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# Matinas BioPharma Presents Pre-clinical Data Showing Anti-bacterial Activity of MAT2501 - Encochleated Amikacin - Against Mycobacterium Avium Lung Infections at ICAAC/ICC 2015

## Lipid-Crystal Nano-Encapsulated Amikacin and Free Amikacin Show Similar Effectiveness Against Lung Infection

BEDMINSTER, N.J., Sept. 19, 2015 (GLOBE NEWSWIRE) --[Matinas BioPharma Holdings, Inc.](#) (OTCQB:MTNB), a clinical-stage biopharmaceutical company focused on identifying and developing safe and effective antifungal and anti-bacterial therapeutics for the treatment of serious and life-threatening infections, today presented preclinical data showing significant anti-bacterial activity against *Mycobacterium avium* (*M. avium*) and no noted toxicity by MAT2501, an orally-administered encochleated formulation of amikacin.

The study, which is titled "[Oral Encochleated Amikacin Demonstrates Activity In Vivo and In Vitro in Biofilm Models of Mycobacterium avium](#)," was presented today at the American Society for Microbiology's Interscience Conference of Antimicrobial Agents and Chemotherapy and International Society of Chemotherapy's International Congress of Chemotherapy and Infection ([ICAAC/ICC 2015](#)) scientific meeting in San Diego.

MAT2501, a drug candidate to treat gram-negative bacterial infections, is an encochleated formulation of amikacin, a broad-spectrum aminoglycoside antibiotic mostly used for short-term treatment of hospital-acquired infections from gram-negative bacteria. Use of amikacin is limited by its intravenous administration and by significant toxicities, obstacles that Matinas BioPharma aims to overcome with MAT2501.

"Our orally administered cochleate technology has shown the potential to deliver amikacin – a powerful anti-infective – for long-term therapy both to the site of lung infection as well as a broad range of tissues in the disseminated form of *Mycobacterium avium* infections," said Roelof Rongen, President and Chief Executive Officer of Matinas BioPharma. "We look forward to learning more about how our lipid-crystal nano-encapsulated formulation of amikacin may become a much needed new treatment option for immunocompromised patients with chronic and hospital-acquired infections."

In the study, 20 and 100 mcg/mL doses of oral MAT2501 were studied in an *in vitro* model of *Mycobacterium avium* lung infection and an *in vivo* model of *M. avium* respiratory lung infection. *M. avium* causes disseminated disease in immunocompromised patients and lung

infection in patients with chronic lung diseases. *M. avium* has also been shown to form biofilm associated with lung infections that are frequently recurrent and often resistant to standard antibiotics. The study found that MAT2501 was an effective bactericide for the treatment of lung infection by *M. avium* both *in vitro* and *in vivo*. No toxicity was observed.

Matinas BioPharma plans to file an investigational new drug application (IND) for MAT2501 in the fourth quarter of 2015 and move the product into human studies in 2016.

## About Matinas BioPharma

Matinas BioPharma is a clinical-stage biopharmaceutical company focused on identifying and developing safe and effective broad spectrum antifungal and anti-bacterial therapeutics for the treatment of serious and life-threatening infections. The Company's proprietary, disruptive technology utilizes lipid-crystal nano-particle cochleate to nano-encapsulate existing drugs, making them safer, more tolerable, less toxic and orally available. The Company's lead drug candidate is MAT2203, an orally-administered, encochleated formulation of amphotericin B (a broad spectrum fungicidal agent). The Company also intends to file an investigational new drug application (IND) for MAT2501, which is an orally-administered, encochleated formulation of amikacin (a broad spectrum aminoglycoside antibiotic agent) for gram-negative and intracellular bacterial infections. In addition, the Company is exploring development and partnership options for MAT9001, a prescription-only omega-3 fatty acid-based composition under development for hypertriglyceridemia, which has shown superiority versus Vascepa<sup>®</sup> (icosapent ethyl) in reducing serum triglycerides, Total- and Non-HDL-Cholesterol, apolipoproteins and PCSK9 levels.

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](http://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 MAT2501, the anticipated timing of regulatory submissions, the ability to obtain required regulatory approval, the Company's ability to identify and pursue development and partnership opportunities for its MAT9001 on favorable terms, if at all, 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 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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