

Matinas BioPharma Commences Dosing in First Human Trial of Lead Product Candidate MAT9001

Topline Data From the Company's First-in-Human PK/PD Study of MAT9001 Expected in the Second Quarter 2015

BEDMINSTER, N.J., Nov. 12, 2014 (GLOBE NEWSWIRE) --<u>Matinas BioPharma Holdings</u>, <u>Inc.</u> ("Matinas BioPharma" or the "Company") (OTCQB:MTNB), an emerging biopharmaceutical company focused on the development and commercialization of omega-3 fatty acid-based prescription therapeutics for the treatment of cardiovascular and metabolic conditions, today announced it has commenced dosing in the first-in-human study of <u>MAT9001</u>. The Company's initial trial is being conducted in Canada and is a pharmacokinetic and pharmacodynamic (PK/PD) study of MAT9001 versus an active comparator.

The PK/PD clinical study will evaluate approximately 50 patients with a goal of demonstrating better bioavailability than the active comparator. In addition, the Company expects this study will provide data on MAT9001's ability to yield distinctive therapeutic response properties and an improved therapeutic profile consistent with its preclinical studies. Matinas BioPharma expects to report topline data from the PK/PD study in the second quarter of 2015.

Roelof Rongen, President and Chief Executive Officer of Matinas BioPharma, commented, "Dosing of our first subject is a very important milestone for the Company and for the advancement of MAT9001. The commencement of the PK/PD study in Canada along with the recently filed IND in the United States for our novel omega-3 drug candidate MAT9001 marks tremendous progress with the execution of our global development strategy and an important step forward as we prepare for the start of our Phase 3 registration program of MAT9001 next year."

MAT9001 is Matinas BioPharma's lead drug candidate, with an initial indication for the treatment of severe hypertriglyceridemia (TG>500 mg/dL). MAT9001 is a uniquely engineered, prescription-only omega-3 fatty acid medication comprising docosa-pentaenoic acid (DPA) and other omega-3 fatty acids. Matinas BioPharma has specifically designed MAT9001 to provide a differentiated pharmacotherapy for the treatment of dyslipidemia.

About MAT9001

MAT9001 is a proprietary prescription-only omega-3 fatty acid-based composition, comprising docosa-pentaenoic acid (DPA) and other omega-3 fatty acids, which is under development for therapeutic applications with severe hypertriglyceridemia (TG>500 mg/dL)

as the lead indication. Promising pre-clinical studies with DPA and MAT9001 indicate distinctive therapeutic response properties. The Company has recently filed an IND for MAT9001 and initiated its first human study in November 2014. The Company believes that its development program and related clinical investigations may yield an improved therapeutic profile compared to existing therapies, based on MAT9001's differentiating mechanistic features associated with its unique composition.

About Matinas BioPharma

Matinas BioPharma is a development stage biopharmaceutical company, founded in 2011, with a focus on identifying and developing novel pharmaceutical products for the treatment of abnormalities in blood lipids, referred to as dyslipidemia, and the treatment of cardiovascular and metabolic diseases. Led by an experienced management team and a board of directors with a history of building pharmaceutical companies, Matinas is focused on creating the next generation of omega-3-fatty-acid-based pharmaceutical products. Our lead product, MAT9001, which takes advantage of advancements in the field of lipidomics, has been specifically designed and formulated for therapeutic applications in the dyslipidemia field. 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 product development, clinical and regulatory timelines, market opportunity, cash flow 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 successfully complete research and further development and commercialization of MAT9001; 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 for MAT9001; 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. Prospective 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 statement to reflect events or circumstances after the date hereof or to reflect the occurrence of unanticipated events. Matinas BioPharma's lead product candidate MAT9001 is in a development stage and is not available for sale or use.

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