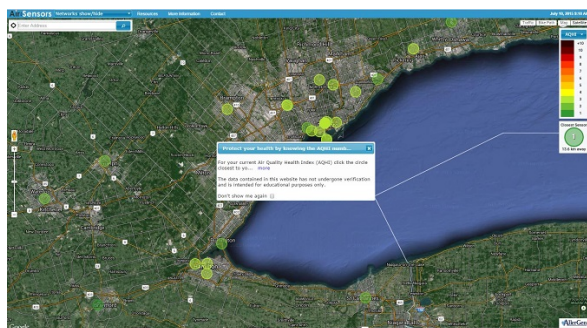


RESEARCH HIGHLIGHTS

AllerGen team measures air quality during 2015 Pan Am Games

Since 2011, AllerGen investigators Drs Greg Evans and Jeff Brook have been working as part of a University of Toronto research team to develop “AirSENCE,” a novel technology for monitoring air quality. Their work recently went public in a high-profile way, during the Pan Am and Parapan Am Games in Toronto.

Using AirSENCE prototypes installed near Game venues, the team launched [AirSensors](#), a website that indicates air quality in locations across Toronto in real time. The site is providing air quality information publicly for the duration of the Games.



Screenshot of the AirSensors website

AirSensors features an interactive map of the GTA. “Click on any location to see the air quality health index (AQHI) and the estimated concentrations of a number of air pollutants over the previous three days,” says Dr. Evans. “Clicking on multiple sites allows you to compare them.”

The site also provides, for comparison, air quality readings from monitoring stations operated by the Ontario Ministry of Environment and Climate Change, and by the Southern Ontario Centre for Atmospheric Aerosol Research (SOCAAR).

AirSENCE devices have long-term implications for health. “This new technology will enable users to manage their exposures to outdoor or indoor pollutants, thereby reducing both the risk of exacerbations of pre-existing health conditions, like asthma, and of development of chronic disease through long term exposure,” says Dr. Evans.

Read the [press release](#) and media coverage in [InsideToronto](#), [CTV News](#), [MetroNews](#), [Longwood](#), and [U of T News](#).



New C-CARE findings on anaphylaxis in adults and children

Almost half the adults seen in an emergency department (ED) for an anaphylactic reaction are not given epinephrine in or outside of the hospital, according to 2014 findings from AllerGen's [Cross-Canada Anaphylaxis REgistry \(C-CARE\)](#) project.



[Dr. Ben-Shoshan](#)

"Our study tracked adult ED visits for anaphylaxis at a Montreal hospital over a one-year period," says [Dr. Moshe Ben-Shoshan](#), a pediatric allergist at Montreal Children's Hospital and lead investigator for C-CARE.

"We found that anaphylaxis accounted for a substantial number of ED visits, the most common trigger was food, and there is non-adherence to guidelines recommending epinephrine use for all cases of anaphylaxis."

The study's findings were [published](#) in *International Archives of Allergy and Immunology* in August 2014.

Of roughly 37,000 ED visits, 0.26% fulfilled the definition of anaphylaxis. Food was the

suspected trigger for over 60% of these anaphylactic reactions, with shellfish being the most common trigger (12.9% of all food-triggered reactions). "In contrast, a C-CARE study conducted in a pediatric ED found that peanut is the major food trigger in children," says Dr. Ben-Shoshan.

Almost 40% of the adult anaphylactic reactions occurred outside the home and almost half of those in restaurants.

"A troubling finding is that epinephrine was not administered in almost half of moderate-to-severe anaphylaxis cases," adds [Dr. Yuka Asai](#), an AllerGen trainee and the paper's first author.



[Dr. Asai](#)

"Our results reveal poor adherence to guidelines stipulating the use of epinephrine for anaphylaxis. We believe that this may be related to concerns about the side effects of epinephrine in adults."



AWARDS & GRANTS

New 5-year CIHR grant for CHILD Study researchers

Dr. [Anita Kozyrskyj](#), an AllerGen investigator and a professor in the Department of Pediatrics at the University of Alberta—together with a team of [CHILD Study](#) researchers from across Canada—has received a five-year operating grant, valued at over \$500,000, from the Canadian Institutes of Health Research-Institute of Human Development, Child and Youth Health (CIHR-IHDCYH).

