

AllerGen

## reAction

March 2019

## A NETWORK TRANSFORMING AllerGen's final research conference... and beyond

Marking the culmination of 14 years of research, AllerGen held its ninth and final Research Conference from January 27-30, 2019, in Toronto, ON.

Over 220 delegates participated. Nearly half were AllerGen trainees, some of whom have been involved in the Network for over a decade. Many were Network investigators or committee members, many serving since AllerGen's inception. Stakeholders and partners across sectors were present—and for the first time, among the speakers were children and families from all four CHILD Cohort Study sites across Canada!

The event showcased the many accomplishments and impacts of AllerGen's partnered research investments. The program included six world-leading keynote speakers; nine discussion panels comprising 38 research presentations; 73 scientific posters and oral presentations by trainees; and a gala evening of awards and recognitions, including the presentation of the inaugural Michelle Harkness Mentorship Awards.

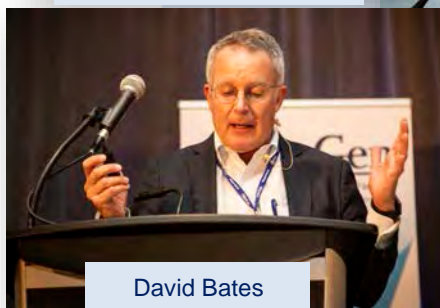
### Conference Keynotes



**Lee Hood**  
Institute for Systems Biology



**Jim Gern**  
University of Wisconsin



**David Bates**  
Harvard Medical School



**Sally Wenzel**  
University of Pittsburgh



**Tim Caulfield**  
University of Alberta



**Kari Nadeau**  
Stanford University

**Continues on page 47**

## RESEARCH HIGHLIGHTS

### Household cleaners may cause obesity in young children: a *CMAJ* “top article” for 2018



Killing germs around the house may have an impact on young childrens' waistlines. The connection? The infant gut microbiome, according to a study led by AllerGen investigator Dr. Anita Kozyrskyj (University of Alberta).

“Infants living in households where disinfectants are used at least weekly are twice as likely to have higher levels of the bacteria called *Lachnospiraceae* at three to four months of age,” notes Dr. Kozyrskyj.

“Those same children have a higher body mass index (BMI) at three years of age, compared to children not exposed to frequent home use of disinfectants as infants.”

On the other hand, “infants in households with heavy use of eco cleaners had much lower levels of different gut microbes,” observes AllerGen trainee Mon Tun, first author of the study. “However, we found no evidence to associate these specific differences with the reduced obesity risk.”

The study also found that infants in households that use eco-friendly cleaners had decreased odds of becoming overweight or obese, though the reasons for this difference remain uncertain.

Reported in the [Canadian Medical Association Journal \(CMAJ\)](#), these findings are based on an analysis of data from 757 children participating in AllerGen's CHILD Cohort Study.

[Press release](#) | [Commentary in CMAJ](#)

#### **Top CMAJ article for media coverage**

According to *CMAJ*, this article received over 700 hits in Canadian, US and international media. Its Altmetric score of 1,226 is the highest of all *CMAJ* articles in 2018 and in the top 5% of all research outputs scored by Altmetric. [View the Altmetric data.](#)

#### **A top 25 article**

*CMAJ* also listed this article among its “[Top 25 articles of 2018.](#)”

## Allergic reactions frequent in children undergoing milk oral immunotherapy



Oral immunotherapy (OIT) is a relatively new approach to treating food allergies that exposes allergic patients to gradually increased doses of an allergenic food to desensitize their immune systems.

While OIT can be safely used to treat the majority of children with cow's milk allergy, a new Canadian study has found that allergic reactions frequently occur during treatment, and that almost 16% of these reactions can be classified as anaphylactic.

The [study](#), published in *The Journal of Allergy and Clinical Immunology: In Practice*, followed 41 children undergoing milk OIT at the Montreal Children's Hospital and found that the mean number of anaphylactic allergic reactions per patient was 6 and roughly one-quarter of children withdrew from treatment due to either recurrent reactions or persistent gastrointestinal symptoms.

"The risk of anaphylactic reactions is one of the main limitations for the routine use of OIT," says the study's lead researcher, AllerGen investigator Dr. Moshe Ben-Shoshan.

"Based on our results, we recommend vigilant monitoring of all patients for both non-anaphylactic and anaphylactic reactions, particularly during the escalation phase of OIT treatment."

The study also identified possible factors associated with a higher risk of anaphylaxis. "We found that children with well-controlled eczema were less likely to react severely during OIT. Children who had an allergy specific to particular milk proteins (*casein* or *alpha-lactalbumin*) seemed to be at higher risk," noted the paper's first author, AllerGen HQP Dr. Sarah De Schryver.

[Press release](#)

## Infant sleep duration associated with mother's level of education, prenatal depression and method of delivery



New research from AllerGen's CHILD Cohort Study has found that babies sleep less at three months of age if their mothers do not have a university degree, experienced depression during pregnancy or had an emergency cesarean-section delivery.

"Sleep affects a baby's growth, learning and emotional development, and is one of the most common concerns of new parents," says AllerGen investigator Dr. Piush Mandhane (University of Alberta), one of the study's lead authors and site leader for the Edmonton site of CHILD.

"While earlier research has linked a mother's socioeconomic status, including level of education, to shorter infant sleep duration, we have not really understood the factors at play. Our study revealed that 30% of the effect of maternal education on infant sleep duration is mediated by a mother's prenatal depression, as well as the type of delivery."

There are several possible explanations for the association between maternal depression and infant sleep: "Mothers in distress tend to have sleep problems

during pregnancy, which can be 'transmitted' to the fetus via the mother's circadian clock and melatonin levels," observes AllerGen investigator and co-lead author Dr. Anita Kozyrskyj (University of Alberta).

"Maternal depression and emergency cesarean section also both lead to elevated free cortisol levels, which, in turn, may cause an exaggerated stress response in infants that negatively impacts their sleep."

"Our study suggests that prenatal depression and birth mode are potential targets for healthcare professionals and policy makers to improve infant sleep duration," adds first author Brittany Matenchuk, an AllerGen trainee. "Mothers who experience prenatal depression or an emergency cesarean delivery may benefit from support so that infant sleep problems do not persist into childhood."

The [study](#), published in *Sleep Medicine*, analyzed data from 619 infants and their mothers participating in the CHILD Study.

**[Press release](#)**



## Infants who sleep less may have lower cognitive and language skills by age two

Does your child sleep less than 12 hours over a 24-hour period? Does he or she breathe through the mouth, snore or have pauses in breathing while asleep?

New [CHILD Cohort Study research](#) has examined the impact of an infant's sleep duration and sleep disruption due to sleep-disordered breathing (SDB) on cognitive and language development at two years of age.

"Short sleep duration and symptoms of SDB ranging from snoring to sleep apnea have been associated with multiple health, learning and behavioural problems in children," says Dr. Piush Mandhane, an associate professor of pediatrics in the University of Alberta's (U of A) Faculty of Medicine & Dentistry, and leader of the CHILD Study's Edmonton site.

"We aimed to find out if limited sleep time and sleep disruption affected cognitive and language development in preschool children."

The researchers found that infants who regularly sleep less than 12 hours total over a 24-hour period have poorer cognitive and language development at two years of age than infants who get more sleep.

They also found that nighttime sleep had a greater impact on cognitive and language development compared to daytime sleep, and a short nighttime sleep was associated with a decrease of roughly 10 points in cognitive development using a standardized test of mental and motor development. "The difference was significant," says Dr. Mandhane.

The researchers further found that children with persistent SDB had lower language scores, but no differences in cognitive development compared to children with no SDB. AllerGen trainee Dr. Lisa Smithson (U of A), the study's first author, suggests a few possible explanations.

"One theory is that language acquisition is more sensitive to sleep disruption than cognitive development. Alternatively, the link between SDB and language delay may be the result of kids having multiple nose and ear infections, which tend to impair hearing and speech," she says.

In a [second study](#), Dr. Mandhane and the CHILD research team identified four patterns of SDB from infancy to two years of age and unique risk factors associated with each.

"We found that infants who received medication for acid reflux were more likely to have early-onset SDB, while children who were exposed to smoke or dogs in the home were more likely to develop late-onset SDB. Children at risk for allergies or with divorced parents were more likely to present with persistent SDB," explains Dr. Mandhane.

Both papers, published in the August 2018 issue of [Sleep Medicine](#), will help doctors better predict which children are at risk for sleep disorders and intervene early with treatment.

[Press release](#)

## Breastmilk microbiome linked to method of feeding



New research from the CHILD Cohort Study sheds some light on the importance of the infant's mouth as a source of breastmilk bacteria.

The idea that breastmilk has a microbiome—a community of bacteria living within it—is relatively new and has sparked debate about where breastmilk bacteria come from.

The new research, published February 13, 2019, in *Cell Host & Microbe*, found that among the many factors examined, the *method of breastfeeding*—whether mothers fed their infants directly at the breast or fed them pumped breastmilk from a bottle—was most consistently associated with the composition of the milk microbiome.

Direct breastfeeding was associated with microbes typically found in the mouth, a

greater abundance of the beneficial *Bifidobacteria*, and higher overall bacterial richness and diversity.

“We found that milk bacteria are different in mothers who pump their milk,” says CHILD investigator Dr. Meghan Azad (University of Manitoba), who led the study.

“We suspect that pumping may prevent the transfer of oral bacteria from the infant to the mother and might introduce other bacteria from the pump.”

The researchers used data from nearly 400 infants and their mothers participating in the CHILD Cohort Study.

**Press release**

## Breastfeeding may protect against obesity in early life and may help prevent food allergies

New CHILd Cohort Study research has found that infants who are breastfed have a reduced risk of being overweight in the first year of life—and that the protective association is stronger with longer and more exclusive breastfeeding.

“We found that the risk of overweight at 12 months of age was over three times higher among infants who were not breastfed compared with infants who were exclusively breastfed for the first six months of life,” said study lead Dr. Meghan Azad.

The study, published in the October 2018 issue of *Pediatrics*, looked at both body mass index (BMI) and the rate of infant weight gain—an important predictor of future obesity and cardiovascular health. It used data from more than 2,500 infants and their mothers participating in CHILd.

The study also found that the method of feeding breastmilk matters, and it uniquely distinguished between partial breastfeeding mixed with formula *versus* partial breastfeeding mixed with foods.

### Press release

Related findings from CHILd from another study also led by Dr. Azad, indicated that complex sugars in breastmilk, known as human milk oligosaccharides (HMOs), may reduce the risk of babies later developing food allergies.

“This research identified a ‘beneficial’ HMO profile that was associated with a lower rate of food sensitization in children at one year of age,” says Dr. Azad.

The findings, which were published in the June 2018 issue of *Allergy*, analyzed data from 421 infants and mothers participating in the CHILd Cohort Study.

“To our knowledge, this is the largest study to examine the association of HMOs and allergy development in infants,” adds Dr. Azad.

Co-authors on the study included AllerGen trainee Dr. Kozeta Miliku (University of Manitoba) and Dr. Lars Bode (University of California San Diego School of Medicine).

### Press release



## New C-CARE findings

Recent data published on the underuse of epinephrine during anaphylaxis outside of hospital and suboptimal, inconsistent treatment for anaphylaxis when the cause is unknown

C-CARE, the AllerGen-supported Cross-Canada Anaphylaxis Registry, published two new findings in late 2018.

One study, published in *The Journal of Allergy and Clinical Immunology: In Practice*, found only 41% of adults and children experiencing food-induced anaphylaxis used their epinephrine autoinjector (EAI) before being treated at a hospital emergency room.

