NEWS RELEASE

Inovio Reports New Positive Clinical Data on Vaccine Advances in the Fight Against Emerging Infectious Diseases

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Significant immune responses observed in 100% of Zika-vaccinated subjects and 98% of MERS-vaccinated human subjects in separate phase I studies

Data reported at Coalition for Epidemic Preparedness Innovation (CEPI) meeting

PLYMOUTH MEETING, Pa., Feb. 23, 2017 (GLOBE NEWSWIRE) -- Inovio Pharmaceuticals, Inc. (NASDAQ:INO) today announced that Dr. David B. Weiner, Inovio's co-founder, presented positive clinical data on Inovio's DNA-based vaccines against MERS (Middle East Respiratory Syndrome) (GLS-5300) and Zika (GLS-5700) at the Coalition for Epidemic Preparedness Innovation (CEPI)'s 1st Scientific Meeting on "Vaccines Against Emerging Infections - A Global Insurance" in Paris, France.

Dr. J. Joseph Kim, Inovio's CEO, said: "Advancing DNA vaccine technology for broadly applicable, rapid response against infectious diseases of epidemic potential is one of Inovio's priorities. We quickly designed and manufactured vaccines for two recent emerging infectious pathogens, MERS CoV and Zika, and these products join our Ebola program in generating significant immune responses with a favorable safety profile in phase I studies. We are pleased to see CEPI moving forward on its vision for proactive and accelerated vaccine development for epidemic threats and to contribute to their first scientific meeting."

Officially launched at the World Economic Forum in Davos in January, 2017, CEPI received an initial $460 million from the governments of Germany, Japan and Norway, plus the Bill & Melinda Gates Foundation and Wellcome Trust, as part of a drive to bring together a total of $1 billion to fund and support its goal of stimulating, financing and coordinating the advancement of safe, effective and affordable vaccines.

MERS Vaccine Results

Dr. Weiner noted that in a phase I MERS study, after a three dose vaccine regimen with GLS-5300, high levels of binding antibodies were measured (ELISA) in 92% (57 of 62) of evaluated subjects. Even two doses or a single dose of vaccine generated a robust

antibody response in 84% (52 of 62) or 44% (27 of 62) of evaluated subjects, respectively.

Significant antigen-specific cytotoxic T-lymphocyte (CTL) responses were also observed. Importantly, all but one evaluated vaccinated subject or 98% (61 of 62) generated an antibody and/or T cell response against the MERS vaccine. Generation of MERS antigen-specific antibody and T cell responses is believed to be important for generating immediate and long-lasting protection against the disease. The vaccine was well tolerated and no significant safety concerns were noted to date.

These interim data from the first set of evaluated subjects were from a fully enrolled phase I study of 75 healthy volunteers. Inovio and GeneOne Life Science Inc. (KSE: 011000) are co-developing Inovio's GLS-5300 in partnership with the Walter Reed Army Institute of Research in Maryland, where the trial was conducted. This trial represents the first and still only MERS vaccine to be tested in humans for this disease that has no approved vaccines or treatments.

In preclinical studies of GLS-5300 (data published in the peer reviewed journal Science Translational Medicine, 2015), 100% of vaccinated Rhesus macaques were protected from symptoms of MERS when exposed to the live MERS virus. The animals also generated strong antibody and T-cell responses.

Since the virus was first identified in Saudi Arabia in 2012, the World Health Organization has reported almost 2,000 MERS infections and nearly 700 deaths worldwide. Twenty seven countries have reported cases, including Korea where an outbreak in the summer of 2015 resulted in 186 cases and 38 deaths. While the SARS epidemic in 2003 killed 10% of those infected, SARS-related MERS has killed about 36% of people who contracted this communicable virus.

Zika Vaccine results

Dr. Weiner also highlighted that in a phase I Zika study, after a three dose vaccine regimen with GLS-5700, high levels of binding antibodies were measured (ELISA) in 100% (39 of 39) of evaluated subjects. Moreover, two doses or a single dose of vaccine generated a robust antibody response in 82% (32 of 39) or 40% (16 of 40) of evaluated subjects, respectively.

T cell immune responses are currently being evaluated. The vaccine was well tolerated and no significant safety concerns were noted. These preliminary data are from a fully enrolled phase I study of 40 healthy volunteers. Inovio and GeneOne are co-developing GLS-5700. This trial represents the first Zika vaccine to be tested in humans for this disease that has no approved vaccines or treatments and also the first human clinical data reported with a Zika vaccine documenting the induction of immune responses following vaccination.

Preclinical data published in the peer-reviewed journal npg Vaccines (2016) showed that GLS-5700 generated single-dose protection in 100% of animals against neurologic or testicular effects of the Zika virus.

Dr. Scott White, Inovio's Vice President of Infectious Disease Clinical Development, will also present this Zika data on Friday, February

24th at the “First International Conference on Zika Virus,” a worldwide forum sponsored by the American Society of Tropical Medicine and Hygiene in Washington, D.C.

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, 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 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 the MERS vaccine GLS-5300 or Zika vaccine GLS-5700, 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, 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, 2015, our Form 10-Q for the quarter ended September 30, 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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