First In Vivo CAR-M Lead Candidate Nominated Under Carisma-Moderna Collaboration

December 14, 2023

First lead candidate to address a solid tumor indication with significant unmet medical need

Supportive pre-clinical proof of concept data reported at SITC 2023 that demonstrated feasibility, tolerability and early efficacy of in vivo CAR-M therapy utilizing mRNA/LNPs in solid tumors

PHILADELPHIA, Dec. 14, 2023 /PRNewswire/ -- Carisma Therapeutics Inc. (Nasdaq: CARM) ("Carisma" or the "Company"), a clinical-stage biopharmaceutical company focused on discovering and developing innovative immunotherapies, today announced the nomination of its first lead candidate under the collaboration with Moderna, Inc. (Nasdaq: MRNA). This first lead candidate will target an antigen present on a solid tumor with significant unmet medical need. This strategic collaboration brings together Carisma's chimeric antigen receptor macrophage (CAR-M) platform with Moderna's messenger RNA (mRNA) and lipid nanoparticle (LNP) technologies to generate and develop *in vivo* CAR-M therapeutics for oncology.

"Following the compelling pre-clinical proof of concept data shared at SITC 2023, we believe *in vivo* CAR-M therapeutics that utilize Moderna's mRNA/LNPs have the potential to benefit patients with a broad variety of cancers," stated Michael Klichinsky, PharmD, PhD, Co-Founder and Chief Scientific Officer at Carisma. "The delivery of this first candidate demonstrates our ability to create novel *in vivo* CAR therapies that can be advanced toward the clinic. We are proud of the significant contributions made by both of the scientific teams at Carisma and Moderna towards this exciting program. We look forward to completing IND-enabling studies with the lead candidate and are excited about the prospect of bringing this therapy forward for patients with advanced solid tumors together with Moderna."

Lin Guey, PhD, Chief Scientific Officer of Therapeutics Research Ventures and Biotherapeutics at Moderna, stated, "We are excited with the progress we've made to advance *in vivo* cell therapy (CAR-M) in collaboration with Carisma. Combining Carisma's deep expertise in myeloid cell biology with our mRNA/LNP platform has allowed us to quickly advance the first lead candidate and we look forward to furthering its development, along with our continued collaboration with Carisma to develop novel therapies to treat patients."

Pre-clinical proof of concept data were recently presented at SITC 2023, demonstrating the feasibility, efficacy, and tolerability of the *in vivo* CAR-M platform that utilizes Moderna's optimized mRNA encapsulated in LNPs and is designed to redirect endogenous myeloid cells to exert targeted anti-tumor activity. The highlighted data demonstrated that Carisma's CAR-M therapy can be directly produced *in vivo*, or within the body, and can successfully redirect endogenous myeloid cells against tumor-associated antigens using Moderna' mRNA/LNPs. This novel approach to cancer immunotherapy offers an off-the-shelf solution that has the potential to increase access to CAR-based therapies and to be the basis of any CAR-M programs discovered or developed under the Carisma and Moderna collaboration.

About Carisma

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

Statements in this press release about future expectations, plans and prospects, as well as any other statements regarding matters that are not historical facts, may constitute "forward-looking statements" within the meaning of The Private Securities Litigation Reform Act of 1995. These statements include, but are not limited to, statements relating to Carisma's business, strategy, future operations, cash runway, the advancement of Carisma's product candidates and product pipeline, and pre-clinical and clinical development of Carisma's product candidates, including expectations regarding timing of initiation and results of pre-clinical and clinical trials. The words "anticipate," "believe," "contemplate," "continue," "could," "estimate," "expect," "goals," "intend," "may," "might," "outlook," "plan," "project," "potential," "predict," "target," "possible," "will," "would," "could," "should," and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words.

Any forward-looking statements are based on management's current expectations of future events and are subject to a number of risks and uncertainties that could cause actual results to differ materially and adversely from those set forth in, or implied by, such forward-looking statements. For a discussion of these risks and uncertainties, and other important factors, any of which could cause Carisma's actual results to differ from those contained in the forward-looking statements, see the "Risk Factors" set forth in the Company's Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on November 9, 2023, as well as discussions of potential risks, uncertainties, and other important factors in Carisma's other recent filings with the Securities and Exchange Commission. Any forward-looking statements that are made in this press release speak as of the date of this press release. Carisma undertakes no obligation to revise the forward-looking statements or to update them to reflect events or circumstances occurring after the date of this press release, whether as a result of new information, future developments or otherwise, except as required by the federal securities laws.

Contacts

Investors:
Shveta Dighe
Head of Investor Relations
investors@carismatx.com

Media:
Julia Stern
(763) 350-5223
jstern@realchemistry.com

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