The CHILD Study application was ranked first among 39 proposals reviewed in the March 2015 competition.

The project, titled “Cesarean section: Impact on infant gut microbiota, childhood obesity and allergic disease,” will use data from over 3,300 infants in the CHILD birth cohort study located at four centres across Canada to determine long-term health outcomes arising from disruptions of an infant’s gut bacterial profile (microbiota) following C-section delivery.

Specifically, the research team will examine whether or not cesarean section delivery contributes to the development of childhood obesity, food allergies and asthma at the ages of three and five years, and if antibiotic use and breastfeeding impact this risk.

The research will address the “urgent need to understand more clearly the relationship between cesarean delivery, breastfeeding, and antibiotic administration, and the infant gut microbiome, which in turn impacts on childhood health,” according to the reviewers.

CIHR funds study of protein involved in severe asthma

Dr. Bruce Mazer, an AllerGen investigator and division head of Allergy and Immunology at the Montreal Children’s Hospital, is leading a new study that will determine how the protein Semaphorin 4C (Sema4C) is involved in the development of severe asthma.

“Regulatory B-cells inhibit Allergic Airways Disease: Role of Semaphorin 4C” has received a five-year operating grant, valued at over \$700,000, from the Canadian Institutes of Health Research-Institute of Circulatory and Respiratory Health (CIHR-ICRH).

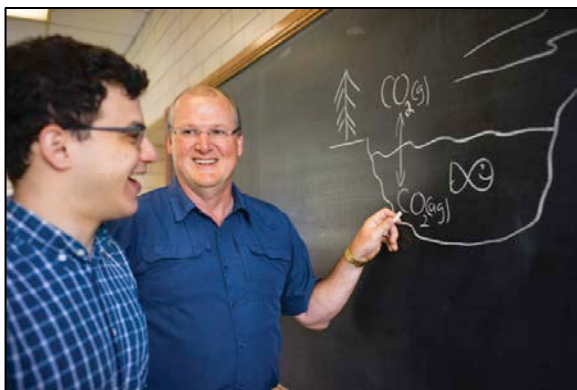
The award will support Dr. Mazer and his research team to better understand the role of Sema4C in the regulation of the immune system and the development of signs of severe asthma, including severe bronchospasm, high levels of the IgE antibody, and increased B-lymphocytes in the lungs. The results could contribute to new treatment options for individuals living with severe asthma.

Dr. Mazer is Deputy Executive Director/Deputy Chief Scientific Officer of the Research Institute of the McGill University Health Centre ([RI-MUHC](#)). He leads an AllerGen study to develop an effective and safe treatment of cow’s milk allergy with oral immunotherapy (OIT) and is a researcher with [GET-FACTS](#): Genetics, Environment and Therapies: Food Allergy Clinical Tolerance Studies—a project that combines components of population genetics, immunology, clinical medicine and sociocultural analyses to study the nature of food allergies.



Dr. Greg Evans receives teaching award

AllerGen investigator [Dr. Greg Evans](#), a professor of chemical engineering, has received a [2015 President's Teaching Award from](#) the University of Toronto (U of T), the University's highest honour for teaching.



[Dr. Evans \(R\) in action \(photo: Neil Ta\)](#)

"His ability to integrate his research and teaching have made him a sought-after supervisor," notes the U of T announcement, and has garnered him previous recognitions including the [Northrop Frye Award](#) in 2013.

"Dr. Evans is a visionary mentor and supervisor, who is always working to raise the bar on research," comments U of T PhD candidate and AllerGen trainee Natalia Mykhaylova. "I really appreciate the opportunity to conduct research under his supervision."

Dr. Evans is active in AllerGen's Gene-Environment Interactions Enabling Platform, where he is playing a lead role in the development of a new technology ("AirSENCE") for measuring air quality.

Dr. Jeremy Hirota granted CIHR New Investigator Salary Award

AllerGen investigator and former trainee [Dr. Jeremy Hirota](#), an assistant professor of medicine at The University of British Columbia, has received a 5-year New Investigator Salary Award from CIHR valued at \$300,000.

The award supports his research project "Respiratory mucosal immune responses to environmental exposures relevant in airway health and disease."

