Omega Therapeutics Rakes in $85 Million One Year After Launch

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Omega Therapeutics has secured $85 million in financing nearly one year after the company launched to develop a new category of genomic medicine through epigenomic programming. The funding will be used to drive its lead assets into clinical trials in 2021.

Launched by Flagship Therapeutics, Omega Therapeutics debuted in September 2019. The company aims to use the latest financing to 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. 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's Epigenomic Controllers include a DNA-binding domain and an epigenetic effector domain delivered as mRNA to modulate gene expression. Besides treating monogenic diseases, the company's therapeutics are designed to target and modulate difficult-to-drug oncogenes and growth factors, treat complex multi-genic diseases, and control cellular programming and differentiation.
Nouber Afeyan, chief executive officer of Flagship Therapeutics and chairman of Omega Therapeutics, said when Omega was founded, they had a 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.

"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," Afeyan said in a statement. "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."

Currently, there are a few epigenetic drugs on the market, including Merck's Zolinza (vorinostat) for lymphoma, Otsuka Pharmaceutical's Dacogen (decitabine) for myelodysplastic syndrome, Novartis's Farydak (panobinostat) for multiple myeloma and Pharmion's Vidaza (azacitidine) for myelodysplastic syndrome.

Omega's CEO Mahesh Karande, formerly president and chief executive officer of Macrolide Pharmaceuticals and a long-time Novartis executive, said the company is "advancing the frontiers of medicine" through epigenomic programming. Karande said the company's approach uses "well-proven aspects" of mRNA-based therapeutics as well as drug delivery.

"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," Karande said in a statement.

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