“It’s a disappointing reality that epinephrine is seriously underused, even when carried,” says AllerGen investigator Dr. Moshe Ben-Shoshan (Montreal Children’s Hospital and the Research Institute of McGill University Health Centre), who led the research.

Over half the time, antihistamines were used, while 20% of patients did not receive any treatment before arriving at the hospital.

The study also found that teenagers were more likely to use an EAI than younger children or adults, and that Alberta had the lowest percentage of EAI use among the five provinces represented in the study.

AllerGen trainee Sofianne Gabrielli and Jennifer Gerds, Executive Director of Food Allergy Canada, were study co-authors.

[Press release](#) | [Allergic Living story](#)

A second C-CARE study, published in *The Journal of Allergy and Clinical Immunology: In Practice*, shed light on “anaphylaxis due to an unknown trigger” (AUT), a medical condition about which surprisingly little is known.

The study followed nearly 4,000 cases of anaphylaxis seen in Canadian emergency departments from 2011 to 2018.

“In our study, the cause of 7.5 percent of the anaphylaxis cases was unknown. We found that the treatment and follow up of AUT were suboptimal and inconsistent both inside and outside of the hospital,” says lead researcher Dr. Ben-Shoshan.

“The underuse of epinephrine and the low rates of referral to an allergist, mainly in adults experiencing AUT, highlight the need for clear AUT treatment guidelines and educational programs for diagnosis and management.”

This was the first longitudinal, large-scale study to assess the clinical characteristics, treatment, and follow-up management of AUT cases across Canada.

[Press release](#) | [CTV News story](#)



## CHILD Cohort Study: Maternal depression higher among certain ethnic minorities

Mothers who are Black or of First Nations ethnicity are at greater risk of experiencing stress and symptoms of depression during pregnancy and their children's first five years, according to new CHILD Cohort Study research.

It was already known that mothers from ethnic minorities are more at risk for psychological distress while pregnant and until their children reach pre-school age, observes CHILD Cohort Study Director Dr. Padmaja Subbarao (The Hospital for Sick Children), but "our study showed that this pattern is more nuanced than previously thought."

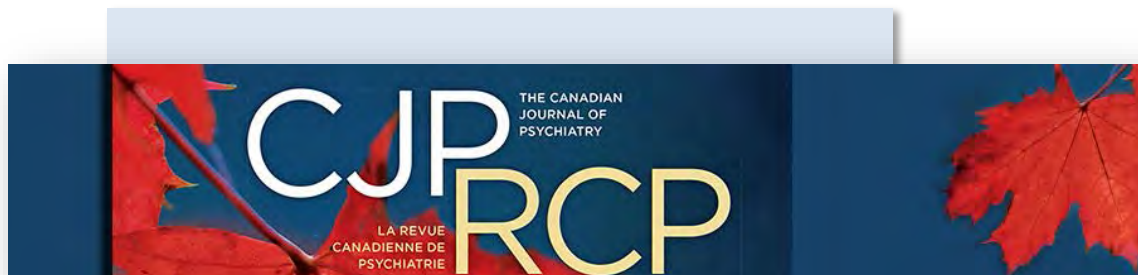
Dr. Subbarao and her team analyzed data from more than 3,000 mothers participating in the CHILD Cohort Study, who had completed detailed questionnaires in which they self-identified their ethnicity and described their distress levels during pregnancy and their children's first years.

"Black and First Nations mothers consistently reported the highest stress levels compared to all other ethnicities," says AllerGen trainee and study first-author Christoffer Dharma (McMaster University). "This difference was significant, even after we controlled for other factors that may affect stress, such as social support, a history of depression, and socioeconomic status."

Although self-reported depressive symptoms may not always translate to clinical depression, it is important for family, friends and healthcare professionals to be aware of potential problems and to support a mother's psychological wellbeing both during and after pregnancy, notes Dr. Subbarao.

The research was published online in August 2018 in the [Canadian Journal of Psychiatry](#).

**Press release**



## CHILD research finds Lung Clearance Index effective at detecting infant lung problems

Findings from AllerGen's CHILD Cohort Study show that the Lung Clearance Index (LCI), a measure of ventilation distribution, can detect lung problems in children as young as four months old.

"Asthma is the most common chronic disease of childhood and detecting airway changes early is critical so that doctors can provide appropriate treatment before lung damage occurs," says CHILD Cohort Study Director Dr. Padmaja Subbarao, who led the study.

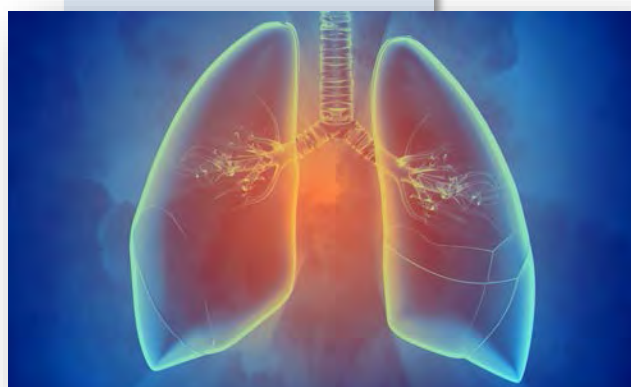
The [research](#), published in the June 2018 issue of *Thorax*, examined 37 infants with a history of wheezing referred from a hospital outpatient clinic and 113 healthy infants participating in the CHILD Study.

LCI was measured using a technique called the Multiple Breath Washout (MBW)—the infants inhaled a "tracer" gas through a face mask while sleeping, and the researchers tracked the time it took for them to clear the gas from their lungs.

The researchers found that LCI was elevated in 19% of infants with recurrent wheeze, compared to only 1.8% of healthy infants. "Higher LCI values indicate more severe lung disease," notes AllerGen trainee Dr. Zihang Lu, the study's first author.

The study was unique in comparing infants with airway disease to healthy controls. The results of the comparison indicate that LCI may be effective in detecting early lung disease even when no symptoms are apparent. "This suggests that the test could be useful at routine clinic visits when the child is well," adds Dr. Lu.

### Press release



## Few outgrow seafood allergies



New AllerGen-supported research suggests that people allergic to fish and shellfish do not usually outgrow these allergies.

Published in *The Journal of Allergy and Clinical Immunology: In Practice*, the study used data collected by survey and by accessing medical records over a period of up to six years, from 63 patients with allergies to fish, shellfish or both.

It found that each year, less than one percent of these patients saw their allergy resolve—a very low rate of resolution, according to the authors.

“Fish and shellfish allergy accounts for a significant proportion of life-threatening (anaphylaxis) reactions in adults, but has attracted much less research attention than other food allergies, such as peanut,” commented AllerGen investigator and senior author Dr. Moshe Ben-Shoshan (Montreal Children’s Hospital and the Research Institute of McGill University Health Centre) to Reuters.

“Patients need to understand the likely course of their food allergy and [until now there have been] no data on the natural resolution of this important allergy.”

The study authors note that, although limited by a small sample size, this is the first cohort study to assess resolution of seafood allergy, and they call for “larger studies ... to confirm these findings and to identify factors potentially associated with resolution.”

## Study sheds light on how the immune system “remembers” food allergens

An AllerGen-supported research team at McMaster University is studying why the body’s immune system responds inappropriately to certain foods and why some food allergies are lifelong.

A food allergy is an abnormal immune response to a food. The immune system mistakenly identifies a food as harmful and produces an antibody called immunoglobulin (Ig) E that binds to cells in tissues (mast cells) and in blood (basophils) through a specific receptor.

The next time the food is consumed, the allergen (peanut, for example) binds to the IgE and triggers mast cells and basophils to degranulate, releasing molecules such as histamine that cause the allergic reaction.

In their new paper published in *The Journal of Allergy and Clinical Immunology*, “[The IgE Memory Reservoir in Food Allergy](#)”, Drs Manel Jordana, Susan Waserman and Rodrigo Jiménez-Saiz, and PhD students Kelly Bruton and Joshua Koenig, shed light on how the immune system “remembers” food allergens.

“Previous research proposed that upon re-encountering a food allergen, memory IgE cells become activated and replenish the cells that produce IgE antibodies, which ultimately triggers the allergic reaction,” says Dr. Jiménez-Saiz, a Research Associate at McMaster University and the paper’s first

author. “However, no one has been able to decipher how the IgE memory works.”

“Recent research suggests that IgG1 memory B cell subsets are the true reservoir of allergen-specific memory, which represents a considerable shift from previous thinking,” adds Dr. Jordana, an AllerGen investigator and a Professor of Pathology and Molecular Medicine at McMaster.

Evidence from mouse and human studies suggests that IgG1 memory B cells survive in the blood and tissues for long periods of time, and that when re-exposed to a food allergen, they evolve into IgE-producing cells under the influence of signalling proteins called interleukin (IL)-4 and IL-13.

“This improved understanding of how immune cells hold their memory provides us with new potential therapeutic targets for allergic diseases,” notes Dr. Jordana.

“For example, treatments that block IL-4 and IL-13 signaling may effectively alleviate food allergy, atopic dermatitis, allergic asthma and allergic rhinitis, and could have a tremendous impact on the quality of life of patients.”



## Breastfeeding & social media: catalyzed by AllerGen

AllerGen investigator Dr. Meghan Azad (University of Manitoba) met AllerGen Highly Qualified Personnel Alessandro Marcon (University of Alberta) at AllerGen's 2016 Research Conference in Vancouver, BC.

Their encounter [catalyzed a unique research project](#) that explored the question of whether or not Instagram users are building communities of support around women who breastfeed.

The answer, the researchers found, is “yes”! Breastfeeding discussions on Instagram were overwhelmingly positive as detailed in their paper “[Protecting, Promoting and Supporting Breastfeeding on Instagram](#),” published in *Maternal and Child Nutrition* on August 6, 2018—during World Breastfeeding Week.

The research team analyzed 4,089 images and 8,331 comments posted on Instagram with popular breastfeeding hashtags ([#breastmilk](#), [#breastisbest](#), and [#normalizebreastfeeding](#)) to assess how users mobilize the social media platform to share perspectives on the subject.

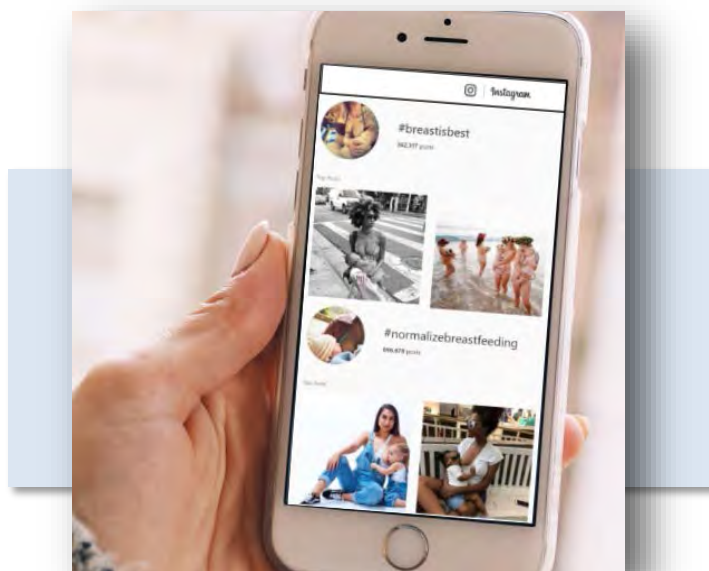
They found that users used the platform to create supportive networks for new mothers to share their experiences with breastfeeding. The researchers suggest that Instagram could potentially offer “new avenues and opportunities to ‘normalize,’ protect, promote, and support breastfeeding more broadly across its large and diverse global online community.”