"My group proposes to study how common inhaled substances interact with airway epithelial cells to start an immune response, and how this immune response may lead to asthma attacks or development of disease," says Dr. Hirota.

"This research will generate new ideas on how to treat asthma and provide evidence for public policy to protect vulnerable people...and aims to uncover new treatment strategies."



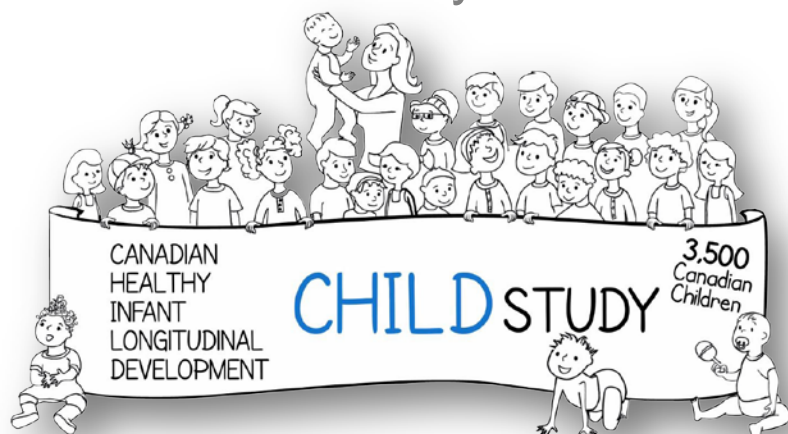
[Dr. Jeremy Hirota](#)

The CIHR (Canadian Institutes for Health Research) created the New Investigator Salary Award program "to provide New Investigators the opportunity to develop and demonstrate their independence in initiating and conducting health research through provision of a contribution to their salary."



KNOWLEDGE MOBILIZATION

New CHILD Study whiteboard video



A new whiteboard-style video about the CHILD Study and its findings was launched online in July 2015. The video was viewed over 600 times in its first two weeks.

View or download the video from the [AllerGen website](#), or watch it on [YouTube](#).

Taking the first step toward developing a National Food Allergy Strategy (NFASt)

Dr. Susan Elliott, a University of Waterloo professor and co-leader of AllerGen's Patients, Policy and Public Health enabling platform, is leading an AllerGen initiative to catalyze the development of a National Food Allergy Strategy for Canada.

On June 23, 2015, Dr. Elliott hosted a national stakeholder consultation meeting with partners from community and patient groups, government, and healthcare to assess the appetite and capacity for developing a national strategy.

Twenty-two pan-Canadian organizations, including Allergy/Asthma Information Association; Anaphylaxis Canada; Dietitians of Canada; Health Canada; McDonalds Canada; Pfizer Canada; the Quebec Food Allergy Association; the Sandbox Project; and Sanofi Canada, as well as Public Health Ontario and other provincial organizations, attended and contributed to the discussion.

Presentations by AllerGen researchers Drs Ann Clarke (University of Calgary), Jean Marshall (Dalhousie University), Susan Waserman (McMaster University) and Susan Elliott (University of Waterloo) provided an overview of the Canadian food allergy landscape in terms of prevalence, perceptions and experiences, pathophysiology, and gaps in diagnosis, treatment and management of food allergy. Michael Abbott (Food Allergy & Intolerance Assessment Section, Health Canada) provided a snapshot of advances in food allergen labelling in Canada.

"This stakeholder meeting was an important first step in developing a national strategy that maximizes choice and minimizes risk for food allergic Canadians," says Dr. Elliott.

Information on the development of a National Food Allergy Strategy and presentations from the June 2015 stakeholder meeting can be viewed on the AllerGen [website](#).



Anaphylaxis Canada's 2015 conference: Unlocking the Mysteries of Food Allergy

On Saturday May 23, 2015, 300 members of the Canadian food allergy community—parents, patients, advocates, policymakers, researchers—gathered in the Ontario Science Centre in Toronto to participate in Anaphylaxis Canada's [8th Annual Community Conference](#).



The conference, “Unlocking the mysteries of food allergy: What can we learn from research?” celebrated Food Allergy Awareness Month and featured some of the country's leading food allergy researchers to address new findings in the areas of diagnosis and treatment.

