



Phio Pharmaceuticals Announces Research Collaboration with Carisma Therapeutics to Evaluate its Self-Delivering RNAi Technology to Enhance Macrophage-Based Adoptive Cell Therapy

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Collaboration may further expand the range of immune cells that can be 'weaponized' using Phio's gene silencing technology

MARLBOROUGH, Mass., Sept. 9, 2019 /PRNewswire/ -- Phio Pharmaceuticals Corp. (NASDAQ: PHIO), a biotechnology company developing the next generation of immuno-oncology therapeutics based on its proprietary self-delivering RNAi (sd-rxRNA®) therapeutic platform, announced today that it has entered into a research collaboration with Carisma Therapeutics to evaluate the potential of Phio's self-delivering RNAi compounds to synergistically modify Carisma's chimeric antigen receptor macrophages (CAR-M). Silencing of key genes using sd-rxRNA compounds may enhance the immune function of these cells as a novel adoptive cell therapy for use in cancer treatment.

Logo - https://mma.prnewswire.com/media/786567/Phio_Pharmaceuticals_Logo.jpg

"Overcoming local tumor immunosuppression remains a significant challenge in the treatment of cancer," said Dr. John A. Barrett, Chief Development Officer of Phio Pharmaceuticals. "We have established collaborations with several companies and academic institutions to validate our technology's ability to improve the activity of T cells, TILS, NK cells and dendritic cells towards tumors. Macrophages are sentinel cells of the innate immune system that robustly accumulate in most solid tumors. Combining Phio's gene silencing technology with Carisma's CAR-M technology has the potential to enhance aspects of macrophage anti-tumor activity and may further tip the scale in favor of an immunostimulatory phenotype and enhance tumor cell killing. We believe we can leverage both technologies to turn cold tumors hot and ultimately improve outcomes for patients."

Dr. Gerrit Dispersyn, Phio Pharmaceuticals' President and CEO stated "We are very excited to work with the Carisma Therapeutics team, which represents our first collaboration addressing macrophages utility as an immunotherapeutic. By combining Carisma's unique approach to adoptive cell therapy using CAR macrophages with our self-delivering RNAi technology, we expect to demonstrate potential synergies between our platforms that could enable us to bring new and improved forms of adoptive cell therapy to patients in the future. Our overall strategy in this setting is to generate robust data that validate our platform for the weaponization of a broad range of immune cells against tumors in order to generate future partnerships and build shareholder value."

"Metastatic solid tumors have been an intractable challenge for engineered cell therapies. Our platform technology, based on the genetically engineered macrophage, has a unique opportunity to provide benefit in this disease state," said Dr. Michael Klichinsky, co-Founder and Vice President of Discovery at Carisma. "We are excited to work with Phio to evaluate sd-rxRNA mediated silencing of genes that have the potential to enhance macrophage immunotherapy."

About Carisma Therapeutics Inc.

Carisma Therapeutics Inc. is biopharmaceutical company developing a differentiated cell therapy platform focused on engineered macrophages. The first applications of the platform are autologous chimeric antigen receptor macrophages for the treatment of solid tumors. Carisma Therapeutics is headquartered in Philadelphia, PA. For more information, please see the Company's website at www.carismatx.com.

About Phio Pharmaceuticals Corp.

Phio Pharmaceuticals Corp. (NASDAQ: PHIO) is a biotechnology company developing the next generation of immuno-oncology therapeutics based on its self-delivering RNAi (sd-rxRNA®) therapeutic platform. The Company's efforts are focused on silencing tumor-induced suppression of the immune system through our proprietary sd-rxRNA platform with utility in immune cells and/or the tumor micro-environment. Our goal is to maximize the power of our sd-rxRNA therapeutic compounds by weaponizing immune effector cells to overcome tumor immune escape providing patients with a powerful new treatment option that goes beyond current treatment modalities. For additional information, visit the Company's website, www.phioharma.com.

Forward-Looking Statements

This press release contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Forward-looking statements are neither historical facts nor assurances of future performance. These statements are based only on our current beliefs, expectations and assumptions regarding the future of our business, future plans and strategies, projections, anticipated events and trends, the economy and other future conditions. Because forward-looking statements relate to the future, they are subject to inherent uncertainties, risks and changes in circumstances that are difficult to predict and many of which are outside of our control. Our actual results may differ materially from those indicated in the forward-looking statements as a result of a number of important factors, including, but not limited to, the safety and efficacy of our product candidates, future success of our clinical trials and scientific studies, expected duration of available cash runway, our ability to enter into strategic partnerships and the future success of these strategic partnerships, the availability of funds and resources to pursue our research and development projects and general economic conditions. Our Annual Report on Form 10-K and subsequent Quarterly Reports on Form 10-Q include detailed risks under the caption "Risk Factors" that may affect our business, results of operations and financial condition. Readers are urged to review these risk factors and to not act in reliance on any forward-looking statements, as actual results may differ from those contemplated by our forward-looking statements. Phio does not undertake to update forward-looking statements to reflect a change in its views, events or circumstances that occur after the date of this release.

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