Instagram is a social networking site where account owners share videos and images online. The app has 700 million active users, the majority of whom are women.

*Dr. Azad is an Assistant Professor of Pediatrics and Child Health, and Canada Research Chair in Developmental Origins of Chronic Disease, at the University of Manitoba. She also co-leads the Manitoba site of the Canadian Healthy Infant Longitudinal Development (CHILD) Study.*

*Alessandro Marcon is a specialist in digital technologies and social media at the University of Alberta's Health Law Institute.*

### Press release



## Is food allergy a legal disability and how does this affect Canadian schools?

In the Canadian legal context, food allergy is considered a disability that must be accommodated by schools. However, food bans are not legally required, according to the conclusions of an AllerGen study published in *Allergy, Asthma & Clinical Immunology*.

AllerGen investigator Prof. Timothy Caulfield (University of Alberta) led the research, which analyzed legislation, human rights policies and relevant precedents in case law, and identified instances where Canadian courts clearly determined that food allergy was a disability.

“Since food allergy is a disability, it triggers a legal duty for schools to ensure that food-allergic students receive fair treatment and are not discriminated against due to an allergy,” explains Professor Caulfield.

On the other hand, the researchers did not find precedents to legally require food bans in schools. In fact, they concluded that it may be in the best long-term interest of all parties to avoid such bans.

“Important protections for allergic students and the school community will continue to include education about food sharing, vigilance, and adequate emergency response mechanisms,” observes the study’s first author, AllerGen HQP Blake Murdoch, a research associate at the University of Alberta’s Health Law Institute.

“We feel that the best policy advice for schools looking to craft sensible, effective, and rights-sensitive policies around food allergies is to consider the particular context of their own setting, as well as the best available scientific research on best practices for food allergy safety and management.”

### ResearchSKETCH | Press Release



#### Allergies likely = a legally recognized disability.<sup>1</sup>

Schools must accommodate for this, but it is unclear whether food bans are legally required or the best approach.<sup>2</sup>

Artwork: Sean Caulfield

<sup>1</sup> Murdoch, Adams, Caulfield. *Allergy, Asthma & Clinical Immunology* (2018) 14:67.  
<sup>2</sup> Cherkasov et al. *Clinical and Translational Allergy* (2015) 5:16.  
• Health Law Institute, University of Alberta. Sean Caulfield, 2018.

## “Harmonized food ontology” emerges from CHILD Cohort Study database project

Dr. Fiona Brinkman (Simon Fraser University) and colleagues have published an [article](#) in *Nature: Science of Food* entitled “FoodOn: a harmonized food ontology to increase global food traceability, quality control and data integration.”

Indirectly supported by AllerGen through Dr. Brinkman’s ontology (controlled vocabulary) development for the CHILD Cohort Study, the effort counted on partnerships with the Public Health Agency of Canada, the Canadian Food Inspection Agency, the US Food and Drug Administration, and partners overseas.

“FoodOn” organizes and defines commonly used food terms, and compliments other technologies facilitating food traceability.

“Issues around food traceability and reliably defining food content are of course important for those with food allergies,” comments Dr. Brinkman, “but more generally, they are becoming critical in this age of increasingly globalized food networks.”

“However, our current focus is very much on CHILD and organizing and integrating its data with other data types,” adds Dr. Brinkman.

## Addressing asthma stigmatization among young athletes

Among children playing organized sports, those with asthma are at increased risk of being stigmatized, according to a University of Waterloo study.

The research stemmed from a 2013 strategic planning workshop organized jointly by AllerGen and the national charity Clean Air Champions, in which delegates discussed the promotion of sport participation by Canadians, especially youth, living with allergies and asthma.

The study also identified the education of coaches on environment and health issues generally, and on asthma management specifically, as a means to address the stigmatization problem.

“Most coaches will say that they understand asthma and are inclusive,” observes PhD candidate Francesca Cardwell, who led the focus group-based research, along with AllerGen Research leader Dr. Susan Elliott.

“But we know from other work that some kids report that their symptoms are questioned or that they are penalized, especially in competitive sports.”

The study was published in the June 2018 issue of [Journal of Environmental and Public Health](#).

**[Press release](#)**

## AWARDS & HONOURS

### Michelle Harkness Mentorship Awards celebrate & promote mentoring excellence

On the evening of January 29, 2019, at the Gala event of AllerGen's final Research Conference, eight exceptional members of the AllerGen network were recognized for their excellence as mentors, and four others were awarded grants to support the development of their mentoring skills.

Participating in the ceremonies were members of the Harkness family: Michelle's husband Glenn and daughter Kasey, who also served on the committees that selected the winners for this, the inaugural presentation of the Michelle Harkness Mentorship Awards (MHMA).

*The Michelle Harkness Mentorship Award (MHMA) program was established in 2017 in honour of Michelle Harkness, the Manager of AllerGen's Highly Qualified Personnel (HQP) Training and Events program from 2011 to 2017.*

*The MHMA awards celebrate the high value Michelle attributed to the practice of mentorship and perpetuate her encouragement of mentoring relationships.*



### Lifetime Mentoring Achievement

Recognizing a sustained, career-spanning commitment to excellence in mentoring by an AllerGen-affiliated professional, the 2019 MHMA Lifetime Mentoring Achievement awardee was:

**MANEL JORDANA**, Professor, Department of Pathology and Molecular Medicine, McMaster University.

"Thank you for this extraordinary award, though I feel it rewards me for doing what people in my privileged position are supposed to do," comments Dr. Jordana, in response to receiving the award.

"In mentoring others, I have merely been passing on what was given to me by the good mentors I was lucky to have throughout my life."

"And while I am truly grateful for the recognition, my greatest reward is the demonstrated successes, present and future, of the young people who have entrusted me with a part of their education."

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*Lifetime Mentoring Achievement awardee Dr. Manel Jordana (centre) is flanked by Kasey (L) & Glenn Harkness (R)*

### ***Testimonials by Dr. Jordana's nominators***

"He tailored his mentorship to give me the best experience... and instilled a love for science that I will carry through my career."

"He strives to create strong leaders in the scientific community and takes pride in the people that they become."

"It would be impossible to overstate the significance of Manel's mentorship on my academic trajectory... From the outset he treated me like a colleague..."

"His passion for medicine and truth in science coupled with his desire to do what is best for patients [is an inspiration to his] students and colleagues alike."

"Manel Jordana's mentorship [helped me to] find pride in who I am and confidence in what I might become."

"More than 10 years after my time as his trainee, I continue to turn to Manel and he continues, without reluctance, to help me to arrive at the best possible decisions..."

"Every student that has entered his lab... becomes like an instant family member to Manel. He truly cares about each of them personally and professionally..."

"It would be impossible to overstate the significance of Manel's mentorship on my academic trajectory... From the outset he treated me like a colleague... he valued everything we brought to the team."

"Our lab discussions weren't only about science, but spoke more broadly to questions of ethics, philosophy, culture. He cultivated an enriching intellectual environment..."

## Mentorship Excellence—Investigator

In recognition of outstanding mentoring by **investigators** in the AllerGen network at any career stage or in any discipline (including (senior or junior University-based faculty or clinician scientists), the 2019 MHMA awardees were:

**MEGHAN AZAD**, Assistant Professor, University of Manitoba;

**JEREMY HIROTA**, Assistant Professor, McMaster University;

**PAIGE LACY**, Professor, University of Alberta; and

**CHRISTOPHER CARLSTEN**, Professor, University of British Columbia

*Mentorship excellence – Investigator award recipients: Meghan Azad (top), Jeremy Hirota (centre), and Paige Lacey (bottom). Not shown: Christopher Carlsten.*



## Mentorship Excellence—Non-Investigator

In recognition of outstanding mentoring by **non-investigators** in the AllerGen network, at any career stage or in any sector (including students, post-doctoral fellows, research staff, technical staff, administrative staff, Board and Committee members, or partner organization representatives), the 2019 MHMA awardees were:

**LOUBNA AKHABIR**, Postdoctoral Fellow, McMaster University;

**JOHN-PAUL OLIVERIA**, Postdoctoral Fellow, Stanford University, and Adjunct Faculty member, McMaster University; and

*Mentorship excellence – Non-Investigator award recipients: Loubna Akhabir (top) and John-Paul Oliveria (centre).*



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**GURPREET SINGHERA**, Research Associate, The University of British Columbia.

## Mentorship Development Grants

MHMA Mentorship Development Grants provide up to \$5,000 to individuals seeking to enhance their mentoring skills.

Applications were ranked by a selection committee based on the proposed activities' potential for enhancing the applicant's mentorship skills.

The recipients of the 2019 MHMA Mentorship Development Grants were:

**SUE KELLER-OLAMAN**, Manager of Knowledge Synthesis and Evaluation Services, Public Health Ontario;

**MARY-ELLEN RAYNER**, Chief Partnerships and Communications Officer, The Sandbox Project;

**LIANNE SOLLER**, Postdoctoral fellow and Research Manager, The University of British Columbia; and

**NEELOFFER MOOKHERJEE**, Associate Professor, the University of Manitoba.



*Mentorship excellence – Non-Investigator award recipient: Gurpreet Singhera.*



*Mentorship Development Grant awardees Sue Keller-Olaman (top of the trio of photos), Mary-ellen Rayner (middle) and Lianne Soller (bottom) with Kasey & Glenn Harkness. Not shown: Neeloffer Mookherjee.*

## AllerGen's Scientific Director receives CSACI's Jerry Dolovich Award



“**Dr. Judah Denburg** is an amazing colleague, clinician, researcher and, to a large degree, visionary, and it is extremely fitting that he is being honoured with the Jerry Dolovich Award,” observed Dr. Allan Becker, as he announced the honour at the awards dinner of the 2018 Canadian Society of Allergy and Clinical Immunology (CSACI) Annual Scientific Meeting.

“They were colleagues at McMaster University, where Jerry was an allergist and Judah a hematologist. It is fortunate for us, however, that Judah was interested in the eosinophil, which took him into the area of allergy—especially allergy as a systemic disease process.”

“Judah’s vision and drive to understand the underpinnings of allergic disease, through his own research and by establishing the nation-wide network, AllerGen, has greatly benefited the state of allergy and allergy research in this country,” summarized Dr. Becker.

Dr. Denburg, AllerGen’s Scientific Director, was presented the Jerry Dolovich

Award for his contributions to the field of allergy and clinical immunology in Canada. He conveyed his acceptance and gratitude by [pre-recorded video](#) and the award was received on his behalf by AllerGen’s Managing Director, Dr. Diana Royce.

The award is named after the late Dr. Jerry Dolovich, a highly respected allergy researcher, clinician, and educator who was based at McMaster University from 1968 until his passing in 1997.



*Dr. Diana Royce (centre) accepts the award on Dr. Denburg’s behalf from CSACI President Dr. David Fischer (L) and Dr. Allan Becker (R). Courtesy of CSACI.*



## CHILD Cohort Study's Founding Director celebrated in video tribute



*Dr. Malcolm Sears with four CHILD Cohort Study participants at AllerGen's 2019 Research Conference.*

Dr. Malcolm Sears, the Founding Director of the CHILD Cohort Study, received a warm video tribute from dozens of his colleagues during AllerGen's 2019 Research Conference.

