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# Geneos Therapeutics Announces First Patient Dosed with its DNA-based, Neoantigen-Targeting Personalized Vaccine Technology

## This is the First-in-Human Implementation for Geneos Therapeutics' Exquisitely Personalized Immunotherapies for Cancer (GT-EPIC) Platform

## Clinical collaboration with Washington University

PLYMOUTH MEETING, PA – July 10, 2019 – Geneos Therapeutics, a clinical-stage biotech company, a spin-out of Inovio Pharmaceuticals (NASDAQ: INO), announced today that the first cancer patient was dosed using the company's GT-EPIC Neoantigen-Targeting Personalized Vaccine Technology. In this first-in-human treatment – part of a clinical collaboration between Geneos and Washington University School of Medicine in St. Louis – a patient with Anaplastic Astrocytoma, a form of advanced brain cancer, is being treated on a Compassionate Use basis with the patient's own tumor-derived neoantigen vaccine. The target neoantigens were identified using Washington University's proprietary neoantigen prediction algorithm – pVAC-Seq. The vaccine, which targets 30 antigens including all 27 tumor specific neoantigens and 3 tumor antigens identified from the patient's tumor, was designed and administered based on the GT-EPIC Platform.

Dr. Niranjan Y. Sardesai, Geneos' Chief Executive Officer, said "This first-in-human treatment is an important milestone for Geneos as it demonstrates the company's rapid biopsy-to-treatment implementation of its GT-EPIC technology platform to target cancer neoantigens on a personalized basis. Geneos is pleased to collaborate with Washington University, a pioneer in developing neoantigen-targeting therapies, in this first-in-human treatment. This collaboration highlights some of the key advantages of the GT-EPIC platform such as the ability to move rapidly into the clinic to treat cancers and to target upwards of all (30+) targetable antigens in the patient in a single administration."

The patient's treatment is led by neurosurgeon Dr. Gavin Dunn and medical oncologist Dr. Tanner Johanns, who treat patients at Siteman Cancer Center at Washington University and Barnes-Jewish Hospital. "We partnered with Geneos to use its technology in building a personalized cancer vaccine tailored to the mutated proteins found in this patient's tumor. We were drawn to the speed and versatility of the Geneos platform, along with its safety record and clinical immunogenicity data from previous human studies in both cancer and infectious diseases. Therefore, we approached Geneos about supporting our effort to make the experimental treatment available to this patient who otherwise has limited treatment options. We look forward to expanding this collaboration and evaluating the same technology to generate personalized neoantigen vaccines for the treatment of additional tumor types," Johanns said.

Cancer neoantigens – the mutations and genomic changes that accumulate as tumors develop – have been recognized as important targets in the development of immune mediated treatments for cancer. These neoantigens are recognized by the immune system as being foreign and generate immune responses directed at the cancer. The GT-EPIC Platform is based on a DNA vaccine platform which Geneos exclusively licensed from Inovio Pharmaceuticals (NASDAQ:INO), and allows the company to develop exquisitely personalized therapies tailored to each patient's unique tumor mutations. Geneos, along with its collaborators at The Wistar Institute, recently published preclinical, proof-of-concept animal model data in the prestigious journal, Cancer Immunology Research, demonstrating the functional advantages of the Geneos Platform.

For more information on the company, visit www.geneostx.com.

**About Geneos Therapeutics' GT-EPIC Neoantigen-Targeting Platform**
Geneos Therapeutics' GT-EPIC Neoantigen-Targeting Platform is based on a clinically-validated DNA vaccine platform exclusively licensed from Inovio Pharmaceuticals, Inc. (NASDAQ: INO) for use in developing personalized, neoantigen-targeting immunotherapies. The platform has been used extensively and safely by Inovio Pharmaceuticals in the clinical treatment of patients with over 2,000 patients treated and over 6,000 administrations. The GT-EPIC platform allows Geneos to develop exquisitely personalized DNA-based therapies tailored to each patient's unique tumor mutations. The GT-EPIC platform is poised to deliver the following key advantages: ability to drive potent and broad T cell immune responses, capability to target an unprecedented number of neoantigens in a single formulation, and a rapid manufacturing turnaround time. Geneos believes that these are the three key differentiators that will drive the company, and the oncology space, into the next generation of immunotherapies.

**About Geneos Therapeutics**
At Geneos Therapeutics, we believe that personalized therapies are the future of cancer treatment. Our passion is to develop personalized therapies to unleash the most powerful force against cancer – your body's own immune system. Our approach is to target unique neoantigens (abnormal mutations produced by cancer cells) from individual patient tumors to develop novel treatments for cancer. Geneos Therapeutics' technology is designed to identify, design, manufacture, and deliver tumor specific neoantigen-targeted personalized immunotherapies. We have an experienced management team with a track record of success in building immunotherapy-based companies. Geneos, created as a spinout of Inovio Pharmaceuticals, Inc. (NASDAQ:INO), holds an exclusive license of Inovio's DNA-based Immunotherapy platform, which has demonstrated in multiple clinical trials, animal models, and peer-reviewed publications the ability to elicit a potent and tumor-specific immune response to fight cancer.

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*This press release contains certain forward-looking statements relating to our business, including our plans to develop electroporation-based drug and gene delivery technologies and DNA immunotherapies, our expectations regarding our research and development programs, including the planned initiation and conduct of clinical trials and the availability and timing of data from those trials, and the sufficiency of our capital resources. Actual events or results may differ from the expectations set forth herein. There can be no assurance that any product candidate in Geneos' pipeline will be successfully developed, manufactured or commercialized, that final results of clinical trials will be supportive of regulatory approvals required to market licensed products, or that any of the forward-looking information provided herein will be proven accurate. Forward-looking statements speak only as of the date of this release, and Geneos undertakes no obligation to update or revise these statements, except as may be required by law.*