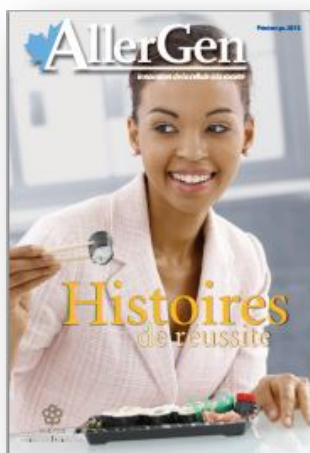
The conference also included presentations from the parents of Sabrina Shannon (the inspiration for [Sabrina's Law](#)); a youth panel that incorporated [Toronto Argonaut Thomas Miles](#); and the publisher of [Allergic Living](#) magazine, as well as updates from Health Canada and the Canadian Food Inspection Agency.

As a conference sponsor and exhibitor, AllerGen shared highlights from the Network's CanFAST research projects.

AllerGen's Managing Director [Dr. Diana Royce](#) presented on the breadth of AllerGen's food allergy research and on the development of a National Food Allergy Strategy (NFASt) to maximize choice and minimize risk for those living with food allergies.

AllerGen investigators Drs [Susan Waserman](#) and [Peter Vadas](#) offered their insight into new diagnostic tests and treatments under development, including oral and epicutaneous immunotherapy and the “peanut patch.”

[Dr. Manel Jordana](#)'s presentation unravelled the complexities of the mechanisms underlying sensitization to peanut.



Histoires de réussite: Printemps 2015 disponible en français

à partir du [site AllerGen](#)

Success Stories: Spring 2015 available in French

on the [AllerGen website](#)



TRAINEE NEWS

AllerGen's Trainee Symposium: 10 years of enhancing careers

Ten years after its first symposium, AllerGen welcomed 54 trainees, research staff and members of the AllerGen Students and New Professionals Network (ASNPN) back to Toronto for the 10th Annual AllerGen Trainee Symposium, held April 29 to May 1, 2015.

The event focused on “careers outside of academia” and featured a career panel; a personality assessment workshop; speakers addressing The Business Side of Science, Success After Graduate School, and Social Media & Communicating Your Science; as well as a special presentation by Dr. Jane Aubin, Chief Scientific Officer and Vice-President, Research, Knowledge Translation and Ethics Portfolio, at CIHR.

Details about the event can be viewed [here](#).

AllerGen HQP pitch their research

In new YouTube videos, AllerGen HQP describe their research in just 60 seconds, using a single PowerPoint slide.

The “1-minute 1-slide” presentations span topics from the health impact of second-hand smoke exposure in early life to identifying the genetic basis of peanut allergy.

Watch the presentations on [AllerGen's YouTube channel](#).

What do HQP say about AllerGen?



Watch their video testimonials on YouTube

Meet the new ASNPN Executive Committee

Members of AllerGen Students & New Professionals Network (ASNPN) have elected a new Executive Committee for 2015-2016.

Meet the new Committee

Amrit Singh • Laura Feldman
Leah Shaver • Mena Soliman
Jasemine Yang • Vivek Gandhi
Elizabeth Simms • Kyla Jamieson
Erika Ladouceur
Cynthia Kanagaratham



ASNPN member receives CIHR Master's Award

Julyanne Brassard, a 2014 AllerGen Summer Studentship recipient studying with AllerGen investigator [Dr. Marie-Renée Blanchet](#) (Université Laval), has been awarded a CIHR Frederick Banting and Charles Best Canada Graduate Scholarship.

The one-year award, valued at \$17,500, will support her project "Modulation of CD103 expression on dendritic cells in airway allergic inflammatory disease."

"This project will allow us to shine a light on CD103 as a potential target for the treatment of airway inflammatory diseases," Ms. Brassard explains in her project abstract.

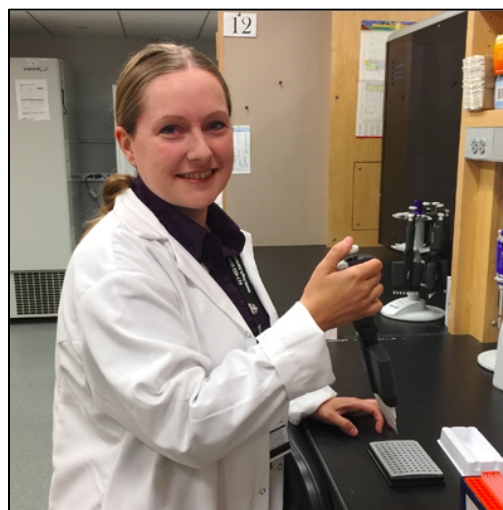
The award programs supports "students who demonstrate a high standard of achievement in undergraduate and early graduate studies."



