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Matinas BioPharma Announces Issuance of U.S. Patent Protecting MAT2203 to Treat or Prevent Cryptococcus Infections

Method-of-use patent strengthens and diversifies MAT2203's long-term patent portfolio

BEDMINSTER, N.J., Aug. 16, 2021 (GLOBE NEWSWIRE) -- Matinas BioPharma Holdings, Inc. (NYSE AMER: MTNB), a clinical-stage biopharmaceutical company focused on improving the intracellular delivery of critical therapeutics through its paradigm-changing lipid nanocrystal (LNC) platform delivery technology, today announced that the U.S. Patent and Trademark Office (USPTO) has issued a Notice of Allowance for U.S. Patent Application No. 16/312,047, covering MAT2203, the Company's oral, LNC formulation of antifungal medicine amphotericin B. The allowed patent application, entitled, "*Encocholeated Antifungal Compounds for Central Nervous System Delivery and Treatment of Cryptococcus Infections*," includes claims directed to using an orally administered amphotericin B cochleate composition in combination with a second antifungal compound, such as 5-Flucytosine or an azole antifungal, to treat or prevent a *Cryptococcus* infection of the central nervous system. The patent that issues from U.S. Patent Application No. 16/312,047 will have a base patent term extending to 2037, excluding any patent term adjustments or patent term extensions which may provide additional protection.

"This new patent allowance by the USPTO is not only another important milestone in protecting the commercial potential of MAT2203, but demonstrates our strong overall commitment to protecting the innovation and commercial opportunity of our entire LNC delivery platform portfolio," commented Jerome D. Jabbour, Chief Executive Officer of Matinas.

A Notice of Allowance is issued after the USPTO makes a determination that a patent should be granted from an application. With the issuance of this new patent, Matinas' patent portfolio includes six issued U.S. patents, as well as additional related patents outside the U.S. that cover MAT2203, with other pending patent applications that can extend patent coverage for MAT2203 beyond 2037. Overall, there are now 25 issued patents covering the LNC platform, with more than 35 additional patents pending in the U.S. and globally, which have claims directed to the LNC platform delivery technology.

About Matinas BioPharma

Matinas BioPharma is a biopharmaceutical company focused on improving the intracellular delivery of critical therapeutics through its paradigm-changing lipid nanocrystal (LNC) delivery platform. The Company is developing its own internal portfolio of products as well as

partnering with leading pharmaceutical companies to develop new formulations that take full advantage of the unique characteristics of the LNC platform.

Preclinical and clinical data have demonstrated that this novel technology can provide solutions to many of the complex challenges in achieving safe and effective intracellular delivery, for both small molecules and larger, more complex molecules, such as mRNA, DNA plasmids, antisense oligonucleotides and vaccines. The combination of a unique mechanism of action and flexibility in both the formulation and route of administration (including oral), position Matinas' LNC technology to potentially become the preferred next-generation intracellular drug delivery vehicle and an important improvement over both lipid nanoparticles and viral vectors.

MAT2203 is an oral, LNC formulation of the highly effective, but also highly toxic, antifungal medicine amphotericin B, primarily used as a first-line treatment for invasive fungal infections. MAT2203 is currently in a Phase 2 open-label, sequential cohort study (EnACT) in HIV-infected patients with cryptococcal meningitis. EnACT has completed enrollment of its second cohort of patients, with the next DSMB evaluation of safety and efficacy data anticipated to occur in September 2021.

MAT2501 is an oral, LNC formulation of the broad-spectrum aminoglycoside antibiotic amikacin, primarily used to treat chronic and acute bacterial infections. With the support of the Cystic Fibrosis Foundation, MAT2501 is currently undergoing important preclinical studies and expects to enter a Phase 1 human clinical trial later in 2021. MAT2501 would be the first and only oral aminoglycoside and is being positioned with an initial indication for the treatment of nontuberculous mycobacterial (NTM) lung disease, including infections in patients with cystic fibrosis (CF).

LYPDISO™, is a prescription-only omega-3 fatty acid-based composition, comprised primarily of EPA and DPA, intended for the treatment of cardiovascular and metabolic conditions. This next-generation omega-3 therapy has been shown in two head-to-head studies to provide effective triglyceride-lowering and significantly higher EPA blood levels than Vascepa®. The Company has initiated a process to identity and potentially secure a partner to continue development of LYPDISO.

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 LNC platform delivery technology, the Company's strategic focus and the future development of its product candidates, including MAT2203, MAT2501, 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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Source: Matinas BioPharma Holdings, Inc.

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