Omega Therapeutics Presents New Preclinical Data at ASGCT 2024 Demonstrating Tunable and Durable Upregulation of Gene Expression with Epigenomic Controllers

May 8, 2024 11:00 AM EDT

- *Programmable epigenomic mRNA candidates enabled durable and robust upregulation of gene expression across a diverse set of gene types and regulatory mechanisms*
- *Additional OMEGA platform capabilities demonstrated, including reversible downregulation and multiplexed upregulation of gene expression*

CAMBRIDGE, Mass., May 08, 2024 (GLOBE NEWSWIRE) -- Omega Therapeutics, Inc. (Nasdaq: OMGA) ("Omega"), a clinical-stage biotechnology company pioneering the development of a new class of programmable epigenomic mRNA medicines, today announced the presentation of new preclinical data demonstrating durable and tunable bidirectional regulation of gene expression in cellular models at the pre-transcriptional level at the American Society of Gene and Cell Therapy (ASGCT) 27th Annual Meeting, taking place in Baltimore, Maryland, May 7 – 11.

"These exciting new data underscore the versatile capabilities and power of our OMEGA platform," said Thomas McCauley, Ph.D., Chief Scientific Officer of Omega Therapeutics. "We have demonstrated preclinically that we can prospectively engineer epigenomic controllers to predictably and durably upregulate gene expression across a diverse range of gene types, including turning on inactivated genes, augmenting the expression of genes with low baseline expression levels, and leveraging existing genomic regulatory processes to boost expression. These capabilities unlock a wide spectrum of possibilities to apply precision epigenomic control as a novel therapeutic modality to meaningfully address key drivers of many diseases."

Details for the poster presentation are as follows:

Title: Tuned Upregulation of Diverse Gene Targets Using Programmable Epigenomic Controllers
Abstract Number: 697
Poster Session: Epigenetic Editing and RNA Editing
Date and Time: May 8, 2024, from 12:00 p.m. – 7:00 p.m. ET

Key Findings

These preclinical findings demonstrate the ability of epigenomic controllers (ECs) to enhance target gene expression across various baseline levels of expression and cellular conditions, achieving up to a 10,000-fold increase in expression for inactivated gene targets and maintaining a stable 2-fold increase in expression for up to 55 days for another gene target. Additionally, simultaneous targeting of two regulatory elements for the same gene with two separate ECs yielded a synergistic effect, more than doubling expression compared to single element targeting.

The poster is available on the Omega website at https://omegatherapeutics.com/science/publications.

About Omega Therapeutics
Omega Therapeutics is a clinical-stage biotechnology company pioneering the development of a new class of programmable epigenomic mRNA medicines to treat or cure a broad range of diseases. By pre-transcriptionally modulating gene expression, Omega's approach enables precision epigenomic control of nearly all human genes, including historically undruggable and difficult-to-treat targets, without altering native nucleic acid sequences. Founded in 2017 by Flagship Pioneering following breakthrough research by world-renowned experts in the field of epigenetics, Omega is led by a seasoned and accomplished leadership team with a track record of innovation and operational excellence. The Company is committed to revolutionizing genomic medicine and has a pipeline of therapeutic candidates derived from its OMEGA platform spanning oncology, regenerative medicine, and multigenic diseases including inflammatory and cardiometabolic conditions.

For more information, visit omegatherapeutics.com, or follow us on X and LinkedIn.

About the OMEGA platform
The OMEGA platform leverages the Company's deep understanding of gene regulation, genomic architecture and epigenetic mechanisms to design programmable epigenomic mRNA medicines that precisely target and modulate gene expression at the pre-transcriptional level. Combining world-class data science capabilities with rational drug design and customized delivery, the OMEGA platform enables control of fundamental epigenetic processes and reprogramming of cellular physiology to address the root cause of disease. Omega's modular and programmable mRNA medicines, called epigenomic controllers, target specific genomic loci within insulated genomic domains with high specificity to durably tune single or multiple genes to treat and cure diseases through unprecedented precision epigenomic control.

Forward-Looking Statements
This press release contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. All statements contained in this press release that do not relate to matters of historical fact should be considered forward-looking statements, including without limitation statements regarding the versatile capabilities and power of the OMEGA platform, the wide spectrum of possibilities to apply precision epigenomic control as a novel therapeutic modality to meaningfully address key drivers of many diseases, the potential of the Company's pipeline of therapeutic candidates, and upcoming events and presentations. These statements are neither promises nor guarantees, but involve known and unknown risks, uncertainties and other important factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements, including, but not limited to, the following: the novel technology on which our product candidates are based makes it difficult to predict the time and cost of preclinical and clinical development and subsequently obtaining regulatory approval, if at all; the substantial development and regulatory risks associated with epigenomic controllers due to the novel and unprecedented nature of this new category of medicines; our limited operating history; the incurrence of significant losses and the fact that we expect to continue to incur significant additional losses for the foreseeable future; our need for substantial additional

financing; volatility in capital markets and general economic conditions; our investments in research and development efforts that further enhance the OMEGA platform, and their impact on our results; uncertainty regarding preclinical development, especially for a new class of medicines such as epigenomic controllers; potential delays in and unforeseen costs arising from our clinical trials; the fact that our product candidates may be associated with serious adverse events, undesirable side effects or have other properties that could halt their regulatory development, prevent their regulatory approval, limit their commercial potential, or result in significant negative consequences; difficulties manufacturing the novel technology on which our epigenomic controller candidates are based; our ability to adapt to rapid and significant technological change; our reliance on third parties for the manufacture of materials; our ability to successfully acquire and establish our own manufacturing facilities and infrastructure; our reliance on a limited number of suppliers for lipid excipients used in our product candidates; our ability to advance our product candidates to clinical development; and our ability to obtain, maintain, enforce and adequately protect our intellectual property rights. These and other important factors discussed under the caption ““Risk Factors” in our Quarterly Report on Form 10-Q for the quarter ended March 31, 2024, and our other filings with the SEC, could cause actual results to differ materially from those indicated by the forward-looking statements made in this press release. Any such forward-looking statements represent management’s estimates as of the date of this press release. While we may elect to update such forward-looking statements at some point in the future, we disclaim any obligation to do so, even if subsequent events cause our views to change.

Contact

Investor contact:
Eva Stroynowski
617.949.4370
estroynowski@omegatx.com

Media contact:
Mollie Godbout
LifeSci Communications
646.847.1401
mgodbout@lifescicomms.com