Julyanne Brassard

Trainee conducts research at Harvard

With support from AllerGen's [International Trainee Research Visit Program](#), Queen's University-based AllerGen trainee Dr. **Michelle North** is spending her summer as a visiting fellow at the T.H. Chan School of Public Health of Harvard University.



Dr. Michelle North at work in Harvard

Dr. North is working in Dr. Andrea Baccarelli's lab, analyzing samples from the Kingston Allergy Birth Cohort as part of her investigation into the early-life origins of allergic disease.

Read more about Dr. North's fellowship experience in this [Queen's University profile](#).

HQP awarded FQRSC doctoral fellowship

AllerGen trainee and former ASNPN Executive member **Stephanie Nairn**, a PhD candidate in Sociology & Social Studies of Medicine at McGill University, was awarded a Fonds de Recherche du Québec - Société et Culture doctoral fellowship in April 2015.

The fellowship will support her research into the scientific and medical advances that have re-established immunotherapy as a viable therapy for treating individuals with food allergy.



PEOPLE & PARTNER NEWS

Dr. Anne K. Ellis named James H. Day Chair at Queen's University

Dr. Anne K. Ellis has been appointed the [James H. Day Chair in Allergic Diseases and Allergy Research](#) by Queen's University, Faculty of Health Sciences. This appointment is for a five-year period from May 1, 2015 to April 30, 2020. In this role, Dr. Ellis will enhance the research excellence of the Clinical Immunology and Allergy Unit at Queen's University by advancing knowledge and preparing students for a global career in allergy and immunology.



Dr. Ellis has served as Queen's University's Chair of the Division of Allergy & Immunology since May 2010, and is the Director of the Allergy Research Unit of Kingston General Hospital. She leads the research program

conducted at the hospital's Environmental Exposure Unit ([EEU](#)), an internationally recognized facility specializing in validated methods to conduct allergy research trials.

Dr. Ellis is also the Co-Director of AllerGen's Allergic Rhinitis Clinical Investigator Collaborative ([AR-CIC](#)), a national multi-centre network of researchers studying the pathophysiology of allergic rhinitis (commonly known as "hay fever").

Dr. Kelly McNagny named Co-Scientific Director of CDRD

Dr. [Kelly McNagny](#) has been named a Co-Scientific Director of the Centre for Drug Research and Development ([CDRD](#))—a national not-for-profit that speeds the development and commercialization of new drugs and health technologies emerging from Canada's universities and research hospitals.

Dr. McNagny is a stem cell biologist and a professor in the Department of Medical Genetics at The University of British Columbia (UBC). His AllerGen research focuses on a protein called CD34 as a therapeutic target for allergic inflammation and asthma, as well as the analysis of the cellular composition of blood to predict susceptibility to allergic disease.

In his [new role at CDRD](#), Dr. McNagny will work alongside Dr. Michael Rudnicki (Professor, Department of Medicine, University of Ottawa) and provide leadership and direction in the translation of research discoveries into new therapies for Canadians.



cdrd The Centre for Drug Research and Development



Dr. Claude Roy (centre) flanked by Drs Susan Elliott (L) and Diana Royce (R) in Sep. 2010

Fondly remembering Dr. Claude Roy

Dr. Claude Roy, a pioneer in the field of pediatric gastroenterology, former Vice-Chairman of AllerGen's Board of Directors and mentor to Network leaders, passed away on July 2, 2015, at Cedars Cancer Centre (McGill University Health Centre) in Montreal, Quebec.

Dr. Roy, a longtime friend of AllerGen, was best known for his visionary work on infant nutrition, chronic liver disease in children, and gastrointestinal and hepatobiliary manifestations of cystic fibrosis. Known as an outstanding researcher, clinician, teacher and mentor, Dr. Roy was a Professor Emeritus at the Université de Montréal and a gastroenterologist at CHU Sainte-Justine, the largest mother and child healthcare centre in Canada.

