Carisma Therapeutics Presents Promising New Preclinical Data on Engineered Macrophages for the Treatment of Liver Fibrosis at AASLD The Liver Meeting® 2024

November 17, 2024

New preclinical results support the anti-fibrotic potential of engineered macrophages in multiple fibrosis models

Engineered TIM4-expressing macrophages correct defective efferocytosis in MASH, demonstrating potent anti-fibrotic activity

PHILADELPHIA, Nov. 17, 2024 /PRNewswire/ -- Carisma Therapeutics Inc. (Nasdaq: CARM) ("Carisma" or the "Company"), a clinical-stage biopharmaceutical company focused on discovering and developing innovative immunotherapies, today presented promising preclinical data on engineered macrophages for treating liver fibrosis at the American Association for the Study of Liver Diseases (AASLD) The Liver Meeting® 2024. These results underscore the pre-clinical efficacy of Carisma's engineered macrophages in multiple liver fibrosis models and offer a novel, off-the-shelf potential treatment option for patients with fibrotic liver disease including advanced metabolic dysfunction-associated steatohepatitis (MASH).

Liver fibrosis is a central late-stage pathway in multiple liver diseases, including MASH, acute liver injury, primary sclerosing cholangitis, primary biliary cholangitis, and others. Treatment options remain limited for advanced liver disease patients. Liver disease is characterized by defective efferocytosis (an anti-inflammatory process by which macrophages clear dead hepatocytes), activation of hepatic stellate cells which leads to collagen accumulation, and chronic inflammation.

New preclinical results demonstrate that macrophages can be genetically engineered to target specific key pathways underlying liver disease with factors including TIM4 (restores efferocytosis), relaxin (inhibits hepatic stellate cell activation), and IL10 (reduces inflammation). Notably, a single dose of macrophages expressing TIM4, alone or together with relaxin, significantly reduced liver fibrosis and hepatic stellate cell activation in the translationally relevant choline-deficient, L-amino acid-defined, high-fat diet (CDAHFD) MASH model. The engineered macrophages were well tolerated and outperformed non-engineered cells in all models.

"We are pleased to present compelling preclinical data supporting the therapeutic potential of our engineered macrophages to address a critical unmet need in liver fibrosis, which is found in advanced stages of MASH," said Michael Klichinsky, PharmD, PhD, Co-founder and Chief Scientific Officer of Carisma. "These data underscore the efficacy of our engineered macrophages as a differentiated, off-the-shelf approach for treating advanced liver fibrosis. Based on these promising findings, we are committed to advancing our liver fibrosis program."

Carisma expects to nominate a development candidate for its liver fibrosis program in the first quarter of 2025.

The poster presented at AASLD 2024 is now available online in the "Publications" section of Carisma's website at https://carismatx.com/technology/publications/

About Carisma Therapeutics

Carisma Therapeutics Inc. is a clinical-stage biopharmaceutical company focused on utilizing our proprietary macrophage and monocyte cell engineering platform to develop transformative immunotherapies to treat cancer and other serious diseases. We have created a comprehensive, differentiated proprietary cell therapy platform focused on engineered macrophages and monocytes, cells that play a crucial role in both the innate and adaptive immune response. Carisma is headquartered in Philadelphia, PA. For more information, please visit www.carismatx.com.

Cautionary Note on Forward-Looking Statements

This press release contains forward-looking statements within the meaning of the "safe harbor" provisions of the Private Securities Litigation Reform Act of 1995, including, but not limited to, anticipated discovery, preclinical and clinical development activities for Carisma's product candidates, the potential safety, efficacy, benefits and addressable market for Carisma's product candidates, and clinical trial results for Carisma's product candidates. All statements other than statements of historical fact are statements that could be deemed forward-looking statements. The words "believes," "anticipates," "estimates," "plans," "expects," "intends," "may," "could," "should," "potential," "likely," "projects," "continue," "will," "schedule," and "would" and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. These forward-looking statements are predictions based on the Company's current expectations and projections about future events and various assumptions. Although Carisma believes that the expectations reflected in such forward-looking statements are reasonable, Carisma cannot guarantee future events, results, actions, levels of activity, performance or achievements, and the timing and results of biotechnology development and potential regulatory approval is inherently uncertain. Forward-looking statements are subject to risks and uncertainties that may cause Carisma's actual activities or results to differ significantly from those expressed in any forward-looking statement, including risks and uncertainties related to Carisma's ability to advance its product candidates, the receipt and timing of potential regulatory designations, approvals and commercialization of product candidates, clinical trial sites and our ability to enroll eligible patients, supply chain and manufacturing facilities, Carisma's ability to maintain and recognize the benefits of certain designations received by product candidates, the timing and results of preclinical and clinical trials, Carisma's ability to fund development activities and achieve development goals, Carisma's ability to protect intellectual property, and other risks and uncertainties described under the heading "Risk Factors" in Carisma's Annual Report on Form 10-K for the year ended December 31, 2023, its Quarterly Reports on Form 10-Q and other documents that Carisma files from time to time with the Securities and Exchange Commission. These forward-looking statements speak only as of the date of this press release, and Carisma undertakes no obligation to revise or update any forward-looking statements to reflect events or circumstances after the date hereof, except as may be required by law.

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