

RESEARCH HIGHLIGHTS



CIC investigators publish new findings for allergic asthma

Researchers in AllerGen's Clinical Investigator Collaborative (CIC) have discovered that an antibody can block a specific protein in the lungs and reduce the symptoms of inflammation and bronchoconstriction experienced by people with mild allergic asthma.

The [study](#), published in the *New England Journal of Medicine*, was conducted at five CIC sites across the country and involved the work of AllerGen Network researchers Dr. Gail Gauvreau, Dr. Paul O'Byrne, Dr. Louis-Philippe Boulet, Dr. Donald Cockcroft, Dr. Mark FitzGerald, Dr. Beth Davis and Dr. Richard Leigh.

Epithelial cells in the lungs' airways produce a protein called thymic stromal lymphopoietin (TSLP) that causes inflammation. This study proved for the first time that epithelial cells continually produce TSLP in humans with asthma and that blocking TSLP with an antibody can reduce the symptoms of mild allergic asthma.

These findings have implications for the development of new antibody treatments not only for allergic asthma, but for severe asthma as well, according to Dr. O'Byrne. Dr. Gavreau presented the study at the 2014 American Thoracic Society conference in San Diego, CA.

Read the [press release](#).



Personalized Health article by AllerGen team published in *EMBO reports*

AllerGen investigators have proposed the concept of “personalized health” as an underlying aspirational ideal defining the Network’s research.

During AllerGen’s 2013 Scientific Meeting, Dr. Chris Carlsten embraced the challenge of more precisely defining “personalized health” and of giving it currency in health science circles.

One product of Dr. Carlsten and his team’s efforts is an article published by *EMBO reports* on June 6, 2014, entitled “[Genes, the environment and personalized medicine](#).” It was

co-authored by a team of researchers and Network management, including Michael Brauer, Fiona Brinkman, Jeff Brook, Denise Daley, Judah Denburg, Kelly McNagny, Mandy Pui, Diana Royce and Tim Takaro.

The article makes a case for including gene-environment interactions in our understanding of disease, and for treating genetics as one of many personalized tools to achieve healthier living. This contrasts with the “personalized medicine” approach, which heavily favors pharmacogenetic interventions.

Researchers, experts, trainees gather for AllerGen’s 2014 Scientific Meeting

From May 30 to June 2, 2014, 71 members of the AllerGen Network, including 33 investigators and 17 trainees, gathered at the Kingbridge Centre and Institute north of Toronto for AllerGen’s second Scientific Meeting.

Participants reported on research progress and worked to collectively update the Network’s research priorities to 2019, to refine its legacy and sustainability strategies, and to better integrate its research efforts across platforms.



Closing day plenary

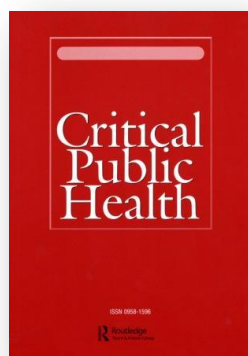


Scenes and faces from the 2014 Scientific Meeting

Three special sessions allowed for focused discussion on priority topics. In one, a panel of experts offered their insights and advice on research commercialization and knowledge mobilization opportunities.

A second explored the specialty of bioinformatics and strategized on integrating data across AllerGen's research teams, while the third delved into "personalized health," proposed as a potential unifying framework for AllerGen's various research thrusts.





Low income, high risk: the overlapping stigmas of food allergy and poverty

A new study by AllerGen researchers provides insight into the experiences of low-income families affected by food allergies. The study shows that low-income families feel “unsafe” procuring allergen-free foods at food banks and discount supermarkets. They may also be “misinformed” about the availability of social assistance health insurance coverage for epinephrine autoinjectors, and “distance” themselves from other low-income groups—including working poor individuals with no health coverage, immigrants, food bank users and youth—as a coping mechanism.

The study, "[Low income, high risk: the overlapping stigmas of food allergy and poverty](http://dx.doi.org/10.1080/09581596.2014.926309)," by authors Leia Minaker (University of Waterloo), Susan Elliott (University of Waterloo) and Ann Clarke (University of Calgary), was published online in *Critical Public Health* on June 13, 2014.

In-depth interviews with 13 low-income adults affected by food allergies and 10 “key informants”—allergists and dietitians, food bank employees, employment support center employees, and governmental social assistance case workers—were conducted in 2012 and 2013.

The researchers also discovered that low-income families and key informants have discrepant perspectives regarding food allergy experiences, with “potentially stigmatizing perspectives on the part of key informants.”

This work was supported by AllerGen as part of the Canadian Food Allergy Strategic Team (CanFAST) research program, and has implications for strategies to improve access to education, safe food, and medication for low-income families affected by food allergies.

