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Matinas BioPharma Announces Collaboration with the National Institute of Allergy and Infectious Diseases to Evaluate Oral Formulations of Gilead's Antiviral Remdesivir Utilizing Matinas' LNC Platform Delivery Technology

BEDMINSTER, N.J., Dec. 07, 2020 (GLOBE NEWSWIRE) -- Matinas BioPharma Holdings, Inc. (NYSE AMER: MTNB), a clinical-stage biopharmaceutical company focused on developing next generation therapeutics to advance standards of care in areas of significant unmet medical need, today announced that they plan to collaborate with the National Institute of Allergy and Infectious Diseases (NIAID), part of the National Institutes of Health (NIH), to test oral formulations of remdesivir in preclinical models. Remdesivir is owned by Gilead Sciences, Inc. (Nasdaq: GILD) and the lipid nanocrystal (LNC) platform is owned by Matinas. Any product generated as a part of efforts by Matinas and NIAID would require a license from Gilead for the use of remdesivir and a license from Matinas for the use of the LNC formulation.

One or more formulations of remdesivir will be developed using Matinas' Lipid Nanocrystal (LNC) platform delivery technology, which enables the development of a wide range of difficult-to-deliver molecules. Matinas plans to utilize NIAID's suite of preclinical services to carry out antiviral testing with selected formulations. Gilead will provide remdesivir and work with Matinas to evaluate the data generated from the planned series of preclinical studies.

"We believe that our LNC technology may be applied to remdesivir to allow for the potential for oral administration of this important drug in the fight against COVID-19," commented Jerome D. Jabbour, Chief Executive Officer of Matinas.

Matinas' LNC platform delivery technology offers an oral intracellular drug delivery solution with potential advantages over other delivery technologies across a broad range of therapeutics. The Company has demonstrated in preclinical animal models the ability to formulate and deliver a wide variety of molecules and drugs (including oligonucleotides, peptides, proteins, vaccines, and small molecules) which, (a) require delivery technology to improve the stability of molecules inside and outside of the body; (b) could benefit from efficient delivery and cellular uptake by target cells; (c) are currently only available in IV formulations or (d) otherwise experience significant toxicity-related adverse events.

About Matinas BioPharma

Matinas BioPharma is a clinical-stage biopharmaceutical company focused on developing next generation therapeutics to advance standards of care for patients in areas of significant unmet medical need. Company leadership has a deep history and knowledge of drug development and is supported by a world-class team of scientific advisors.

MAT9001, the Company's lead product candidate for the treatment of cardiovascular and metabolic conditions, is a prescription-only omega-3 fatty acid-based composition, comprised primarily of EPA and DPA, under development for hypertriglyceridemia. MAT9001 is currently in a second head-to-head comparative study against Vascepa® (ENHANCE-IT), with topline data expected in the first quarter of 2021.

In addition, Matinas is developing a portfolio of products based upon its proprietary lipid nanocrystal (LNC) drug delivery platform, which can solve complex challenges relating to the safe and effective delivery of potent medicines, making them orally bioavailable, less toxic and targeted to cells and tissues.

MAT2203 is an oral, encochleated formulation of the well-known, but highly toxic, antifungal medicine amphotericin B, primarily used to treat serious invasive fungal infections. MAT2203 is currently in a Phase 2 open-label, sequential cohort study (EnACT) in HIV-infected patients with cryptococcal meningitis. EnACT is preparing to enroll patients in its second cohort, with the next DSMB evaluation of safety and efficacy data anticipated to occur in the middle of 2021.

MAT2501 is an oral, encochleated formulation of the broad-spectrum aminoglycoside antibiotic medicine amikacin, primarily used to treat chronic and acute bacterial infections. The Company recently announced that it has been awarded up to $3.75 million from the Cystic Fibrosis Foundation (CFF) to support development of MAT2501 toward an indication to treat nontuberculous mycobacterial (NTM) lung disease, including infections in patients with cystic fibrosis (CF).

Gilead is a trademark of Gilead Sciences, Inc., or its related companies.

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 MAT9001 and 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 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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