To recognize his years of leading the Study, his career-long accomplishments, and his mentoring of others, a [video montage](#)—with contributions from AllerGen and CHILD colleagues, trainees, students and research staff—was screened during the Gala evening of the event, on January 29.

"Without Malcolm there would be no CHILD Study," said Dr. Judah Denburg, introducing the video.

Following the screening, the Study's current Director, Dr. Padmaja Subbarao, commented: "To have a mentor like Malcolm has been amazing; it has rocketed my career forward..."

"I'm always moved by how thoughtful he is and how much he cares about everyone in the Study."

"It's been a tremendous journey; I have thoroughly enjoyed it," said Dr. Sears in response to the tributes.

Dr. Sears led the planning for the Study from initial discussions in 2004 and served as its Director from its inception in 2007. He stepped down from the position of Director in July 2017.



*L to R: Dr. Malcolm Sears, CHILD Co-Director Dr. Stuart Turvey, and Dr. Padmaja Subbarao.*

## CHILD Co-Director honoured for “outstanding career in child health”

“**Dr. Stuart Turvey** has distinguished himself not only as an international research leader, but also as a dedicated and compassionate clinician and as a highly valued colleague and mentor.”

So begins an inspiring tribute to AllerGen investigator Dr. Turvey by the BC Children’s Hospital, identifying him as the 2018 recipient of its Geoffrey L. Hammond Lectureship.

The tribute extols Dr. Turvey’s personal and professional attributes and enumerates his many career accomplishments—including his leadership role in the CHILD Study, and his part in the breakthrough 2015 research, powered by CHILD data, that found the presence of four gut bacteria in the first few months of life can protect against asthma.

Dr. Turvey received the recognition and gave a talk on his career trajectory on September 26, 2018, in Vancouver, BC.

The Lectureship recognizes investigators who have made a significant contribution to improving the health and well-being of children and families, and who have served as role models, mentors and leaders.

Dr. Turvey is Co-Director the CHILD Study and the leader of its Vancouver site.

[Read the BC Children’s Hospital announcement.](#)

## Two AllerGen investigators elected Fellows of Royal Society of Canada

In 2018, AllerGen investigators **Dr. Fiona Brinkman** (Simon Fraser University) and **Dr. Guillaume Paré** (McMaster University) were inducted into the Royal Society of Canada (RSC) in recognition of their scholarly and scientific accomplishments.

The two were among 53 new members welcomed into the RSC’s College of New Scholars, Artists and Scientists—the first national system for Canada’s emerging generation of intellectual leadership. New members are nominated by existing members of the College, RSC fellows and institutional members.

Dr. Brinkman is a world-leading bioinformatics expert who has led research efforts, including large consortiums, to tackle the global health threats posed by infectious and inflammatory diseases and antibiotic resistance.

Dr. Paré is a world-leading physician-scientist in the area of genetic and molecular epidemiology of cardiovascular disease whose research has advanced knowledge of the genetic causes of heart attack and stroke.

They were officially recognized by the RSC at an inductee ceremony held in November 2018 in Halifax, NS.



## Dr. Jeremy Hirota awarded CFI grant for 3D tissue printing project

In April 2018, AllerGen investigator Dr. Jeremy Hirota was awarded a \$180,000 infrastructure grant by the Canadian Foundation for Innovation (CFI) for his project “the Tissue Engineering for Advanced Medicine (TEAM) Lab.”

The CFI funding will allow Dr. Hirota and his team to continue their research into using 3D tissue printing techniques to construct novel human tissue for use in the prevention, treatment, and diagnosis of respiratory disease.

“Using this CFI investment in research,” commented Dr. Hirota in a [St. Joseph's Healthcare announcement](#), “we aim to create tools that will allow for an individual to get personalized prevention, diagnosis, or treatment – as unique to them as the colour of their eyes or their fingerprint.”

Dr. Hirota, Canada Research Chair in Respiratory Mucosal Immunology at the Firestone Institute for Respiratory Health, has been working with the award-winning Canadian biotechnology company Aspect Biosystems on tissue engineering since early 2015.

CFI awards are given based on a researchers' track record for excellence; the need for infrastructure; and the potential benefits to Canadians.

## Dr. Sonia Anand appointed inaugural Associate Chair, Equity & Diversity

AllerGen investigator Dr. Sonia Anand has been appointed Associate Chair, Equity and Diversity, of the Department of Medicine at McMaster University.

In the newly created role, Dr. Anand is developing and implementing policies and practices related to equity and diversity in the department, and will support the recruitment, retention and advancement of faculty in a manner that accounts for issues related to equity including gender, sexual orientation, and ethnicity.

“I am excited to take on this new position,” said Dr. Anand in a [McMaster news release](#), “and will lead the implementation of procedures to reduce conscious and unconscious biases, both of which stifle equity in the advancement of women and diverse individuals in medicine.”

Dr. Anand began her three-year renewable term in the position on July 1, 2018.



## Dr. Jean Marshall recognized for “distinguished scientific leadership”

The Canadian Society for Immunology (CSI) has chosen AllerGen Research Leader Dr. Jean Marshall to receive its top honour—the Bernhard Cinader Award for “distinguished scientific leadership and accomplishments in immunology.”

The CSI bestows the award annually upon a Canadian immunologist who is an exceptional researcher and who excels in another, related realm of endeavour, such as teaching, the arts, research outreach, or writing.

Dr. Marshall, PhD, is Co-Leader of AllerGen’s national, multidisciplinary food allergy research consortium, comprising the CanFAST Legacy Project and NFAST legacy initiative. She is a professor and former head of the Department of Microbiology & Immunology at Dalhousie University. Her main research interest is in the biology and function of mast cells in host defense and disease.

In addition to her academic contributions and leadership, Dr. Marshall has dedicated herself to advancing the role of women and other under-represented groups in science and senior academic leadership.

“Dr. Marshall has displayed extraordinary dedication and passion for promoting women in science and in pushing for women to occupy leadership positions at Dalhousie University,” noted Dr. Andrew Makrigiannis, current head of the

Department of Microbiology & Immunology at Dalhousie, in the university’s announcement.

“She does not fear to be outspoken on this issue and is persistent in this endeavour. She is an excellent role model for our female trainees and new faculty and they often go to her for advice and mentorship.”

Dr. Marshall also co-chairs a Diversity Task Force as part of Dalhousie’s medical school and she is a member of the Women in Research Caucus at Dalhousie. She is also a strong proponent of interdisciplinary research collaboration and will make this the focus of her keynote address at the CSI Annual Conference in Banff in April 2019.

The Bernhard Cinader Award is named in honour of Dr. Bernard (Hardy) Cinader who is considered as one of the “founders” of immunology in Canada and who was the inaugural award recipient at the first CSI meeting held in 1987.

[Read the Dalhousie announcement.](#)





## Dr. Moshe Ben-Shoshan funded to study children's allergies to antibiotics

AllerGen investigator Dr. Moshe Ben-Shoshan (Montreal Children's Hospital) has been awarded a four-year, \$336,000 CIHR Project Grant to explore adverse reactions to antibiotics among children.

His project aims to determine how often these adverse reactions—typically seen in the form of skin rashes—are allergic rather than non-allergic, and to develop a simple evaluation approach to help diagnose “true” allergies to antibiotics.

“Currently, there is no accepted method to diagnose allergic *versus* non-allergic antibiotic reactions,” says Dr. Ben-Shoshan. “As a result, children may be misdiagnosed as allergic, and then avoid the antibiotic involved into adulthood, replacing it with antibiotics that may be less effective, more toxic, and more expensive.”

His team began collecting data from children with suspected antibiotic allergy in 2012, conducting supervised oral challenges on them in his clinic, and following those tolerant of the antibiotic for five years to see if their tolerance was sustained.

With the new CIHR grant, his team will now “expand our registry to evaluate the major antibiotics used to treat infections, and identify factors associated with positive challenges. Our study will provide valuable data on the safe use of

antibiotics in children and the strategies to diagnose and predict allergic reactions.”

Dr. Ben-Shoshan published in *JAMA Pediatrics* on the misdiagnosis of antibiotic allergies in 2016, when he found a commonly used skin test ineffective for diagnosing suspected allergy to amoxicillin. That study contributed to a paradigm shift in the approach to the diagnosis of antibiotic allergy and was named one of the [top 10 Pediatrics and Adolescent Medicine stories](#) for 2016 by *NEJM Journal Watch*. Its findings were [covered by the CBC](#) and others.



Dr. Moshe Ben-Shoshan.

## Dr. Chris Carlsten appointed Division Head, Respiratory Medicine, at UBC

In March 2018, AllerGen investigator Dr. Chris Carlsten became Head of the Division of Respiratory Medicine at The University of British Columbia (UBC).

“This role is a real challenge that will test a whole new set of skills,” commented Dr. Carlsten on his appointment, “but it’s also a great leadership and learning opportunity.”

As highlighted in the [departmental announcement](#), Dr. Carlsten “is a recognized national and international leader in the field of air pollution and health effects related to inhaled exposures... and has been recognized for his excellence as a mentor and as a researcher.”



## Prof. Tim Caulfield’s TV series wins 2019 Realscreen Award

Immediately after delivering his keynote presentation at AllerGen’s 2019 Research Conference, AllerGen investigator Professor Tim Caulfield received a message from the producer of his television series, “A User’s Guide to Cheating Death.”

The message was sent from the 20<sup>th</sup> Realscreen Summit, held in New Orleans, where Prof. Caulfield’s show was competing for an “Outstanding Achievement” recognition in the non-fiction/science & technology category.

“As soon as I sat down after my talk I had a text from our producer (‘We WON!’). We were up against some huge, big budget shows ... It was surreal,” Prof. Caulfield stated.

The first season of Prof. Caulfield’s series, which explores the dubious claims of various widely marketed wellness and beauty products and services, is now available on Netflix. A second season is in production.





## PEOPLE & PARTNERS

### AllerGen colleagues bid a fond farewell to Dr. Frances Silverman



Dr. Frances Silverman, world-renowned expert on the health effects of air pollutants and their role in the development of inflammation, passed away peacefully on December 11, 2018, at her home in Toronto.

Dr. Silverman was one of AllerGen's original research leaders at the Network's founding in 2005, providing leadership to AllerGen's Gene-Environment Interactions (GxE) research platform and providing Network investigators access to infrastructure at the Gage Occupational and Environmental Health Unit at the University of Toronto.

She remained an active investigator for the duration of the Network within the GxE platform, supporting the CHILD Study and working closely with platform leaders Drs Jeff Brook and Mike Kobar.

"Frances was a dear colleague, friend and mentor to many in AllerGen," says Dr. Judah Denburg, AllerGen's Scientific Director.

"We are very saddened by her untimely passing. On behalf of the Network, I extend my heart-felt condolences to her family and friends."

Dr. Silverman was recognized internationally for her innovative work on controlled human environmental chamber studies. She collaborated with many groups in Canada and abroad.

Dr. Silverman also developed and was first Director of The Collaborative Program in Environment and Health at the University of Toronto, and she created and taught the award-winning Seminars in Environment and Health. Both encouraged students to integrate their research into a broader context by introducing them to methods and concepts from other disciplines.

Dr. Silverman was Associate Professor Emeritus in the Department of Medicine, Faculty of Medicine, and the Division of Occupational and Environmental Health, Dalla Lana School of Public Health, at the University of Toronto. She was also still active as a Scientist at the Keenan Research Centre, Li Ka Shing Knowledge Institute, at St Michael's Hospital, as well as at the Research Institute at the University Health Network.

She continued to inspire her colleagues, students and friends alike.

