

Researchers discover new potential antibody treatment for asthma

May 20 2014

Researchers at St. Joseph's Healthcare Hamilton and McMaster University have successfully tested an antibody that can improve the quality of life for individuals with asthma by relieving inflammation in the lungs. The research was led by Dr. Gail Gauvreau, associate professor at McMaster University and Dr. Paul O'Byrne, executive director of the Firestone Institute of Respiratory Health (FIRH) at St. Joseph's Healthcare Hamilton and chair, Department of Medicine at McMaster University.

The study was published in the *New England Journal of Medicine* and presented at the American Thoracic Society conference in San Diego. It concluded that blocking a specific protein in the lungs with an antibody both alleviates baseline inflammation and provides resistance to allergens for those with mild [allergic asthma](#).

"It was known that the epithelial cells which line the airways in the lungs produce a protein called thymic stromal lymphopoietin (TSLP) that causes inflammation. This study, for the first time, proved that these cells continually produce this protein in humans with asthma," states O'Byrne. "While we studied patients with allergic asthma, this research opens the door for the development of new treatments not only for this population, but for those diagnosed with severe asthma as well."

Individuals with allergic asthma are typically treated with inhaled corticosteroids or bronchodilators that help to control their asthma when taken regularly. While antibodies are typically reserved for [severe](#)

[asthma](#), this research can lead to antibody treatment for those who have mild allergic asthma. This study can lead to quality of life improvements for those with allergic asthma that have issues with inhalers or steroid-based medications.

The study – conducted by the Clinical Investigator Collaborative, a multi-centre, Phase II clinical trials group supported by the Allergy, Genes and Environment Network (AllerGen) – recruited 31 patients over five sites across Canada. After 12 weeks of participant monitoring, the antibodies significantly reduced baseline inflammation and protected the participants against inhaled allergens when compared to a placebo.

Established by AllerGen in 2005, the Clinical Investigator Collaborative is globally unique in its ability to undertake early stage clinical trials to evaluate the efficacy of new molecules and compounds that treat inflammation in the lung. O'Byrne, along with fellow researchers at the Firestone Institute for Respiratory Health and other Clinical Investigator Collaborative sites, continues to work closely with clinicians and patients in order to uncover the best treatments, medications and procedures which will improve the quality of life for those diagnosed with respiratory illnesses such as [asthma](#), allergies and pulmonary disease.

Provided by McMaster University

Citation: Researchers discover new potential antibody treatment for asthma (2014, May 20) retrieved 9 May 2024 from

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