Critical Public Health, 2014
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Low income, high risk: the overlapping stigmas of food allergy and poverty

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The aim of this study was to explore experiences and coping strategies of low-income families affected by food allergies. Of particular interest was the experience of allergy-related stigma within the context of poverty. A secondary objective was to offer suggestions for refining a conceptual model of disease stigma. In-depth interviews with 23 individuals (10 key informants and 13 low-income adults affected by food allergies in southwestern Ontario) were conducted in 2012–2013. Participants reported feeling food insecurity, income-related stigmatized behaviors to obtain food and perceived barriers to obtaining medication. Participants adopted cognitive distancing strategies to separate themselves from other low-income families affected by food allergies.

KNOWLEDGE MOBILIZATION

CHILD Study news to reach 700,000 in *Toronto Star* supplement

A special June 28, 2014, “Allergies & Asthma” supplement to the *Toronto Star* features a story on AllerGen’s Canadian Healthy Infant Longitudinal Development (CHILD) Study and an advertising banner for AllerGen NCE.

The [article](#) provides an introduction to the CHILD Study, some of its preliminary findings, and the promise it holds for future prevention and treatment of asthma and other chronic diseases.

The supplement also features celebrities Alex Tagliani, a Canadian auto racing driver with severe food allergies, and Steve Omischl, the three-time Olympic freestyle skier and aerial champion who grew up with severe asthma and a life-threatening peanut allergy.

The eight-page print publication will reach over 722,000 Canadians. A [digital site](#) with the same content was launched on June 12 and received wide distribution through social media and digital news platforms.



AllerGen hosts first Francophone forum on asthma

AllerGen recently convened a panel of Montreal’s leading asthma experts in an engaging public forum about asthma: what provokes it, what exacerbates it, and what can be done to control or prevent it.

The free French-language event, the first of its kind to be organized by AllerGen, was held on

Monday, May 12, 2014, from 7:00-9:00 p.m. in Mont-Royal, QC, and focused on preventing and managing asthma spikes among school-aged children.

Expert speakers included [Dr. Francine Ducharme](#) (pediatric allergist, CHU Ste-Justine); Dr. Marie-Josée Francoeur (pediatric

allergist, Hôpital Charles LeMoyne, Université de Sherbrooke); [Dr. Louis Jacques](#) (prevention and public health specialist, Direction de santé publique de Montréal); and Jocelyne Bouchard (RN/asthma educator, CHU Ste-Justine).



The event was co-moderated by AllerGen Scientific Director Dr. Judah Denburg and [Dr. Reza Alizadehfar](#) of McGill University.

Scenes from the Montreal event



Online support program a lifeline for kids with severe food allergies

[Anaphylaxis Canada](#) has launched “Allergy Pals,” an online mentorship program providing peer support and mentoring to children (ages 7-11) affected by severe food allergies.

The program materials were designed by AllerGen investigator and Professor of Nursing [Dr. Miriam Stewart](#) and her team at the University of Alberta, with research support from AllerGen.

In a recent [Global TV News \(Edmonton\) profile](#) of the program, Dr. Stewart noted that “the importance of peers is that each of the children in the group understands what it’s like to live with allergies,” adding that the mentoring focuses mainly on how kids can “live normal lives despite coping with allergies—at school, in sports and having fun...”

With support from AllerGen and [TEC Edmonton](#), project collaborator Anaphylaxis

Canada licensed the program to support children affected by life-threatening allergies.

[Allergy Pals](#) offers eight support sessions led by older peer mentors in a safe online environment. Sessions include interactive activities such as brainstorming, problem solving, goal setting and developing effective coping strategies.

“This program is important to our communities as it empowers children to tell their own stories, share experiences and learn from each other while they make new friends,” says [Kyle Dine](#), Anaphylaxis Canada’s youth project coordinator.





TRAINEE ACCOMPLISHMENTS

Microbiome poster, KT videos garner multiple recognitions

AllerGen trainee [Dr. Meghan Azad](#) and the SyMBIOTA research team are double-award winners with their poster and knowledge translation (KT) videos on the topic of breastfeeding and its influence on infant gut microbiota.



Dr. Meghan Azad

The poster, “Breastfeeding, infant gut microbiota, and early childhood overweight,” in combination with the related videos—entitled “Breast-feeding: good for your baby and their gut bacteria”—won the Nutrition Translation Research

Interest Section competition at the American Society of Nutrition / Experimental Biology conference in San Diego.

Dr. Azad’s [poster abstract](#) was selected as one of six finalists, from over 100 abstracts submitted, for the Postdoctoral Research Award competition.

The poster—which provides further evidence that partial and extended breastfeeding protect against overweight, and shows that gut microbiota contribute to this association—also received an “outstanding poster presentation” award at the CIHR Institute for Cardiovascular & Respiratory Health Young Investigators Forum on May 28, 2014.