## AllerGen salutes Board Member Donald Green

It is with deep sorrow that we announce the passing of a friend and supporter of AllerGen, Mr. Donald Green, on Monday, February 18, 2019.

Mr. Green was a member of AllerGen's Board of Directors and Chair of its Budget and Audit Committee, positions he held since 2014.

"Don's leadership within AllerGen was grounded in great wisdom and a depth and breadth of real-world experience," says AllerGen's Managing Director, Dr. Diana Royce. "Though a busy and very accomplished person, he was generous with his time, and his warm, level-headed presence will be sorely missed. On behalf of the entire network, I extend my sincere condolences to his family, friends and colleagues for their loss."

At the time of his passing, Mr. Green was also President and CEO of the private investment company Greenfleet Ltd. and President and Chairman of E-celebrate Corp.

Through his career, he had held executive or governance roles in many other enterprises, including Aviva Canada Inc., the National Bank of Canada, Laidlaw International Inc., the Ontario Research Foundation, McMaster University, and the Canadian Chamber of Commerce. Mr. Green began, however, in the family firm, Hamilton Clamp Company, which he transformed into the global auto parts powerhouse Tridon Ltd.



*Donald Green in 2007, with a painting of his racing yacht, the Evergreen. Photo used with permission of the Hamilton Spectator.*

Parallel to his success in the business world, Mr. Green also excelled on the water: He sailed around the world at the age of 18 and wrote a book about the adventure, and in 1978, he skippered his racing yacht "Evergreen" to victory in the Canada's Cup.

In 1980, Mr. Green was awarded the Order of Canada, the highest civilian honour bestowed on Canadians. He was inducted into the Burlington Sport Hall of Fame in 2012, the Royal Hamilton Yacht Club Hall of Fame in 2015, and the Canadian Sailing Hall of Fame in 2018.

Mr. Green held an Engineering degree from Ryerson Polytechnic University, along with Business Administration certifications from the University of Western Ontario and McMaster University.

He will be much missed by the AllerGen community.

***Hamilton Spectator obituary***



## Dr. Param Nair finds effective antibody treatment for severe asthma

AllerGen investigator Dr. Parameswaran Nair and his team at the Firestone Institute for Respiratory Health have developed a new treatment for severe asthma.

In a study with over 200 participants, they found that use of the antibody dupilumab improved asthma symptoms and lung function in individuals with severe asthma, reducing the need for corticosteroids by up to 70%.

The results were published in the [New England Journal of Medicine](#).

“Ultimately, our goal is to find new treatment pathways that allow us to circumvent the use of [prednisone],” said Dr. Nair in a [news release](#) from St. Joseph’s Healthcare Hamilton.

Severe asthma is often treated with high doses of corticosteroids such as prednisone, which can have serious side effects when used for prolonged periods. No serious side effects were associated with dupilumab treatment, the researchers noted.



Dr. Nair (R) in the Sputum Lab at St. Joseph’s. Courtesy of The Research Institute of St. Joe’s – Hamilton

## Dr. Diana Royce shares lessons on network success from AllerGen

“A few years ago, the NCE studied why certain networks fail,” said Dr. Diana Royce toward the end of her closing plenary presentation at *SPOR Summit 2018 – Mapping the Progress of Patient-Oriented Research in Canada* on November 15, 2018, in Ottawa, ON.

“They found that typically, networks fail not because of the science or partnerships, but because of shortcomings in management and governance. If you don’t have a strategic plan, if you don’t have the governance structure in place, and if you don’t have an administrator to move things forward, these are critical weaknesses.”

Dr. Royce, AllerGen’s Managing Director, shared these and many more insights gleaned from her experience running two NCE networks with the SPOR stakeholders assembled at the event.

SPOR (Strategy for Patient-Oriented Research) Networks are CIHR-supported national collaborative research networks of diverse stakeholders that aim to accelerate the translation of research findings into patient care and health care policy.



Dr. Royce speaks at the 2018 SPOR Summit



## AllerGen investigators lead two platforms of new pan-Canadian microbiome research core



**Photo on LEFT:** University of Calgary team; top row from left: Paul Kubes, Joe Harrison, Braedon McDonald, Ian Lewis, and Markus Geuking. Bottom row, from left: Kathy McCoy, Marie Claire Arrieta, Shaunna Huston, and Laura Sycuro. **Photo on RIGHT:** University of Alberta team; top row from left: Eytan Wine, Ben Willing, and Karen Madsen. Bottom row, from left: Jens Walter, Anita Kozyrskyj, and Irina Dinu.

The CIHR is funding a new, national microbiome research core, and two of its five platforms are headed by AllerGen investigators.

The University of Calgary-based initiative, *The Integrated Microbiome Platforms for Advancing Causation Testing and Translation*, or IMPACTT, brings together a “brain trust” of experts to offer core microbiome services, including research protocols and advice.

AllerGen investigator Dr. Anita Kozyrskyj, (University of Alberta) and AllerGen HQP Dr. Marie-Claire Arrieta (University of Calgary) are co-leading the core’s “Human Cohort Design and Analysis” platform.

AllerGen investigators Drs Celia Greenwood (McGill University) and Fiona Brinkman (Simon Fraser University) are co-leading, together with Dr. William Hsiao

(The University of British Columbia), its “Computational” platform.

A five-year, \$3M CIHR grant was awarded to Dr. Kathy McCoy (University of Calgary), the leader of IMPACTT, to set up the research core.

“The 2010 CIHR microbiome grants, which funded my own SyMBIOTA initiative, enhanced the capacity for microbiome research in Canada,” observes Dr. Kozyrskyj.

“This second round of CIHR funding will enable microbiome researchers to come together across universities in a national network, to offer their expertise and support to the next generation of Canadian microbiome researchers.”

[Read the University of Calgary announcement.](#)

## CHILD Cohort Study families take the stage



Members of four families participating in the CHILD Cohort Study—one from each province represented—took the stage at Allergen's 2019 Research Conference, as kids and parents sat together on a panel and responded to questions from the scientists, students and others at the event.

The panel was part of a full-day program dedicated to CHILD. Delegates heard from the Study's Directors, past and present; from the site leaders who head the Study's four locations across Canada; and from leading experts involved in the Study, in fields spanning bioinformatics, cardio-metabolic and mental health, respiratory health and epidemiology.

The highlight of the day for many was hearing directly from the parents and kids whose commitment, of the past nine years, truly underpins the Study's success.

Ms. Linda Warner, Research Coordinator for CHILD's Vancouver site, moderated the panel, which was entitled: "CHILD participants give the REAL SCOOP: What is it like to be part of CHILD?"

From Vancouver, Maxime Doucas-Mooy and his mother Natasha Doucas spoke; Sara Celemin and her mom Tatiana Celemin represented Edmonton; Lily Hoffman and her mom Harmoni Hoffman represented Winnipeg; while Brynn Eddie and her dad Aaron Eddie represented Toronto.

They answered questions about their experiences in the Study; about what participating has entailed and how the process might be improved; about their motivations for staying involved; and about how their engagement has informed their perspectives on science.

The children expressed interest in producing posters about the Study, and, having enjoyed meeting each other, in finding a way to interact online with their peers in the Study.



*Off-duty in the foyer*

## CHILD completes first 8-year clinical visits

In August 2018, the first clinical visits were completed with CHILD Cohort Study participants at eight years of age.

This marked another major milestone for the Study, representing the inaugural implementation of its second phase of existence—beyond the originally planned end-point of the Study (clinical visits with the kids at age five).

For the eight-year visits, CHILD researchers expanded the protocol for the clinical assessment. They added a methacholine challenge test to measure

lung function, as well as new questionnaires about Body Image, School Performance, Puberty, and Physical Activity.

The new data collected will allow researchers to investigate additional health conditions with probable early-life origins, including cardiovascular disease and metabolic disorders such as diabetes.

CHILD researchers now aim to follow the study participants through to post-puberty, conducting clinical assessments of the participating children at ages 8-9, 11-12, and 14-15 years.



*Maxime Doucas-Mooy undergoes his 8/9-year-old clinical visit at CHILD's Vancouver site.*





## CHILD Edmonton celebrates five years

On September 8, 2018, the Edmonton site team of CHILD gathered 100 study researchers and participating families in the TELUS Science Centre to celebrate the completion of all clinical visits with children in the study at five years of age, and to thank the families for their continuing dedication to CHILD.

As part the festivities, Edmonton site leader Dr. Piush Mandhane reviewed some of the key publications and findings that have emerged from the study thanks to the involvement of participating families, and research coordinator Joyce Chikuma provided examples of how the study has helped propel interns, Research Assistants and post-doctoral students along their career paths. Interactive educational displays illustrated lung function and the gut microbiome—key areas of CHILD research.

Similar 5-year celebrations were previously held at the Manitoba, Toronto and Vancouver sites of CHILD.



Scenes from the Edmonton celebration

## Staff changes at Toronto, Manitoba sites of CHILD

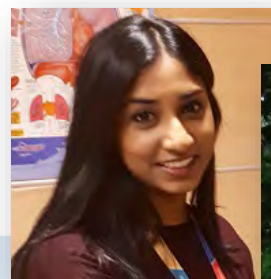
As of November 13, 2018, the Manitoba site of the CHILD Study has a new Research Coordinator: Brittany Semenchuk.

Brittany holds an Exercise Science degree from the University of Winnipeg and received her Master's of Exercise Psychology from the University of Manitoba in the fall of 2017.

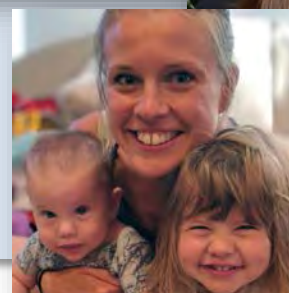
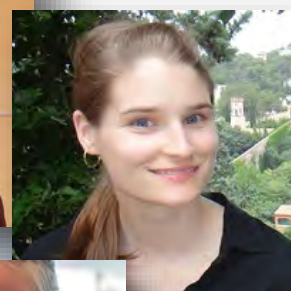
Aimée Dubeau, the long-time Research Coordinator for the Toronto site of CHILD, is now Project Manager with CHILD's Hamilton-based National Coordinating Centre.

Yaminee Charavanapavan, a Clinical Research Project Coordinator with The Hospital for Sick Children, has assumed Aimée's former position as the Toronto site Research Coordinator.

Yaminee Charavanapavan



Aimée Dubeau



Brittany Semenchuk (and kids)





## Asthma Canada recognizes Dr. Catherine Lemière

On World Lung Day (September 25), AllerGen's legacy partner Asthma Canada awarded its 2018 Leadership Award in Health Research to Dr. Catherine Lemière, in recognition of her "groundbreaking research on work-related asthma and airway inflammation."

Dr. Lemière, an AllerGen collaborator, is a professor of Medicine at the Université de Montréal and a Staff Chest Physician at Sacre-Cœur Hospital in Montreal.

The award recognizes researchers working to expand our understanding of asthma and finding new treatment options for people living with the disease. Past recipients include AllerGen investigators Drs Michael Brauer, Parameswaran Nair and Malcolm Sears.



*Dr. Catherine Lemière*

## AllerGen's Communications Director recognized

"She knows the science and can do the technical writing, but can also write for the lay public... She has positioned us on the web and in social media; she led the development of the CIHR award-winning CHILD Study video and of our Research *SKETCHES*—and she is a lot of fun."

These were among the observations of AllerGen's Managing Director, Dr. Diana Royce, about Kim Wright as she presented Kim with an Award of Excellence for Communications and Knowledge Mobilization (C&KMb) during the Gala evening of AllerGen's 2019 Research Conference.

