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# Matinas BioPharma Presents Preclinical PK and Efficacy Data of Encochleated Atovaquone in Murine Model at IDWeek 2015

*- CATQ – Encochleated Atovaquone – Demonstrates Enhanced Efficacy and Tissue Targeting over Current Formulation -*

BEDMINSTER, N.J., Oct. 10, 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, announces the presentation of pre-clinical data that shows its cochleate lipid-crystal nano-particle drug delivery technology significantly improves the efficacy of atovaquone in treating pneumocystis pneumonia (PCP), and enhances lung tissue penetration.

PCP is an opportunistic fungal infection of the lung, which is often lethal if not adequately treated. PCP typically affects patients who are immunocompromised, such as patients with HIV or who have undergone medical therapies involving chemotherapy, immune-suppressants or a transplant. Traditional therapies for PCP may affect the recovery of white blood cell levels in approximately 36 percent, making such older therapies poorly suitable for treatment of patients who have undergone a bone-marrow transplant.

Parag Kumar, Pharm.D., director of the Clinical Pharmacokinetics Research Laboratory at the National Institutes of Health (NIH) Clinical Center in Bethesda, Md., presented the data during an oral presentation entitled "*Pharmacokinetics and Efficacy of Encochleated Atovaquone (CATQ) in Murine Model of Pneumocystis*," on Oct. 10 at [IDWeek 2015](#) in San Diego.

"CATQ demonstrated the tissue-targeting potential of Matinas's cochleate technology," said Roelof Rongen, CEO of Matinas BioPharma. "The pharmacokinetics and biodistribution associated with traditional drug delivery typically show high plasma levels of drug with relatively low intracellular levels within the targeted and infected tissue. The data in this study show that levels of CATQ that reach the infected lung tissue are actually greater than the drug levels within plasma. This provides more evidence of enhanced tissue targeting capabilities of our cochleate lipid-crystal nano-particle technology."

According to the presentation, CATQ represents a viable potential therapeutic candidate for treatment of PCP, for which future studies are warranted, the study concluded. PK and biodistribution data of CATQ were favorable and trended towards higher exposure in lungs than plasma, and investigators observed dose-dependent efficacy in a murine model of PCP

with equivalent efficacy at half the dose of the formulation of atovaquone already approved for the treatment of PCP.

Atovaquone is an anti-infective agent currently indicated for the prevention and treatment of PCP, a condition often seen in immunocompromised patients. CATQ is formulated utilizing Matinas BioPharma's proprietary cochleate delivery technology. It is currently in preclinical development in collaboration with the National Institutes of Health Clinical Center's Critical Care Medicine Department.

This pre-clinical study was a collaborative effort including researchers at the National Institutes of Health (NIH), the University of Cincinnati, New Jersey School of Medicine at Rutgers University and Matinas BioPharma. The research was led by Joseph A. Kovacs, M.D., Senior Investigator with the NIH Clinical Center, and Dr. Kumar.

### **About IDWeek 2015**

IDWeek 2015™ is an annual meeting of the Infectious Diseases Society of America (IDSA), the Society for Healthcare Epidemiology of America (SHEA), the HIV Medicine Association (HIVMA) and the Pediatric Infectious Diseases Society (PIDS). With the theme "Advancing Science, Improving Care," IDWeek features the latest science and bench-to-bedside approaches in prevention, diagnosis, treatment, and epidemiology of infectious diseases, including HIV, across the lifespan. IDWeek 2015 takes place October 7-11 at the San Diego Convention Center in San Diego, California. For more information, visit [www.idweek.org](http://www.idweek.org).

### **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 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® (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 MAT2203, the anticipated timing of clinical studies for MAT2203, 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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