August 10, 2018

Matinas BioPharma Reports Second Quarter 2018 Financial Results and Provides Corporate Update

– Management intently focused on advancing proprietary and highly differentiated lipid nano-crystal platform delivery technology –

– Multiple discussions with strategic partners remain ongoing –

– Lead platform-validating asset, MAT2203, positioned for streamlined development in high need, high value patient population –

BEDMINSTER, N.J., Aug. 10, 2018 (GLOBE NEWSWIRE) -- Matinas BioPharma Holdings, Inc. (NYSE AMER: MTNB), a clinical-stage biopharmaceutical company focused on enabling targeted intracellular delivery of life-changing medicines using its proprietary lipid nano-crystal (LNC) platform technology, yesterday reported its financial results for the second quarter ended June 30, 2018.

"With the anticipated completion of one or more strategic and research collaborations in the near term, we believe we have successfully positioned the Company to capitalize on the opportunity enabled by our unique and highly differentiated drug delivery technology platform. These potential relationships with large pharmaceutical companies and well known research institutions should provide the Company with valuable data demonstrating the unique capabilities of our technology," commented Jerome D. Jabbour, Chief Executive Officer of Matinas. "We continue to advance our lead platform-validating asset, MAT2203, toward a potential pivotal trial in an area of significant unmet medical need, which could provide the basis for aggressive expansion of the utilization of MAT2203 as the preferred drug for the prevention and treatment of invasive fungal infections. During the second half of 2018 we will continue to be intently focused on expanding the reach of our LNC technology and building the organizational expertise necessary to take our Company to the next level and fulfill the exciting potential for our platform."

LNC PLATFORM TECHNOLOGY: RESEARCH COLLABORATIONS UPDATE

In July 2018, Matinas entered into a research collaboration with the National Institutes of Health (NIH) to identify a novel human immunodeficiency virus (HIV) therapy through the combination of antisense oligonucleotides with Matinas' proprietary LNC delivery technology. This unique joint research effort is representative of the broad applicability and significant potential of Matinas disruptive and differentiated LNC delivery technology. The goal of this particular collaboration is to leverage the unique attributes of Matinas' LNC technology to safely, effectively and efficiently deliver antisense oligonucleotides (ASO) intracellularly to inhibit Trans-Activator of Transcription (Tat)/viral mRNA translation. Tat is a contributing

factor in three major aspects of HIV infection post treatment with antiretroviral therapy (ART): viral replication/latency, chronic inflammation and neurological complications. Tat is a key regulatory protein not specifically targeted by currently available ART. *In vitro* and *in vivo* studies will be conducted to determine optimal structures for incorporating ASOs into the LNC technology platform, delivery into target cells and the effective inhibition of Tat and/or viral replication while monitoring Tat-induced cytotoxicity.

Based upon existing and consistently replicated preclinical and clinical data, the Company believes that its unique and proprietary LNC delivery technology platform can be used to formulate and thereby redesign a wide variety of molecules and drugs which, (i) require a delivery technology to improve the stability of molecules inside and outside the body, (ii) could benefit from efficient delivery and cellular uptake by target cells, and (iii) are currently only available in IV formulations or (iv) otherwise experience significant toxicity-related adverse events. Leveraging its LNC delivery technology, the Company believes it can develop a pipeline of product candidates, both internally and through strategic partnerships with pharmaceutical and biotech companies. Matinas has demonstrated the safety and efficacy of its LNC platform technology to deliver a broad range of compounds, including small molecules, oligonucleotides (mRNA, siRNA, DNA plasmids), vaccines, peptides, proteins, anti-inflammatory agents, NSAIDs and anti-microbials in a number of clinical and preclinical studies.

Matinas continues to advance its discussions with multiple strategic and research partners and expects to utilize this strategy to expand the successful application of its LNC Technology and capitalize upon partner's expertise and significant financial resources in numerous high-profile therapeutic categories to drive development and potentially create additional shareholder value.

MAT2203 CLINICAL DEVELOPMENT UPDATE

The Company's lead and platform-validating product candidate, MAT2203, utilizes its proprietary LNC formulation technology to enable the safe and effective delivery of the broad-spectrum fungicidal agent, amphotericin B. Based on the positive patient clinical data reported in 2017 and a positive face-to-face interaction with the U.S. Food and Drug Administration (FDA) in 2018, Matinas has designed a streamlined and risk-mitigated development program focused on a potential pivotal Phase 2 trial of MAT2203 for the prevention of IFIs in patients with acute lymphoblastic leukemia (ALL). This initial indication represents a significant unmet medical need and we believe that Matinas' ability to formulate a safe and effective oral formulation of amphotericin B, which is designed for longer term use, uniquely positions MAT2203 to potentially become the ideal antifungal therapy for the prevention and treatment of invasive fungal infections.

