



reAction

June 2018

RESEARCH HIGHLIGHTS

Infant feeding method influences baby's gut bacteria and risk of becoming overweight

New findings from AllerGen's CHILD Study have shown that exclusive breastfeeding in the first three months of life provides more protection against an infant becoming overweight at one year of age than either partial breastfeeding or formula feeding.

The study involved 1,087 Canadian mothers and infants participating in the CHILD Study, and found a 63% increased risk of becoming overweight among partially breastfed infants, and a 102% increased risk among exclusively formula-fed infants. The researchers believe that these differences are partially explained by the effect of feeding practices on the infant gut microbiome—the community of microorganisms or bacteria that live in the human digestive tract.

“Our research showed that partial breastfeeding and exclusive formula feeding were associated with a higher microbial diversity at three months of age, meaning more types of microbes were present in the baby's gut, as well as an abundance of a group of bacteria called *Lachnospiraceae*,

which has been associated with infant overweight,” explains co-author Dr. Anita Kozyrskyj, a professor in the Department of Pediatrics at the University of Alberta.

The study, published June 4, 2018, in [JAMA Pediatrics](#), is one of the largest infant microbiome studies in the world, identifying over 900 types of bacteria from 2.6 million DNA sequences generated from more than 1,000 infants.

The study is unique in that it also distinguished between partial breastfeeding mixed with formula *versus* partial breastfeeding mixed with foods, and is the first to evaluate the potential association of a brief use of infant formula (during the hospital stay only) with infant microbiota and the risk of becoming overweight.

Drs Meghan Azad and Jessica Forbes (AllerGen HQP) from the University of Manitoba were co-first authors on the paper. Drs James Scott, University of Toronto, and Anita Kozyrskyj were co-senior authors.

Press release

Review paper from Jordana-Waserman lab tackles Th2 sensitivity

Foods that are harmless to most people may trigger anaphylaxis—a sudden, life-threatening reaction—in sensitized (or allergic) individuals. Dr. Manel Jordana and Dr. Susan Waserman, AllerGen investigators and professors at McMaster University, are trying to find out what causes this sensitization to certain foods.

In a [review paper](#), published in a May 2018 special issue of *International Journal of Molecular Sciences*, Drs Jordana and Waserman help us to understand the biology underlying the initial acquisition of food allergy.

AllerGen trainees Yosef Ellenbogen (MD candidate), Dr. Rodrigo Jiménez-Saiz (Research Associate Academic), Paul Spill (MD candidate) and Dr. Derek Chu (MD, PhD) were co-authors on the publication.

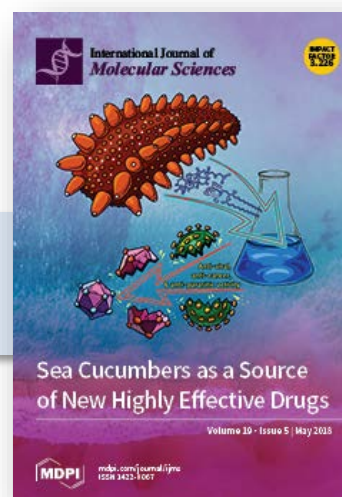
The paper discusses the processes and signals involved in the induction of T helper type 2 (Th2) cells, which orchestrate allergic reactions against foods.

“We have proposed that neither inherent food allergenicity nor individual genetics play major roles in causing food allergy,” says Dr. Jordana.

“Rather, it is the combination of external and internal triggers, and converging pathways that lead to Th2 sensitization.”

“Beyond biology, social practices such as the abuse of antibiotics in infancy; misguided recommendations regarding the delayed introduction of foods (notably peanut) into the diet of infants; manufacturing processes that enhance food allergenicity; or the consumption of foods from contaminated crops all likely play a role,” he adds.

“Arguably, the development of food allergies is the result of an infrequent ‘perfect storm.’”



Dr. Jordana is a Professor of Pathology and Molecular Medicine at McMaster University.

Dr. Waserman is a Professor of Medicine in the Division of Clinical Immunology & Allergy at McMaster University.

Building a better nasal allergen challenge: new Allergic Rhinitis-Clinical Investigator Collaborative publication



Dr. Anne Ellis in the Kingston General Hospital Environmental Exposure Unit

AllerGen investigator Dr. Anne Ellis (Queen's University) and her team have produced a clinically validated protocol for conducting nasal allergen challenges (NACs) in clinical trials.

The optimized protocol, and its application in a unique cat allergy study, is described in an April 2018 publication in [Clinical and Translational Allergy](#). The protocol was developed for AllerGen's Allergic Rhinitis-Clinical Investigator Collaborative (AR-CIC), and previously described in [Allergy, Asthma and Clinical Immunology](#) in 2015.

The opportunity to validate the protocol arose when British biotech firm Circassia Ltd. approached Dr. Ellis to conduct clinical trials on a vaccine that successfully treats people with an allergy to cats.

The assessment of such novel therapies for allergy can be challenging, requiring large, expensive and time-consuming clinical efficacy trials to achieve statistical power, the 2018 study authors noted. However, using the AR-CIC's optimized NAC protocol, Dr. Ellis's study was "able to detect significant changes in both subjective and objective measurements of clinical efficacy, in an open label clinical trial ... utilizing a population of only 20 allergic subjects."

This outcome "supports the validity of the AR-CIC's optimized NAC protocol for conducting research on the potential efficacy of novel therapeutics in multi-centre studies," the authors concluded.

Co-authors include AllerGen investigators Dr. Helen Neighbour and Dr. Mark Larché (McMaster University), and AllerGen HQP Mena Soliman and Lisa Steacy.

Dr. Ellis is a clinician-scientist recognized for her research into various allergic conditions, especially allergic rhinitis. Her Environmental Exposure Unit (EEU) at Kingston General Hospital is a unique facility capable of conducting a controlled allergen challenge for the study of allergic rhinitis for up to 150 participants at a time.

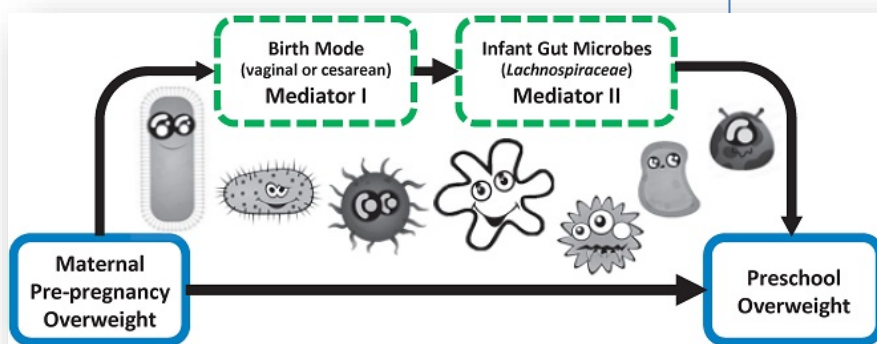
C-sections and gut bacteria increase risk of childhood obesity

New [CHILD Study](#) research has found that overweight and obese women are more likely to have children who are overweight or obese by three years of age—and that bacteria in the gut may be partially to blame.

“We know that maternal overweight is linked to overweight in children,” said Dr. Anita Kozyrskyj, the University of Alberta investigator who led the study. “What our study showed is that both the type of infant delivery—vaginal birth *versus* cesarean section birth—and changes in gut bacteria are also involved.”

The study, published in [JAMA Pediatrics](#), found that when an overweight woman delivered vaginally, the risk of overweight in her child was three times higher than normal. But the risk was five times higher than normal when the woman delivered *via* cesarean section (C-section). This association persisted even after adjustment for multiple other factors.

Press release



Exclusive breastfeeding in hospital associated with longer breastfeeding duration



New findings from AllerGen’s [CHILD Study](#) show that exclusive breastfeeding during the first few days of life is positively associated with longer-term breastfeeding, while in-hospital formula use is associated with breastfeeding for a significantly shorter duration.

Dr. Meghan Azad led a research team that found breastfeeding ended earlier for infants who received formula supplementation in hospital, compared to those who received only breastmilk during this critical period. The findings were published March 2, 2018, in the journal [Birth](#).

“Newborns who received only breastmilk were ultimately breastfed for four months longer than those who received formula supplementation in hospital, and they were 63% more likely to meet the World Health Organization recommendation of exclusive breastfeeding for six months,” says Dr. Azad.

