

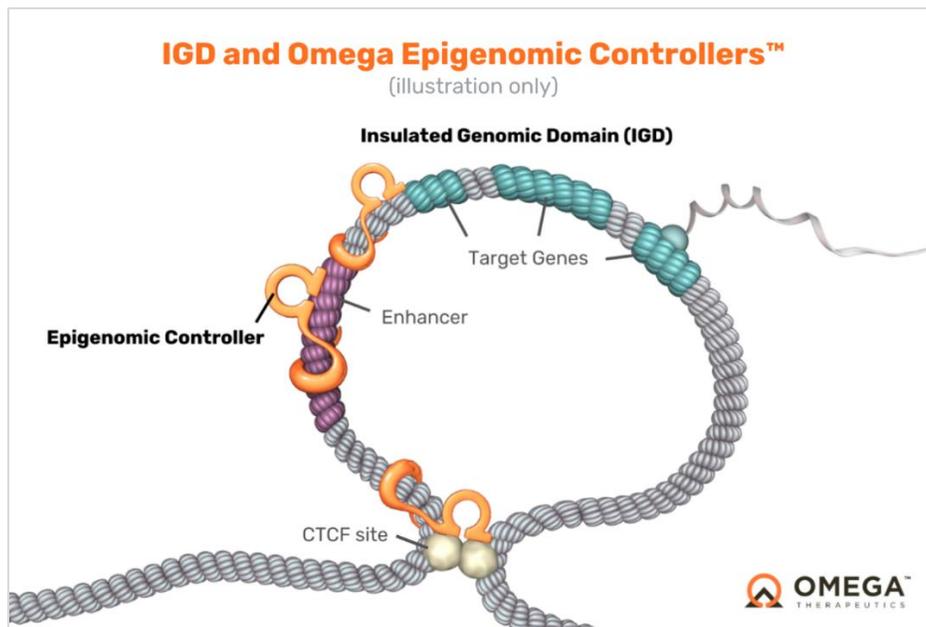
Omega Therapeutics Advances Controllable Epigenomic Programming Platform to Deliver a Pipeline of Novel Therapeutics with \$85M in Financing

Financing proceeds support identification of novel therapeutic targets and enable genomic medicine programs across a wide range of therapeutic areas

Omega's transformative platform aims to deliver highly effective and safe therapies that modulate gene expression without altering a patient's native genomic nucleic acid code

CAMBRIDGE, Mass., July 29, 2020 – Omega Therapeutics[™], a company pioneering a new category of genomic medicine through epigenomic programming, today announced the completion of an \$85 million financing. The funding will support progression to first-in-human clinical trials of the company's Epigenomic Controllers for programs in oncology, inflammation, autoimmune, metabolic, and rare genetic diseases.

“We founded Omega with the long-term vision to create a controllable epigenomic programming platform that would identify novel epigenetic targets and therapeutically address them through a new class of genomic medicines,” said Noubar Afeyan, Ph.D., Chief Executive Officer of Flagship Pioneering and Co-founder and Chairman of the Board for Omega Therapeutics. “Although human cells all share a common genetic code within their 23 pairs of chromosomes, epigenetic regulation determines identity and function at the tissue and cellular level. Coordinated changes in epigenomic programming drive the cellular variation that controls human biology, in both healthy and diseased states. Omega's platform enables controllable and tunable epigenomic programming. It will provide patients and physicians with therapeutic alternatives to gene editing and gene therapy while offering the advantages of programmable, nucleic acid sequence-based targeting of medicines, while also avoiding the challenges of small molecule-based epigenetic approaches.”



Precision Genomic Control[™] delivered through epigenomic programming. Omega's novel engineered therapeutics, called Epigenomic Controllers, target optimal genomic loci with high specificity to deliver the required potent and durable therapeutic effect to precisely modulate or tune single or multiple genes, up or down, to unleash the human genome's innate capacity to cure disease without altering native genomic nucleic acid codes.

“We are advancing the frontiers of medicine through epigenomic programming,” said Mahesh Karande, President and Chief Executive Officer of Omega Therapeutics. “We have engineered novel therapeutics that enable controllable epigenomic programming leading to single and multiple gene modulation. We have therapeutic programs in immunology, oncology, metabolism and other disease areas where our precision genomic modulation approach allows us to go after historically ‘undruggable’ targets,” Mr. Karande continued. “Our approach utilizes well-proven aspects of mRNA-based therapeutics as well as drug delivery. We are privileged to continue the Flagship tradition of pioneering innovative genomic medicine-based therapeutic platforms with the potential to generate multiple products, the first of which we plan to have ready for the clinic in 2021.”

Omega’s epigenomic programming platform is focused on selectively directing the human genome to treat and cure disease by precisely controlling genomic expression without altering native nucleic acid sequences. Omega has created a proprietary platform and knowledge base that identifies Insulated Genomic Domains (IGDs) and their biological functions in both healthy and diseased states across cell types. IGDs naturally function as the fundamental regulators of the human genome and can be modulated to up- or down-regulate single or multiple genes simultaneously. These scientific and product insights drive the discovery and development of disease-specific genomic modulators called Epigenomic Controllers, which are engineered to precisely tune genomic activity to desired therapeutic levels with high targeting specificity and durability of effect.

“Our Epigenomic Controllers comprise a DNA-binding domain and an epigenetic effector domain delivered as mRNA to modulate gene expression. Besides treating monogenic diseases, our therapeutics can, for example, target and modulate difficult-to-drug oncogenes and growth factors, treat complex multi-genic diseases, and control cellular programming and differentiation,” said Thomas McCauley, Ph.D., the company’s Chief Scientific Officer. “A single intervention allows us to modulate single or multiple genes to the desired therapeutically-relevant level with high specificity and a controlled duration of effect through epigenomic programming. This is Precision Genomic Control™ at its best.”

About Omega Therapeutics

Omega Therapeutics is a genomic medicine company advancing novel engineered therapeutics, Omega’s Epigenomic Controllers, enabling controllable epigenomic programming into clinical development for a broad range of indications. These therapeutics deliver Precision Genomic Control™ by controlling Insulated Genomic Domains (IGDs), the fundamental structural and functional units of genomic regulation, by modulating single and multiple gene expression through epigenomic programming. IGDs encompass single or multiple genes and their associated regulatory elements, and are correlated with diverse diseases, including cancer, autoimmune, inflammatory, regenerative, metabolic, neurological conditions and rare diseases. Omega’s Epigenomic Controllers deliver the required potent and durable therapeutic effect by precisely modulating or tuning single or multiple genes, up or down, with high specificity to unleash the human genome’s innate capacity to cure disease without altering native genomic nucleic acid codes. Omega’s Epigenomic Controllers also allow repeat dosing with controllable durability.

Founded by Flagship Pioneering in 2017, with a long-term vision to create a programmable, epigenetic-based genomic medicine platform that would identify novel targets, as well as medicines, Omega’s epigenomic programming platform has identified and mapped IGDs and their structure and function in both healthy and diseased states across cell types. This scientific insight drives the discovery and development of Omega’s novel Epigenomic Controllers, intended for clinical development across a range of therapeutic indications. To learn more please visit www.omegatherapeutics.com.



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