, because of the short-term nature of the instruments in our portfolio, a sudden change in market interest rates would not be expected to have a material impact on our financial condition and/or results of operation. We do not have any foreign currency or other derivative financial instruments.

**Item 4. CONTROLS AND PROCEDURES**

***Evaluation of Disclosure Controls and Procedures.***

On September 5, 2018 our former Chief Financial Officer notified the Board of Directors of his retirement effective September 30, 2018. Our CEO, Mr. Jerome D. Jabbour, who has also served as the Chief Business Officer since October 2013 has taken the role of Chief Financial Officer concurrently to assume the role of overseeing the finance operation and financial reporting process. Mr. Jabbour possesses appropriate knowledge and experience, and the Company has taken additional steps to provide financial support by retaining a professional third-party consulting firm to assist Mr. Jabbour in preparing the financial statements under U.S. GAAP at the transition period when the former CFO left.

As of September 30, 2018, 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 due to the material weakness discussed below, our disclosure controls and procedures were not effective at the reasonable assurance level as of September 30, 2018. 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.

During the fourth quarter of fiscal 2017, we identified a material weakness in the design and operating effectiveness of our controls over the application of proper accounting guidance for the recognition of stock-based compensation for modified awards issued to consultants.

Although the material weakness did not result in a restatement, it is likely that the control deficiency could have potentially resulted in a material misstatement of the Company's financial statement if not remediated timely. To remediate the material weakness we have initiated compensating controls in 2018 by engaging additional technical accounting resources to review the Board Compensation and have enhanced and revised the design of existing controls and procedures to ensure the proper application of accounting guidance for the recognition of stock-based compensation awards. We believe the actions described above will be sufficient to remediate the identified material weakness and strengthen our internal control over financial reporting. However, the new and enhanced controls have not operated for a sufficient amount of time to conclude that the material weakness has been remediated. We will continue to monitor the effectiveness of these controls and will make any further changes management determines appropriate.

*Changes in internal control over financial reporting.*

Other than the remediating controls to address the material weakness discussed above, there have been no changes in our internal control over financial reporting during the quarter ended September 30, 2018 that have materially affected, or are reasonably likely not 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, 2017. 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, 2017, 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**

None.

**Item 3. DEFAULTS UNDER SENIOR SECURITIES**

None.

**Item 4. MINE SAFETY DISCLOSURES**

Not applicable.

**Item 5. OTHER INFORMATION**

Not applicable.

**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/ Jerome D. Jabbour*
Jerome D. Jabbour
Chief Executive Officer
Interim Chief Financial Officer

Dated: November 9, 2018

EXHIBIT INDEX

| | |
|---|---|
| *31.1 | Certification of Chief Executive Officer |
| *31.2 | Certification of Interim Chief Financial Officer |
| **32.1 | Section 1350 Certifications |
| *+10.1 | Separation and General Release Agreement, dated June 18, 2018, between the Company and Dominick DiPaolo |
| *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.

**SEPARATION AND GENERAL RELEASE AGREEMENT**

THIS SEPARATION AND GENERAL RELEASE AGREEMENT (this "Separation Agreement") is entered into between Dominick DiPaolo (the "Employee") and MATINAS BIOPHARMA HOLDINGS, INC., having an office at 1545 Route 206 South, Suite 302, Bedminster, NJ 07921 (the "Employer"). Employer, together with its past, present and future direct and indirect parent organizations, subsidiaries, affiliated entities, professional employer organizations, related companies and divisions and each of their respective past, present and future officers, directors, employees, shareholders, trustees, members, partners, attorneys and agents (in each case, individually and their official capacities), and each of their respective employee benefit plans (and such plans' fiduciaries, agents, administrators and insurers, in their individual and their official capacities), as well as any predecessors, future successors or assigns or estates of any of the foregoing, is collectively referred to in this Separation Agreement as the "Released Parties."

A. Matinas and Employee entered into an employment agreement, dated March 16, 2017 (the "Employment Agreement").

B. Matinas and Employee have been engaged in discussions regarding a separation from service and desire to settle all matters between them by entering into this Separation Agreement on the terms and conditions set forth herein.