Kim has advanced the C&KMb portfolio of AllerGen since 2013, serving first as its Manager and, from 2016, as its Director.



*Kim Wright (L) accepts an Award of Excellence for Communications and Knowledge Mobilization from Dr. Diana Royce (R).*

## KNOWLEDGE MOBILIZATION

### AllerGen researchers launch food allergy app for youth

Kung Food, a food allergy app for youth and teens developed with AllerGen support, was launched in October 2018 on the Mac App Store and on [Google Play](#).

In the first three months, the free app had been downloaded almost 2,000 times.

The mobile application aims to improve the knowledge and skills of youth living with food allergies. It features a quick reference allergy guide, an allergy attack simulator and allergy trivia games. The app is socially integrated, allowing users to build, educate and engage their own support groups.

The app was developed with AllerGen support by researchers at the [Children's Allergy & Asthma Education Centre](#) (CAAEC), a program of the Department of Pediatrics and Child Health at the Children's Hospital of Winnipeg, under the leadership of AllerGen investigator Dr. Allan Becker.

Collaborators on the project include AllerGen legacy partner [Food Allergy Canada](#) and its Youth Advisory Panel, as

well as [Tactica Interactive](#), a digital media company that specializes in cross-platform digital media strategy and products for researchers.

Shauna Filuk, a Nurse Educator from CAAEC, presented an abstract about the app—"Development of a Food Allergy App for School Age Children and Teens at Risk for Food-Induced Anaphylaxis"—at the Annual Meeting of the Canadian Society of Allergy and Clinical Immunology (CSACI) in Halifax in September 2018.



*L to R: Shauna Filuk and Nancy Ross of the CAAEC demo the Kung Food app at the 2018 CSACI Annual Meeting.*

## Environment Minister thanks CHILD for research contributions

On October 23, 2018, the Honorable Catherine McKenna, MP, Minister of Environment and Climate Change, spoke with Dr. Malcolm Sears, Founding Director of the CHILD Study, on the health impacts of exposure to air pollution, as well as the potential future health impacts of climate change.

"I want to thank you for your research. We make decisions based on science; it's really important," said Minister McKenna as their exchange drew to an end.

"It's great to be able to follow children from their early stages, as we're doing with [the CHILD Cohort Study] now, looking at the impact of the environment—as well as their genes, as well as their food, as well as all the other impacts on child health," responded Dr. Sears, "but the environment has a big impact on the way children grow and develop." [See the video.](#)



## CHILD breastfeeding research makes a splash

Ongoing research led by Dr. Meghan Azad, using data from the CHILD Cohort Study, has shed light on breastfeeding's protective effects against allergy and asthma, as well as obesity and diabetes, and the world is paying attention.

The University of Manitoba not only profiled Dr. Azad's findings in a [feature](#) on their website, but also placed an advertisement about them in the *Globe and Mail* newspaper in November 2018.

In December, *MD Magazine* published an [article](#) on Dr. Azad's exploration of the link between asthma and breastfeeding; in January 2019 Dr. Azad was interviewed on the [radio program](#) *Born to be Breastfed* with Marie Biancuzzo; and in February 2019 she was [interviewed](#) on CBC's *Quirks & Quarks* and her work was [featured](#) in *SPLASH! milk science update*.

The fight against obesity, allergies and asthma might not look like you'd expect.

Dr. Meghan Azad sees breastmilk as personalized medicine, each feed a dose that protects a baby from health complications. She and her research team are revealing profound benefits of breastmilk, and how it helps prevent allergies and fight the childhood obesity epidemic. With growing evidence comes an urgency to remove the stigma of breastfeeding in public spaces.

Once a participant of a childhood asthma study herself, Azad thinks about the next generation and how her work can not only inform maternal child health policies and nutritional guidelines, but also change societal attitudes - so mothers have the confidence and comfort to feed their babies no matter where they are.

Visit [news.umanitoba.ca/innovation](http://news.umanitoba.ca/innovation) to learn more.

UNIVERSITY OF MANITOBA

*Dr. Azad's work highlighted in the Globe and Mail*



## Inside *Success Stories* 12



The newest issue of *Success Stories* is now available.

**All in Good Time:** Amid ever-changing advice about when to introduce allergenic foods to babies,

**CHILD research sends a clear signal**

Featuring: Dr. Malcolm Sears & Maxwell Tran (McMaster University)

**The Stress Molecule:** A University of Alberta researcher and his team have identified a molecule that increases during acute stress. Featuring: Dr. Dean Befus & Eduardo Reyes-Serratos

**New Genes on the Scene:** New research by Allergen investigators identifies a group of genes that contribute to food allergy and peanut allergy

Featuring: Drs Denise Daley & Aida Eslami (University of British Columbia) & Dr. Yuka Asai (Queen's University)

**Anxious Mom, Allergic Kid?** A mother's distress not only affects her interactions with her baby—it can also throw the baby's immune system off-kilter

Featuring: Dr. Anita Kozyrskyj & Liane Kang (University of Alberta)

**HQP Profile—Philippe Bégin:** This former Allergen trainee won't rest easy until oral immunotherapy becomes accessible to all who need it

Featuring: Dr. Philippe Bégin (Sainte-Justine Hospital)

## Allergen's 2017-18 digital Annual Report



Experience Allergen's **2017-2018 digital Annual Report**.

The report features dynamic multimedia highlights of Network research, knowledge mobilization, commercialization, and capacity-building accomplishments and impacts in 2017-18.



**AirSENCE** air pollution monitor



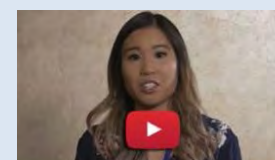
**CHILD** breastfeeding findings



**CHILD** Study milestone



A biomarker for stress



Asthma Canada-Allergen award supports research



Impact of *Emerging Clinician-Scientist Fellowship*



## HQP NEWS

### *Graduate Student Research Awards continue to support exceptional students*



*L to R: Xiaoshu Cao (University of Toronto), Ryan Huff (The University of British Columbia), Jaclyn Parks (Simon Fraser University), Hadeesha Piyadasa (University of Manitoba)*

On October 31, 2018, Asthma Canada and AllerGen were pleased to announce the 2018-2019 *Asthma Canada / AllerGen Graduate Student Research Award* recipients within Asthma Canada's National Research Program.

The grants support Master's and Doctoral students from across Canada who are involved in early-onset and late-onset asthma research.

The initiative not only advances promising research, but also fosters the next generation of outstanding asthma researchers in Canada.

"Through this awards program, we are enabling graduate students to investigate

better management practices and treatments, as well as to search for a cure for asthma, a condition that affects more than three million Canadians," said Vanessa Foran, President & CEO of Asthma Canada.

This marks the second disbursement of awards from this program. The [inaugural recipients](#) were announced in March 2018; see the [video interview](#) with award-winner Diana Pham in AllerGen's 2017-18 digital Annual Report.

[Press release](#)

## AllerGen HQP receive Banting Postdoctoral Fellowships

AllerGen HQP Drs Christopher Pascoe and Sarah Svenningsen were among a select group of researchers to be named 2018 Banting Postdoctoral Fellows.

Dr. Pascoe (Children's Hospital Research Institute of Manitoba) researches the role of early life environmental exposures on asthma risk. This Fellowship will support his investigation of the association between artificial sweetener consumption during pregnancy and the increased risk of asthma in offspring.

Dr. Svenningsen (McMaster University) will use the Fellowship to continue her research into the use of pulmonary magnetic resonance imaging (MRI) to investigate airway inflammation, which will help to improve asthma patient outcomes. She was previously awarded the 2017 John Charles Polanyi Prize in Physiology and Medicine in recognition of her innovative approach.

The federally funded Banting Postdoctoral Fellowships program awards 70 fellowships annually to applicants who positively contribute to the country's economic, social, and research-based growth, and who demonstrate research excellence and leadership in their fields of study.

Valued at \$70,000 per year for two years, it is Canada's most prestigious award for postdoctoral research.

## Trainee awarded two fellowships for CHILD research

In late 2018, AllerGen trainee Dr. Kozeta Miliku was offered two postdoctoral fellowships to support her CHILD-based research into the relationship between breastfeeding and lung health.

Dr. Miliku accepted a one-year *Breathing as One Research Fellowship* from the Canadian Lung Association. She was also offered a one-year Research Manitoba/Children's Hospital Research Institute of Manitoba Postdoctoral Fellowship Award.

Dr. Miliku's project, conducted under the supervision of CHILD site co-leaders Drs Meghan Azad and Allan Becker at the University of Manitoba, is entitled "The role of human milk oligosaccharides in the developmental origins of lung function and asthma." The research will use CHILD Cohort Study data in collaboration with the lab of Dr. Lars Bode at the University of California San Diego—building on their [previous joint work](#).

"Kozeta is breaking new ground with this exciting project that brings together two unique domains of the CHILD Study: human milk composition and lung health trajectories," comments Dr. Azad.

Dr. Miliku holds a Medical Doctorate from the Medical University of Tirana in Albania, and a PhD from Erasmus University in the Netherlands.

[See Dr. Miliku interviewed](#) about her research on *Global News*.

## Manali Mukherjee receives CAAIF-AllerGen Research Award

AllerGen trainee Dr. Manali Mukherjee is the recipient of the 2018 *Canadian Allergy, Asthma and Immunology Foundation (CAAIF)-AllerGen Research Fellowship Award in Clinical Immunology and Allergy*.

Dr. Mukherjee is a postdoctoral fellow in AllerGen investigator Dr. Param Nair's lab at McMaster University.

Dr. Mukherjee's project is entitled "Investigating autoimmune pathology underlying inflammatory airway diseases."

The project aims to explain the observed increase in the inflammatory component of severe asthma, facilitating the formulation of better therapeutic plans for those 5-10% of asthma patients with the more severe form of the disease.

Dr. Mukherjee also received a CIHR Postdoctoral Fellowship for her project "Investigating local vs. systemic autoimmune pathomechanisms in complex airways disease."



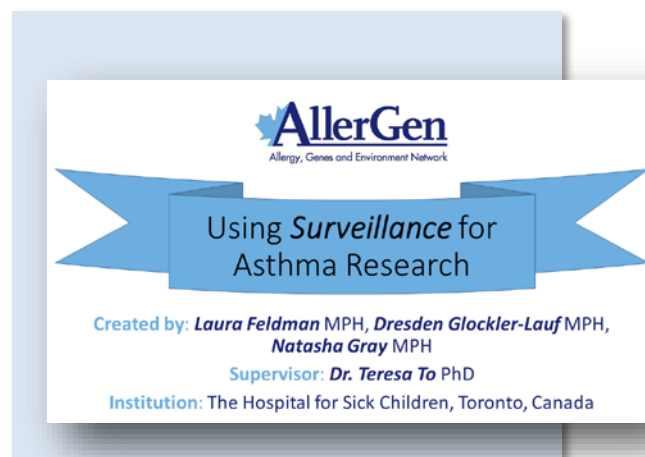
## HQP video describes public health surveillance of asthma in Ontario

In a [knowledge translation video](#) prepared for AllerGen's HQP Video Competition, trainees Laura Feldman, Dresden Glockler-Lauf and Natasha Gray provide an introduction to public health surveillance and describe how it is being used by the Ontario Asthma Surveillance Information System (OASIS) to monitor asthma in the province of Ontario.

The video also lists constructive uses to which health surveillance data can be put; for example, to facilitate the evaluation of treatment programs, the calculation of economic burden of disease, and the generation of research questions.