Press release | CTV coverage

NEJM Study led by CIC Director identifies alternative treatment for mild asthma

Dr. Paul O'Byrne is a co-author on two *New England Journal of Medicine (NEJM)* papers that outline a new approach for asthma treatment.

"Poor adherence to asthma medications, particularly inhaled steroids as maintenance therapy, is a major problem across all severities of asthma," observes Dr. O'Byrne in a McMaster [news story](#).

For ongoing control of their symptoms, most individuals with mild asthma are prescribed a steroid inhaler for use twice daily, but fewer than 20% follow this routine.

Most choose, instead, to use a relief inhaler only when they have an actual asthma attack. These inhalers contain beta-agonists, which help to open airways and facilitate breathing. They "work quickly but they do not treat the underlying problem of inflammation," notes Dr. O'Byrne.

By contrast, the new treatment replaces the conventional relief inhaler with a combined-drug inhaler, one that combines a beta-agonist (formoterol) with a steroid (budesonide).

"The secret in this new approach is that it not only relieves symptoms, but at the same time delivers steroids required for overall control of asthma."

"I think this is going to actually change the way we manage asthma."

The treatment was tested in two parallel, large international clinical trials, spanning 25

countries, both involving close to 4,000 patients with mild asthma and both running for almost three years. Dr. O'Byrne led one of these *NEJM* studies, and was co-author on the second, led by Dr. Eric Bateman of the University of Cape Town.

These studies found the combined inhaler, used on an as-needed basis, better for symptom control than conventional relief inhalers and more effective at reducing the risk of asthma attacks. Although regular (twice-daily) use of the steroid alone offered the best overall symptom control, as-needed use of the combined inhaler was just as effective at reducing severe asthma attacks.

"In addition, the amount of steroids used was much less when the combined inhaler was used, because the patient did not need to take it every day," observes Dr. O'Byrne.

The results of [Drs O'Byrne's](#) and [Bateman's](#) studies were published in separate articles in *NEJM*.

Dr. O'Byrne is a respirologist, a professor of medicine at McMaster University's Michael G. DeGroote School of Medicine, a clinician scientist at the Firestone Institute for Respiratory Health at St. Joseph's Healthcare Hamilton, and Director of AllerGen's Clinical Investigator Collaborative (CIC). He is also Dean and Vice-President of the Faculty of Health Sciences at McMaster University.

[Video interview with Dr. O'Byrne](#)

AWARDS & HONOURS

Dr. Meghan Azad awarded Canada Research Chair

AllerGen investigator Dr. Meghan Azad (University of Manitoba) is one of 185 individuals across Canada to have received a Canada Research Chair (CRC) in the spring of 2018.

Dr. Azad's Tier 2 Chair in Developmental Origins of Chronic Disease constitutes a significant recognition of her research accomplishments to date. Tier 2 Chairs are awarded to "exceptional emerging researchers, acknowledged by their peers as having the potential to lead in their field."

This award follows upon a series of achievements by Dr. Azad, including receipt of a Postdoctoral Banting Fellowship in 2013 and participation in a Nobel Laureate Meeting in 2014.

Dr. Azad researches the early-life determinants of lifelong health, with a current focus on the impact of maternal nutrition and breastfeeding on child health and development. Much of her research analyzes data from the CHILD Study, in which she is deeply involved through various roles, including as co-leader of the Study's Manitoba site with Dr. Allan Becker, and as Chair of CHILD's Knowledge Mobilization Stakeholder Advisory Committee.

Part of a national strategy to position Canada at the forefront of global research and development, CRCs are research professorships that the federal government awards to "some of the world's most accomplished and promising minds" to attract them to, or retain them in, Canada.



Meghan Azad, PhD

@MeghanAzad

Thank you! Thrilled to be awarded a @CRC_CRC in Developmental Origins of Chronic Disease. Lots of exciting #DOHaD research ahead at @umanitoba w/ @CHILDSTUDY @DEVOTION_MB @CHRIManitoba #AzadLab

UManitoba Research @um_research

Congrats to our six new and renewed Canada Research Chairs news.umanitoba.ca/?p=91461 @MeghanAzad @WoodgateRoberta

New CHILD CIHR Project Grant: Can breastfeeding help prevent food allergies?

Dr. Jean Marshall (Dalhousie University) and Dr. Meghan Azad (University of Manitoba) have been awarded over \$742,000 from CIHR to support CHILD Study research on how breastfeeding can help prevent food allergies.

“It is well recognized that breastfeeding is beneficial to the future health of children,” note Drs Marshall and Azad. “One such benefit may be that breastfed babies have a lower risk of developing allergies, including food allergies, later in life. However, research findings on this topic have been inconsistent.”

There are a number of components to breastmilk that help shape immune development, including beneficial bacteria and proteins (cytokines) that regulate the immune system. Recent research has further revealed that breastmilk also contains a protein known as “soluble Toll-like receptor 2” (sTLR2), which can alter the way the body responds to bacteria and fungi in the environment.

“We suspect that immune regulators found in breastmilk are critical for allergy prevention,” comments Dr. Azad.

“In our studies we will examine sTLR2, beneficial bacteria and other immune regulators in breastmilk, and determine the relationship between these factors and the development of allergic diseases in a large cohort of Canadian children from the CHILD Study.”

The researchers will also conduct research on mice, to directly examine the importance of sTLR2 in milk for preventing food allergy in those animals.

The four-year CIHR Project Grant, for the study [“The impact of soluble TLR2 and other immunomodulatory factors in breastmilk on the development of allergic disease: translational research in pre-clinical models and the CHILD birth cohort,”](#) was awarded by the CIHR Institute for Nutrition, Metabolism and Diabetes.



Jean Marshall leads Diversity Task Force at Dalhousie University

In January 2017, the dean of medicine at Dalhousie University struck a task force to assess, and suggest ways to promote, the representation of diverse groups in leadership roles at the university.

AllerGen investigator Dr. Jean Marshall was appointed as co-leader of the nine-person task force, which delivered a [report](#) with 28 recommendations for policy and practice changes to enhance diversity.

In an interview for a [story](#) about the task force, Dr. Marshall spoke of her experience as the first female head of a basic science department at Dalhousie's medical school, and the challenges women typically confront when aspiring to leadership roles.

"In science, we work as a team. The more viewpoints you have, the more likely you are to come up with a creative solution," Dr. Marshall commented, on the advantages of greater diversity more generally. "If you're excluding major societal groups, you are limiting your collaborative opportunities and your potential for impact."

Dr. Marshall is professor and former head of the Department of Microbiology & Immunology at Dalhousie. Her main research interest is in the biology and function of mast cells in host defence and disease. She is a Research Leader of AllerGen's CanFAST Legacy Project and NFASt legacy initiative.

MSFHR award recipients combine patient care with research

Two AllerGen researchers are among the 12 "exceptional BC health professionals" funded in the second Health Professional-Investigator (HP-I) competition of the Michael Smith Foundation for Health Research (MSFHR).

The awards will support Dr. Catherine Biggs' project "[Improving Outcomes Through Precision Medicine For Adults With Primary Immunodeficiency](#)," and Dr. Del Dorscheid's project "[IgE-Mediated Inflammation Generated By The Airway Epithelium Is Antigen Independent: A Cause Of A Novel Asthma Phenotype](#)."

Dr. Biggs, the fourth recipient of the AllerGen-CAAIF *Emerging Clinician-Scientist Research Fellowship* in 2016, and AllerGen investigator Dr. Dorscheid are both based at The University of British Columbia.

The MSFHR is British Columbia's health research funding agency. Its HP-I Program aims to develop BC's research talent and to help mobilize new knowledge by supporting health professionals who are active in patient care to conduct and apply research relevant to health and/or the health system.

Michelle Harkness Mentorship Award: Call for Applications and Nominations

AllerGen proudly announces the inaugural Call for Applications and Nominations to the Michelle Harkness Mentorship Award (MHMA).

The MHMA was established in honour of Michelle Harkness, the Manager of AllerGen's Highly Qualified Personnel (HQP) Training and Events program from 2011 to 2017. It celebrates the high value Michelle attributed to the practice of mentorship, and seeks to perpetuate her encouragement of mentoring relationships.

Deadline for 2018-2019 submissions:
October 1, 2018

Nominate a mentor for recognition:

AllerGen-affiliated individuals can nominate mentors for recognition in one of three categories:

1. Lifetime Mentoring Achievement
2. Mentoring Excellence by an Investigator
3. Mentoring Excellence by a Non-Investigator

Apply for a grant to develop your mentoring skills:

AllerGen-affiliated individuals seeking to enhance their mentoring skill-set can apply for a professional development grant of up to \$5,000.