In a career that spanned more than 40 years, Dr. Roy helped countless children overcome severe illnesses and advanced the study of pediatric gastroenterology to a vibrant and valued medical subspecialty. His manual

Pediatric Clinical Gastroenterology, now in its 4th edition, is still regarded as the primary textbook in its field.

Among numerous awards and distinctions, Dr. Roy was named an Officer of the [Order of Canada](#) in 1990 and in 2013 he was one of six distinguished medical leaders inducted into the [Canadian Medical Hall of Fame](#). On May 22, 2015, Dr. Roy received the [2015 Quebec Medical Association \(QMA\) Prestige Award](#), the highest distinction granted by the QMA.

Dr. Roy leaves behind his wife, Simone St-Germain, as well as children, grandchildren, family, friends, and a scientific community in Canada and abroad who are deeply saddened by his passing.

Obituaries can be viewed online at [La Presse](#) and [The Montreal Gazette](#). See also the Canadian Medical Hall of Fame's [farewell page](#) and the CHU Sainte-Justine [tribute](#).



AllerGen researchers appointed to Hydra Biosciences Advisory Board

AllerGen research leader Dr. Paul O'Byrne has been appointed to the newly created [Pulmonary Medical Advisory Board](#) of Hydra Biosciences, a Massachusetts-based biopharmaceutical company that develops drugs to treat pain, inflammation, renal disease, anxiety and pulmonary disease.

Dr. O'Byrne, a respirologist, leads AllerGen's [Clinical Investigator Collaborative](#), a multi-centre Phase II clinical trials consortium enhancing drug discovery for allergic diseases from proof-of-concept to use in patient populations. He is also Professor and Chair of Medicine at McMaster University, and Director of the [Firestone Institute for Respiratory Health](#) at St. Joseph's Healthcare in Hamilton, Ontario.

Dr. Sven-Erik Dahlén, Director of the [Centre for Allergy Research](#) (CfA) of the Karolinska Institutet in Stockholm, Sweden, an AllerGen research partner, has also been appointed to the Pulmonary Medical Advisory Board.



Cheryl Cartwright joins the AllerGen Team

We are pleased to welcome Cheryl Cartwright to the AllerGen Administrative Centre team. Cheryl takes over the role of Finance Officer from Carol Ridsdale, who served with the Network since early 2011.



Cheryl Cartwright, AllerGen's new Finance Officer

Cheryl brings to the team over 15 years of private sector experience providing financial services to companies including Philip Services and Tim Hortons. While at Tim Hortons, Cheryl worked for both the Tim Horton Children's Foundation and the Advertising and Promotion Fund.

Cheryl holds Diplomas in Accounting and in Food and Beverage Management from McMaster University and George Brown College, respectively.

Cheryl can be reached at:

cherylcartwright@allergen-nce.ca

905-525-9140 x. 26643



MEDIA

Globe and Mail references CHILD Study

A *Globe and Mail* article, "[Say Hello to Your Little Friends](#)," references AllerGen's CHILD Study as the resource enabling new Canadian microbiome research.

The June 8, 2015, article profiles [Dr. Brett Finlay](#), a microbiologist at The University of British Columbia, who uses CHILD Study data and biological samples to study the makeup of the infant microbiome and how variations in this internal ecosystem can affect the development of asthma later in life.

The CHILD Study involves more than 3,500 Canadian children and their families, carefully studying them until the children are at least five years old. It is one of the largest studies in the world to look in depth at how an individual's genes and environmental exposures—such as diet, stress, antibiotic use, outdoor air pollution, dust and pets inside the home—impact health and well-being.



Dr. Finlay's research uses fecal samples collected from diapers to understand how the gut microbiome may eventually affect the development of chronic diseases such as asthma.

Genetics specialist explains CHILD Study on *RadioCanada*

Dr. Catherine Laprise, a co-investigator with the CHILD Study, spoke, in a French-language interview, with [RadioCanada](#) on May 23, 2015, to discuss how Canadian families participating in the Study are helping scientists uncover the origins of asthma and allergies.



"Over 300 genes may be involved in the development of asthma and allergies," says [Dr. Laprise](#), a genetics specialist and a professor at the Université du Québec à Chicoutimi.

