

For immediate release

CIC investigators test new drug for allergic asthma.

HAMILTON, ON (3 July 2014)

Researchers in AllerGen's Clinical Investigator Collaborative (CIC) have shown that a new drug (quilizumab) successfully blocks the production of an immune system protein, reducing symptoms of allergic asthma.

The study, led by Dr. Gail Gauvreau, associate professor in the Department of Medicine at McMaster University, was conducted by CIC investigators at six Canadian universities and one international site, and published in the July 2, 2014, issue of the journal *Science Translational Medicine*.

Quilizumab, manufactured by Genentech, is a new monoclonal antibody that targets a receptor on immature blood cells to block the production of immunoglobulin E (IgE), a key protein involved in the allergic response. While other drugs bind to circulating IgE, quilizumab acts by depleting the cells responsible for IgE production even before it occurs, according to Dr. Gauvreau.

"The reduction of IgE in the blood was sustained for at least six months after the last dose of quilizumab, suggesting a long-lasting effect on IgE production," says Dr. Gauvreau. "These findings may have implications for patients with severe asthma or other diseases which are caused by high levels of circulating IgE."

The researchers tested the drug in a group of 29 subjects with mild asthma and another group of 36 subjects with allergic rhinitis (hayfever). Quilizumab reduced overall levels of IgE, and also reduced the amount of IgE that specifically targeted the allergens to which patients were exposed, the study found.

The Phase II study was conducted from December 2010 to March 2012 and involved the work of AllerGen researchers Dr. Louis-Philippe Boulet (Laval University), Dr. Donald Cockcroft (University of Saskatchewan), Dr. Mark FitzGerald (The University of British Columbia), Dr. Beth Davis (University of Saskatchewan), Dr. Richard Leigh (University of Calgary), Dr. Irvin Mayers (University of Alberta), Dr. Barbro Dahlén (Karolinska Institute, Stockholm, Sweden) and the CIC's director, Dr. Paul O'Byrne (McMaster University).

A follow-up clinical trial involving a larger group of subjects with more severe asthma is underway, according to Dr. Jeffrey Harris, principal medical director of immunology, tissue growth and repair for Genentech, and one of the study's co-authors.

About AllerGen NCE

AllerGen NCE Inc., the Allergy, Genes and Environment Network (est. 2004), is a national research network dedicated to improving the quality of life of people suffering from allergic and related immune diseases. Funded by Industry Canada through the federal Networks of Centres of Excellence (NCE) Program, the Network is hosted at McMaster University in Hamilton. Visit www.allergen-nce.ca for more information.

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