NEWS RELEASE

# Inovio Awarded up to $56 Million from CEPI to Advance DNA Vaccines Against Lassa Fever and MERS

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## Major investment by Coalition for Epidemic Preparedness Innovations (CEPI) to advance vaccine development and manufacturing on two of CEPI's highest priority infectious diseases

PLYMOUTH MEETING, Pa. and OSLO, Norway, April 11, 2018 (GLOBE NEWSWIRE) -- Inovio Pharmaceuticals, Inc. (NASDAQ:INO) and CEPI – the Coalition for Epidemic Preparedness Innovations – today announced a partnership under which Inovio will develop vaccine candidates against Lassa fever and Middle East Respiratory Syndrome (MERS).

CEPI will fund up to $56,000,000 to support Inovio's pre-clinical and clinical advancement through Phase 2 of INO-4500, its Lassa fever vaccine, and INO-4700, its MERS vaccine. The shared goal of Inovio and CEPI is for the Lassa and MERS vaccines to be available as soon as possible for emergency use.

This is the second company agreement CEPI has signed since its launch in 2017. These partnerships represent an innovative approach to funding vaccine development, unlocking research and development potential so that vaccines are ready for efficacy studies during an outbreak. The agreement will enable funding for Inovio's development efforts over a five-year period. The partnership agreement also includes options, not counted in the total above, to establish investigational stockpiles of both vaccines.

Lassa fever is a disease endemic to West Africa associated with annual outbreaks. An ongoing outbreak in Nigeria has, according to figures from the Nigerian Centre for Disease Control, resulted in over 400 confirmed cases and over 100 deaths from January 1, 2018 through April 8, 2018 1. MERS, first identified in 2012, causes a severe respiratory illness and has been associated with a number of outbreaks in Saudi Arabia and neighboring countries.

Individuals acquiring these diseases in the regions of origin occasionally travel to other locations, becoming ill in areas outside the endemic regions. In 2015 an individual with MERS returned to South Korea from the Middle East. This resulted in an outbreak that resulted in 186 confirmed cases and 38 deaths. The outbreak affected 24 hospitals, led to the temporary closure of more than 2,000 schools, and had a significant impact on the South Korean economy.

Richard Hatchett, CEO of CEPI, said, “Epidemics don’t respect borders; they destroy lives and devastate economies and we need to move swiftly to prepare for them. Partnering with Inovio is a considerable move forward for CEPI’s vaccine portfolio and developing a global insurance policy against these diseases.”

CEPI’s funding will support development up to the end of Phase 2, providing clinical safety and immunological data, and the establishment of investigational stockpiles that will be ready for clinical efficacy trial testing during outbreaks.

CEPI’s portfolio of investments will provide additional benefits to the wider vaccine community through the development of assays, reference standards and associated knowledge that may accelerate the development of other vaccines and medical counter measures against Lassa fever and MERS.

Dr. J. Joseph Kim, Inovio’s President & CEO, said, “The Inovio/CEPI partnership demonstrates the confidence of both organizations in Inovio’s DNA vaccine platform to rapidly produce countermeasures against emerging viral threats potentially protecting large populations from a pandemic.  A key demonstration of such capabilities was that Inovio was the first organization to develop, manufacture and report positive human data from a Zika vaccine in less than seven months – when traditional vaccines take several years to reach this point. We look forward to addressing the global health challenges of emerging infectious diseases.”

Inovio will develop these DNA vaccines employing its ASPIRE™ (Antigen SPecific Immune REsponses) platform. This platform delivers optimized synthetic antigenic genes into cells, where they are translated into protein antigens that activate an individual's immune system to generate robust targeted T cell and antibody responses. Inovio’s immunotherapies function exclusively in vivo, and have generated an antigen-specific immune response against targeted diseases in all clinical trials to date.

The CEPI partnership builds upon Inovio’s clinical and preclinical advancements for MERS and Lassa fever vaccines. Results from a first-in-human Phase 1 study for its MERS vaccine found high levels of binding antibodies in 92% (57 of 62) of evaluated subjects. 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. Inovio’s Lassa vaccine data also holds much promise 2. In a study funded by a $3.5 million grant from the National Institute of Allergy and Infectious Diseases (NIAID), Inovio previously published that its DNA vaccine against Lassa fever provided 100% protection for non-human primates challenged with a lethal dose of the virus 3.

Inovio is advancing MERS and Lassa vaccines with the support of its collaborators: The Wistar Institute, Laval University, the NIH’s Rocky Mountain Laboratories, U.S. Army Medical Research Institute of Infectious Diseases (USAMRIID), VGXI/GeneOne Life Science and the International Vaccine Institute.

About MERS

Middle East Respiratory Syndrome is caused by the MERS-Corona virus, part of the same family of viruses that causes the common

cold and SARS (Severe Acute Respiratory Syndrome). It is transmitted from animals to humans and can be further transmitted by person to person contact. Symptoms include severe acute respiratory illness with fever, cough and shortness of breath as well as gastrointestinal symptoms, which can lead to death.

About Lassa Fever

Lassa fever is also known as Lassa hemorrhagic fever. The Lassa virus is transferred to humans from animals, most commonly by the Mastomys rodent. The virus can spread from person to person via bodily fluids and causes a range of symptoms including vomiting, swelling of the face, bleeding, and pain in the chest, back and abdomen.

About CEPI

CEPI is an innovative partnership between public, private, philanthropic and civil organizations founded in Davos in 2017.

To date, CEPI has received multi-year funding from Norway, Germany, Japan, the Bill & Melinda Gates Foundation and Wellcome. CEPI has also received single-year investments from the governments of Australia, Belgium, and Canada. It has reached $630 million of its target $1 billion funding target. The European Commission has announced a contribution in kind of €250 million that will support relevant projects through EC mechanisms.

Since its launch in January 2017, CEPI has announced two Calls for Proposals. The first was for candidate vaccines against MERS-COV, Nipah and Lassa viruses. The second was for the development of platforms that can be used for rapid vaccine development against unknown pathogens.

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 CD8+ 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 clinical stage product pipeline, including candidates in Phase 3 and Phase 2. 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, 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.

1 **http://ncdc.gov.ng/diseases/sitreps/?cat=5&name=An** update of Lassa fever outbreak in Nigeria

2 **http://ir.inovio.com/news-and-media/news/press-release-details/2017/Inovio-Reports-New-Positive-Clinical-Data-on-Vaccine-Advances--in-the-Fight-Against-Emerging-Infectious-Diseases/default.aspx**

3 **http://ir.inovio.com/news-and-media/news/press-release-details/2015/Inovio-Pharmaceuticals-DNA-Vaccine-Protects-100-Against-Deadly-MERS-Virus-in-Non-Human-Primates/default.aspx**

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