Visterra presents Data on Broadly Neutralizing Influenza Antibodies at the Infectious Diseases Society of America (IDSA) Meeting

— Poster Presentation at IDWeek 2012 —

Cambridge, MA – October 20, 2012 – Visterra, Inc., developer of novel medicines to prevent and treat infectious and other major diseases, today announced the presentation of nonclinical proof-of-concept data for its broadly neutralizing influenza antibodies at the Infectious Disease Week (IDWeek) Meeting in San Diego.

Based on its proprietary platform enabling an enhanced structure-function understanding of broadly neutralizing antibodies in influenza, Visterra has identified more than 50 human antibodies that bind to a highly conserved epitope on influenza hemagglutinin (HA) and neutralize both Group 1 and 2 influenza A viruses. These antibodies bind with high affinity to both the HA₀ and the mature HA₁-HA₂ form of HA (typically <100pM, depending on strain), suggesting the potential for both direct and indirect, cell-mediated, antiviral effects. These antibodies also demonstrate favorable physiochemical attributes. The lead antibody candidates have been tested in vivo, demonstrating potent prophylactic and preventive efficacy in animal models, with 100% survival of mice challenged with H1N1, H5N1 and H3N2 strains of influenza A viruses. Histological analysis indicates that this protection is correlated with a substantial reduction in both virally-induced cell damage and the presence of inflammatory infiltrate. Antiviral activity and observed efficacy in the mouse correlates with levels of antibody in the lung and bronchoalveolar lavage.

Visterra’s lead candidate, VIS410, is now being advanced to clinical trials with the goal of demonstrating proof-of-concept in both the prevention and treatment of influenza. VIS410’s potential profile – broad spectrum coverage and refractory to resistance development – could provide a key preventive and therapeutic option in the global clinical management of both seasonal and pandemic influenza.

About Influenza
Influenza virus infection is one of the most common infectious diseases, typically causing mild to severe illness, which can sometimes lead to death. Influenza epidemics occur yearly during autumn and winter, resulting in about three to five million cases of severe illness, and about 250,000 to 500,000 deaths worldwide. Although the usual strains of influenza that circulate in the annual influenza cycle constitute a substantial public health concern, far more lethal influenza strains have emerged periodically leading to pandemics that kill millions of people. Of the different types of influenza virus, influenza A viruses can replicate and mutate very rapidly, typically involving more serious infections including recent pandemics: H1N1 caused the most
deadly global pandemic Spanish flu in 1918, as well as the 2009 swine flu outbreak, H2N2 caused Asian flu in the late 1950s, and H3N2 caused the Hong Kong flu in the late 1960s.

At the general population level, the most effective way to prevent influenza or severe outcomes from the disease is vaccination. However, although safe and effective vaccines have been available and used for more than 60 years, influenza viruses are constantly changing, and the annual vaccine is developed based on an estimation of the three most prominent strains each season. A monoclonal antibody, like VIS410, that is designed to neutralize all influenza A strains, offers potential for both prevention and treatment of seasonal influenza disease. Furthermore, during a pandemic with a new influenza strain, timely production and implementation of an effective vaccine that targets the pandemic strain is not feasible. However, a universally effective monoclonal antibody could be immediately available and would be utilized for prevention in containment strategies as well as treatment for those at highest risk. VIS410 is being developed for clinical studies and expected to enter the clinical stage over the next two years. Finally, the unique epitope that VIS410 targets also holds promise for the development of a universal vaccine. A universal vaccine or therapeutic that targets a common element in all strains of influenza would have significant worldwide impact on addressing both seasonal and pandemic influenza.

About Visterra
Visterra discovers and develops novel drugs for the prevention and treatment of major diseases. The company’s proprietary platform generates unique structural information that identifies novel drug target sites and guides the design of drugs to effectively combat disease. The company’s lead product candidate, VIS410, is a broad spectrum monoclonal antibody for the prevention and treatment of both seasonal and pandemic influenza. The company is building a proprietary pipeline in infectious disease, and continuing to expand its disease area focus through strategic partnerships in infectious and other diseases. Visterra was founded by Dr. Ram Sasisekharan of MIT and is backed by Polaris Venture Partners, Flagship Ventures, and Lux Capital. For more information please visit www.visterrainc.com.

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