October 24, 2016

Matinas BioPharma Receives Notice of Allowance of U.S. Patent for Novel Lipid-Crystal Nano-Particle Cochleate Formulation Technology

Second Patent Allowance Including Pharmaceutical Use Claims for Novel Nano-particle Formulation Technology for Very Hydrophobic Compounds

BEDMINSTER, N.J., Oct. 24, 2016 (GLOBE NEWSWIRE) -- Matinas BioPharma Holdings, Inc. (OTCQB:MTNB), a clinical-stage biopharmaceutical company focused on identifying and developing safe and effective broad spectrum therapeutics for the treatment of serious and life-threatening infections, today announced that it received Notice of Allowance from the U.S. Patent and Trademark Office ("USPTO") for U.S. Patent Application Serial No.13/854,487 entitled, "Geodate Delivery Vehicles."

The allowed patent claims cover Matinas BioPharma's proprietary methods related to the composition and the formation of cochleate lipid-crystal nano-particles containing tiny oil droplets in which very hydrophobic compounds can be dissolved. Often, hydrophobic compounds are so difficult to formulate that they may not even reach the clinic or end up having significant limitations in clinical use.

"This patent allowance is another example of the ability of our unique lipid-crystal nano-particle cochleate formulation technology to be utilized as a targeted delivery vehicle for numerous promising highly hydrophobic therapeutic agents which, up to now, have experienced significant absorption, efficacy and side-effect challenges," said Roelof Rongen, President and Chief Executive Officer. "Our cochleate technology has the potential to enhance oral administration of hydrophobic and poorly absorbed compounds, while reducing side-effects. Both of these aspects were clearly demonstrated in our EULAR abstract last June, showing our Geodate cochleate NSAID product caused no gastric lesions in rat studies and achieved efficacy at lower doses."

The Company's cochleate lipid-crystal nano-particle encapsulation technology was developed under the leadership of co-inventor, Dr. Raphael J. Mannino, Matinas BioPharma's Chief Scientific Officer, in collaboration with Rutgers University, The State University of New Jersey, which has granted the Company exclusive worldwide licenses under applicable patents and offers a drug delivery solution with three differentiated and disruptive features: oral availability, multi-organ protection and enhanced safety, and targeted delivery to the site of the infection and inflammation with the ability to effectively

penetrate tissues.

Based on the timing of this Notice of Allowance, Matinas BioPharma expects the forthcoming cochleate formulation patent to be issued in early-2017.

About Matinas BioPharma

Matinas BioPharma is a clinical-stage biopharmaceutical company focused on identifying and developing safe and effective broad spectrum therapeutics for the treatment of serious and life-threatening infections. The Company's proprietary, disruptive technology utilizes lipid-crystal nano-particle cochleates to nano-encapsulate existing drugs, making them safer, more tolerable, less toxic and orally bioavailable. The Company's lead drug candidate is MAT2203, an orally-administered, encochleated formulation of amphotericin B (a broad spectrum fungicidal agent). The Company has an open Investigational New Drug (IND) application for MAT2501, which is an orally-administered, encochleated formulation of amikacin (a broad spectrum aminoglycoside antibiotic agent) for acute bacterial infections, including non-tuberculous mycobacterium (NTM) and multi-drug resistant gram negative bacterial infections.

The Company's lead anti-infective product candidates, MAT2203 and MAT2501, position Matinas BioPharma to become a leader in the safe and effective delivery of anti-infective therapies utilizing its proprietary lipid-crystal nano-particle cochleate formulation technology. For more information, please visit www.matinasbiopharma.com and connect with the Company on Twitter, LinkedIn, Facebook, and Google+.

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 strategic focus and the future development of its product candidates, including MAT2203 and MAT2501, the anticipated timing of regulatory submissions, the anticipated timing of clinical studies, 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 and MAT2501, 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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Source: Matinas BioPharma Holdings, Inc.