MICHELLE HARKNESS
MENTORSHIP AWARD



[**More information**](#)

PEOPLE & PARTNERS

Food Allergy Canada promotes improved management of food allergies on campus

On September 15, 2015, the second day of her first year of university, 18-year-old Andrea Mariano died of an anaphylactic reaction after consuming a smoothie that she bought on campus.

In response to this tragedy, AllerGen's legacy partner Food Allergy Canada (FAC) mobilized to produce new resources to support food-allergic students pursuing post-secondary studies. Presently, some 150,000 Canadian students enrolled in over 225 Canadian universities and colleges are affected by food allergies.

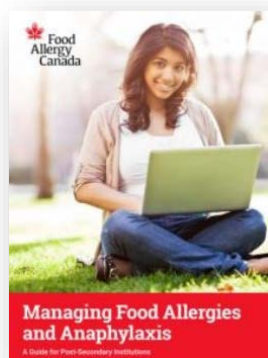
On May 2, 2018, after two years of consultation with stakeholders—including college and university representatives, food service providers, patients and families, clinicians and researchers—FAC launched *Allergies and Anaphylaxis: A Guide for Post-Secondary Institutions*.

The 71-page publication offers information to help post-secondary institutions develop food allergy policies to support their students living with food allergies. The guide addresses, among other issues: allergen protocols at foodservice outlets, campus awareness and education, housing and dining procedures, and considerations for making stock epinephrine auto-injectors widely available.

"The guide will be a first step in a comprehensive strategy to enable teens and young adults to better manage their allergies with the support of their communities," explained Jennifer Gerdts, Executive Director of FAC, in a [press release](#).

The guide can be downloaded from a page on the [FAC website](#) that also contains: a food allergy management quiz for institutions to assess how they currently manage food allergies; a video that outlines the benefits of the guide; additional resources and tools; and a personal dedication to Andrea Mariano.

AllerGen legacy partner the Canadian Society of Allergy and Clinical Immunology (CSACI) provided a medical review of the guide's contents. AllerGen investigators Drs Anne Ellis, Allan Becker, Moshe Ben-Shoshan, Elinor Simons, and Susan Wasserman also provided expert input. McMaster University, AllerGen's host institution, hosted the launch event.



Food Allergy Canada is a non-profit charitable organization dedicated to helping Canadians with food allergies and those who care for them.

Dynamic peer-mentor programs help kids with allergies and asthma to help each other

Allergy Pals and *Asthma Pals* are unique peer-to-peer mentorship programs that demonstrate how AllerGen-supported research has successfully moved from the academic setting to on-the-ground community organizations and into Canadian households.

Allergy Pals is a free online program offered by AllerGen legacy partner Food Allergy Canada for children between the ages of seven and 11. Program materials were adapted from research led by AllerGen investigator Dr. Miriam Stewart (University of Alberta) and then refined and pilot-tested with community partner organizations.

Allergy Pals helps children with food allergies develop greater confidence and coping skills by connecting them with other allergic children and older peer mentors who have faced similar experiences. The sessions include interactive discussions, games and activities designed to promote communication, problem-solving, and support-seeking skills.

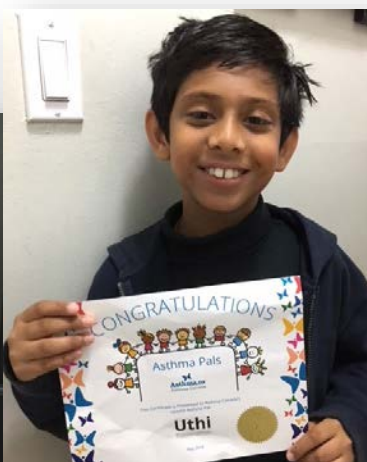
Since 2014, *Allergy Pals* has mentored over 600 Canadian kids with food allergies, held 90 group sessions and trained 37 youth mentors.

The program has grown to be so popular that Food Allergy Canada added a new program in 2015 called *Allergy Allies* for teens between the ages of 12 and 15. Also, because children often don't want the sessions to end, Food Allergy Canada has launched a monthly online session where new topics are introduced.

In 2016, AllerGen Legacy Partner, Asthma Canada, signed a non-exclusive, non-revenue generating licensing agreement with AllerGen and the University of Alberta (TEC Edmonton) to adapt the program for children living with asthma. Two eight-week *Asthma Pals* programs have been offered to date and several more sessions are planned for the next year.

Asthma Pals participants:

"I loved Asthma Pals! I learned how to problem solve and I liked meeting other kids with asthma. The missions were fun."
– Charlotte



"Uthi had fun while sharing his asthma experience and learning about others' experiences. It helped him deal with asthma in a positive way." – Uthi's mom

KNOWLEDGE MOBILIZATION

Recent AllerGen Research *SKETCHES*

New blood test predicts ‘late-phase’ asthmatic response

Recent AllerGen research has identified blood molecules that may help scientists better understand the biology of allergic asthma.

AllerGen HQP Dr. Amrit Singh wants you to know more about this discovery, which emerged from research he participated in with AllerGen investigator Dr. Scott Tebbutt (The University of British Columbia).

Read all about it in AllerGen’s Research *SKETCH*: “[New blood test predicts ‘late-phase’ asthmatic response.](#)”

Can a mom’s distress increase baby’s allergy risk?

Recent AllerGen research leveraging CHILD Study data sheds light on the link between a mom’s psychological wellbeing and the immune health of her newborn.

An AllerGen HQP who worked on the project with AllerGen investigator Dr. Anita Kozyrskyj (University of Alberta), Liane Kang, wrote about their findings in an AllerGen Research *SKETCH*: “[Can a mom’s distress during and after pregnancy increase her baby’s allergy risk?](#)”

AllerGen’s Scientific Director visits South Korea



Professor Yoon-Seok Chang (L) and colleagues with Dr. Judah Denburg at National University Bundang Hospital

In April 2018, AllerGen’s Scientific Director, Dr. Judah Denburg, provided an overview of AllerGen’s research program to clinicians and researchers at the National University Bundang Hospital in

Seoul, Korea. He also visited the university’s Allergy Clinics and Allergy/Asthma Education Office, and toured the new Innovation Park

CHILD spotlighted at national child & youth health summit

AllerGen's CHILD Study was in the spotlight at the [2018 Sandbox Summit](#), held April 12, 2018 in downtown Toronto. At the event, CHILD was featured as a success story in an area of social concern where otherwise Canada has been found lacking: child and youth health.

The 2018 Summit marked the 10th anniversary of the publication of "[Reaching for the Top: A Report by the Advisor on Healthy Children and Youth](#)." This report inspired the creation of [The Sandbox Project](#), the Summit's host organization.

The report's author, Conservative MP Dr. Kellie Leitch, observed at the Summit that, of the five key recommendations made in her 2007 report, significant progress has been made on only one—thanks to the CHILD Study: the undertaking of "a Longitudinal Cohort Study to provide data on the health of Canadian children and youth to help understand environmental factors impacting children's health."

The value of the Study, and the need for the research it enables, was underlined as Summit presenters referenced the [2018 UNICEF Report Card](#). The document ranks Canada poorly among developed countries on various measures of child wellbeing; overall, Canada ranks 25th out of 41 countries, despite Canada being among the world's 10 most prosperous nations.

Also at the 2018 Summit, AllerGen investigator Dr. Meghan Azad reported on recent policy-relevant Study findings, and sought input on how to mobilize those findings to maximize their social impact.

Dr. Azad's [presentation](#) and the ensuing discussion focused on CHILD findings relating to breastfeeding and timing the introduction of allergenic foods to infants. Summit participants offered their observations on the issues at play, and provided suggestions for research questions going forward.

The annual Sandbox Summit brings together many of the leading players working in Canada's child and youth health sector to exchange knowledge and experience, and to work collaboratively toward finding practical solutions to the health and wellbeing challenges faced by Canada's children and youth.



Graphic by Brittany Datchko of BrillianceMastery.com

Chatelaine and National Post share AllerGen and CHILD Study food allergy research results

A new article published in *Chatelaine* (April 2018) and the *National Post* (June 2018) highlights the latest developments in the fight against food allergies. The media coverage provides national exposure for AllerGen investigators, trainees, partner organizations and AllerGen-supported food allergy research.

