Breakthrough in RSV research to help infected children

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Researchers at Le Bonheur Children's Hospital and the University of Tennessee Health Science Center announced results today from a clinical trial of a drug shown to safely reduce the viral load and clinical illness of healthy adult volunteers intranasally infected with respiratory syncytial virus (RSV).

Detailed results of this study were presented by lead researcher Infectious Disease Specialist John DeVincenzo, MD, this week during a poster discussion session at the American Thoracic Society 2014 International Conference in San Diego. He serves as medical director of the Molecular and Viral Diagnostics Laboratories at Le Bonheur Children's Hospital and also serves as a professor of Pediatrics and professor of Microbiology, Immunology, and Biochemistry at the University of Tennessee College of Medicine.

RSV is the most common cause of lower respiratory tract infections in young children in the United States and worldwide. It hospitalizes 125,000 children in the United States each year, and was the cause for 1.5 million outpatient visits, according to the Centers for Disease Control and Prevention (CDC). DeVincenzo and his fellow researchers have been part of virtually every experimental therapeautic advancement, developmental pathway and antiviral therapy created to tackle the virus in the past 15 years.

The Phase 2a challenge study of Gilead Sciences Inc.'s GS-5806, an investigational oral RSV fusion inhibitor, achieved primary and

secondary endpoints of lower viral load, improvements in total mucus weight and symptom diary score compared to placebo. Volunteers in the study were given the oral drug after being infected with RSV using the experimental challenge model – based on a clinical isolate from an infant hospitalized with RSV bronchiolitis which can be safely used to infect adults, and that was developed by DeVincenzo in 2007 to test proof-of-concept antivirals.

"No effective antiviral treatments currently exist for RSV, which is the leading cause of severe childhood respiratory infections, and is increasingly recognized as a major cause of serious adult respiratory infections," said DeVincenzo. "Based on the reductions in viral load, reduced clinical symptoms, as well as the safety profile observed in this adult challenge study, clinical trials in naturally infected patients should now be explored."

More information: Learn more about his research at lebonheur.org/promise.

Provided by Le Bonheur Children's Hospital