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

Inovio Pharmaceuticals {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 will conduct human studies later this year.

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PLYMOUTH MEETING, PA – May 16, 2016 – **Inovio Pharmaceuticals {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, **www.inovio.com**

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