From symptoms control to Cure: Resetting Allergy with mRNA CAR-T therapy

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“Rewriting Biology In Vivo: The Age of Cellular Reprogramming.”

Executive Summary / Investment Rational: Zelig Therapeutics develops the only hope for cure that people suffering from severe allergies have, while all other competitors pursue incremental improvements on standard-of-care or transient symptomatic relief. Leveraging the well-known efficacy of depleting soluble IgE in the bloodstream, Zelig cures allergy by eliminating the source: IgE-producing B cells. We do that by using a transient form of engineered T-cells primed to selectively eradicate these culprit cells. Since we induce a transient version of the eradication mechanism, and because our binder demonstrated exquisite selectivity for IgE-producing cells in clinical trials, we ensure a high safety profile. Furthermore, our one-and-done solution is a pipeline-in-a-product, designed to cure all allergies. To date, Zelig established preclinical proof-of-concept to support its ability to eliminate all IgE-producing cells. The founding team combines expertise in immunology, allergy, RNA therapeutics, biotech entrepreneurship and pharmaceutical development, including a Nobel prize laureate for mRNA therapeutics. • Core Technology: Zelig’s platform uses lipid nanoparticle (LNP)-delivered mRNA encoding a Chimeric Antigen Receptor (CAR) that selectively targets the membrane-bound domainof IgE receptors. The encoded CAR binder has been clinically validated as potent and safe in four clinical trials. By using mRNA to encode the CAR, we enable transient, nonintegrating CAR expression, which selectively depletes IgE+ B cells, while sparing soluble IgE, as well as all other immunoglobulins. In totality, these attributes ensure a high safety profile, and unparalleled penetration into bone marrow and lymph-nodes, where IgE-producing B cells reside. • Product Profile/Pipeline: The Lead candidate, Q-CAR, is in advanced preclinical development stages, including demonstrating selective elimination of IgE-secreting human cells in dozens of primary donor samples, as well as in vivo potency in murine models. The drug product includes a targeted LNP, combining founder-sourced IP and partnerships. Our initial indication is severe food allergies. • Business Strategy: Zelig will advance its mRNA CAR platform into clinical development for severe allergies, followed by refractory Chronic Spontaneous Urticaria and Atopic Asthma. The short-term milestones include Development Candidate Nomination and an Investigator-Initiated Trial in China, producing clinical proof-of-principal validation of safety, pharmacodynamics and biomarkers. The long-term strategy includes expanding the platform to additional immunoglobulin-driven disorders and forming partnerships with biotech/pharma for their development and commercialization. • What's Next? Next steps include optimization of our LNP formulation, IND-enabling studies, and GMP manufacturing, with first-in-human studies expected to start in 2027. The Delaware incorporated Zelig Therapeutics seeks seed/Series A funding and is in strategic partnership discussions.