Inovio announces $16 m grant after PENNVAX HIV vaccine clinical success

Inovio Pharmaceuticals and academic collaborators, notably the University of Pennsylvania, have received a $16 Million grant from National Institute of Allergy and Infectious Diseases.

The grant will fund a 5 year AIDS vaccine Development Program, and comes about following the success of the PENNVAX vaccine cinical work to date.

PLYMOUTH MEETING, Pa. – March 16, 2015 – **Inovio Pharmaceuticals, Inc. {NASDAQ: INO}** announced today that the company and its academic collaborators, including the University of Pennsylvania (UPenn), were awarded a new five-year $16 million Integrated Preclinical/Clinical AIDS Vaccine Development Program grant from the National Institute of Allergy and Infectious Diseases (NIAID).

This five-year program grant was awarded based on the clinical successes of Inovio's PENNVAX® HIV vaccine program. The grant will fund research to expand PENNVAX coverage of HIV strains as well as to further enhance antibody responses generated by the vaccine.

New PENNVAX envelope constructs will be designed and tested with Inovio's DNA-based immune activator encoding novel cytokine genes and will be studied in a prime-boost strategy with recombinant HIV envelope proteins. The collaborators will assess different combinations in preclinical models with the goal of generating high levels of neutralizing antibodies mirroring the robust CD8+ T cell responses generated by

Inovio's PENNVAX-B DNA vaccine in previously published clinical studies. The overall goal of this project is to further build upon this important HIV vaccine approach as well to gain fundamental insight into new technologies to improve vaccination outcomes.

As part of this grant consortium, Inovio will couple its expertise in constructing, developing and manufacturing HIV vaccines with researchers from four world-leading academic institutions (University of Pennsylvania, Emory University, Duke University and the University of Massachusetts) along with VGXi, a contract DNA plasmid manufacturer, and Waisman Biomanufacturing, a contract protein manufacturer.

Dr. J. Joseph Kim, President and CEO, said, "On behalf of our team of preeminent academic collaborators, we are honored to receive this significant new grant from the NIAID. Having completed the development of PENNVAX-GP under a prior $25 million NIAID grant, we are on track to separately initiate a phase I study of this HIV vaccine. This additional NIAID funding allows us to immediately continue and expand the development of PENNVAX vaccines. We have one of the most dynamic HIV programs in the world and we look forward to pursuing any and all scientific exploration to achieve an answer to this challenging disease using our novel DNA immunotherapy approach."

The NIAID previously awarded Inovio a $25 million grant to develop PENNVAX-GP. UPenn was a collaborating partner on that award as well for the pre-clinical development activities. A phase I study of PENNVAX-GP is expected to start in the first half of 2015.

About PENNVAX® HIV Vaccines and Immunotherapies

Human immunodeficiency virus (HIV) is a retrovirus that causes acquired immunodeficiency syndrome (AIDS), a condition in which progressive failure of the immune system allows life-threatening opportunistic infections and cancers to thrive. HIV is classified into clades, sub-types within which the virus has genetic similarities. The most prevalent clades are B (found mainly in North America and Europe), A and D (found mainly in Africa), and C (found mainly in Africa and Asia).

Inovio completed initial clinical studies of its HIV immunotherapy PENNVAX-B, targeting clade B viruses, to achieve proof of principle in generating potent immune responses using its SynCon® vaccine technology. In two published phase I studies, PENNVAX-B immunization has been shown to generate high levels of activated, antigen-specific CD8+ killer T cells with proper functional characteristics. This ability uniquely positions PENNVAX as an important product candidate for both preventing and treating HIV infections.

Using a $25 million grant from the NIH, Inovio designed its multi-clade, multi-antigen PENNVAX-GP immunotherapy targeting viruses from clades A, B, C and D. PENNVAX-GP is Inovio’s lead preventive and therapeutic immunotherapy for HIV.

About Inovio Pharmaceuticals, Inc.

Inovio is revolutionizing the fight against cancer and infectious diseases. Their immunotherapies uniquely activate best-in-class immune responses to prevent and treat disease, and have shown clinically significant efficacy 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 Roche, MedImmune, University of Pennsylvania, DARPA, Drexel University, NIH, HIV Vaccines Trial Network, National Cancer Institute, U.S. Military HIV Research Program, and University of Manitoba. For more information, visit www.inovio.com.

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N.B.

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 and 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 (including, but not limited to, the fact that pre-clinical and clinical results referenced in this release may not be indicative of results achievable in other trials or for other indications, that the studies or trials may not be successful or achieve the results desired, including safety and efficacy for VGX-3100, that pre-clinical studies and clinical trials may not commence or be completed in the time periods anticipated, that results from one study may not necessarily be reflected or supported by the results of other similar studies and that results from an animal study may not be indicative of results achievable in human studies), 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 broad pipeline of SynCon® active immune therapy and vaccine products, our ability to advance our portfolio of immune-oncology products independently, including INO-5150, and to commence a phase I clinical trial for INO-5150 in the first half of 2015, 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, our ability to enter into partnerships in conjunction with our research and development programs, evaluation of potential opportunities, 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, 2014, and other regulatory filings from time to time. There can be no assurance that any product in Inovio's pipeline will be successfully developed or manufactured, that final results of clinical studies 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.