NEWS RELEASE

Immediate Release

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Geneos Personalized Neoantigen-Targeting Vaccine (GNOS-PV02) to be Utilized in Innovative GT-30 Hepatocellular Carcinoma Trial

PLYMOUTH MEETING, PA – January 29, 2020 – Geneos Therapeutics announced today that its personalized neoantigen-targeting vaccine, GNOS-PV02 (based on its proprietary GT-EPIC™ platform), will be evaluated in a clinical trial for patients with advanced Hepatocellular Carcinoma (HCC). GNOS-PV02 is a tumor-specific DNA plasmid product designed and manufactured for each patient based on the unique tumor variations (neoantigens) identified by sequencing each patient's tumors. In the trial, GNOS-PV02 will be combined with a DNA plasmid encoded cytokine immunomodulator IL-12 (INO-9012) and standard of care PD-1 checkpoint inhibitor (pembrolizumab).

This innovative trial is an open-label, non-randomized, exploratory study designed to assess the safety, immunogenicity, and antitumor activity of the combination treatment in advanced HCC patients who have progressed on or are intolerant to first-line treatment with a Tyrosine Kinase Inhibitor (TKI). The primary study goals are to evaluate safety, biomarkers of immune activity, with special emphasis on CD8+ T cell responses, and clinical outcomes.

Geneos has exclusively licensed the DNA Medicines platform, INO-9012 and CELLECTRA® device for in vivo delivery of DNA plasmids from Inovio Pharmaceuticals (NASDAQ: INO) for use in the development of personalized cancer treatments. The two DNA based products, GNOS-PV02 and INO-9012, will be administered to cancer patients via intradermal (ID) administration using the CELLECTRA® 2000 ID device.

Dr. Niranjan Y. Sardesai, Founder and Chief Executive Officer of Geneos Therapeutics, said "We are excited about this first clinical trial for the Geneos GT-EPIC™ neoantigen-targeting platform. This trial will seek to demonstrate that Geneos can produce personalized neoantigen-targeting immunotherapies in a clinically meaningful time frame, which drive strong T cell responses (both CD4+ and CD8+) and that these immunotherapies can enhance the efficacy of a PD-1 inhibitor alone. Enabled by our industry leading rapid biopsy to treatment turnaround time and the unique design of this study, the Geneos personalized therapy will be initiated at the same time the patient receives the first dose of the PD-1 inhibitor - we believe this is a critical success factor for neoantigen-based combination trials."

Dr. Mark Yarchoan, Assistant Professor of Oncology at Johns Hopkins and Investigator for the GT-30 advanced HCC study said "Checkpoint inhibitors and other immunotherapies have advanced the cancer treatment field and have had a significant impact on clinical outcomes. However, every

patient's tumor is unique and in order to further improve outcomes, I believe that personalized approaches are critical. I'm excited about this clinical trial utilizing Geneos' innovative personalized treatment approach in combination with an approved immunotherapy for the treatment of advanced HCC. HCC is one of the fastest growing cancers in the U.S., and a significant unmet need exists to find more efficacious treatments."

HCC accounts for the majority of primary liver cancers. Globally, liver cancers are the fourth most common cause of cancer-related death and rank sixth in terms of annual incidence. The rate of death from liver cancer in the U.S. has increased 43% from 2000 to 2016 and with a 5-year survival rate of 18% for advanced liver cancer, it is the second most deadly tumor behind pancreatic. To date, immunotherapies have shown limited efficacy with two PD-1 inhibitors (pembrolizumab and nivolumab) approved as second line treatments following a tyrosine kinase inhibitor.

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

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 using our GT-EPIC™ platform is to target unique neoantigens (abnormal mutations produced by cancer cells) from individual patient tumors to develop novel treatments for cancer. We have an experienced management team with a track record of success in building immunotherapy-based companies. Geneos was created as a spinout of Inovio Pharmaceuticals, Inc. (NASDAQ: INO). For more information, visit http://www.geneostx.com

About GT-EPIC™ Platform:

Geneos Therapeutics' GT-EPIC™ Neoantigen-Targeting Platform is based on a clinically-validated DNA medicines technology exclusively licensed from Inovio Pharmaceuticals, Inc. (NASDAQ: INO) for use in developing personalized, neoantigen-targeting immunotherapies. The Inovio technology 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 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 three key differentiators that will drive the company, and the oncology space, into the next generation of neoantigen targeted immunotherapies.

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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.