“How Close Are We to a Cure for Food Allergies?” features interviews with researchers from AllerGen’s Canadian Food Allergy Strategic Team (CanFAST) and National Food Allergy Strategy (NFASt) legacy initiative, including:

- Dr. Susan Waserman (McMaster University);
- Dr. Moshe Ben-Shoshan (McGill University);
- Dr. Bruce Mazer (McGill University);
- Dr. John Gordon (University of Saskatchewan); and
- Dr. Edmond Chan (The University of British Columbia).

The article looks at current and emerging food allergy treatments and preventative strategies, such as oral immunotherapy (OIT), allergy patches and oral capsules, and dendritic cell modifications.

CanFAST food allergy prevalence findings and results from AllerGen’s CHILD Study, including AllerGen trainee Maxwell Tran’s research on the importance of introducing allergenic foods early, provide data to benchmark the scope of, and highlight issues relating to, the problem of food allergy in Canada.

Dr. David Fischer, President of the Canadian Society of Allergy and Clinical Immunology (CSACI), an AllerGen legacy partner, also comments in the article on the importance of new treatments to reduce the risk of “catastrophic accidental exposure” to ingested food allergens.

Read [“How Close Are We to a Cure for Food Allergies?”](#)



Multi-stakeholder engagement in the CHILD Study

In 2017, the CHILD Study established a Knowledge Mobilization (KMb) Stakeholder Advisory Committee to provide stakeholder feedback on future Study research priorities, and to ensure that the knowledge and outputs from CHILD are accessible and appropriately communicated to diverse knowledge users and audiences.

This multidisciplinary committee is composed of 23 members from across sectors including: members of the public; CHILD Study parents; not-for-profit, business and government representatives; and medical and KMb experts.

AllerGen investigator Dr. Meghan Azad (Canada Research Chair in Developmental Origins of Chronic Disease at the University of Manitoba; co-lead of the CHILD Study Manitoba site) chairs the Committee.

On April 11, 2018, the Committee held its third meeting in the form of a one-day, in-person workshop in Toronto, Ontario.

Dr. Azad and CHILD Study Director Dr. Padmaja Subbarao (The Hospital for Sick Children) presented on the CHILD Study's research "journey" and associated discoveries since 2008; its planned research foci as it follows the participants to age eight years and beyond; Study retention strategies; and the development of a new integrated CHILD database.

During the meeting, committee members provided advice and feedback on:

- the development of a CHILD Stakeholder Engagement Strategy;
- best practices in marketing;
- possible future directions for CHILD research; and
- options for a new CHILD brand and positioning statement.

"CHILD is extremely fortunate to have such an engaged and informed Committee ensuring that patient and stakeholder voices are heard, and that the perspectives of community leaders, clinicians, and health advocates are brought to the table," says Dr. Azad.

"The insight, guidance and valuable partnership of this committee is helping CHILD to translate its discoveries into national, regional and community-level practices, policies, and interventions."

The next CHILD KMb Stakeholder Advisory Committee is planned for Fall 2018.

For more information about the Committee and its activities, contact Dr. Azad at meghan.azad@umanitoba.ca

Happy Momma, Healthy Baby: UNICEF features CHILD Study research

In April 2018, UNICEF Canada, the world's leading child-focused humanitarian organization, featured [CHILD Study research](#) results in a campaign aimed at improving parental leave policies in Canada.

The [research](#), led by AllerGen investigator Dr. Anita Kozyrskyj (University of Alberta), was published in November 2017 in *Brain, Behavior and Immunity*.

It found that infants born to mothers experiencing psychological distress (stress, depression, anxiety) had reduced levels of an important immune antibody in their gut microbiome in the first few months of life, which may put them at a higher risk of developing allergic disease.

Dr. Kozyrskyj and first author AllerGen HQP Liane Kang showed that, regardless of breastfeeding status and other maternal factors:

- when mothers experienced distress both during and after pregnancy (prenatal and postnatal), their infants were *three times as likely* to have reduced levels of secretory Immunoglobulin A, or sIgA, (an important immune antibody found in an infant's gut) as infants whose mothers were not distressed; and
- when mothers experienced distress only during pregnancy (prenatal), their infants had lower sIgA levels than infants whose mothers were not distressed.

Their findings, which suggest that programs and policies to support the psychosocial wellbeing of mothers during and after pregnancy will help shape the immune health of newborns, were used by UNICEF to bolster a call for improvements to parental leave policies and early childhood education programming.

"CHILD research is helping to inform UNICEF's efforts to advocate for better child and family policies, including parental leave take-up that will help more mothers continue breastfeeding and keep more babies healthy", says UNICEF'S Director of Policy and Research, Lisa Wolff.



CBC's *Quirks & Quarks* talks climate change with Dr. Tim Takaro



AllerGen investigator Dr. Tim Takaro was interviewed on CBC Radio's flagship science program, *Quirks & Quarks*, on one of his areas of research expertise: the health effects of climate change.

The May 12, 2018, [broadcast](#) focused on recent floods in different Canadian provinces and the health concerns they leave in their wake, including the risk of allergic response to mould resulting from dampness.

In the interview, Dr. Takaro commented on the need to monitor and better understand the effects of such extreme weather events as they become more frequent due to climate change.

"We need to prepare people and make sure vulnerable populations like people with asthma or chronic disease, young children and the elderly are particularly protected during these events."

This concern about the nexus between climate and health is central to the CIHR-funded project, [CANadian Urban Environmental \(CANUE\) Health Research Consortium](#), led by AllerGen investigator Dr. Jeff Brook (University of Toronto), in which Dr. Takaro is a contributing researcher.

"With Tim's expertise, and the expertise of many others across different sectors and fields of study, we in CANUE are looking at ways to advance our knowledge about the health effects of climate change," comments Dr. Brook.

Dr. Takaro is a professor and the Associate Dean of Research for the Faculty of Health Sciences at Simon Fraser University. He is a physician-scientist trained in occupational and environmental medicine, public health and toxicology, and a long-time Network investigator involved in AllerGen's Gene by Environment Enabling Platform.

HQP NEWS

AllerGen's 2018 Trainee Symposium

AllerGen's 12th and final Trainee Symposium was held at the Fort Garry Hotel in Winnipeg, Manitoba, from Wednesday, May 2 to Friday, May 4, 2018.

This annual three-day symposium provides a unique, value-added professional development opportunity for Network HQP to complement their academic and scientific training. The event program and related activities aim to foster networking and collaboration among trainees and young professionals with a shared interest in allergy and asthma research and/or clinical practice.



The 2018 event drew AllerGen's highest Symposium attendance: 73 trainees from 15 institutions across nine provinces, who participated in dynamic, diverse capacity-building workshops identified as high-priority areas by Network trainees.

2018 topics and presenters included:

CIHR Mock Grant Review

Dr. Allan Becker, Dr. Andrew Halayko,
Dr. Kevin Coombs, Dr. Richard Keijzer

University of Manitoba

AllerGen trainees developed an understanding of the CIHR peer-review process, and how to prepare effective, fundable grant applications for Tri-Agency funding.

Equity, Diversity and Inclusion

Valerie Williams
[Diversity Consultant](#)

University of Manitoba

AllerGen trainees learned how Equity, Diversity, and Inclusion apply across settings and identified challenges to equity and strategies to address them.

Infographic Toolkit for Researchers

Julia Krolik
[Pixels and Plans](#)

AllerGen trainees improved their ability to convey research results clearly and effectively to end users using infographics.

Personality Assessments

Heather Erhard
[Erhard Associates](#)

AllerGen trainees increased their self-awareness and strengthened their ability to effectively interact, influence and communicate with others.

Trainees also had the opportunity to meet their peers from across the country during a Speed Networking session, and benefitted from the expertise of local experts and investigators at the HQP Mentoring Dinner. Invited mentors included:

Clinicians / researchers: Drs Andrew Halayko, Kevin Coombs, Clare Ramsey, Elinor Simons, and Jennifer Protudjer, all from the University of Manitoba.

Technical / business experts: Drs Forough Khadem (Business Development Specialist, Mitacs), Dustin Lippert (Research Grants Facilitator, University of Manitoba) and Loren Oschikpok (Technology Transfer Manager, University of Manitoba) provided trainees with a glimpse into career opportunities outside of traditional academia.

