Inovio Pharmaceuticals, Inc.

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Inovio Pharmaceuticals Broadens its Intellectual Property Portfolio from the University of Pennsylvania

Expanded License Includes New Product Candidates for Cancer, Infectious Diseases and Novel Immune Activators

BLUE BELL, Pa., June 17, 2014 /PRNewswire/ — Inovio Pharmaceuticals, Inc. (NYSE MKT: INO) has expanded its existing license agreement with the University of Pennsylvania, adding exclusive worldwide rights to technology and intellectual property for novel synthetic therapies against cancer, infectious diseases and new immune activators. Inovio has an ongoing collaborative research agreement with the university to support fundamental research in the area of DNA-based vaccines and immunotherapies. All newly licensed products are in preclinical development.

These new pipeline candidates were developed using Inovio's SynCon® design approach and were constructed and tested in preclinical animal models for their ability to generate potent antigen-specific T cell and antibody responses. Multiple patents have been filed and several manuscripts are being prepared for peer-reviewed journal publications.

Overall, this amendment broadens and strengthens the patent protection around previously licensed oncology and infectious disease targets by in-licensing expanded patents covering candidate products for DNA based synthetic antibodies and those covering dengue fever, H7N9 influenza, additional HPV

serotypes as well as certain other undisclosed cancer antigen targets.

In addition, the amended agreement provides Inovio global rights to:

- DNA-based synthetic antibodies – DNA plasmids are able to generate not only antigens and immune activators, but also encode for various monoclonal antibodies. Monoclonal antibodies (mAb) are designed to bind to a very specific epitope (area) of an antigen or cell surface target and can bind to almost any selected target. mAbs have the unique ability to alert the immune system to attack and kill specific cancer cells (as in the case of Yervoy®) or block certain biochemical pathways (such as those leading to rheumatoid arthritis, as in the case of Remicade®). Monoclonal antibodies, with their designer capabilities and potency, have consequently become a powerful class of products against cancers, autoimmune diseases such as rheumatoid arthritis, and neurological diseases such as multiple sclerosis.
- Immune Activators (IL-21, IL-23 & IL-33) – Immune activators can play a vital role in augmenting antigen-specific immune responses such as those generated by Inovio's DNA vaccines. Inovio has already deployed two different DNA immune activators (IL-12 and IL-28) in human studies. In a published clinical study, its DNA-based IL-12 immune activator significantly enhanced antigen-specific T cell immune responses from its HIV DNA vaccine, PENNVAX®: 89% of the subjects who received IL-12 DNA together with the PENNVAX® DNA vaccine delivered with electroporation produced a vaccine specific CD4+ or CD8+ T cell response compared to 67% who received the DNA vaccine alone without the IL-12 DNA. Under the amended license agreement with UPenn, Inovio also licensed additional intellectual property

covering IL-12 encoded DNA plasmids, further strengthening Inovio's IP position on IL-12. Initial data in animal models suggests that IL-21, IL-23 and IL-33 also have the potential to exert powerful influences on the immune system.

- Middle East Respiratory Syndrome (MERS) – Since the infection was identified in 2012, 42% of MERS cases have been fatal. MERS is similar to the SARS virus which infected 8,000 people several years ago; but MERS is almost five times as fatal as SARS. There is currently no vaccine or effective treatment for MERS.
- Tuberculosis – TB is second only to HIV/AIDS as the greatest killer worldwide due to a single infectious agent. In 2012, 8.6 million people fell ill with TB and 1.3 million died from the infection.

Dr. J. Joseph Kim, Inovio's President and CEO, said, "Our SynCon® technology offers the potential to treat and/or prevent a broad array of cancers and infectious diseases, and has achieved best-in-class immune responses in human studies. This new intellectual property from the University of Pennsylvania expands the development and commercialization opportunities we can pursue with our core technology."

Under the terms of the original license agreement completed in 2007 and expanded via subsequent amendments, Inovio obtained exclusive worldwide rights to develop multiple DNA therapies for HIV, hepatitis B and C, HPV and related diseases, influenza, multiple cancers, CMV (cytomegalovirus), RSV (respiratory syncytial virus), herpes, MRSA, and multiple other infectious diseases as well as chemokine and cytokine immune activators. In consideration, Inovio has made upfront as well as milestone payments and will in the future make additional milestone as well as royalty payments to the University.

About Inovio Pharmaceuticals, Inc.

Inovio is revolutionizing vaccines to prevent and treat today's cancers and challenging infectious diseases. Its SynCon® vaccines, in combination with its proprietary electroporation delivery, are generating best-in-class immune responses, with therapeutic T-cell responses exceeding other technologies in terms of magnitude, breadth, and response rate. Human data to date have shown a favorable safety profile. Inovio's lead vaccine, a therapeutic against HPV-caused pre-cancers and cancers, is in phase II. Other phase I and preclinical programs target prostate, breast, and lung cancers as well as HIV, influenza, malaria and hepatitis. Partners and collaborators include Roche, the University of Pennsylvania, NIH, HIV Vaccines Trial Network, National Cancer Institute, U.S. Military HIV Research Program, US Dept. of Homeland Security, and University of Manitoba. More information is available at www.inovio.com.