DAS181: A novel host directed approach to prevent and treat virus infections

Vaccines and anti-virals are currently the main approaches to prevent and treat respiratory virus infections such as influenza. The recent 2009 H1N1 pandemic and the H7N9 outbreaks exemplify the unpredictable nature of influenza viruses. Particularly concerning is the documentation NAI drug resistance to particular strains of influenza. DAS181 is an investigational host directed inhaled sialidase fusion protein and has shown \textit{in vitro} and \textit{in vivo} activity against many subtypes and strains of influenza virus including H7N9 and H5N1. Data will be presented from preclinical and late stage clinical studies of DAS181 against influenza. Parainfluenza lower track infection results in significant morbidity and mortality in immune-suppressed transplant patients without any licensed vaccines or antiviral drugs. In addition, the drug has shown \textit{in vitro} and \textit{in vivo} activity against parainfluenza virus strains (PIV-1, PIV-2, PIV-3 and PIV-4) by inactivating the virus binding receptors. DAS181 has been utilized in over 80 EIND's and a phase-1 study of transplant patients with severe PIV infection. Interestingly, DAS181 has also shown significant \textit{in vitro} activity against other viruses including EV-68, JC, and BK. The host directed approach of DAS181 contrasts with virus specific antivirals, by circumventing considerable problems related to antiviral drug resistance and the need for prediction of strains for effective vaccines. DAS181, an investigational drug, is currently in Phase 2 clinical trials of parainfluenza infection. Preclinical and clinical data from studies with DAS181 activity against a variety of pathogenic viruses will be presented.

Biography

Ronald Moss, MD has served as the Chief Executive Officer of Ansun Biopharma, Inc. since October 2012 and before that, served as both interim CEO and Executive Vice President of Clinical Development and Medical Affairs at Ansun from 2008 to 2012. He held various executive positions in the pharmaceutical industry for over 20 years and played a pivotal role in successfully leading companies through the complexities of drug and vaccine development. He has been involved in drug and vaccine development of products in Infectious Disease, Allergy, Neurology, Dermatology, Oncology, Respiratory, Transplant and Autoimmunity in both large pharmaceutical and biotechnology companies, including roles at Aventis, Immune Response, Merck, Telos and Vical. He has also authored over 70 scientific publications. Prior to joining industry, he received his MD degree from Chicago Medical School, completed a residency in Pediatrics at SUNY Stony Brook and completed a fellowship at the National Institutes of Health. He is double boarded in Pediatrics and Allergy and Immunology. He is also a Fellow of the American Academy and American College of Allergy and Immunology.

rmoss@ansunbiopharma.com

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