The Symposium also featured the first ever AllerGen “Trainee Bowl” competition. The game-show styled event was fashioned after an event run by AllerGen’s Dr. Anne Ellis at the CSACI Annual Scientific Meeting, and has at its roots the Canadian “Reach for the Top” academic quiz show for high school students that became a national sensation in 1966.



AllerGen Investigators Drs Allan Becker and Jennifer Protudjer from the University of Manitoba, judge AllerGen’s first-ever “Trainee Bowl” Game Show.

During the Trainee Bowl, trainee teams competed in a fast-paced trivia challenge, testing speed of recall and knowledge about: allergic disease research; Network investigators and trainees; AllerGen’s HQP Program; allergies and asthma in popular culture; and fun facts about Winnipeg and Manitoba.

Post-conference evaluations show that 100% of responding trainees rated the Trainee Symposium as “Above Average” or “Excellent.” Participant testimonials indicated that the event was a valuable opportunity for trainees to think innovatively, collaborate across disciplines and cultures, and to build personal and professional networks that will endure long beyond AllerGen’s NCE funding.

Event photos | Participant testimonials

2018 Symposium Snapshots:



Winning team at the “Trainee Bowl” (L to R): John-Paul Oliveria, Kevin Lau, Kozeta Miliku, Michelle La, Wendy Zhao, Laura Feldman, Radhika Joshi, Mona Hamada.



Trainees and Mentors gather for the HQP Mentoring Dinner.



Consultant Heather Erhard explains Myers Briggs Personality Types.



Trainees (L to R) Bassel Dawod, Casey Cohen, Mark Tenn, Young Woong Kim, Laura Feldman, Emilie Manny, Eduardo Reyes-Serratos and Mahmoud Mostafa explore Winnipeg’s Museum for Human Rights.



Trainees rank a grant during the CIHR Mock Grant Review (L to R): Chris Pascoe, Dr. Allan Becker (facilitator), Loubna Akhabir, Shelly Jun.



Allergan’s ASNP Executive Committee members, Allergan Administrative Centre staff, and Blake Camden (photographer).

Responses to the Symposium:

"This Trainee Symposium was way over my expectations. I met wonderful trainees, all passionate about their research field, who encouraged me to give the best of myself."

Emilie Manny, Université Laval

"The Infographics Toolkit session was the most immediately implementable session I've ever attended."

Laura Feldman,
The Hospital for Sick Children

"I liked that speakers were brought in from outside academia; they offered fresh perspectives and thus the opportunity for real change in our practices and mindsets."

Anonymous

"Throughout the years the Trainee Symposia have been pivotal in allowing me to foster friendships from across Canada. Though there were many newcomers at this year's symposium, there was a very strong sense of family during the meeting."

John-Paul Oliveria, Stanford University

"The AllerGen Trainee Symposium provided me with the opportunity to meet young scientists in my field, and develop transferrable skills that will be useful outside of a science setting. I highly enjoyed the experience. Thanks AllerGen!"

Anonymous

"The Training Symposium gave me the opportunity to meet other researchers across Canada with similar interests that otherwise I would not have been able to meet. The workshops dealing with diversity, personality, and knowledge translation are not topics you learn about and discuss day-to-day in academia, but are essential for being able to work effectively in a team and teach others about your results."

Anonymous

Graduate Student Awards fund innovative asthma research



2017 Recipients

Asthma Canada and AllerGen are pleased to announce the inaugural recipients of their partnered Graduate Student Research Awards:

- **Danay Maestre-Battle** (The University of British Columbia);
- **Thomas Mahood** (University of Manitoba); and
- **Diana Pham** (University of Calgary)

The awards will support research on early- and late-onset asthma. All three awardees are AllerGen HQP.

“By investing in these young Canadian researchers and supporting their promising research, we ensure continued efforts to search for a cure for asthma, while making real strides towards better treatment options for the more than three million Canadians living with asthma,” said Vanessa Foran, President & CEO of Asthma Canada.

Press release



L to R: Danay Maestre-Battle, Thomas Mahood and Diana Pham

2018 Call for Applications

Asthma Canada, in partnership with AllerGen, is now accepting applications for their [National Research Program](#) Graduate Student Research Awards.

Launched in 2017, these awards create value-added opportunities for the training, education and professional development of graduate students who will strengthen Canada's knowledge base and scope for innovation.

This year, the 2018 Graduate Student Research Awards will grant three awards valued at \$10,000 each to Masters level (MSc/MScN) student researchers; and two awards valued at \$20,000 each to PhD level student researchers conducting innovative research on early-onset and late-onset asthma.

The *Goran-Enhorning Graduate Student Research Award* supports research on early-onset asthma and the *Bastable-Potts Graduate Research Award* supports research on late-onset asthma.

Qualified graduate student researchers should submit a completed [application](#) by **Friday, June 29, 2018** (by 8 pm in the applicant's local time zone).

If you plan to apply, please email us in advance to let us know we should expect your application: info@allergen-nce.ca

[Call for Proposals](#) | [Application](#)

AllerGen HQP shine at 2017 CSACI Scientific Meeting



Poster Competition winners at CSACI, October 2017

AllerGen Trainees continue to shine at the AllerGen/Canadian Society of Allergy and Clinical Immunology (CSACI) Poster Competition, winning 12 of the 16 awards granted at the Fall 2017 event.

The competition was held in conjunction with CSACI's 2017 Scientific Meeting,

from October 11 to 15, 2017, in Toronto, ON. This was the fifth consecutive year that AllerGen and CSACI, an AllerGen legacy partner, co-hosted the competition.

The AllerGen awardees are listed below, by poster category.

Allergic Rhinitis/Asthma

1st place

Maxwell Tran, McMaster University
Supervisor: Malcolm Sears
Title: "Predicting the atopic march: results from the Canadian Healthy Infant Longitudinal Development Study"

Young Woong Kim, The University of British Columbia

Supervisor: Scott Tebbutt
Title: "Immune gene signatures in blood of patients with allergic rhinitis following nasal allergen challenge"

2nd place tie

Helen Cai, The Hospital for Sick Children
Supervisor: Padmaja Subbarao
Title: "Determining if asthma risk at 5 years can be predicted in early life using infant and preschool pulmonary function tests (PFTs)"

Honourable mention

Garthika Navaranjan, University of Toronto
Supervisor: Jeffrey Brook
Title: "Assessing Canadian children's exposure to phthalates and polycyclic aromatic hydrocarbons (PAHs)"

Continued on next page

Basic Science/Immunology

1st place tie

Bassel Dawod, Dalhousie University

Supervisor: Jean Marshall

Title: "Examining the impact of TLR2 and cow's milk on oral tolerance development"

John-Paul Oliveria, McMaster University

Supervisor: Gail Gauvreau

Title: "FoxP3+ regulatory B cells were higher in sputum and blood, but lower in bone marrow following whole lung allergen challenge in allergic asthmatics"

2nd place

Kurtis Ng, University of Alberta

Supervisors: Harissios Vliagoftis and Dean Befus

Title: "Mast cells enhance resistance against influenza A in epithelial cells"

Food Allergy/Anaphylaxis

2nd place tie

Bahar Torabi, McGill University

Supervisor: Bruce Mazer

Title: "PD-L1+ regulatory B cells increase during milk oral immunotherapy"

Elaine Hsu, The University of British Columbia

Supervisor: Edmond Chan

Title: "The Barriers to oral food challenge (OFC) implementation in Canada"

Honourable mention

Sara Johnson, University of Manitoba

Supervisor: Roberta Woodgate

Title: "The lived experience of teens with Food-Induced Anaphylaxis (FIA): a proposed study"

Other Allergy/Immunology

1st place

Christopher Liwski, Dalhousie University

Supervisor: Jean Marshall

Title: "The impact of IgE-mediated activation on human mast cell responses to viral infection"

Case Reports

2nd place

Herman Tam, University of Manitoba

Supervisor: Tamar Rubin

Title: "Meningococcal sepsis in possible complement deficiency: a case report"

See the full list of CSACI poster winners.

HQP wins best poster at 2018 DoHAD conference

AllerGen trainee Dr. Kozeta Miliku won Best Poster at the [2018 Meeting](#) of the Canadian DOHaD (Developmental Origins of Health and Disease) Society for her poster on CHILD-related research into breastmilk and infant health.

The poster, “Human milk fatty acids: associations with maternal characteristics and infant body composition in the CHILD Study,” reported on the wide variation in fatty acid levels found in the breastmilk of different mothers.

