NEWS RELEASE

# Inovio and The Wistar Institute Receive More Than $4.6 Million in R&D Funding to Advance Vaccines Against Tuberculosis & Malaria

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PLYMOUTH MEETING, Pa., Feb. 12, 2018 (GLOBE NEWSWIRE) -- Inovio Pharmaceuticals, Inc. (NASDAQ:INO) today announced that the company is collaborating with The Wistar Institute to advance two novel SynCon® vaccine programs against tuberculosis (TB) and malaria, fully funded by more than $4.6 million in total grants from the Bill & Melinda Gates Foundation and the National Institutes of Health (NIH).

Grants from the Gates Foundation (for malaria) and from the National Institute of Allergy & Infectious Diseases (for TB) will fully support Inovio's efforts to develop new DNA vaccines employing its versatile ASPIRE (Antigen SPecific Immune REsponses) platform that is leading the way forward for activation immunotherapy. This one-of-a-kind platform delivers optimized synthetic antigenic genes into cells, where it is translated into protein antigens that activate an individual's immune system to generate robust targeted T cell and antibody responses.

Malaria and TB remain two of the largest global health problems existing today. Efforts to develop better malaria control tools have gained new urgency as drug resistance has rendered the cheapest and most widely-used anti-malarial drugs useless in many parts of Africa. New combination treatments for malaria are more effective but have remained out of reach for millions of Africans due to supply shortages and the relatively high cost of the drugs. In 2013, there were an estimated 584,000 deaths from malaria with around 90% of these occurring in sub-Saharan Africa, and 83% in children under the age of five in sub-Saharan Africa. There is currently no vaccine on the market for protection against malaria.

Dr. Laurent Humeau, Inovio's Senior VP, Research and Development, said, "Inovio is pleased to collaborate with The Wistar Institute and laboratory of Inovio's co-founder, Dr. David B. Weiner, to develop novel, effective vaccines against the global health threats of malaria and TB. What we learn from developing vaccines against these infectious disease programs using our versatile ASPIRE™ technology platform we can also apply to advance our cancer-focused therapies. This platform is well suited to address global health outbreaks, with its demonstrated potency and long safety track record in the clinic as well as its rapid design, ease of manufacturing and transportation/storage. Based on the quality of preclinical data, Inovio and collaborators plan to obtain additional funding to

advance the vaccines into clinical studies."

"DNA vaccines have a significant public health potential to rapidly impact emerging pandemics, as this technology has conceptual safety, development, speed of production, field stability, and deliverability advantages for vaccine and immunotherapy development," said Dr. David B. Weiner, Ph.D., executive vice president, director of the Vaccine & Immunotherapy Center at The Wistar Institute and the W.W. Smith Charitable Trust Professor in Cancer Research. "These synthetic DNA approaches can be developed for important infectious diseases, and with our collaborators, we have shown this consistently by rapidly engineering multiple synthetic DNA vaccines and advancing them to clinical study with positive outcomes of safety and immune potency."

Inovio and Wistar will also develop and evaluate a novel SynCon vaccine against TB in non-human primates. This research will be funded under a National Institutes of Health (National Institute of Allergy & Infectious Diseases) grant to Wistar. In use today is a decades-old TB vaccine (BCG) that, while somewhat effective, has variable protective efficacy and is unreliable in protecting against pulmonary TB, which accounts for most of the disease burden worldwide, according to the CDC. A safe, effective and affordable TB vaccine that covers a broad spectrum of strains would represent a major advance in the control of the disease, which is currently experiencing treatment ineffectiveness due to the rise of multi-drug resistances.

The Inovio/Wistar TB program will also build on recent clinical success by newer genetic immune modulators focused on improved T cell and antibody induction. The program will concentrate on increasing the breadth of coverage induced by optimized SynCon vaccines by exploring the potential of a multivalent DNA vaccine targeting multiple TB antigens at both active and latent stages of infection. Furthermore, Inovio plans to develop this collection of technologies in a simplified vaccine scheme that has distinct clinical advantages for global testing.

Tuberculosis is one of the top ten causes of death worldwide. In 2016, 10.4 million people fell ill with TB, and 1.7 million died from the disease. Over 95% of TB deaths occur in low- and middle-income countries. Seven countries account for 64% of the total, with India leading the count, followed by Indonesia, China, Philippines, Pakistan, Nigeria, and South Africa. In 2016, an estimated one million children became ill with TB and 250,000 children died of TB (including children with HIV-associated TB). TB is also the leading killer of HIV-positive people: in 2016, 40% of HIV deaths were due to TB.

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, the Parker Institute for Cancer Immunotherapy, 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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