In consideration of the foregoing premises, the mutual covenants and agreements contained herein, and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties hereto, intending to be legally bound, hereby agree as follows:

1. Separation of Employment. Employee and Matinas have mutually agreed to terminate the Employment Agreement. Employee acknowledges, confirms and agrees that his last day of employment with Matinas shall be June 13, 2018 (the "Separation Date"). The Employment Agreement is hereby superseded and terminated by this Separation Agreement. Employee further acknowledges that, except as otherwise specifically provided in this Separation Agreement, Employee has received all compensation and benefits to which Employee is entitled under the Employment Agreement or otherwise as a result of Employee's employment. Employee understands that, except as otherwise provided in this Separation Agreement, Employee is entitled to nothing further from the Released Parties, including reinstatement by Employer.

2. Employee General Release of Released Parties. In consideration of the payment set forth in Section 4 below, Employee (on his own behalf and on behalf of his heirs, executors, administrators, trustees, legal representatives, successors and assigns) hereby unconditionally and irrevocably releases, waives, discharges and gives up, to the full extent permitted by law, any and all Claims (as defined below) that Employee may have against any of the Released Parties, including without limitation, Insperity PEO Services, L.P. ("Insperity") (including its current and former parent companies, subsidiaries, and other affiliated companies as well as any of their current and former insurers, directors, officers, agents, shareholders, and employees), arising on or prior to the date of Employee's execution and delivery of this Separation Agreement to Employer. "Claims" means any and all actions, charges, controversies, demands, causes of action, suits, rights, and/or claims whatsoever for debts, sums of money, wages, salary, severance pay, expenses, commissions, fees,

bonuses, unvested stock options and/or other equity compensation, vacation pay, sick pay, fees and costs, attorneys' fees, losses, penalties, damages, including damages for pain and suffering and emotional harm, arising, directly or indirectly, out of any promise, agreement, offer letter, contract, understanding, common law, tort, the laws, statutes, and/or regulations of the States of New Jersey, Florida, or any other state or municipality and the United States, including, but not limited to, federal and state wage and hour laws (to the extent waiveable), federal and state whistleblower laws, Title VII of the Civil Rights Act of 1964, the Civil Rights Act of 1991, the Equal Pay Act, the Lilly Ledbetter Fair Pay Act of 2009, the Americans with Disabilities Act, the Family and Medical Leave Act, the Employee Retirement Income Security Act (excluding COBRA), the Vietnam Era Veterans Readjustment Assistance Act, the Fair Credit Reporting Act, the Age Discrimination in Employment Act ("ADEA"), the Older Workers' Benefit Protection Act, the Occupational Safety and Health Act, the Sarbanes-Oxley Act of 2002, the federal False Claims Act, the New Jersey Law Against Discrimination, the New Jersey Family Leave Act, the New Jersey Civil Rights Act, the New Jersey Conscientious Employee Protection Act, the New Jersey False Claims Act, the Florida Civil Human Rights Act, the Florida ADIS Act, the Florida Wage Discrimination Law, the Florida Equal Pay Law, and the Florida Whistleblower Protection Law, as each may be amended from time to time, whether arising directly or indirectly from any act or omission, whether intentional or unintentional. This releases all Claims including those of which Employee is not aware and those not mentioned in this Separation Agreement. Employee specifically releases any and all Claims arising out of Employee's employment with Employer and Insperity or termination therefrom. Employee expressly acknowledges and agrees that, by entering into this Separation Agreement, Employee is releasing and waiving any and all rights or Claims including, without limitation, Claims that Employee may have arising under ADEA, which have arisen on or before the date of Employee's execution and delivery of this Separation Agreement to Employer.

3. Representations; Covenant not to Sue. Employee hereby represents and warrants that (A) Employee has not filed, caused or permitted to be filed any pending proceeding (nor has Employee lodged a complaint with any governmental or quasi-governmental authority) against any of the Released Parties, nor has Employee agreed to do any of the foregoing, (B) Employee has not assigned, transferred, sold, encumbered, pledged, hypothecated, mortgaged, distributed, or otherwise disposed of or conveyed to any third party any right or Claim against any of the Released Parties that has been released in this Separation Agreement, and (C) Employee has not directly or indirectly assisted any third party in filing, causing or assisting to be filed, any Claim against any of the Released Parties. Except as set forth in Section 11 below, Employee covenants and agrees that Employee shall not encourage or solicit or voluntarily assist or participate in any way in the filing, reporting or prosecution by himself or any third party of a proceeding or Claim against any of the Released Parties.

4. Separation Payment. Notwithstanding the language contained in the Employment Agreement, the parties have mutually agreed that, as good consideration for Employee's execution, delivery, non-revocation, and full compliance with the terms of this Separation Agreement, Employer shall provide Employee with a payment equal to $22,917 (less applicable withholdings and deductions), referred to herein as the "Separation Payment".