The three-minute video uses simple language and stop-motion animation with playful props to convey its information in a manner accessible to a lay audience.

The creators are based at The Hospital for Sick Children and supervised by AllerGen investigator Dr. Teresa To.



## 2019 AllerGen HQP Poster Competition winners



*L to R: Chelsea Cutler, Dr. Stuart Turvey, Darlene Liying, Danay Maestre-Battle, Amy Moorehead, Gurpreet Singhera, Manali Mukherjee, Eduardo Reyes-Serratos, Hein Min Tun, Dr. Anita Kozyrskyj, Laura Feldman, Mona Hamada, Maxwell Tran, Ruixue Dai, Dr. Padmaja Subbarao and Dr. Susan Elliott.*

In a display of the broad range of research encompassed within the network, AllerGen's 2019 HQP Poster Competition included 59 regular scientific posters, seven knowledge translation posters, and seven late-breaking posters.

The posters were exhibited during AllerGen's 2019 Research Conference in Toronto in January 2019, and the authors

all delivered a "one-minute, one-slide" presentation on their posters as part of the conference program.

AllerGen investigators Drs Susan Elliott, Gail Gauvreau and Kelly McNagny co-chaired the competition, and were among the 33 judges who assessed the entries.

The winners are listed below by category.

### Undergraduate

**1<sup>st</sup> place** **Maxwell Tran**, The Hospital for Sick Children. Supervisor: Dr. Padmaja Subbarao.  
*A symptom-based algorithm to improve asthma diagnosis in early childhood: the Canadian Healthy Infant Longitudinal Development (CHILD) Study*

### Master's

**1<sup>st</sup> place** **Chelsea Cutler**, The University of British Columbia. Supervisor: Dr. Stuart Turvey.  
*Early-life gut microbiome dysbiosis in childhood atopic dermatitis*

**2<sup>nd</sup> place** **Amy Moorehead**, McMaster University. Supervisor: Dr. Judah Denburg.  
*Thymic stromal lymphopoietin (TSLP) polymorphism rs1837253 minor allele may provide protection from asthma by altering TSLP long isoform gene expression in nasal epithelial cells*



## PhD

- 1<sup>st</sup> place** **Zihang Lu**, Hospital for Sick Children. Supervisor: Dr. Padmaja Subbarao.  
*Early lung function changes associated with wheezing phenotypes in the CHILd Study*
- 2<sup>nd</sup> place** **Danay Maestre-Battle**, The University of British Columbia. Supervisor: Dr. Chris Carlsten.  
*Di-butyl phthalate (DBP) worsens allergen-induced lung function decline and alters lower airway innate immunology in crossover human study*
- 3<sup>rd</sup> place** **Mona Hamada**, University of Saskatchewan. Supervisor: Dr. Darryl Adamko.  
*Investigating the diagnostic potential of selected urinary metabolites in asthma and COPD using an integrated LC-MS/MS platform*

## Open

- 1<sup>st</sup> place** **Hein Min Tun**, University of Alberta. Supervisor: Dr. Anita Kozyrskyj.  
*Delayed gut microbiota maturation during infancy is associated with food sensitization in children*
- 2<sup>nd</sup> place** **Liyong (Darlene) Dai**, The University of British Columbia. Supervisor: Dr. Stuart Turvey.  
*Early-life antibiotic exposure, the gut microbiome, and the risk of childhood asthma: data from the CHILd Cohort Study*
- 2<sup>nd</sup> place** **Manali Mukherjee**, McMaster University. Supervisor: Dr. Param Nair.  
*Airway anti-MARCO antibodies impair macrophage bacterial efferocytosis in severe eosinophilic asthma*

## Research Staff

- 1<sup>st</sup> place** **Ruixue Dai**, Hospital for Sick Children. Supervisor: Dr. Padmaja Subbarao.  
*Using latent class analysis to identify childhood wheeze phenotypes from birth to age 5 years*
- 2<sup>nd</sup> place** **Gurpreet Singhera**, The University of British Columbia. Supervisor: Dr. Del Dorscheid.  
*Characterization of cell subtypes in primary bronchial epithelial cells*

## Making Research Accessible

- 1<sup>st</sup> place** **Laura Feldman**, Hospital for Sick Children. Supervisor: Dr. Teresa To.  
*Measuring how the flu affects health care use for asthma*
- 2<sup>nd</sup> place** **Eduardo Reyes-Serratos**, University of Alberta. Supervisor: Dr. Dean Befus.  
*Calcium Binding Protein, Spermatid-Associated 1 (CABS1) in saliva may help us measure stress and intervene before stress-related diseases strike*

## Great science, lifelong connections made in Norway



Danay Maestre-Battle (R) and her Norwegian supervisor, Dr. Anette Kocbach Bølling.

“Norwegians are very proud of their culture, but not so much of their lunches,” notes AllerGen HQP Danay Maestre-Battle. “They complain about lunches being boring yet always eat the same open-face sandwich every day. They know it and laugh about it.”

Danay, a PhD candidate from Dr. Chris Carlsten’s lab at The University of British Columbia, was one of two Network trainees to receive a 2018 AllerGen *International Research Visit* award.

Danay was hosted in Oslo by Dr. Anette Kocbach Bølling, senior researcher at the Norwegian Institute of Public Health (NIPH), or *Folkehelseninstituttet* (“Try saying that!” comments Danay) in the fall of 2018.

While there, she conducted computational flow cytometry and statistical analysis of the outcomes associated with the phthalate inhalation study (PAIR), measured the background phthalate levels in the urine of PAIR study participants, and explored the country.

“The trip was one of the best experiences of my life,” says Danay. “Being close to my supervisor, Anette, was priceless. She is one of the best scientists I know—and also an exemplary mother and human being.”

At the NIPH, “I met scientists from different fields and every interaction was a great learning opportunity... I have grown as a scientist, as a global citizen and created new friendships that will last a lifetime, thanks to AllerGen and the support of my supervisors.”

Since 2013, AllerGen has granted 11 *International Research Visit* awards, an investment of \$132,891, to support trainee development.



The NIPH in Oslo (at right), and two scenes of rural Norway. Photos by Danay Maestre-Battle.

## AllerGen HQP shine at 2018 CSACI Scientific Meeting



*Back, L to R: AllerGen's Managing Director Dr. Diana Royce, Bassel Dawod, Casey Cohen, Owen Crump, CSACI President Dr. David Fischer, AllerGen HQP Coordinator Leah Graystone, Dr. Elinor Simons. Front, L to R: Myrtha Reyna-Vargas, Lauren Muttucomaroe, Loubna Akhabir, Michael Chen.*

AllerGen trainees continue to shine at the AllerGen/Canadian Society of Allergy and Clinical Immunology (CSACI) Poster Competition, winning 8 of the 15 awards granted at the Fall 2018 event.

The competition was held in conjunction with CSACI's 2018 Scientific Meeting,

from September 12 to 16, 2018, in Halifax, NS. This was the sixth 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**

#### **1<sup>st</sup> place**

**Myrtha Reyna-Vargas**, University of Toronto  
Supervisor: Nicholas Mitsakakis

Title: "Developing an 'urban greenness' index, an approach based on Toronto census metropolitan areas"

### **Allied Health**

#### **1<sup>st</sup> place**

**Lauren Muttucomaroe**, The University of British Columbia

Supervisor: Stuart Turvey

Title: "Strategies for Participant Retention in Pediatric Longitudinal Research Studies: Lessons Learned from the Vancouver Site of the CHILD Study"

**Food Allergy/Anaphylaxis****2<sup>nd</sup> place**

**Casey Cohen**, McGill University

Supervisor: Bruce Mazer

Title: "Differential profiling of small molecule distribution in raw vs. roasted peanuts using high-resolution magic angle spinning (HR-MAS) and solution <sup>1</sup>H nuclear magnetic resonance (NMR) spectroscopy"

**3<sup>rd</sup> place**

**Bassel Dawod**, Dalhousie University

Supervisor: Jean Marshall

Title: "The role of maternal TLR2 during breastfeeding on oral tolerance development"

**Immunology****1<sup>st</sup> place**

**Michael Chen**, Meakins-Christie laboratories

Supervisor: James Martin

Title: "Heparin-binding EGF-like growth factor modulates the bidirectional activation of CD4+ T cells and dendritic cells independently of the epidermal growth factor receptor"

**2<sup>nd</sup> place**

**Owen Crump**, Dalhousie University

Supervisor: Jean Marshall

Title: "Priming human mast cells with IL-4 reduces gene expression of viral recognition genes TLR2 And MyD88"

**Other Allergy/Immunology****1<sup>st</sup> place**

**Melanie Wong**, McMaster University

Supervisor: Paul Keith

Title: "Prevalence of skin prick test positivity to inhalant allergens in patients with chronic spontaneous urticaria (CSU): a systematic literature review"

**2<sup>nd</sup> place**

**Loubna Akhabir**, McMaster University

Supervisor: Judah Denburg

Title: "Alterations in cord blood hemopoietic progenitor cell surface receptor expression precede atopy and poor lung function at 1- and 3-years in the Canadian Healthy Infant Longitudinal Development Study"

**See the full list of CSACI poster winners.**

Canadian Society of Allergy and Clinical Immunology  
La Société canadienne d'allergie et d'immunologie clinique

