NEWS RELEASE

Inovio Receives Milestone Payment from MedImmune as MEDI0457 and Checkpoint Inhibitor Combination Trial in Head and Neck Squamous Cell Cancer Advances to Phase 2

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First efficacy trial to evaluate Inovio's cancer immunotherapy targeting HPV in combination with durvalumab

PLYMOUTH MEETING, Pa., Jan. 08, 2018 (GLOBE NEWSWIRE) -- Inovio Pharmaceuticals, Inc. (NASDAQ:INO) announced today it has received a milestone payment from MedImmune as MEDI0457 (formerly called INO-3112 which MedImmune in-licensed from Inovio) in combination with durvalumab (MEDI4736) satisfactorily completed the phase 1 safety review portion of the study and has advanced to the phase 2 efficacy stage of the trial. As part of a $700 million 2015 license and collaboration agreement, MedImmune, the global biologics research and development arm of AstraZeneca, is evaluating MEDI0457 in combination with durvalumab, its PD-L1 checkpoint inhibitor, in patients with recurrent/metastatic HPV-associated head and neck squamous cancer (HNSCC) in a clinical trial with an estimated enrollment of 50 patients.

Under the 2015 agreement, MedImmune acquired exclusive rights to Inovio's MEDI0457 immunotherapy. MEDI0457 targets cancers caused by human papillomavirus (HPV) types 16 and 18 which are responsible for more than 70 percent of cervical pre-cancers and cancers and are involved in the development of other tumors as well such as HNSCC. Within the broader license and collaboration agreement, MedImmune and Inovio will develop two additional DNA-based cancer therapy products not included in Inovio's current product pipeline, which MedImmune has exclusive rights to develop and commercialize. Inovio will receive development, regulatory and commercialization milestone payments and will be eligible to receive royalties on worldwide net sales for these additional cancer vaccine products.

Dr. Ildiko Csiki, MD, PhD, Inovio Vice President, Clinical Development said, "We are pleased to see this combination study advance to the efficacy portion of the trial. Published preclinical studies suggest that treatment with HPV targeted immunotherapeutic approach in combination with PD-1/PD-L1 inhibition may be synergistic, and potentially increase efficacy of checkpoint inhibitors."

Dr. J. Joseph Kim, Inovio's President and Chief Executive Officer, said, "Inovio's primary goal is to become the global leader in HPV-related disease treatment. Along with MEDI's development of MEDI0457 for HPV-related cancer, Inovio's VGX-3100, is currently

being tested in global phase 3 pivotal trials for cervical pre-cancer as well as a treatment for vulvar and anal pre-cancers caused by HPV. Overall, these products could be well-positioned to comprehensively treat HPV-related diseases across the continuum of HPV infections from pre-cancerous conditions to cancer in both women and men."

In a phase 1 study of MEDI0457 in 22 HPV-positive patients with HNSCC, Inovio has previously demonstrated that MEDI0457 generated robust antigen-specific CD8+ killer T cell responses in both tumor tissue and peripheral blood. One patient in that trial who initially displayed a slight increase in T cell immune responses developed progressive disease at 11 months into the study and subsequently received a PD-1 checkpoint inhibitor. The patient had a sustained complete response after only four doses of a checkpoint inhibitor, and continues on anti PD-1 therapy with no evidence of disease 18 months after initiation of the checkpoint inhibitor.

About MEDI0457 and VGX-3100

MEDI0457 (formerly called INO-3112 (VGX-3100, plus IL-12) which MedImmune in-licensed from Inovio) is under evaluation by MedImmune to treat HPV-associated cancers. Inovio is investigating VGX-3100, a DNA-based immunotherapy for the treatment of HPV-16 and HPV-18 infection and pre-cancerous lesions of the cervix (phase 3) and vulva (phase 2). VGX-3100 has the potential to be the first approved treatment for HPV infection of the cervix and the first non-surgical treatment for pre-cancerous cervical lesions. VGX-3100 works by stimulating a specific immune response to HPV-16 and HPV-18, which targets the infection and causes destruction of pre-cancerous cells. In a randomized, double-blind, placebo-controlled phase 2b study in 167 adult women with histologically documented HPV-16/18 cervical HSIL (CIN2/3), treatment with VGX-3100 resulted in a statistically significantly greater decrease in cervical HSIL and clearance of HPV infection vs. placebo. The most common side effect was injection site pain, and no serious adverse events were reported. VGX-3100 utilizes the patient's own immune system to clear HPV-16 and HPV-18 infection and pre-cancerous lesions without the increased risks associated with surgery, such as loss of reproductive health and negative psychosocial impacts.

About Inovio Pharmaceuticals, Inc.

Inovio is taking immunotherapy to the next level in the fight against cancer and infectious diseases. We are the only immunotherapy company that has reported generating T cells in vivo in high quantity that are fully functional and whose killing capacity correlates with relevant clinical outcomes with a favorable safety profile. With an expanding portfolio of immune therapies, the company is advancing a growing preclinical and clinical stage product pipeline. Partners and collaborators include MedImmune, Regeneron, Genentech, The Wistar Institute, University of Pennsylvania, DARPA, GeneOne Life Science, Plumbline Life Sciences, ApolloBio Corporation, 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, and the sufficiency of our capital resources. 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 the company or its collaborators, including alternatives that may be more efficacious or cost effective than any therapy or treatment that the company and its collaborators hope to develop, issues involving product liability, issues involving patents and whether they or licenses to them will provide the company 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 the company can finance or devote other significant resources that may be necessary to prosecute, protect or defend them, the level of corporate expenditures, assessments of the company's 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, 2016, our Form 10-Q for the period ended September 30, 2017, and other regulatory filings we make from time to time. There can be no assurance that any product candidate in Inovio's 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 Inovio undertakes no obligation to update or revise these statements, except as may be required by law.

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