Research finds novel airborne germ-killing oral spray effective in fighting colds and flu

September 9 2012

University Hospitals Case Medical Center clinical researchers will present findings about a one-two punch to prevent colds and flu in San Francisco at the Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC) on September 9, 2012.

The research team is presenting data in two poster presentations that a new oral antiseptic spray is effective in killing 99.9 percent of infectious airborne germs. Findings from these two presentations led to the development of Halo Oral Antiseptic, a first-of-its kind germ-fighting spray which is currently on store shelves.

"Respiratory tract disease is a major cause of morbidity and mortality throughout the world," says Frank Esper, MD, infectious disease expert at UH Rainbow Babies & Children's Hospital and lead author of one of the studies. "Yet there has been limited progress in the prevention of respiratory virus infections. Halo is unique in that it offers protection from airborne germs such as influenza and rhinovirus."

Dr. Esper and a team of researchers used glycerine and xanthan gum as a microbial barrier combined with cetylpyridinium chloride (CPC) as a broad-spectrum anti-infective agent to fight respiratory illnesses. To test this, clinical strains of 2009 pandemic H1N1 were used as a prototype virus to demonstrate Halo's anti-infective activity in cell culture assays. "The glycerine and xanthan gum prevent the germs from entering a person's system and the CPC kills the germs once they're trapped there," explains Dr. Esper, who is also Associate Professor at Case Western

Reserve University School of Medicine.

Dr. Esper will present his findings that Halo will have clear benefit to aid against infection and reduce disease from epidemic, sporadic or pandemic respiratory viral infections, particularly helping people at risk for severe respiratory illness including immune-compromised individuals with chronic lung disease, and military personnel.

Another study on Halo will be presented by Mahmoud Ghannoum, PhD, of UH Case Medical Center, showing Halo's effectiveness against disease-causing pathogenic germs. The presentation asserts that respiratory and/or systemic infections through airborne and manually transmitted pathogenic microbes often enter the system through the mouth, making Halo, an oral spray that targets these pathogens, an effective way to prevent infections. Additionally, preliminary data from the researchers found that Halo completely kills all 11 clinical strains of whooping cough (Bordetella pertussis) against which the spray was tested.

The results showed that when a person used three sprays of Halo, it destroyed airborne germs breathed in for up to six hours, even when people were eating and drinking. The concept of coating the back of the oral cavity to prevent germs from entering and then providing sustained antiseptic action to kill airborne germs was developed by a Cleveland company, Oasis Consumer Healthcare.

"Exposure to airborne germs is inevitable – especially in crowded environments and when traveling," said Dr. Ghannoum, who is also the Director of the Center for Medical Mycology at Case Western Reserve University School of Medicine. "Unlike other products that support the immune system or protect from germs on surfaces or hands, Halo is the first and only product of its kind to offer protection from airborne germs."

Provided by University Hospitals Case Medical Center