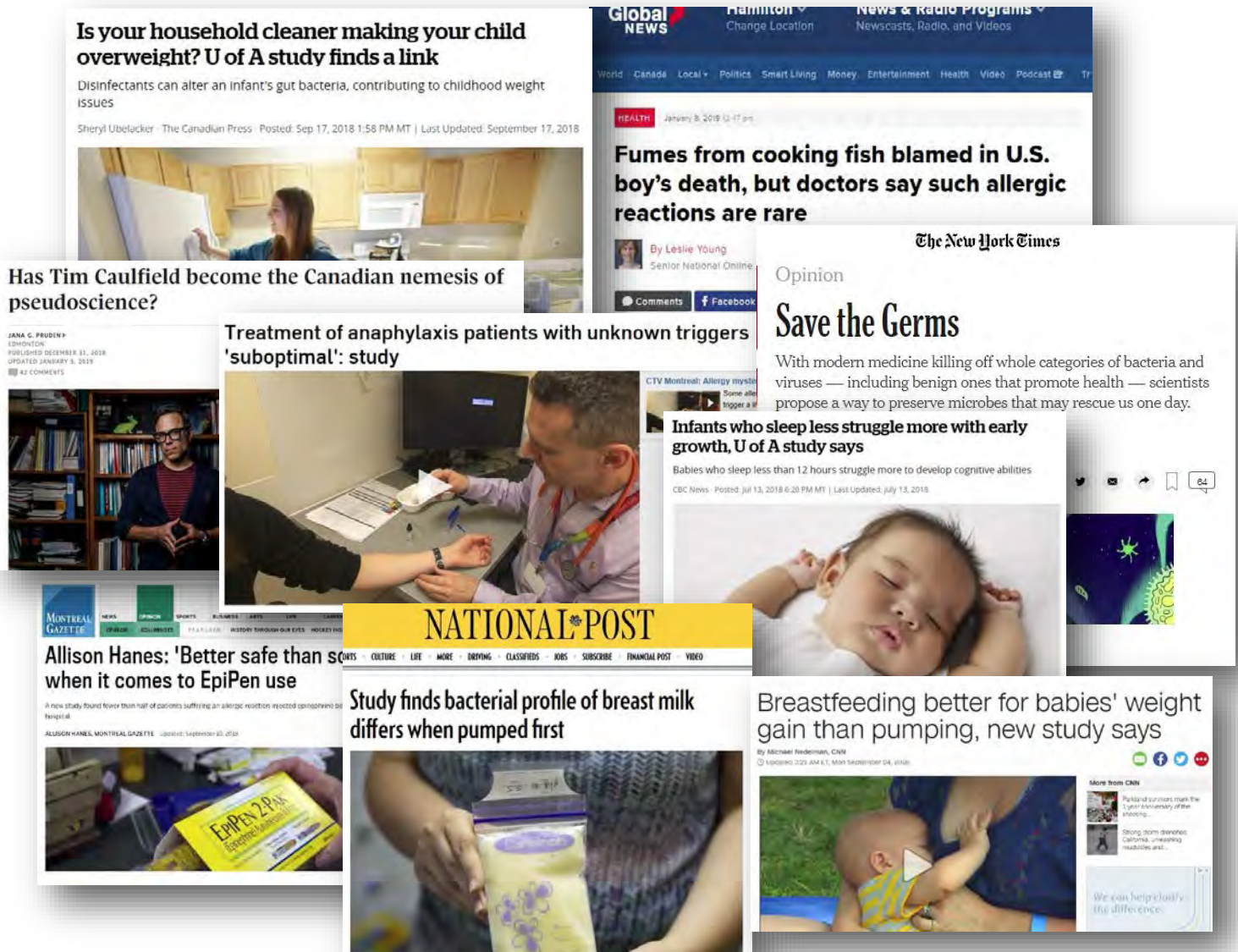


**CSACI 2018**  
**HALIFAX**



# MEDIA

## AllerGen Researchers in the News



### Dr. Meghan Azad

- *National Post, Telegraph, CTV News, US News & World Report, NYT, CNN*

### Dr. Moshe Ben-Shoshan

- *CTV, Global, Reuters, Allergic Living, Montreal Gazette*

### Prof. Timothy Caulfield

- *Globe & Mail, CBC, Folio*

### Dr. Michael Kobor

- *Telegraph, Independent, Irish Sun*

### Dr. Anita Kozyrskyj

- *Guardian, CBC, ABC, Toronto Star, Globe & Mail, Fox, CNN*

### Dr. Piush Mandhane

- *Global News, CBC, Edmonton Journal, Folio*

## EVENTS

## A NETWORK TRANSFORMING AllerGen's final research conference... and beyond

*Continued from page 1*

A full day of the event was dedicated to the CHILD Cohort Study, the highlight of which was a panel discussion featuring four child participants and their parents ([see p. 31](#)).

A session on the Clinical Investigator Collaborative included a comment from Paul Newbold, representing industry partner AstraZeneca: "There is nowhere else in the world you can go to do a multicentre allergen challenge [except at the AllerGen CIC]..."

Biomarkers and Bioinformatics (B&B) researchers provided a survey of outputs being mobilized for social impact. A half-day presentation of food allergy research results revealed new prevalence data and incorporated clinical and patient voices.

Full program and speaker details can be found in the [Conference Program](#). The winners of the event's Poster Competition are featured on [page 41](#) above; all the poster abstracts can be accessed [here](#). Of honourees recognized during the gala evening, read about Dr. Malcolm Sears on [page 21](#), and the Michelle Harkness Mentorship Award winners on [pages 16-19](#).

A full gallery of event photos can be seen on the Conference [website](#).

Ninety-nine percent of respondents to a post-conference evaluation survey ranked their overall conference experience as "excellent" or "very good."



*A conference highlight: CHILD families take the stage*



*AstraZeneca's Paul Newbold speaks*



*B&B panel*



*Food allergy under discussion*

**Continues on next page**



## Responses to the Conference

**"An excellent and memorable conference experience - thank you, AllerGen!"**

**"The CHILD families were EXCELLENT. To me, this session was an absolute highlight of the conference, and captured the impact of our network."**

**"Memorable event. Bittersweet in some respects. Really appreciated the recognition and honoring of Michelle Harkness."**

**"An excellent meeting both for science and networking."**

**"The conference was extremely well organized, and a sense of community was evident everywhere. Congratulations on this remarkable achievement!"**

**"Congratulations on 2 cycles of funding and the generation of a legacy of stellar scientific output that will hopefully lead to eradication of allergic disease in the future! It was a pleasure being a part of this network."**

**"It was a wonderful experience being a part of the AllerGen network. I feel so proud and excited every time I attend a meeting. Thank you"**



*Dr. Judah Denburg*



### *What's next?*

AllerGen's NCE mandate ends on March 30, 2019 and [the NCE program itself is officially sunseting](#), so the question of the network's future was on the minds of many at the event.

"People have asked me, 'What is going to happen after AllerGen?'" said Scientific Director Dr. Judah Denburg in his closing remarks.

"Well, this is what is going to happen: on-going collaborations and discussions; big data to look at and 'omics to decipher in the CHILD Study; clinical trials that will go on; teams that have been built—like SyMBIOTA, CANUE, Get-FACTS—will remain big-letter items..."

“We’re not talking about network death; we’re talking about network transformation,” added AllerGen’s Managing Director Dr. Diana Royce.

Network continuity after the era of NCE funding will take various forms, beyond the independent continuation of AllerGen’s Legacy Projects (the CHILD Cohort Study, the Clinical Investigator Collaborative [CIC] and the National Food Allergy Strategic Team), beyond off-shoot initiatives like CANUE, and beyond the student capacity-building opportunities being carried forward by legacy partners.

The AllerGen administrative core will continue operations—initially, with the support of NCE Management funds, which were awarded to AllerGen in 2018 to facilitate a two-year period of wind-down activities—mainly reporting and knowledge mobilization—through to 2021.

On recommending the award of these wind-down funds to AllerGen, the NCE reviewers observed:

“By all metrics... the network has been extremely successful... AllerGen is a truly multidisciplinary network... [and] is a well-known international entity, which is viewed as a strong success story that will long outlive NCE funding.”

After 2021, there are plans for AllerGen to continue providing administrative support to CHILD and the CIC, and potentially to other research networks that may emerge in the post-NCE world.

### Scenes from the 2019 Research Conference

Blake Murdoch talks to Marie-Claire Arietta



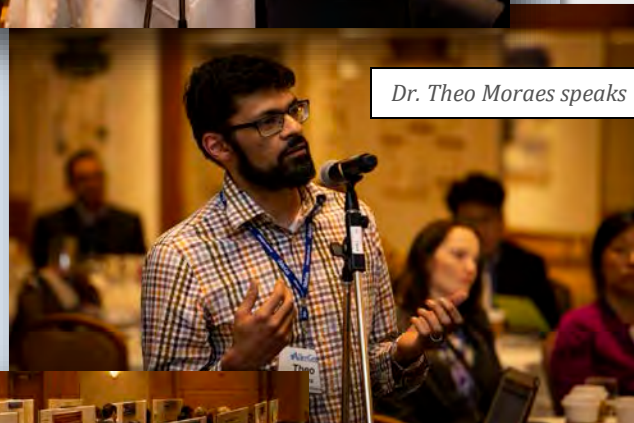
Food Allergy Canada’s Jennifer Gerdtz at the podium



Dr. Bruce Mazer at the mic



Dr. Theo Moraes speaks



Perusing the posters





Finally, as Dr. Royce emphasized in her closing remarks to the Conference, those individuals who were changed by their involvement in AllerGen will carry with them “that network way of working, that spirit of collaboration and that sense of family so many have talked about at this event.”

“There is so much to be done to build on the incredible foundation that AllerGen has built over the last 14 years,” Dr. Royce concluded.

“Even when our NCE funding comes to an end, the AllerGen network will live on in its participants.”



*Dr. Diana Royce*

**“AllerGen has transformed Canada’s research and capacity-building landscape in allergic disease.”**

—opening remarks, Dr. Patrick Deane,  
President of McMaster University



*Members of the Executive Committee of the  
AllerGen Students & New Professionals Network*

“We must not underestimate the importance of AllerGen’s contributions to research and science, to training, and to health policy and clinical practice...”

—greeting from former AllerGen  
Board Chair Dr. Howard Bergman

“Congratulations on 14 amazing years... all of my colleagues at CIHR are very impressed with AllerGen....”

—greeting from Dr. Brian Rowe,  
ICRH Director, CIHR



*Members of AllerGen’s Research Management Committee (RMC)*

**“AllerGen has contributed insights into key areas that inform Health Canada’s work... our collaboration has been fruitful.”**

—greeting from Stephen Norman, Director, Bureau of  
Chemical Safety (Health Canada’s Food Directorate)

## CHILD findings: a conversation starter at the Best Start Resource Centre Conference

On February 13, 2019, AllerGen and the CHILD Cohort Study exhibited at the Best Start Resource Centre Conference, an annual event for service providers working with parents, parents-to-be, and families in the areas of preconception, prenatal and postpartum health, and early life development.

The event, which drew over 300 delegates (including public health nurses; prenatal and early childhood educators; social workers and counsellors; midwives and doulas; family support workers; and community health workers), offered an outstanding networking, educational and resource-sourcing opportunity.

The AllerGen-CHILD exhibit welcomed delegates to chat, and to learn about the Study's findings on modifiable, early exposures associated with child health through AllerGen's *Success Stories* magazines, ResearchSKETCHES lay summaries, infographic flyers, CHILD videos and the Study's website.

Aimée Dubeau, CHILD's project manager, and Kim Wright, AllerGen's Director of Communications & Knowledge Mobilization, provided staff support.

The Best Start Resource Centre is a program of [Health Nexus Santé](#), a health promotion organization that supports service providers with resources on a range of topics related to health in pregnancy, infancy and childhood.

Previously, on September 18, 2018, Dr. Meghan Azad (co-leader of CHILD's Manitoba site) delivered a webinar on her CHILD breastfeeding research to Health Nexus Santé stakeholders, and AllerGen regularly shares its findings with the group's network of 3,700 members.

Each year, AllerGen participates in workshops, seminars and events with partners across the country to mobilize the Network's research findings to those who can put them to use.



L to R: Kim Wright and Aimée Dubeau spread the word.

## 2019 Sandbox Summit: Collaborating to improve youth health



APRIL 11, 2019 @ TELUS HARBOUR, TORONTO

AllerGen's legacy partner organization, The Sandbox Project, will hold its 9<sup>th</sup> annual stakeholder gathering—The Sandbox Summit—on April 11, 2019, in Toronto, ON.

Under the theme “Collaboration that Counts,” the event will gather youth, researchers, non-profits, corporate Canada, families and policymakers for interactive learning and cross-sectoral collaboration to address the most pressing challenges in child and youth health and wellbeing.

As in previous Summits, representatives of AllerGen and the CHILD Cohort Study will participate, to update stakeholder groups on the Study's progress and to solicit their input on CHILD research priorities and knowledge mobilization efforts.

[More information](#) | [Register](#)

## Microbiome Summit to feature CHILD breastfeeding research

The *1st Microbiome Movement – Maternal & Infant Health Summit* will take place May 22-24, 2019, in Boston, MA, USA.

Among the presenters, Dr. Meghan Azad (University of Manitoba) will discuss how breastfeeding and human milk shape the infant gut microbiota and influence health trajectories, based on her pivotal work on the CHILD cohort.

“Join the leaders in maternal-infant microbiome research as they discuss the latest data-driven case studies and forge the collaborations you need to unlock the full potential of preventative, therapeutic and nutritional solutions in the key window of opportunity of the first 1000 days of life,” say the organizers.

[More information](#) | [Register](#)



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