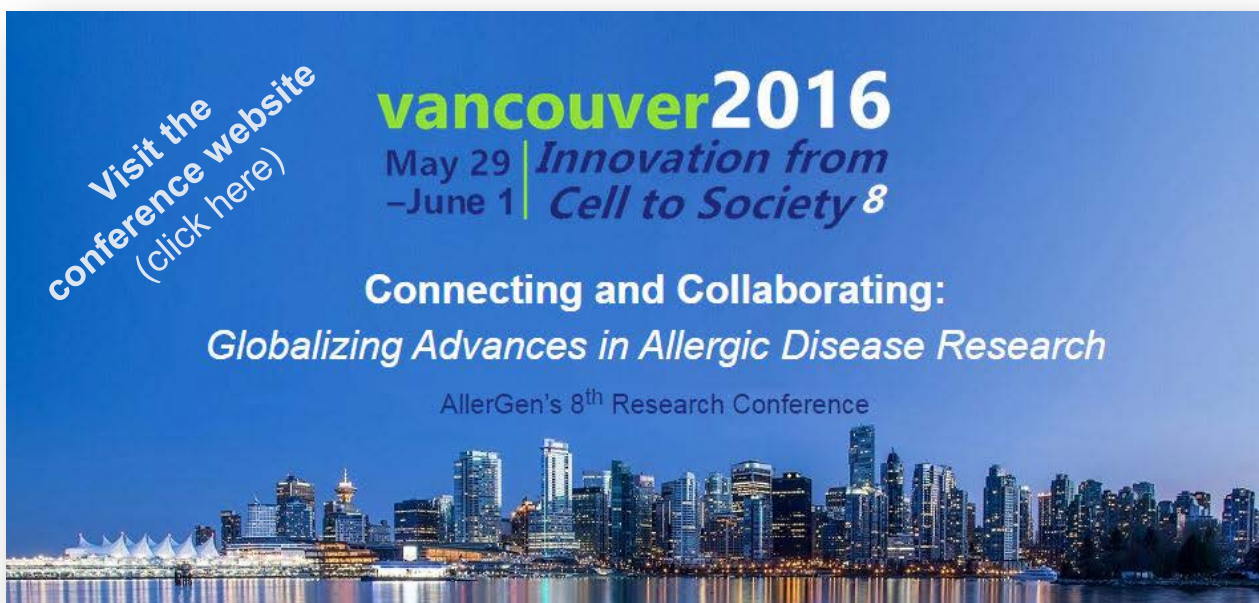
"This unique study is helping us to determine which specific genes are at play and to understand how environmental exposures affect the genes, as these conditions cannot be explained by hereditary factors alone."

"It is very important to use scientific evidence to inform public policy, and the CHILD Study is providing that evidence—from the impact of outdoor air pollution to dust and pets in the home, and the effects of maternal and infant diet on the development of allergies and other chronic diseases."

Dr. Laprise is an AllerGen investigator and a [Canada Research Chair in Environment and Genetics of Respiratory Diseases and Allergy](#).



EVENTS



CSACI Annual Scientific Meeting 2015

The Canadian Society of Allergy and Clinical Immunology (CSACI) 70th Annual Scientific Meeting will take place **October 21-24, 2015** in Vancouver, BC.

Featuring speakers with expertise across the spectrum of clinical and basic sciences, the meeting will provide an opportunity for specialists and researchers in the field of allergy, asthma, and clinical immunology, as well as allied health professionals, to meet and share their knowledge.

Visit the CSACI [website](#) for details.

Food Allergen Management: AQIA 6th Annual Meeting

The 2015 Annual Meeting of the Quebec Association for Food Protection (AQIA), to be held **September 30 and October 1, 2015**, in Quebec City, QC, will engage international speakers on the topic of *Food Allergen Management: Emerging Issues & Perspectives*.

The [program](#) includes a keynote presentation by AllerGen Scientific Director Dr. Judah Denburg and presentations by AllerGen investigators Drs Susan Elliott and Ann Clarke.

Graduate students are [invited to present posters](#) (abstract deadline: Sept 1, 2015).

Visit the AQIA [website](#) for details.

Send newsletter enquiries and comments to:

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