

A Novel Glioblastoma Drug

A median survival rate of 15 months. Even with the current standard treatment, the overall survival rate is less than 10% in three years. Glioblastoma multiforme (GBM) is one of the most deadly cancers despite traditional surgery, radiotherapy and chemotherapy treatment. Researchers at Stony Brook University are thinking outside the box in order to address the urgent need for a novel glioblastoma drug.

Dr. Eckard Wimmer is a member of the National Academy of Sciences, and a Distinguished Professor in the Department of Molecular Genetics & Microbiology at Stony Brook University. He is the first scientist to synthesize a virus from scratch and one of the inventors of Mono-Cre poliovirus – the platform upon which a potential new drug would be based.



Eckard Wimmer, PhD

Dr. Wimmer's REACH-funded technology already has a potential home – Codagenix Inc. – a pre-clinical stage biotechnology startup based on Long Island, New York. Codagenix is developing live attenuated vaccines using a “disruptive” software-based rational design algorithm based on Dr. Wimmer's technology. The Center for Biotechnology, the lead for the NIH-REACH funded Long Island Bioscience Hub, has played a crucial role in Codagenix's company development. The Center for Biotechnology (CFB) has provided both business and technology development support to Codagenix since its inception in 2009. Current support includes an Applied Research and Development grant and an LIBH-REACH grant totaling \$180,000.



CODAGENIX INC.

Additionally, the company has secured NIH grants in excess of \$1M as well as three SBIR grants. The company recently secured a \$2M private investment, partly for oncolytic virus development.

In Fall of 2016, Codagenix entered into an exclusive licensing agreement with Stony Brook University, through the Research Foundation for the State of New York, to commercialize a platform technology to develop a pipeline of live attenuated vaccines against viral infections in people and animals based on Dr. Wimmer's work. The technology relies on software to re-design the

genomes of potentially harmful viruses to make them safe and effective vaccines. The lead indication for vaccine development generated is a vaccine against Seasonal Influenza slated for Phase I human clinical trials in 2017.

Additionally, in early September 2016, the company Codagenix began first tests of its potential Zika virus vaccine in a living host. The in vivo testing of its live-attenuated Zika virus vaccine commenced just 27 days after it plugged Zika into its proprietary, synthetic biology-based vaccine-design platform, representing the potential to develop vaccines on demand.