Matinas expects to engage with FDA frequently over the next 6-12 months as it prepares to commence its potential pivotal Phase 2 adaptive-designed study in 2019. The Company has positioned MAT2203 for approval with a targeted indication for prevention of IFIs in ALL patients. The first aspect of this pivotal Phase 2 trial will be an evaluation of the PK/PD and tolerability of MAT2203 in leukemia patients. The second part of this study will evolve to become an evaluation of PK/PD, efficacy and safety of MAT2203 versus placebo in ALL patients, where there is no standard of care in prevention of IFIs. Due to significant drug-drug interactions or the lack of an oral dosing mode, there is limited utility of currently approved antifungal therapies for the prevention of IFIs. The Company believes that orally-

administered MAT2203 has the potential to become a highly differentiated therapy in the antifungal field.

The FDA has granted MAT2203 designations for Fast Track and Qualified Infectious Disease Product (QIDP) for the treatment of invasive candidiasis and aspergillosis and for the prevention of IFIs in patients on immunosuppressive therapy.

Q2 2018 SUMMARY OF FINANCIAL RESULTS

For the three months ended June 30, 2018, the Company reported a net loss attributable to common shareholders of approximately $3.6 million, or a net loss per share basic and diluted of $0.4, compared to a net loss attributable to common shareholders of approximately $4.1 million, or a net loss per share basic and diluted of $0.4, for the three months ended June 30, 2017. The net loss for the quarter ended June 30, 2018 was primarily attributable to ongoing research and development activities related to the Company's MAT2203 antifungal product candidate as well as the costs associated with operating as a public company. The Company ended the quarter with cash and cash equivalents of approximately $8.9 million.

About Matinas BioPharma

Matinas BioPharma is a clinical-stage biopharmaceutical company focused on developing innovative medicines using its lipid nano-crystal (LNC) platform delivery technology. The Company's proprietary, disruptive technology utilizes lipid-crystal nano-particles to nano-encapsulate small molecules, oligonucleotides, vaccines and other medicines potentially making them safer, more tolerable, less toxic and orally bioavailable.

The Company's lead anti-fungal product candidate, MAT2203, positions Matinas BioPharma to become a leader in the safe and effective delivery of anti-infective therapies utilizing its proprietary LNC formulation technology.

For more information, please visit www.matinasbiopharma.com and connect with the Company on Twitter, LinkedIn, Facebook, and Google+.

Matinas BioPharma Holdings Inc.
Consolidated Balance Sheets

	June 30, 2018	December 31, 2017
	Unaudited	**Audited**
ASSETS		
CURRENT ASSETS		
Cash and cash equivalents	**$ 8,903,029**	**$ 7,306,507**
Restricted cash – security deposit	**100,000**	**155,431**
Accounts receivable	**89,813**	**-**
Prepaid expenses	**249,752**	**502,032**
Total current assets	**9,342,594**	**7,963,970**

Leasehold improvements and equipment - net	**1,811,475**	**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	**535,999**	**535,999**
TOTAL ASSETS	**$ 16,043,933**	**$ 14,423,692**
LIABILITIES AND STOCKHOLDERS' EQUITY		
CURRENT LIABILITIES		
Accounts payable	**$ 497,388**	**$ 582,867**
Note payable	**-**	**170,236**
Accrued expenses	**939,600**	**959,147**
Deferred revenue	**-**	**29,937**
Lease liability	**52,657**	**26,975**
Total current liabilities	**1,489,645**	**1,769,162**
LONG TERM LIABILITIES		
Deferred tax liability	**848,185**	**848,185**
Deferred rent liability	**489,161**	**455,554**
Lease liability - net of current portion	**103,042**	**67,683**
Stock dividends payable - long term	**587,143**	**601,143**
TOTAL LIABILITIES	**3,517,176**	**3,741,727**
STOCKHOLDERS' EQUITY		
Series A Convertible preferred stock, stated value $5 per share, 1,600,000 shares authorized as of June 30, 2018 and December 31, 2017, respectively; 1,467,858 and 1,502,858 shares outstanding at June 30, 2018 and December 31, 2017, respectively (liquidation preference - $7,926,433 at June 30, 2018)	**5,583,686**	**5,716,825**
Series B Convertible preferred stock, stated value $1,000 per share, 8,000 shares authorized and 7,975 shares outstanding as of June 30, 2018 (liquidation preference - $7,975,000 at June 30, 2018) No shares authorized or issued at December 31,2017	**6,944,897**	**-**

