

National Jewish Health Researchers Awarded \$13M to Evaluate Treatments for Toxic Gases

OCTOBER 10, 2011

DENVER — National Jewish Health researchers have received a near \$13 million grant from the National Institutes of Health to evaluate potential rescue medications for victims of terrorist attacks, wartime use of toxic gases, and/or inhalation disasters. The gases of greatest interest in these studies will be ‘mustard gas’ (sulfur mustard) and chlorine gas.

“The excitement about these studies is that they are designed to provide rescue treatments,” said Carl White, MD, principal investigator of the grant.

The grant, part of the NIH’s Countermeasures Against Chemical Threats Research Network (CounterACT), is for 5 years. The rescue agents to be given greatest study in these trials will include fibrinolytics (‘clot busters’), anticoagulants, catalytic antioxidants, and flavonoids (specific herbal remedies). Researchers will evaluate models of damage to the lungs and airways and to skin.

“We have already found very encouraging preliminary data in which some of our agents can be effective even when given several hours after the toxic inhalation,” said Dr. White. “This is important because real world conditions can cause minutes to hours of delay in getting to victims of such tragedies.”

The work involves collaborations between two teams of investigators at National Jewish Health and one from the University of Colorado School of Pharmacy, as well as a collaborating center at the U.S. Army Medical Research Institute of Chemical Defense (USAMRICD).

“The drugs we are testing work through several different mechanisms so that they may prevent or limit progressive damage to airways or skin, as well as prevent or clear blockage of airways,” said Dr. White. “It is also exciting that some of the treatments we develop may also carry over to other difficult lung diseases of childhood and adults.”

The initial focus of the research is on the acute injury to lungs and skin occurring in the first 24-48 hours of exposure. As the studies progress over the next several years, researchers hope to evaluate the ability of our relatively early interventions to prevent lung fibrosis and bronchiolitis obliterans that can result from such exposures.

National Jewish Health is the leading respiratory hospital in the nation. Founded 125 years ago as a nonprofit hospital, National Jewish Health today is the only facility in the world dedicated exclusively to groundbreaking medical research and treatment of children and adults with respiratory, cardiac, immune and related disorders. Patients and families come to National Jewish Health from around the world to receive cutting-edge, comprehensive, coordinated care. To learn more, visit the [media resources](#) page.

Media Resources

Media Contacts

We have many faculty members, from bench scientists to clinicians, who can speak on almost any aspect of respiratory, immune, cardiac and gastrointestinal disease as well as lung cancer and basic immunology.

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Our team is available to arrange interviews, discuss events and story ideas.

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