These variations “are associated with multiple characteristics beyond maternal diet, such as fixed (ethnicity, lactation stage, asthma) and modifiable (Body Mass Index, education) maternal factors,” notes Ms. Miliku.

Dr. Miliku works with AllerGen investigator Dr. Meghan Azad at the University of Manitoba.

“Ultimately, our goal is to inform novel nutrition-based strategies for disease prevention,” comments Dr. Miliku on their current research into human breastmilk.

HQP receives 2017 CIHR New Investigator Grant

AllerGen HQP Dr. Sze Man Tse was awarded a 2017 CIHR New Investigator Grant in Maternal, Reproductive, Child and Youth Health, to support her work on pediatric acute respiratory distress syndrome (PARDS).

PARDS affects children with a severe lung injury needing respiratory support in the intensive care unit. The condition has a mortality rate of 18-27%, and can have significant long-term health consequences.

Dr. Tse’s study of PARDS will examine post-discharge outcomes and the effect of early diagnosis, and will seek to identify inflammatory signatures to better understand the disease mechanism involved.

“The results of this study will provide insight into the long-term outcomes of PARDS survivors and the mechanisms underlying this condition, and may change the way PARDS is currently diagnosed,” she observes.

Dr. Tse is a Clinical Assistant Professor in the Department of Pediatrics at the University of Montréal, and a Pediatric Pulmonologist at the Centre hospitalier universitaire Sainte-Justine.

Call for Abstracts: *CSACI-AllerGen Abstract Competition*

AllerGen and The Canadian Society of Allergy and Clinical Immunology (CSACI) are pleased to announce the 2018 Call for Submissions for their annual Abstract Competition.

The CSACI-AllerGen Abstract Competition is open to AllerGen trainees and members of the AllerGen Students and New Professionals Network (ASNPN), as well as CSACI Residents and Fellows-in-Training, medical students, and allied health professionals interested in presenting allergic disease research findings.

All abstracts must adhere to the [abstract guidelines](#). The CSACI and AllerGen will award prizes for the top poster/presentation in six abstract categories: Case Reports, Immunology, Food Allergy/Anaphylaxis, Allergic Rhinitis/Asthma, Other Allergy/Immunology, and Allied Health.

All approved and accepted abstracts will be posted in the CSACI Meeting App and published in *Allergy, Asthma & Clinical Immunology* (AACI), the official journal of CSACI.

The submission deadline is June 29, 2018.

[More information](#)

Call for Applications: *AllerGen-CAAIF Emerging Clinician-Scientist Research Fellowship*

AllerGen and The Canadian Allergy, Asthma and Immunology Foundation (CAAIF) are pleased to announce the 2018-2019 Call for Applications for the *AllerGen-CAAIF Emerging Clinician-Scientist Research Fellowship*.

This prestigious national Fellowship seeks to address the shortage of allergy and clinical immunology expertise in Canada.

The award provides up to \$250,000 for a maximum of two years (an award of \$100,000 plus a \$25,000 research allowance each year) to a clinician who has completed clinical immunology and allergy sub-specialty training.

Eligible foci include basic and/or clinical research related to allergy, asthma and/or anaphylaxis.

The principal criteria on which applications are judged are: the quality of the research or training opportunity, and the potential for a combined career as a clinician and researcher.

The submission deadline is July 31, 2018.

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

[More information](#)

New ASNPN Profiles on AllerGen website

Thanks to an increased desire among AllerGen trainees and HQP to network among themselves following AllerGen's 2018 Trainee Symposium, the number of ASNPN members profiled on the AllerGen site recently increased.

All ASNPN members are encouraged to take advantage of this venue, as a means to network with peers and to have a professional online profile.

To add your profile, please contact AllerGen at info@allergen-nce.ca.



Wenjia Chen, PhD

Affiliation

Institution: The Hospital for Sick Children

Position: Postdoctoral Research Fellow

Supervisor: [Dr. Teresa To](#)

Research focus: Distinct Early-life Patterns of Respiratory-related Health Services Use and Long-term Economic Implications: A Longitudinal Analysis of Linked CHILD—Health Administrative Data

Awards

Career Goals

Publications

Fun Facts

Contact



Eduardo Reyes-Serratos, MSc

Affiliation

Institution: University of Alberta

Department: Medicine

Position: Masters

Supervisor: [Dr. Dean Befus](#)

Research focus: Studies of Calcium Binding, Protein-Associated 1 (CABS1) as a Biomarker and Potential Therapeutic Agent for Stress

Awards

Career Goals

Publications

Fun Facts

Contact



Kozeta Miliku, MD, PhD

Affiliation

Institution: University of Manitoba

Program: Children's Hospital Research Institute of Manitoba

Position: Post-Doctoral Researcher

Supervisor: [Dr. Meghan Azad](#)

Research title: Human milk components and the developmental origins allergies, asthma and cardio-metabolic health in children

