

# **Inovio Pharms and GeneOne Life Science Receive Approval for First-in-Man Zika Vaccine Clinical Trial**

PLYMOUTH MEETING, PA – June 20, 2016 – **Inovio Pharmaceuticals, Inc. {NASDAQ: INO}** and **GeneOne Life Science, Inc. (KSE: 011000)** today announced that they have received approval to initiate a phase I human trial to evaluate Inovio's Zika DNA vaccine (GLS-5700) to prevent infection from this concerning virus.

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In pre-clinical testing this synthetic vaccine induced robust antibody and T cell responses in small and large animal models, demonstrating the product's potential to prevent infection from this harmful pathogen in humans.

This phase I, open-label, dose-ranging study with 40 healthy subjects will evaluate the safety, tolerability and immunogenicity of GLS-5700 administered intradermally with CELLECTRA®, Inovio's proprietary DNA delivery device.

**Dr. J. Joseph Kim, Inovio's President & CEO**, said, *"We are proud to have attained the approval to initiate the first Zika vaccine study in human volunteers. As of May 2016, 58 countries and territories reported continuing mosquito-borne transmission of the Zika virus; the incidences of viral infection and medical conditions caused by the virus are expanding, not contracting. We plan to dose our first subjects in the next weeks and expect to report phase I interim results later this year."*

**Mr. Young K. Park, GeneOne Life Science's President & CEO**, said *"It is an honor for our company to help usher this Zika vaccine through the clinical and regulatory process. We look forward to conducting this trial with the goal of achieving products to combat this dreaded virus."*

Inovio and GeneOne are developing the Zika vaccine, GLS-5700, with academic collaborators from the US and Canada with whom they have previously collaborated to advance Inovio's Ebola and MERS vaccines 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 spreads Zika virus is found throughout the world there is concern that Zika will continue to spread to new countries and regions. Zika can also be sexually transmitted.

The most common symptoms of Zika virus are fever, rash, joint pain, and conjunctivitis. More seriously, Zika has been linked to a severe birth defect called microcephaly which arises from infection during pregnancy. Microcephaly is a rare condition marked by an abnormally small head and incomplete brain development. Zika is also associated with Guillain-Barré syndrome, which causes muscle weakness of the limbs and in severe cases may cause almost total paralysis including the inability to breathe. Recent reports suggest Zika may also be linked to other neurological abnormalities.

***No vaccine or therapy currently exists for the Zika virus.***

## **About GeneOne Life Science**

GeneOne Life Science, Inc. is an international DNA vaccine developer and leading contract manufacturer of DNA plasmid-based agents for preclinical and clinical trials for global companies and institutions. It researches and develops DNA vaccines to prevent and treat incurable diseases in South Korea and internationally. The company is headquartered in

Seoul, South Korea. VGXI, Inc., GeneOne's wholly-owned manufacturing subsidiary located in Texas, is the largest pure-play cGMP DNA plasmid manufacturing facility in the world. VGXI manufactured the Zika vaccine and other emerging disease vaccines including Ebola and MERS.

### **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, Plumblin Life Sciences, 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](http://www.inovio.com)

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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.