



NEWS RELEASE

Inovio Pharmaceuticals Demonstrates PSA Stabilizing Effect of INO-5150 Immunotherapy in Phase 1b Study for Prostate Cancer

2018-05-17

PLYMOUTH MEETING, Pa., May 17, 2018 (GLOBE NEWSWIRE) -- Inovio Pharmaceuticals, Inc. (NASDAQ:INO) today announced a poster presentation of additional prostate cancer data (Abstract #229675) at the American Society of Clinical Oncology (ASCO) annual meeting to be held in Chicago, June 1-5, 2018. Previously reported data from a Phase 1b clinical trial demonstrated that Inovio's cancer immunotherapy (INO-5150) slowed PSA rise in patients with biochemically recurrent prostate cancer. Additional analyses show clinically meaningful PSA stabilization post-administration of Inovio's immunotherapy in patients with no documented disease progression during the study. Of note, this effect was also observed in the patients with the fastest PSA doubling at the time of study entry.

The multi-center Phase 1b study enrolled 62 patients with biochemically relapsed prostate cancer following definitive local therapy. Under the trial design, eligible patients received INO-5150 (DNA plasmids encoding prostate specific antigen (PSA) and prostate specific membrane antigen (PSMA)) alone or co-administered with INO-9012 (IL-12 plasmid) delivered intramuscularly followed by EP using the CELLECTRA®-5P device. Of the 61 evaluable patients, 77% (47/61) demonstrated T cell immunogenicity, and 38% (19/50) exhibited CD38+, Perforin+CD8+ T cell responses. Additional analyses are underway to elucidate the correlation between immunologic efficacy and clinical benefit. For more information, please visit [ClinicalTrials.gov](https://clinicaltrials.gov/ct2/show/study/NCT02514213) (Identifier: NCT02514213).

Dr. J. Joseph Kim, Inovio's President & CEO, said, "The additional results from our Phase 1b INO-5150 study continue to support our rationale that Inovio's T cell generating INO-5150 could be an important agent as an immunotherapy as it provides strong and durable immune responses in a particularly difficult-to-treat prostate cancer patient population. We remain diligent on establishing an outside partnership to further advance INO-5150 and I look forward to sharing additional observations from our prostate cancer development program later this year."

INO-5150 was generated using Inovio's proprietary ASPIRE™ technology process to enable significant production of engineered PSA and PSMA antigens with genetic sequences differentiated from native human PSA and PSMA sequences. This patented approach is designed to help the body's immune system overcome its "self-tolerance" to prostate cancer cells and mount a strong targeted CD8+ killer T cell response to eliminate the cancerous cells displaying these antigens. PSMA is also one of 3 antigens comprising INO-5401, which is being tested in two separate Phase 1/2 trials as an immunotherapy to treat glioblastoma and metastatic bladder cancer in

combination with Regeneron and Genentech/Roche's checkpoint inhibitors, respectively.

Independently, as part of the active, ongoing collaboration, two additional posters are being presented at the ASCO meeting that provide details on the ongoing trials of AstraZeneca/MedImmune's MEDI0457 (formerly called INO-3112 which MedImmune licensed from Inovio) in abstract #TPS6093 and #5525.

About Inovio Pharmaceuticals, Inc.

Inovio is a late-stage biotechnology company focused on the discovery, development, and commercialization of DNA immunotherapies that transform the treatment of cancer and infectious diseases. Inovio's proprietary platform technology, ASPIRE, applies next-generation antigen sequencing and DNA delivery to activate potent immune responses to targeted diseases. The technology functions exclusively in vivo, and has been demonstrated to consistently activate robust and fully functional T cell and antibody responses against targeted cancers and pathogens. Inovio is the only immunotherapy company that has reported generating T cells whose killing capacity correlates with relevant clinical outcomes. Inovio's most advanced clinical program, VGX-3100, is in Phase 3 for the treatment of HPV-related cervical precancer. Also in development are Phase 2 immuno-oncology programs targeting head and neck cancer, bladder cancer, and glioblastoma, as well as platform development programs in hepatitis B, Zika, Ebola, MERS, and HIV. Partners and collaborators include MedImmune, Regeneron, Roche/Genentech, ApolloBio Corporation, The Wistar Institute, University of Pennsylvania, the Parker Institute for Cancer Immunotherapy, CEPI, DARPA, GeneOne Life Science, Plumline Life Sciences, Drexel University, NIH, HIV Vaccines Trial Network, National Cancer Institute, U.S. Military HIV Research Program, and Laval University. For more information, visit www.inovio.com.

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 vaccines, 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, our plans and expectations regarding partnerships and the plans of GENEOS Therapeutics, Inc. to raise capital. Actual events or results may differ from the expectations set forth herein as a result of a number of factors, including uncertainties inherent in pre-clinical studies, clinical trials and product development programs, the availability of funding to support continuing research and studies in an effort to prove safety and efficacy of electroporation technology as a delivery mechanism or develop viable DNA vaccines, our ability to support our pipeline of SynCon® active immunotherapy and vaccine products, the ability of our collaborators to attain development and commercial milestones for products we license and product sales that will enable us to receive future payments and royalties, the adequacy of our capital resources, the availability or potential availability of alternative therapies or treatments for the conditions targeted by us or our collaborators, including alternatives that may be more efficacious or cost effective than any therapy or treatment that we and our collaborators hope to develop, issues involving product liability, issues involving patents and whether they or licenses to them will provide us with meaningful protection from others using the covered technologies, whether such proprietary rights are enforceable or defensible or infringe or allegedly infringe on rights of others or can withstand claims of invalidity and whether we can finance or devote other significant

resources that may be necessary to prosecute, protect or defend them, the level of corporate expenditures, assessments of our technology by potential corporate or other partners or collaborators, capital market conditions, the impact of government healthcare proposals and other factors set forth in our Annual Report on Form 10-K for the year ended December 31, 2017, our Quarterly Report on Form 10-Q for the quarter ended March 31, 2018 and other regulatory filings we make from time to time. There can be no assurance that any product candidate in our 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 we undertake no obligation to update or revise these statements, except as may be required by law.

CONTACTS:

Investors: Ben Matone, Inovio, 484-362-0076, **ben.matone@inovio.com**
Media: Jeff Richardson, Inovio, 267-440-4211, **jrichardson@inovio.com**

Source: Inovio Pharmaceuticals, Inc.