Awards

Career Goals

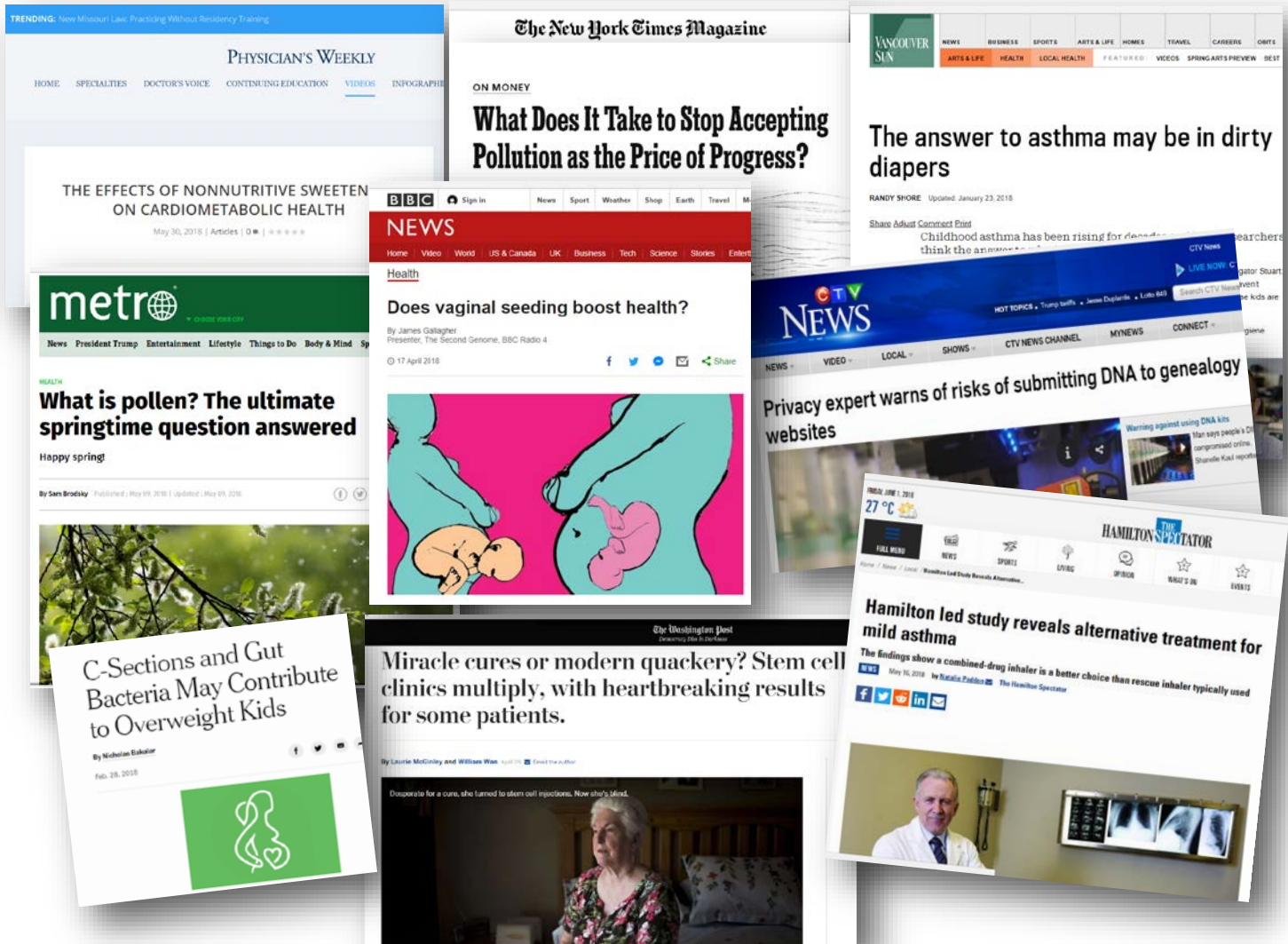
Publications

Fun Facts

Contact

A MEDIA

AllerGen Researchers in the News



Dr. Meghan Azad

- *Physician's Weekly, New York Times, ABC News*

Dr. Stuart Turvey

- *BCCHR News, UBC Science, Vancouver Sun*

Prof. Timothy Caulfield

- *CTV, CBC, Seattle Times*

Dr. Susan Wasserman

- *Global News, Metro, Weather Network*

Dr. Anita Kozyrskyj

- *BBC, New York Times, CBC, CTV*

Dr. Michael Brauer

- *New York Times, Global News*

CanFAST/NFASt Researchers

- *National Post, Chatelaine*

Dr. Paul O'Byrne

- *Hamilton Spectator, Science Daily*

EVENTS

CHILD Toronto hosts five-year celebration

On June 10, 2018, children participating in AllerGen's CHILD Study at its Toronto site celebrated the completion of their "five-year-old" clinical visits. Completion of the five-year visits at all four Study sites (Toronto, Manitoba, Edmonton, and Vancouver) was the original end-point of this national birth cohort study of nearly 3,500 children.

"We are incredibly fortunate to have such dedicated families participating in CHILD," says Dr. Theo Moraes, who leads the Study's Toronto site. "These parents and kids are research heroes, helping scientists understand how asthma, allergies and other chronic diseases begin very early in life. Their commitment to the CHILD Study is helping Canadian kids live happier and healthier lives."

The celebration was held at the Hospital for Sick Children's Peter Gilgan Centre for Research and Learning. About 100 CHILD Study participants, their families, site staff and researchers attended the event. Medical science demonstrations, face-painting, games, crafts, dress-up photos and a giant birthday cake all contributed to a celebratory vibe. In a special "graduation" ceremony, each child received a "Junior Scientist" certificate recognizing his or her contribution to Canadian research.

Dr. Moraes and other Toronto-based CHILD researchers—Drs Indra Narang, Wendy Lou and Padmaja Subbarao (CHILD Study Director)—provided an overview of ground-breaking discoveries arising from CHILD

and described the connections between sleep and asthma, the importance of CHILD statistics to inform health findings, and plans for the upcoming eight-year clinical visits. Debbie Morrison, an enthusiastic CHILD Study donor, shared the story of her journey with asthma and why supporting this research is so important to her.

"Completing the five-year clinical assessments of CHILD participants is a significant achievement," says Dr. Subbarao. "Moving forward, CHILD has secured additional resources from AllerGen along with matching partner investments to support another round of clinical visits when the children turn eight."

Dr. Subbarao notes that the CHILD team is just beginning to tap into the wealth of data and associated research opportunities available to Canadian scientists: "We have so many questions to answer as these children grow older. We want to know how they do in school; how sleep, screen time, physical activity and nutrition affect their health and development; whether the kids how have asthma now will outgrow it later; and so on."

The future of research into children's health has been enhanced and accelerated by CHILD Study researchers and their dedicated junior scientists.

As Dr. Subbarao notes, "Truly, the greatest promise of CHILD still lies ahead."

Event photos

CHILD Vancouver thanks its “Junior Scientists”

On February 15, 2018, the CHILD Study’s Vancouver team hosted a celebratory Town Hall at BC Children’s Hospital (BCCH) to mark the completion of the Study’s clinical assessment of all participating children at five years of age, and to share some of the discoveries to emerge so far from CHILD research.

About 50 members of families participating in CHILD attended, with others connected by [webcast](#).

Presenters included CHILD Study Co-Director and Vancouver site leader Dr. Stuart Turvey (The University of British Columbia), who quizzed attending kids on Study facts and provided an overview of CHILD’s research scope; Colleen McGavin, of the BC Strategy for Patient-Oriented Research (SPOR) SUPPORT Unit, who is advising the Study on patient engagement; and Natasha Majdandzic, who is the parent lead on CHILD Vancouver’s Parent Advisory Council.

The event also included the presentation of an illustrated CHILD [storybook](#) to each child as a gesture of appreciation for their participation in the Study. In the book, *The Science Squad: Youth Helping Youth to Stay Healthy*, young CHILD Study participants, “Jr. Scientists,” help resolve an inter-planetary health crisis.

Celebrants were also shown the teaser for a documentary film currently under production, “Let Them Eat Dirt,” which will highlight [CHILD Study research](#). Based on

the [book](#) of the same name, the film will explore the role of healthy bacteria in building children’s immune systems.

The BCCH Foundation generously supported the celebration, donated gifts, and interviewed parents about their child’s participation as part of a [report](#) on the event posted to their website: “*Helping other kids lead healthier lives*”: *CHILD Study families advance allergy and asthma research*.

“We hope that when [our daughter] Tuesday grows up, she’s proud to know that she was part of this and that she is helping other kids lead healthier lives,” parent Kristen Gagnon said in the report.

“The CHILD Study has reached a huge milestone,” observed Dr. Turvey on the occasion.

“We have completed the five-year-old visits... There are so many people to thank, but most important are our dedicated families: the real unsung heroes who inspire us and make this research possible.”

In November 2017, the CHILD Manitoba site staged a similar [celebration](#) for their participants. Planning for an Edmonton site event is underway.

Event photos

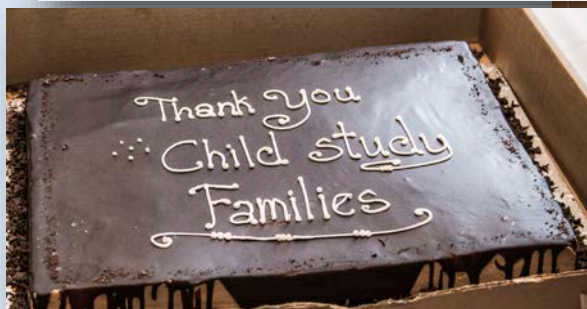
CHILD Study participants celebrate completion of their five-year-old clinical visits Toronto:



CHILD Toronto 5-year graduates



A "Junior Scientist" certificate!



Toronto CHILD researchers and staff

Vancouver:



Scenes from the Vancouver Town Hall Celebration



One of the Vancouver CHILD Study participants, Dimitri, at his one year and 5-year visit.



An illustration from "The Science Squad."

AllerGen experts featured in partners' webinar series

AllerGen's key community-based legacy partners, Asthma Canada and Food Allergy Canada, have both launched informational webinar series to share emerging knowledge about asthma and food allergies with parents, patients, the public and healthcare professionals.

These free, interactive seminars frequently feature AllerGen experts:

[Food allergy, anaphylaxis, and stock epinephrine in foodservice settings](#) (May 2017, Food Allergy Canada) featured **Dr. Susan Waserman** (McMaster University)

[New guidelines for the introduction of peanut to babies – for healthcare professionals](#) (Food Allergy Canada, June 2017) featured **Dr. Edmond Chan** (The University of British Columbia).

[The science of food allergy – Understanding the research](#) (November 2017, Food Allergy Canada) featured **Dr. Manel Jordana** (McMaster University).

[Paradoxes of Asthma Management](#) (April 2017, Asthma Canada) featured **Dr. Anne Ellis** (Queen's University).

[Impact of the Environment on Asthma](#) (May 2018, Asthma Canada) featured **Dr. Chris Carlsten** (The University of British Columbia).

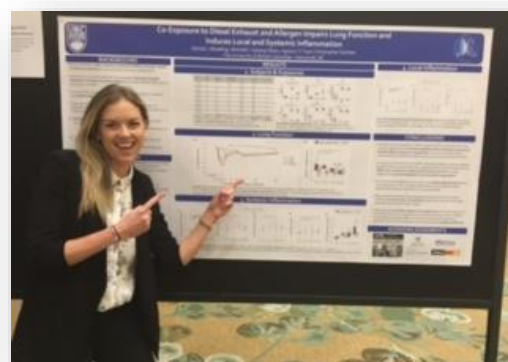
Canadian Respiratory Conference 2018

AllerGen investigators, trainees and Administrative Centre staff shared AllerGen research and knowledge mobilization accomplishments at the leading national educational and scientific meeting for the Canadian respiratory community: the Canadian Respiratory Conference (CRC), presented by the Canadian Thoracic Society.