Employee acknowledges that Employee is not otherwise entitled to receive the Separation Payment and acknowledges that nothing in this Separation Agreement shall be deemed to be an admission of

liability on the part of any of the Released Parties. Employee agrees that Employee will not seek anything further from any of the Released Parties. Employee also agrees that the Separation Payment to be paid under this Separation Agreement is due solely from the Company and that Insperity has no obligation to pay the Separation Payment even though it may be processed through Insperity.

5. Who is Bound. Employer and Employee are bound by this Separation Agreement. Anyone who succeeds to Employee's rights and responsibilities, such as the executors of Employee's estate, is bound and anyone who succeeds to Employer's rights and responsibilities, such as its successors and assigns, is also bound.

6. Securities Law. Employee understands that he will continue to be deemed an affiliate for a period of three months after the Separation Date under applicable federal securities laws and therefore the restrictive legends on any shares of common stock that Employee owns will not be removed until at least three months after the Separation Date. Employee acknowledges and understands that even after three months, Employee is still unable to trade in Matinas securities if Employee is in possession of material, non-public information. Compliance with insider-trading law is Employee's responsibility, and given the potentially severe penalties for violations, Employee should take extra care and seek his own advice on trading. In addition, in accordance with Section 16 of the Exchange Act of 1934, as amended, Employee is subject to reporting obligations with respect to Matinas securities, including option exercises, open-market purchases or sales, and short-swing profit rules and such obligations may continue for up to six months after his Separation Date. Employee shall inform Employer of any such transactions so Employer can assist with any required Form 4 filings.

7. Cooperation. Employee agrees that in the next two weeks, he shall disclose in a form reasonably acceptable to Employer, all information relevant to his open projects and tasks and to assist in the transition of his duties as requested. If Employee does not comply with this obligation, as determined in Employer's sole judgment and discretion, the Employer shall revoke its offer to pay the Separation Payment, and Employee shall have no basis to receive any of the payments or benefits set forth herein. Employee further agrees, upon Employer's request, at all times through and the after the Separation Date, to reasonably cooperate, by providing truthful information and/or testimony, in any Employer investigation, litigation, arbitration, or regulatory proceeding regarding events that occurred during Employee's tenure with Employer. Employee will make himself reasonably available to consult with Employer's counsel, to provide information, and to appear to give testimony. Employer will, to the extent permitted by law and applicable court rules, reimburse Employee for reasonable out-of-pocket expenses Employee incurs in extending such cooperation, so long as Employee provides advance written notice of Employee's request for reimbursement and provides satisfactory documentation of the expenses.

8. Employer Property. Employee represents and warrants that, as of the Separation Date, Employee has returned to Employer all property in Employee's possession, custody or control belonging to Employer, including, but not limited to, all equipment, computers, pass codes, keys, swipe cards, credit cards, documents or other materials, in whatever form or format, that Employee received, prepared, or helped prepare. Employee represents that Employee has not retained any copies, duplicates, reproductions, computer disks, or excerpts thereof, of correspondence,

memoranda, reports, notebooks, drawings, photographs, or other documents relating in any way to the business or affairs of Employer or any third parties associated with the Employer.

9. Remedies. If Employee breaches any term or condition of this Separation Agreement or any representation made by Employee in this Separation Agreement was false when made, it shall constitute a material breach of this Separation Agreement and in addition to and not instead of the Released Parties' other remedies hereunder or otherwise at law or in equity, Employee shall be required to immediately, upon written notice from Employer, return the value of the Separation Payment under this Separation Agreement, less $500.00. Employee agrees that if Employee is required to return the payments as described herein, this Separation Agreement shall continue to be binding on Employee and the Released Parties shall be entitled to enforce the provisions of this Separation Agreement as if the payments had not been repaid to Employer and Employer shall have no further payment obligations to Employee hereunder.

