



NEWS RELEASE

Inovio Pharmaceuticals Zika Vaccine Produces Robust Immune Responses in Non-Human Primates

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Inovio will conduct human studies later this year

PLYMOUTH MEETING, Pa., May 16, 2016 (GLOBE NEWSWIRE) -- Inovio Pharmaceuticals, Inc. (NASDAQ:INO) today announced that testing of its synthetic vaccine for the Zika virus induced robust antibody and T cell responses in non-human primates (monkeys), demonstrating the product's potential to prevent infection from this harmful pathogen.

Inovio synthetically generated DNA vaccine constructs targeting multiple Zika virus antigens using its SynCon vaccine technology. These SynCon constructs were administered using Inovio's CELLECTRA® electroporation delivery technology. Two doses of the Zika DNA vaccine delivered either intramuscularly or intradermally resulted in seroconversion, or the development of detectable specific antibodies in the blood, in all vaccinated non-human primates. Researchers also observed that vaccination generated robust and broad T cell responses as analyzed by the standardized T cell ELISPOT assay. These findings are vital given the potential importance of neutralizing antibodies in preventing infection and the role T cells play in clearing infection by killing cells that harbor the virus.

Dr. J. Joseph Kim, Inovio's President & CEO, said, "With positive large animal results in hand we are moving aggressively to initiate and conduct our first Zika vaccine human trial in 2016."

Dr. Kim will discuss Inovio's Zika vaccine preclinical developments today at an international forum hosted and organized by the Foundation for Vaccine Research and The National Academy of Medicine called "Ebola, SARS, MERS, Nipah, Zika Virus and Beyond: Challenges and Opportunities for Vaccine Development" in Washington DC. This high-level international forum is an invitation-only 1½ day event for decision-makers from the public and private sectors.

Inovio is developing its Zika vaccine, GLS-5700, with GeneOne Life Sciences (KSE:011000) and academic collaborators with whom Inovio has previously collaborated to advance its vaccines for Ebola and MERS into clinical development.

About the Zika Virus

First identified in Uganda, Zika virus subsequently spread to equatorial Asia and over the past two years has rapidly spread through the South Pacific, including Hawaii, and to South America, Central America, and the Caribbean. Zika virus is a flavivirus, a family of viruses including yellow fever, dengue, and West Nile virus, which are introduced to people through mosquito bites. Because the *Aedes* species of mosquitoes that spread Zika virus is found throughout the world there is concern that outbreaks will spread to new countries. There is also concern that Zika can spread sexually, as has been reported for some returning travelers. In May, 2016, WHO stated that 58 countries and territories report continuing mosquito-borne transmission of Zika. Geographical distribution of the virus has steadily expanded.

The most common symptoms of Zika virus are fever, rash, joint pain, and conjunctivitis. More seriously, a possible link to a severe birth defect called microcephaly has recently been observed resulting from infected mothers. Microcephaly is a rare condition marked by an abnormally small head and incomplete brain development. There may also be a link with Guillain-Barré syndrome, a disease in which the body's immune system mistakenly attacks peripheral nerves. Symptoms start with muscle weakness. In severe cases the person is almost totally paralyzed and the disorder can be life threatening.

No vaccine or therapy currently exists for the Zika virus.

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, Roche, The Wistar Institute, University of Pennsylvania, DARPA, GeneOne Life Science, 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**.

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 and INO-3112, 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

immunotherapy and vaccine products, our ability to advance our portfolio of immuno-oncology products independently, 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, 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, 2015, our Form 10-Q for the quarter ended March 31, 2016, 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.

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