The conference was held April 12-14, 2018, in Vancouver, BC.



AllerGen trainees and AllerGen Administrative Centre staff share the Network's research results. L to R: Kim Wright, Michelle North, Danay Maestre-Batlle, Thomas Mahood, Denise Wooding, Leah Graystone.



Is co-exposure to diesel exhaust and an allergen a good thing? DEFINITELY NOT! AllerGen trainee Denise Wooding presented research from Dr. Chris Carlsten's UBC Pollution lab to explain how such co-exposure impairs lung function and induces inflammation.

Resources are available for Allergen webinars you may have missed...

Bioinformatics for Discovery and Global Collaborations

with **Yuri Quintana**, PhD, Director, Global Health Informatics, Division of Clinical Informatics, Beth Israel Deaconess Medical Center; Assistant Professor of Medicine, Harvard Medical School

Key Messages



Bioinformatics for Discovery & Global Collaborations
Yuri Quintana
Harvard University

An Allergen webinar for Research Success (Bioinformatics series)

Yuri Quintana, PhD, delivered a webinar in Allergen's Webinars for Research Success series on February 27, 2018, discussing different approaches to biomedical informatics and innovations in big-data platforms for biomedical research. His main messages and a hyperlinked index in his presentation follow:

WHAT IS BIOINFORMATICS?
Bioinformatics is an interdisciplinary field that develops analytical methods and software tools for understanding clinical and biological data. It combines elements from many fields, including basic sciences, biology, computer science, mathematics and engineering, among others.

WHY DO WE NEED BIOINFORMATICS?
Chronic diseases are rapidly expanding all over the world, and associated healthcare costs are increasing at an astronomical rate. We need to develop personalized treatments tailored to the genetics of increasingly diverse patient populations, to clinical and family histories, and to environmental factors. This requires collecting vast amounts of data, integrating it, and making it accessible and usable.

CHALLENGES IN BIOINFORMATICS

Presentation slides



**Bioinformatics for Discovery and Global Collaborations:
Approaches and Lessons Learned**

Yuri Quintana, PhD
Director, Global Health Informatics, Beth Israel Deaconess Medical Center
Assistant Professor, Harvard Medical School

Webinar video



Bioinformatics for Discovery and Global Collaborations
An Allergen webinar

Presented by
Yuri Quintana, PhD
Global health informatics expert

Pushing Data Uphill: Overcoming Barriers to Large-Scale Biomedical Data Use

with **Eric Perakslis**, PhD, Department of Medical Informatics, Harvard Medical School

Key Messages



Overcoming Barriers to Large-scale Biomedical Data Use
Eric Perakslis
Harvard University

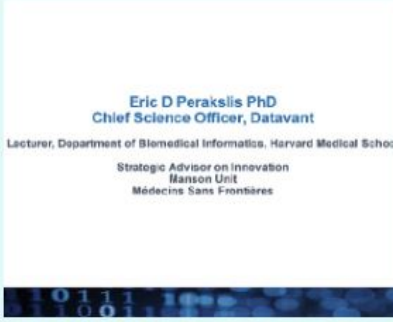
An Allergen webinar for Research Success (Bioinformatics series)

Eric Perakslis, PhD, delivered a webinar in Allergen's Webinars for Research Success series on April 8, 2018, discussing the challenges and opportunities of biomedical informatics for research. His main messages and a hyperlinked index in his presentation follow:

THE INFORMATICS CHALLENGE
Something we do very well in medicine is study pieces of things: an x-ray, a genome, a microbiome—each a unique study in and of itself. In informatics, one challenge is to bring all this data together, to obtain a picture that incorporates all the different departments of an individual patient's health. Sharing this kind of data across patients, in turn, which is a second challenge in informatics, builds data density and empowers greater insights. If each of us only has 20 patients, none of us is ever going to cure a disease. If together we have access to 4,000 patients, we have a better chance of doing so.

THE INFORMATICS OPPORTUNITY
The promise of biomedical informatics: Realizing the potential of biomedical informatics requires a multi-dimensional clinical data clinical data warehouse that links genomes, phenotypes, genetics, radiology reports—anything about a patient, in a very translational

Presentation slides



**Eric D Perakslis PhD
Chief Science Officer, Datavant**

Lecturer, Department of Biomedical Informatics, Harvard Medical School
Strategic Advisor on Innovation
Manson Unit
Médecins Sans Frontières

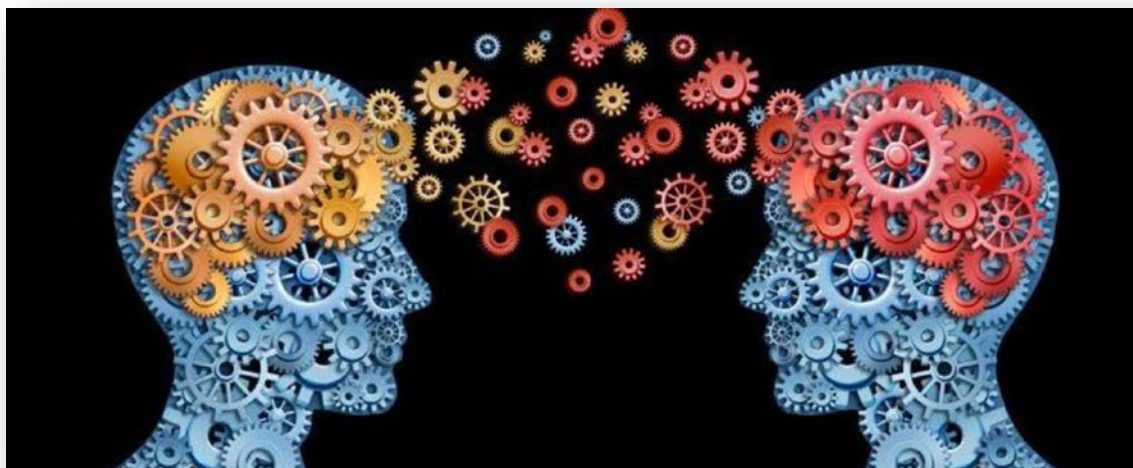
Webinar video



Overcoming Barriers to Large-scale Biomedical Data Use
An Allergen webinar

Presented by
Eric Perakslis, PhD
Research, informatics, technology and R&D leader

73rd CSACI Annual Scientific Meeting



As the primary Canadian gathering for the allergy community, the CSACI Annual Scientific Meeting provides an excellent opportunity for specialists and researchers in the field of allergy, asthma, and clinical immunology to meet and share their knowledge in an atmosphere conducive to medical, scientific and social interaction.

September 12-16, 2018
Halifax, NS

For more information, visit the [meeting website](#) or contact CSACI office at info@csaci.ca or 613-986- 5869.



September 30, 2018
9:45 am – 12:30pm

Milne Park
8251 McCowan Rd
Markham, ON

The Walk for Andrea honours Andrea Mariano, an 18-year-old who died of an anaphylactic reaction at Queen's University in September 2015. The Walk raises funds to support research within the Food Allergy and Anaphylaxis Program of the Hospital for Sick Children.

[MORE INFORMATION](#)

Join us for the 9th & final Research Conference of the

Allergy, Genes & Environment Network

Canada's leading experts in allergic disease

Padmaja Subbarao

Stuart Turvey

Paul O'Byrne

Gail Gauvreau

Param Nair

Susan Elliott

Jean Marshall

present AllerGen's cutting-edge research on
asthma | food allergy | anaphylaxis

& other chronic non-communicable diseases & their

developmental origins in early life

including the role of genetics | the microbiome | epigenetics
the exposome | the environment

Ann Clarke

Allan Becker

Jeffrey Brook

Michael Kobor

John Gordon

Kelly
McNagney

Dean Befus

Keynote Speakers



David Bates
Harvard Medical School



Timothy Caulfield
University of Alberta



James Gern
University of Wisconsin



Leroy Hood
Institute for Systems Biology



Kari Nadeau
Stanford University



Sally Wenzel
University of Pittsburgh

January 27 - 30, 2019 | Toronto Marriott Downtown



For details and to register:
<http://conf.allergen-nce.ca/>



Send newsletter enquiries and comments to:

Marshall Beck, Digital Initiatives Manager

Tel: 905.525.9140 x21672 Email: marshallbeck@allergen-nce.ca