10. Construction of Agreement. This Separation Agreement, as well as any nondisclosure, invention assignment, and restrictive covenants agreement, shall remain in full force and effect. In the event that one or more of the provisions contained in this Separation Agreement shall for any reason be held unenforceable in any respect under the law of any state of the United States or the United States, such unenforceability shall not affect any other provision of this Separation Agreement, but this Separation Agreement shall then be construed as if such unenforceable provision or provisions had never been contained herein or therein. This Separation Agreement and any and all matters arising directly or indirectly herefrom shall be governed under the laws of the State of New Jersey without reference to choice of law rules. Employer and Employee consent to the sole jurisdiction of the federal and state courts of New Jersey. **EMPLOYER AND EMPLOYEE HEREBY WAIVE THEIR RESPECTIVE RIGHT TO TRIAL BY JURY IN ANY ACTION CONCERNING THIS SEPARATION AGREEMENT OR ANY AND ALL MATTERS ARISING DIRECTLY OR INDIRECTLY HEREFROM AND REPRESENT THAT THEY HAVE CONSULTED WITH COUNSEL OF THEIR CHOICE OR HAVE CHOSEN VOLUNTARILY NOT TO DO SO SPECIFICALLY WITH RESPECT TO THIS WAIVER.**

11. Acknowledgments. Employer and Employee acknowledge and agree that:

(A) By entering in this Separation Agreement, Employee does not waive any rights or Claims that may arise after the date that Employee executes and deliver this Separation Agreement to Employer;

(B) This Separation Agreement is not intended to, and shall not in any way prohibit, limit or otherwise interfere with Employee's protected rights under federal, state or local law to without notice to the Employer: (i) communicate or file a charge with a government regulator; (ii) participate in an investigation or proceeding conducted by a government regulator; or (iii) receive an award paid by a government regulator for providing information;

(C) Nothing in this Separation Agreement shall preclude Employee from exercising Employee's rights, if any (i) under Section 601-608 of the Employee Retirement Income Security Act of 1974, as amended, popularly known as COBRA or (ii) under Employer's 401(k) plan; or (iii) with respect to Employer's stock option plan.

12. Opportunity for Review. **Employee is hereby advised and encouraged by Employer to consult with his own independent counsel before signing this Separation Agreement**. Employee represents and warrants that Employee: (i) has had sufficient opportunity to consider this Separation Agreement; (ii) has read this Separation Agreement; (iii) understands all the terms and conditions hereof; (iv) is not incompetent or had a guardian, conservator or trustee appointed for Employee; (v) has entered into this Separation Agreement of Employee's own free will and volition; (vi) has duly executed and delivered this Separation Agreement; (vii) understands that Employee is responsible for Employee's own attorney's fees and costs; (viii) has had the opportunity to review this Separation Agreement with counsel of Employee's choice or has chosen voluntarily not to do so; (ix) understands that Employee has been given twenty-one (21) days to review this Separation Agreement before signing this Separation Agreement and understands that he is free to use as much or as little of the 21-day period as he wishes or considers necessary before deciding to sign this Separation Agreement, (x) understands that if Employee does not sign and return this Separation Agreement to Matinas (Attn: Jerome D. Jabbour) within 21 days of receipt, Matinas shall have no obligation to enter into this Separation Agreement, Employee shall not be entitled to receive the Separation Payment, and (xi) understands that this Separation Agreement is valid, binding, and enforceable against the parties hereto in accordance with its terms. This Separation Agreement shall be effective and enforceable on the eighth day after execution and delivery to Matinas (Attn: Jerome D. Jabbour) by Employee. The parties hereto understand and agree that Employee may revoke this Separation Agreement after having executed and delivered it to Matinas by so advising Matinas (Attn: Jerome D. Jabbour) in writing no later than 11:59 p.m. on the seventh day after Employee's execution and delivery of this Separation Agreement to Matinas. If Employee revokes this Separation Agreement, it shall not be effective or enforceable, and Employee shall not be entitled to receive the Separation Payment.

***[Signatures appear on the following page]***

Agreed to and accepted on this 16th day of June, 2018.

Witness:

EMPLOYEE:

Dominick DiPaolo

Agreed to and accepted on this 18th day of June, 2018.

MATINAS BIOPHARMA HOLDINGS, INC.

BY: Jerome D. Jabbour

**Exhibit 31.1**

CERTIFICATION

I, Jerome D. Jabbour, 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

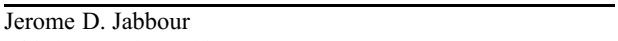
   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially 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: November 9, 2018

By *  *

Name: Jerome D. Jabbour

Title: Chief Executive Officer
Interim Chief Financial Officer

**Exhibit 31.2**

CERTIFICATION

I, Jerome Jabbour, 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: November 9, 2018

By: */s/ Jerome D. Jabbour*
Name: Jerome D. Jabbour
Title: Chief Executive Officer
Interim Chief Financial 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: November 9, 2018

By: */s/ Jerome D. Jabbour*
Name: Jerome D. Jabbour
Title: Chief Executive Officer
Interim Chief Financial 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.