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Inovio Pharmaceuticals & U.S. Army Receive $3.5 Million Biodefense Grant to Further Develop Mass Vaccination Device

Press Release

April 10, 2013

Inovio to Advance Painless Device to Simultaneously Deliver Multiple Vaccines Using Electroporation Technology

BLUE BELL, Pa., April 10, 2013 /PRNewswire/ -- Inovio Pharmaceuticals, Inc. (NYSE MKT: INO) has been selected to receive a $3.5 million grant from the National Institute of Allergy and Infectious Diseases (NIAID) to advance the development of its next generation DNA vaccine delivery device capable of simultaneously administering multiple synthetic vaccines via skin surface electroporation. Inovio is collaborating with Dr. Connie Schmaljohn, Chief Scientist at the U.S. Army Medical Research Institute of Infectious Diseases (USAMRIID). The goal of this public/private partnership is to develop a device that would facilitate rapid vaccination of U.S. troops stationed around the world against multiple infectious diseases and protect civilian populations from pandemic threats.

Dr. J. Joseph Kim, Inovio's president & CEO, said, "This new device would provide a means to rapidly and painlessly deliver multiple vaccines simultaneously to large groups of people. This collaboration builds on Inovio's strong relationship with Dr. Schmaljohn and her team at USAMRIID in which Inovio is bringing medical innovation to several biodefense efforts. Moreover, the advancements from this project will enable rapid and efficient delivery of Inovio's SynCon® vaccines for universal flu, HIV, and other infectious diseases on a mass scale."

The Inovio team of researchers has been collaborating with USAMRIID scientists to advance a DNA vaccine for the Lassa virus, which the DOD has designated as a "Category A" pathogen. In previous testing, an optimized DNA vaccine for the Lassa virus delivered by surface electroporation demonstrated complete protection against a virus challenge in both guinea pig and non-human primate disease models. Although prior results are highly encouraging and electroporation delivery is very tolerable from a patient perspective, improvements are still needed to make the technology more suitable for multiple vaccine administrations and mass vaccinations.

This NIAID grant builds on a 2011 Small Business Innovation Research Grant in which Inovio demonstrated a delivery device that was designed to deliver two separate DNA vaccines simultaneously. In this new program, Inovio will develop the multi-vaccine electroporation delivery device to address biodefense vaccine targets - notably to advance the Lassa virus vaccine through to

clinical studies.

The research effort will investigate the novel simultaneous delivery of multiple DNA vaccines -- final testing will use the Lassa virus and other arenaviruses -- at distinct spatial sites while avoiding immune interference between vaccines. In addition, this new device platform could significantly increase the dose of vaccine delivered at one time which is a current limitation in vaccine delivery to the skin. The new skin surface device resulting from this research will leverage Inovio's latest surface DNA vaccine delivery technology, based on the company's proprietary electroporation delivery platform which uses millisecond electrical pulses to dramatically improve cellular uptake of the vaccine and resulting immune responses. Inovio vaccines delivered with electroporation devices for cancer and infectious diseases have previously demonstrated best in class T-cell and antibody responses in clinical studies.

About Inovio Pharmaceuticals, Inc.

Inovio is revolutionizing vaccines to prevent and treat today's cancers and challenging infectious diseases. Its SynCon® vaccines are designed to provide universal protection against known as well as new unmatched strains of pathogens such as influenza. These synthetic vaccines, in combination with Inovio's proprietary electroporation delivery, have been shown in humans to generate best-in-class immune responses with a favorable safety profile. Inovio's clinical programs include phase II studies for cervical dysplasia, leukemia and hepatitis C virus and phase I studies for influenza and HIV. Partners and collaborators include the University of Pennsylvania, Merck, ChronTech, National Cancer Institute, U.S. Military HIV Research Program, NIH, HIV Vaccines Trial Network, University of Southampton, US Dept. of Homeland Security, University of Manitoba and PATH Malaria Vaccine Initiative. More information is available at www.inovio.com.

About USAMRIID

USAMRIID's mission is to protect the warfighter from biological threats and to be prepared to investigate disease outbreaks or threats to public health. Research conducted at USAMRIID leads to medical solutions--vaccines, drugs, diagnostics, and information--that benefit both military personnel and civilians. The Institute plays a key role as the lead military medical research laboratory for the Defense Threat Reduction Agency's Joint Science and Technology Office for Chemical and Biological Defense. USAMRIID is a subordinate laboratory of the U.S. Army Medical Research and Materiel Command.

[The information contained in this press release does not necessarily reflect the position or the policy of the Government and no official endorsement should be inferred.]

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 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, 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, 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, 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, 2012, 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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