Inovio initiates Phase 1 Aerodigestive trial

Inovio pharma {NASDAQ: INO} Expands HPV Immunotherapy Development to Aerodigestive Cancers.

Inovio Pharma have initiated a Phase 1 clinical trial for their INO-3016, targeting HPV-6, the cause of most human Aerodigestive cancers, which effect the lips, mouth, tongue, throat, vocal cords, and other oral areas.

The motivator to achieve this is the unmet needs of patients suffering from this form of cancer, and the opportunity to take first mover advantage in this critical area.

Inovio Pharmaceuticals Expands HPV Immunotherapy Development to Aerodigestive Cancers

Expansion Comes After Successful Phase II Trial for Cervical Dysplasia

PLYMOUTH MEETING, Pa. – September 22, 2014 – Inovio Pharmaceuticals, (NASDAQ: INO) announced today it has initiated a phase I clinical trial in patients with Aerodigestive cancers. The trial will evaluate the safety, tolerability, and immunogenicity of INO-3106. This immunotherapy targets human papillomavirus type 6 (HPV-6), which causes most Aerodigestive cancers.

Aerodigestive cancers affect the lips, mouth, tongue, nose, throat, vocal cords, and parts of the esophagus and windpipe. The unmet need for patients suffering from this form of cancer is significant.

This study is part of Inovio’s strategy to broadly expand clinical development of its DNA-based immune therapy products to treat different HPV types and the many diseases they cause.

It is a phase I, open label compassionate study enrolling patients with invasive cancer who have exhausted all other treatment options (chemotherapy, radiation and surgery). The study will test Inovio's immunotherapy, INO-3106, alone or in combination with DNA-based IL-12, Inovio's proprietary immune activator, in subjects with HPV-6 associated Aerodigestive malignancies. Successful results could open a path to pursuing an FDA orphan designation (special status granted for therapies for rare diseases) for Aerodigestive cancers.

Earlier this year, Inovio reported positive top-line phase II efficacy data for VGX-3100, its SynCon® immunotherapy targeting pre-cancers and cancers caused by HPV-16 and HPV-18. VGX-3100 showed the ability to eliminate HPV infection and cause full regression of high grade cervical dysplasia (CIN 2/3). Inovio is advancing VGX-3100 into a phase III registration study with target patient characteristics and a treatment regimen similar to the phase II study. In addition, Inovio has initiated two separate studies testing INO-3112 to treat head and neck cancer as well as inoperable cervical cancer.

Dr. J. Joseph Kim, President and CEO, said, "Following our phase II success, we are pleased to expand our HPV franchise with this product and clinical trial targeting a different HPV type. Our SynCon immunotherapies have been shown to activate the immune system to bring about desired efficacy with a very favourable safety profile. This makes them well-suited to potentially treat the broad spectrum of HPV-associated cancers and pre-cancers as well as HPV itself, which is one of the most prevalent cancer-causing viruses."

About Inovio's HPV Immunotherapies

Inovio's SynCon® DNA-based immunotherapies help the immune system activate disease-specific killer T cells to fight a targeted disease. HPV, the most pervasive sexually transmitted virus, causes numerous pre-cancers and cancers. Inovio's HPV

immunotherapy called VGX-3100 targets disease associated with the high-risk HPV types 16 and 18, which are responsible for over 70% of cervical pre-cancers and cancers. Inovio is currently advancing this product for cervical pre-cancers. INO-3112 combines VGX-3100 with Inovio's DNA based immune activator encoded for IL-12. This product is being directed to cervical, head & neck, and anogenital cancers caused by HPV types 16 and 18. INO-3106 now extends Inovio's HPV immunotherapy franchise to HPV type 6. Inovio aims to advance therapies against multiple types of HPV and HPV-associated diseases.

About Inovio Pharmaceuticals, Inc.

Inovio is revolutionizing the fight against cancer and infectious diseases. Our immunotherapies uniquely activate best-in-class immune responses to prevent and treat disease, and have shown clinically significant efficacy with a favourable safety profile. With an expanding portfolio of cancer immunotherapies and clinical studies, the company is advancing a growing product pipeline. 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. For more information, visit www.inovio.com.