



New Data Uncover Potential of Expedited Pathway for Immunotherapy Development Through CAR Monocytes

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Carisma Therapeutics expands on foundational first-of-its-kind engineered macrophage cell therapy platform study and explores time-reducing isolation-to-infusion pathway

PHILADELPHIA, May 15, 2020 /PRNewswire/ -- [Carisma Therapeutics Inc.](#), a biopharmaceutical company focused on discovering and developing innovative immunotherapies, shares details from new data findings accepted for presentation at leading healthcare conferences, the American Society of Gene & Cell Therapy (ASGCT) Annual Meeting and the American Association for Cancer Research (AACR) Annual Meeting. Accepted data build on foundational, preclinical findings in Nature Biotechnology's "[Human Chimeric Antigen Receptor Macrophages for Cancer Immunotherapy](#)," first published in March 2020. Additionally, new studies led by Carisma Therapeutics' Drug Discovery team investigate the use of anti-HER2 CAR monocytes (CAR-Mono) to potentially expedite the manufacturing process, resulting in a shorter isolation-to-infusion time for immunotherapies.

"We continue to build on our preclinical work to progress CAR macrophages (CAR-M) toward a clinical solution for patients and providers," said Steven Kelly, president and chief executive officer at Carisma Therapeutics. "In doing so, we are uncovering promising insights – such as the potential to prime the broader immune system to fight the tumor – that showcase the viability of this immunotherapeutic approach as a treatment for solid tumors."

In addition to the growing body of evidence supporting the CAR-M platform, Carisma Therapeutics researchers, in collaboration with the University of Pennsylvania Abramson Cancer Center, are also exploring the feasibility of a CAR-Mono platform. Monocytes are a type of white blood cell that becomes a macrophage as it matures. The advantage to using human monocytes instead of macrophages is that it saves time in the lab, shortening the time between retrieval and infusion from seven days to one day. Initial data suggests that engineering human monocytes in the same way as CAR-M also confers proinflammatory properties to fight tumors, and the CAR-Mono can become macrophages, once infused. Further, CAR-Mono demonstrate antitumor activity, similar to that shown with CAR-M.

"These findings are both scientifically and clinically exciting because of the potential dual impact: a novel approach to harnessing the power of our innate immune systems as well as solving for a long-standing care delivery issue: time," shared Michael Klichinsky, PharmD, PhD, co-inventor of the CAR-M technology and scientific co-founder and vice president of discovery of Carisma Therapeutics. "This early data warrants a deeper investigation so we can fully understand the potential for a shortened manufacturing process as well as advantages in tumor penetration with CAR-Mono."

Abstracts presented at ASGCT as well as supporting presentation materials are [available online in the searchable program](#):

- CT-0508 is an Anti-HER2 Chimeric Antigen Receptor (CAR) Macrophage that Promotes a Pro-Inflammatory Solid Tumor Microenvironment and Eliminates Cancer Cells via Phagocytosis
- Human CAR Monocytes Demonstrate Anti-Tumor Activity and Differentiate Into M1-Polarized CAR Macrophages

Abstracts accepted for presentation at AACR 2020 Annual Meeting (June 22-24), available online:

- [CT-0508 is an Anti-HER2 Chimeric Antigen Receptor \(CAR\) Macrophage with Targeted Anti-Tumor Activity That Promotes A Pro-Inflammatory Solid Tumor Microenvironment](#): June 22, 2020 at 9:00 am EDT
- [Genetically Engineered Chimeric Antigen Receptor \(CAR\) Monocytes Demonstrate Targeted Anti-Tumor Activity and Differentiate into M1-Polarized CAR Macrophages](#): June 22, 2020 at 9:00 am EDT

About Carisma Therapeutics Inc.

Carisma Therapeutics Inc. is a biopharmaceutical company developing a differentiated and proprietary cell therapy platform focused on engineered macrophages, cells that play a crucial role in both the innate and adaptive immune response. The first applications of the platform, developed in collaboration with the University of Pennsylvania, are autologous chimeric antigen receptor (CAR)-macrophages for the treatment of solid tumors. Carisma Therapeutics is headquartered in Philadelphia, PA.

For more information, please visit www.carismatx.com

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