

VAXINNATE

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VaxInnate Reports Promising Results for Novel Influenza Vaccine Candidates

Early testing demonstrates company's innovative technology yields strong immunogenicity

Cranbury, NJ, October 23, 2006 – Two novel influenza vaccine candidates produced through an innovative technology have shown promising results in early testing, according to a presentation made by VaxInnate at the second “Influenza Vaccines for the World” conference. VaxInnate reported that vaccines fusing proteins or protein fragments from influenza virus with a protein from bacteria, and produced in a bacterial expression system, were able to deliver a highly efficacious response in mice.

VaxInnate reported that its seasonal influenza vaccine candidate based upon the hemagglutinin antigen (HA) showed good efficacy in mouse studies at low doses, providing complete protection against lethal influenza challenge at a dose of influenza that typically kills 90 percent of animals. Investigators attribute the effectiveness of the vaccine candidate to the fusion or linking of HA antigen to bacterial flagellin (STF2), a component of the hair-like tails that bacteria use to “swim.” Flagellin is a toll-like receptor (TLR) ligand that stimulates the innate immune system – a first line defense against pathogens, which in turn triggers a more potent response from the adaptive immune system, including the production of antibodies and cytotoxic T cells. Neither the HA fragment alone, nor HA fragment plus flagellin administered simultaneously, were able to confer any significant protection against lethal influenza challenge demonstrating the importance of linking these two components.

Presenting HA fused with a bacterial TLR ligand, the vaccine represents a strategy for protecting against influenza infection by targeting seasonal variants of the virus. Each strain of influenza virus is characterized by its mutations that arise in proteins on its surface, including the HA molecule.

“This is the first proof-of-concept demonstration that shows physically linking bacterial flagellin to viral antigens leads to a more potent vaccine, harnessing the natural, synergistic relationship between the innate and adaptive immune response,” said Lynda Tussey, Ph.D., Project Leader and Senior Director, Clinical Immunology at VaxInnate.

VaxInnate is also developing influenza vaccine candidates based upon the M2e antigen. Unlike traditional influenza vaccines using HA, the M2e vaccine candidate targets regions of the influenza virus that are highly conserved across all strains and would not require annual reformulation as do current vaccines. This product also links M2e antigen to STF2, inducing strong immune responses in mice that protect 90 percent of mice against lethal influenza challenge.

VaxInnate’s vaccines are produced in a bacterial expression system, a proven method for producing large quantities of proteins that has been practiced for over two decades. Data presented at the conference showed that using this expression system, researchers have been able to consistently produce, harvest and purify folded vaccine fusion products in large quantity and high purity. The technology is also potentially much more efficient than current influenza vaccine production methods. Current yields suggest 50 million to 100 million doses can be produced per standard 2000 liter fermenter run.

“We believe that VaxInnate’s technology has the potential to significantly improve the cost-effectiveness, manufacturing capacity, and potency of influenza vaccines, key issues facing the clinical and public health

communities,” said Tussey. “We look forward to continued advancement of our vaccine candidates as an important contribution to the global response to influenza and pandemic preparedness.”

The IVW conference is an international forum for world renowned experts in the field of influenza vaccines and related issues to report the latest data and trends associated with current and new influenza vaccines and their delivery worldwide.

About VaxInnate

VaxInnate is a privately-held biotechnology company based in Cranbury, NJ that is developing novel, proprietary vaccines for both pandemic and seasonal influenza. The company’s breakthrough vaccines are based on its Toll-like receptor (TLR) technology platform, which dramatically improves vaccine immunogenicity and efficacy. For more information about VaxInnate, please visit www.vaxinnate.com.

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