InDevR Offers Influenza Titer on Chip® to Enhance Flu Vaccine Development

BOULDER, CO--(Marketwired - July 09, 2014) - InDevR, a Boulder-based life science company, announced today that it is now offering Titer on Chip as a service for rapid quantification of influenza hemagglutinin protein, the crucial ingredient in flu vaccines.

Influenza Titer on Chip (Flu-ToC™) utilizes a panel of subtype-specific and broadly-reactive antibodies that enable reliable quantification of hemagglutinin (HA) despite antigenic drift. Flu-ToC can be used to quantify HA protein in almost any medium, including crude extract, bulk drug substance, and multivalent drug product. The system has been shown to work with split viruses, virus like particles, and recombinant HA.

Titer on Chip technology was developed with support from the National Institute of Allergy and Infectious Diseases (grant R43 AI102318) as part of the Department of Health and Human Services (HHS) *Influenza Vaccine Manufacturing Improvement* program. Flu-ToC was recently selected by HHS as 1 of 5 techniques to be evaluated by members of the International Federation of Pharmaceutical Manufacturers & Associations (IFPMA) as an alternative to the current time-consuming gold standard method for vaccine potency determination, the single radial immunodiffusion (SRID) assay.

"We understand that it takes time, extensive validation, and scientific consensus to replace a gold standard method, no matter how onerous that method might be. In the meantime, this new tool will enable influenza scientists to quantify hemagglutinin without waiting for the development of new antisera with each strain change. For vaccine producers, this means a faster route to time-critical results at all stages of the manufacturing process," said Dr. Kathy Rowlen, InDevR's CEO.

Dr. Manon Cox, CEO of Protein Sciences Corporation, whose innovative Flublok® influenza vaccine was recently approved by the FDA for the prevention of influenza in adults 18 - 49 years old, noted: *"Our initial testing with Titer on Chip indicates that this new multiplexed protein quantification platform has tremendous potential to significantly reduce the time to result, which would be especially impactful during the early phases of vaccine development."*

The testing service provided by InDevR is designed to streamline the vaccine development process by ensuring rapid turn-around. Samples and standards are shipped to InDevR for analysis and results provided electronically. Medicago Inc. (Quebec City, Canada and Research Triangle Park, USA) has capitalized on the testing service at InDevR. According to Dr. Michèle Dargis, Director of Analytical Development at Medicago Inc. in Quebec City "*Medicago is developing innovative vaccines based on virus-like particle expressed in plants and we are pleased to collaborate in the development of a potential alternative assay to SRID that may allow the rapid quantification of hemagglutinin and the evaluation of potency of our vaccines. We are committed to using state-of-the-art analytical methods and are delighted to be evaluating Flu-ToC.*"

Version 1.0 of Flu-ToC as an *"off the shelf"* kit is anticipated for release in Q4 and InDevR is currently considering partnerships as a means to distribute the technology globally. Interested parties should contact InDevR at info@indevr.com.

About InDevR

InDevR has a demonstrated commitment to innovative solutions for the life science industry. With focus on enhancing vaccines and other biotherapeutics, InDevR has emerged as a leader in progressive new analytical technologies that enable accelerated development and manufacturing of these life-saving products. For more information about the company and products, please visit www.indevr.com or call 303-402-9100.

About Protein Sciences Corporation

Protein Sciences Corporation is a vaccine development and protein production company headquartered in Meriden, CT that is dedicated to saving lives and improving health through the creation of innovative vaccines and biopharmaceuticals. Our proprietary BEVS technology provides a fast, reliable and inexpensive platform for the production of high quality recombinant proteins, making it a powerful tool for producing vaccines and therapeutics when they are needed most. BEVS technology is covered by broad patents that include our proprietary *expres*SF+® cell line that we use to make all of our products. We recently expanded to Pearl River, NY where we will manufacture Flublok in addition to our CT facility. Learn more at www.proteinsciences.com and www.flublok.com.

About Medicago

Medicago is a clinical-stage biopharmaceutical company developing novel vaccines and therapeutic proteins to address a broad range of infectious diseases worldwide. The Company is committed to providing highly effective and competitive vaccines and therapeutic proteins based on its proprietary VLP and manufacturing technologies. Medicago is a worldwide leader in the development of VLP vaccines using a transient expression system which produces recombinant vaccine antigens in plants. This technology has potential to offer more potent vaccines with speed and cost advantages over competitive technologies, enabling the development of a vaccine for testing in approximately one month after the identification and reception of genetic sequences from a pandemic strain. This production time frame has the potential to allow vaccination of the population before the first wave of a pandemic, and supply large volumes of vaccine antigens to the world market. Medicago also intends to expand development into other areas such as biosimilars and biodefense products where the benefits of our technologies can make a significant difference. Additional information about Medicago is available atwww.medicago.com.

HHS is not responsible for the contents of this release. The statements contained in this release do not constitute endorsement or recommendation by the U.S. Government or HHS.

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