

For immediate release

AllerGen investigators contribute to asthma genetics discovery

HAMILTON, ON (22 December 2017) – The world’s largest genetic study on asthma has identified five new genes associated with the condition and produced the most comprehensive list of genes and gene locations involved in the development of asthma and allergic disease.

These research results open the door to future studies, improved diagnostics and new treatment options, according to Dr. Denise Daley, the AllerGen investigator who led the Canadian arm of the international collaboration.

“Previously, only 21 genes had been found to be associated with asthma across roughly 20 studies, and they explained only part of the genetic risk for the condition,” says Dr. Daley, a genetics expert who is an associate professor at The University of British Columbia and the Centre for Heart Lung Innovation at St. Paul’s Hospital in Vancouver, BC. “Thanks to this global collaboration, we have brought together data from more than 140,000 individuals of diverse ancestries, allowing us to develop a much fuller picture of how genetics influences asthma across different populations.”

The findings were published today in [*Nature Genetics*](#).

The Canadian team, supported by AllerGen, was part of the Transnational Asthma Genetics Consortium (TAGC)—an international collaboration that analyzed 65 studies from around the world searching for clues to determine which genes contribute to an increased risk of asthma.

Looking at data from individuals of European, African, Japanese, and Latino ancestry, the TAGC consortium identified five new asthma genes; confirmed nine known asthma genes; uncovered additional associations for two known asthma genes; and established asthma associations for two genes known to affect asthma plus hay fever.

These findings have resulted in the world’s most comprehensive inventory of the genetic variants that increase an individual’s susceptibility to asthma.

“Asthma risk is influenced by genes and the environment,” adds Dr. Daley. “The TAGC discoveries are robust across populations and environmental exposures, which will help scientists to categorize subtypes of asthma, identify pathways for possible therapeutic interventions, and open new routes for future asthma research. We are delighted to have led Canada’s contribution to this global initiative.”

AllerGen investigators Dr. Allan Becker (University of Manitoba); Dr. Anita Kozyrskyj (University of Alberta); and Dr. Catherine Laprise (Université du Québec à Chicoutimi) were also members of the Canadian research team.

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 Innovation, Science and Economic Development Canada through the federal Networks of Centres of Excellence (NCE) Program, the Network is hosted at McMaster University in Hamilton, ON. Visit allergen-nce.ca for more information.

About The University of British Columbia

The University of British Columbia is a global centre for research and teaching, consistently ranked among the top 20 public universities in the world. Since 1915, UBC's entrepreneurial spirit has embraced innovation and challenged the status quo. UBC encourages its students, staff and faculty to challenge convention, lead discovery and explore new ways of learning. At UBC, bold thinking is given a place to develop into ideas that can change the world.

About Providence Health Care

Providence Health Care (PHC) is one of Canada's largest faith-based health care organizations, operating 16 health care facilities in Greater Vancouver. PHC operates one of two adult academic health science centres in the province – St. Paul's Hospital – performs cutting-edge research in more than 30 clinical specialties, and focuses its services on six "populations of emphasis": cardiovascular risks and illnesses, HIV/AIDS, mental health, renal risks and illness, specialized needs in aging and urban health and is home to the B.C. Centre for Excellence in HIV/AIDS.

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Dr. Daley is available for interviews by phone or Skype.

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