



For immediate release

CHILD Cohort Study researchers awarded \$2M to study microbial causes of asthma

WINNIPEG, MB (31 January 2020)

A \$2 million award from the Canadian Microbiome Initiative 2 (CMI2) program will allow CHILD Cohort Study researchers to examine the trillions of microorganisms living inside the human body and uncover the role they play in causing asthma.

This five-year project will be co-led by Dr. Padmaja Subbarao at The Hospital for Sick Children and Dr. Meghan Azad at the University of Manitoba.

[Funding was announced](#) by the Honourable Patty Hajdu, Canada's Minister of Health, as part of an \$18-million investment from the Canadian Institutes of Health Research (CIHR) to better understand the role of the microbiome in human health and disease.

"This CIHR award is evidence of the incredible value of the CHILD Cohort Study (CHILD) as a platform for novel research," said Dr. Subbarao, Director of CHILD, a pediatric respirologist at SickKids, and an Associate Professor at the University of Toronto.

"CHILD researchers have already published novel associations between important risk factors and asthma development, such as traffic-related air pollution, infant feeding practices, the gut microbiome, and early-life lung function trajectories. This funding will help us further that knowledge to understand the biological relationship between these risk factors and asthma, which in turn will lead to the development of new preventative and therapeutic interventions."

The project, *Causational Roles of the Gut Microbiome in Childhood Asthma: Leveraging the CHILD Cohort Study*, will mine the extensive environmental, clinical and microbiome data, and biological samples available from CHILD to investigate:

- how an infant's genetics, sex, and early-life exposures influence the microbiome-immune system co-development;
- the importance of breastmilk and antibiotics in shaping the infant gut microbiome;
- the impact of the microbiome on the risk of asthma; and
- microbiome-targeted interventions for asthma in mice.

"CHILD has shown that breastfed babies have higher levels of beneficial gut bacteria and a lower risk of developing asthma as they get older," commented Dr. Azad, co-lead of the CHILD Manitoba site, a Canada Research Chair in Developmental Origins of Chronic Disease at the University of Manitoba, and a research scientist at the Children's Hospital Research Institute of Manitoba (CHRIM). "This research will use new technologies to find out how gut bacteria are causing or preventing asthma and the role that early-life exposures, such as breastfeeding, play in modifying those bacteria."

“Asthma affects about one in 10 children and it is the most common reason why children miss school or end up in hospital,” she added. “We are truly delighted to be recognized with this award, which will ultimately help us to improve the lives of Canadian children.”

Principal Investigators on the project include: Dr. Qingling Duan (Queen’s University); Dr. Jeremy Hirota (McMaster University); Dr. Anita Kozyrskyj (University of Alberta); Dr. Wendy Lou (University of Toronto); Dr. Kelly McNagny (The University of British Columbia); Dr. Michael Surette (McMaster University); and CHILD Co-Director Dr. Stuart Turvey (The University of British Columbia).

About the CHILD Cohort Study: Launched in 2008 by CIHR and AllerGen NCE, the [CHILD Cohort Study \(CHILD\)](#) is tracking nearly 3,500 Canadian infants and their families to help determine the root causes of chronic diseases such as asthma, allergies and obesity. CHILD spans four provinces, involving over 140 multidisciplinary researchers, students and research staff. [Watch the CHILD Cohort Study videos.](#)

About the Children’s Hospital Research Institute of Manitoba: The Children’s Hospital Research Institute of Manitoba was established in 2001. [CHRIM](#) is the research division of the Children’s Hospital Foundation of Manitoba. At the Institute, more than 270 world-class pediatric medical researchers, technical staff, students and support staff are involved in over \$20 million of research and clinical trial activity each year.

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