Dr. Azad’s work presents findings from the SyMBIOTA (Synergy in Microbiota) research program, led by AllerGen investigators [Dr. Anita Kozyrskyi](#) (University of Alberta) and [Dr. James Scott](#) (University of Toronto), and uses data from 849 infants from the Winnipeg site of AllerGen’s Canadian Healthy Infant Longitudinal Development (CHILD) birth cohort study.

Dr. Azad acknowledges the work of creative duo Chris Bryan and Ainsley Sturko on [Video #1](#), and of high school students from Winnipeg’s Tec Voc High School on [Video # 2](#): “We are very grateful to both teams.”



KT Video #1



KT Video #2



AllerGen trainee receives faculty appointment

Dr. Jeremy Hirota has been appointed Assistant Professor in the Division of Respiratory Medicine at The University of British Columbia, where he will work with Dr. Chris Carlsten and Division Head Dr. Mark FitzGerald, both AllerGen investigators.

“Through CAIDATI fellowship funds, my membership in the ASNPN Leadership Committee, HQP travel awards and the International Trainee Research Program, AllerGen has created tangible opportunities for me to capitalize on and further the development of my independent research career,” noted Dr. Hirota, reflecting upon his appointment.

“AllerGen has nurtured my career and the careers of many young researchers across the country and now I will try to do the same for my trainees.”

In June 2014, Dr. Hirota will use an AllerGen Research Skills Acquisition Award to attend an immersive two-week workshop on Science Communications at the Banff Centre in Banff, Alberta.

Dr. Hirota is studying how the lung copes with environmental insults. His goal is to inform public policy to improve air quality for Canadians. He is also a 2013 Banting Postdoctoral Fellow.

PEOPLE & PARTNER NEWS

AllerGen-Stanford collaboration advances food allergy research

A new collaboration between AllerGen and Stanford University will allow young Canadian scientists to pursue advanced food allergy research with [Dr. Kari Nadeau](#), a renowned expert in adult and pediatric allergies. Read the [press release](#).

The [Stanford Alliance for Food Allergy Research \(SAFAR\)/AllerGen Research Fellowship Award](#) will co-fund a \$50,000 award for a Canadian investigator (PhD or MD) with an interest in the prevention and treatment of severe food allergies to pursue academic research training with Dr. Nadeau at Stanford University.



Dr. Kari Nadeau

Dr. Nadeau leads translational research and clinical studies at Lucile Packard Children's Hospital and directs the Nadeau Laboratory at Stanford. Her work studies the mechanisms involved in food allergies, oral immunotherapy for multiple food allergies, and eosinophilic esophagitis.

[Call for Applications](#) | [Application Form](#)

Deadline: September 12, 2014.



Dr. Michael Brauer honoured for research on asthma and the environment

Dr. [Michael Brauer](#), a Professor at the School of Population and Public Health, The University of British Columbia, and an AllerGen Principal Investigator, has been named as the first recipient of the [Asthma Society of Canada's Bastable-Potts Asthma Research Prize](#). The award, valued this year at



Dr. Michael Brauer

\$10,000, recognizes innovative Canadian research that adds to the body of knowledge

on asthma and its relationship to environmental exposures. Read the [press release](#).

Dr. Brauer also received a *For Life and Breath Innovation Award*, which celebrates individuals whose work has dramatically helped to improve the lives of Canadians with asthma and respiratory allergies.

The award was presented by AllerGen Managing Director Dr. Diana Royce and AllerGen investigator Dr. Susan Waserman on April 30, 2014, during the Asthma Society of Canada's For Life and Breath: Environment, Asthma and Allergy Summit.

Dr. Louis-Philippe Boulet recognized as distinguished lecturer

AllerGen investigator [Dr. Louis-Philippe Boulet](#) was presented the [2014 CIHR-ICRH-CTS Distinguished Lecturer in Respiratory Sciences](#) award during the 7th annual Canadian Respiratory Conference (CRC) held in Calgary, Alberta in April 2014.

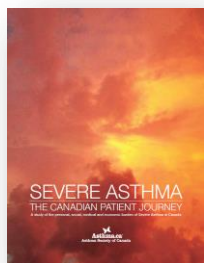
As part of the honour, Dr. Boulet delivered a keynote lecture at the conference: "From Asthma Pathophysiology to Knowledge Translation: A Journey Through Airways and Human Behaviour," in which he reviewed various aspects of research on asthma, airway function and inflammation/remodelling.



Dr. Boulet

Dr. Boulet is a lung specialist at l'Institut universitaire de cardiologie et de pneumologie de Québec (iuCPQ), a professor of medicine at Laval University, and a site leader of AllerGen's Clinical Investigator Collaborative (CIC).

Established in 2006 by the CIHR's Institute of Circulatory and Respiratory Health (ICRH) and the Canadian Thoracic Society (CTS), this annual award recognizes outstanding contributions to the advancement of respiratory sciences in Canada.