Common stock par value $0.0001 per share, 250,000,000 shares authorized at June 30, 2018 and December 31, 2017, respectively; 94,236,918 issued and outstanding as of June 30, 2018; 93,371,129 issued and outstanding as of December 31, 2017	**9,423**	**9,335**
Additional paid in capital	**58,784,330**	**56,230,347**
Accumulated deficit	**(58,795,579)**	**(51,274,542)**
Total stockholders' equity	**12,526,757**	**10,681,965**
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	**$ 16,043,933**	**$ 14,423,692**

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

	Three Months Ended June 30,	
	2018	2017
Revenue:		
Contract research revenue	$ 89,813	$ 44,906
Costs and Expenses:		
Research and development	1,522,695	2,314,716
General and administrative	1,972,048	1,706,493
Total costs and expenses	3,494,743	4,021,209
Loss from operations	(3,404,930)	(3,976,303)
Other income/(expense), net	(6,101)	8,663
Net loss	**$ (3,411,031)**	**$ (3,967,640)**
Preferred stock series A accumulated dividends	(146,786)	(152,400)
Preferred stock series B accumulated dividends	(21,849)	-
Net loss attributable to common shareholders	$ (3,579,666)	$ (4,120,040)
Net loss available for common shareholders per share - basic and diluted	$ (0.04)	$ (0.04)

Weighted average common shares outstanding:		
Basic and diluted	94,034,837	91,611,531

	Six Months Ended June 30,	
	2018	**2017**
Revenue:		
Contract research revenue	$ 119,750	$ 59,875
Costs and Expenses:		
Research and development	3,715,584	4,698,934
General and administrative	3,929,847	3,824,468
Total costs and expenses	7,645,431	8,523,402
Loss from operations	(7,525,681)	(8,463,527)
Other income/(expense), net	4,644	(230)
Net loss	**$ (7,521,037)**	**$ (8,463,757)**
Preferred stock series A accumulated dividends	(294,072)	(311,400)
Preferred stock series B accumulated dividends	(21,849)	-
Inducement charge from exercise of warrants	-	(16,741,356)
Net loss attributable to common shareholders	$ (7,836,958)	$ (25,516,513)
Net loss available for common shareholders per share - basic and diluted	$ (0.08)	$ (0.29)
Weighted average common shares outstanding:		
Basic and diluted	93,787,752	88,285,929

Forward Looking Statements: *This release contains "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995, including those relating to the Company's anticipated capital and liquidity needs, strategic focus and the future development of its product candidates, including MAT2203, the anticipated timing of regulatory submissions, the anticipated timing of clinical studies, the anticipated timing of regulatory interactions, the Company's ability to identify and pursue development and partnership opportunities for its products or platform delivery technology on favorable terms, if at all, and the ability to obtain required regulatory approval and other statements that are predictive in nature, that depend upon or refer to future events or conditions. All statements other than statements of historical fact are statements that could be forward-looking*

statements. Forward-looking statements include words such as "expects," "anticipates," "intends," "plans," "could," "believes," "estimates" and similar expressions. These statements involve known and unknown risks, uncertainties and other factors which may cause actual results to be materially different from any future results expressed or implied by the forward-looking statements. Forward-looking statements are subject to a number of risks and uncertainties, including, but not limited to, our ability to obtain additional capital to meet our liquidity needs on acceptable terms, or at all, including the additional capital which will be necessary to complete the clinical trials of our product candidates; our ability to successfully complete research and further development and commercialization of our product candidates; the uncertainties inherent in clinical testing; the timing, cost and uncertainty of obtaining regulatory approvals; our ability to maintain and derive benefit from the Qualified Infectious Disease Product (QIDP), Orphan and/or Fast Track designations for MAT2203, which does not change the standards for regulatory approval or guarantee regulatory approval on an expedited basis, or at all; our ability to protect the Company's intellectual property; the loss of any executive officers or key personnel or consultants; competition; changes in the regulatory landscape or the imposition of regulations that affect the Company's products; and the other factors listed under "Risk Factors" in our filings with the SEC, including Forms 10-K, 10-Q and 8-K. Investors are cautioned not to place undue reliance on such forward-looking statements, which speak only as of the date of this release. Except as may be required by law, the Company does not undertake any obligation to release publicly any revisions to such forward-looking statements to reflect events or circumstances after the date hereof or to reflect the occurrence of unanticipated events. Matinas BioPharma's product candidates are all in a development stage and are not available for sale or use.

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