Asthma Society of Canada releases study on burden of Severe Asthma

On May 6, 2014, to commemorate World Asthma Day, the [Asthma Society of Canada](#) (ASC) released the first-ever patient study of Severe Asthma in Canada. Entitled *Severe Asthma: The Canadian Patient Journey*, the study examines the personal, social, medical and economic burden of severe asthma (SA) in Canada.

The study entailed extensive interviews with SA patients in Alberta, Ontario and Quebec, as well as online surveys conducted nation-wide, and is particularly concerned with the patient

experience of SA. It is estimated that between 150,000 and 250,000 Canadians suffer from SA.

"The good news in this report," said Robert Oliphant, President and CEO of ASC, "is that SA is a disease Canadians have the possibility to control. We need more research into SA, more attention to the issue by physicians and government, and more resources to educate patients about how to manage their disease."

The [full report](#) and its [executive summary](#) can be downloaded from the ASC website.



The World's Largest Sandbox returns to Ottawa

On June 4, 2014, AllerGen partner organization The Sandbox Project hosted its [third annual World's Largest Sandbox event](#) to raise awareness about the health of Canadian children and youth.

In a giant sandbox located in front of the CBC studios in downtown Ottawa, Members of Parliament, Cabinet Ministers, media personalities and industry professionals gathered with local children and school

groups to participate in a sandcastle-building competition.



Sandcastle in downtown Ottawa

[The Sandbox Project](#) was created to respond to the 2008 research finding that Canada was slipping behind its peer countries in terms of key health indicators for children and youth. Its work focuses on improving children and youth health outcomes with respect to injury prevention, obesity, mental health and the environment.



Dr. Peter Paré receives lifetime achievement award

The Faculty of Medicine of The University of British Columbia (UBC) has awarded the 2014 Bill and Marilyn Webber Lifetime Achievement Award to [Dr. Peter Paré](#), whose work in the pathophysiology of asthma and

chronic obstructive pulmonary disease (COPD) helped establish UBC as a premier scientific centre for lung disease.

Dr. Paré was among the AllerGen Network's first cohort of investigators



Dr. Peter Paré

and he played a role in many AllerGen research initiatives between 2005 and 2012. Dr. Paré continues to actively collaborate on several AllerGen projects, working with co-investigators including Dr. Denise Daley, to find susceptibility genes for allergic disease.

At the recent AllerGen Trainee Symposium in Vancouver, BC, Dr. Paré led an interactive session titled "Succeeding at the Grant Game: Mock Review Panel," which was designed to enhance network trainees' grant writing skills.

Read the UBC Faculty of Medicine [statement](#) on the choice of Dr. Paré as the 2014 honoree.

AllerGen AROUND THE WORLD

AllerGen investigators abroad

Dr. John Gordon presented a study on reversing food allergen sensitivity in mouse models of anaphylaxis at the World Immune Regulation (WIR) Meeting in Davos, Switzerland (March 19–22).

Dr. Gordon's presentation was awarded "Best Workshop Presentation for Immune Regulation in a Clinical Setting: Allergy and Asthma."



Drs Jeff Brook, Anita Kozyrskyj and Tim Takaro presented at the 3rd Worldwide Universities Network (WUN) International Inflammation Network (In-FLAME) Annual Workshop in Cape Town, South Africa (March 30–31).

Their presentations are summarized in the [workshop final report](#).





MEDIA

AllerGen investigators in the news

At least 28 worldwide media outlets featured news of the Clinical Investigator Collaborative's (CIC's) new findings for allergic asthma, recently published in the *New England Journal of Medicine*. [The Wall Street Journal](#), [The Washington Post](#), [The San Francisco Chronicle](#) and [ZeeNews](#) (India), among other outlets, featured interviews with **Drs Paul O'Byrne and Gail Gauvreau** (McMaster University).

AllerGen trainee and Emerging Clinician-Scientist Fellowship recipient **Dr. Philippe Bégin**'s work on peanut desensitisation was featured in the May 6 edition of the [South China Morning Post](#).

AllerGen investigator **Dr. Paul Keith** (McMaster University) was interviewed on the

Rogers Network's [Toronto Boomers](#) on May 15 about managing allergies as one ages.

Dr. Martin Blaser (New York University) referenced AllerGen investigator **Dr. Anita Kozyrskyj** and her SyMBIOTA team's microbiome research, which uses data from the CHILD Study, on CBC's *The Current* in a May 6 episode titled "[Missing Microbes: Are we killing off bacteria at our own peril?](#)"

AllerGen researchers **Drs Michael Brauer and Chris Carlsten** (The University of British Columbia) were cited in an April 28 [Globe and Mail article](#) on the effects of climate change on pollen seasons and on related allergy and asthma rates.



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