

15th Annual Child Health Research Days

NAVIGATING THE INFORMATION

AVALANCHE

OCTOBER 22-24, 2019

Presented by:





NAVIGATING THE INFORMATION

AVALANCHE



CHILD HEALTH RESEARCH DAYS



CEO'S MESSAGE



On behalf of everyone at the Children's Hospital Research Institute of Manitoba, we welcome you to the 2019 Annual Child Health Research Days (CHRD) at the beautiful RBC Convention Centre.

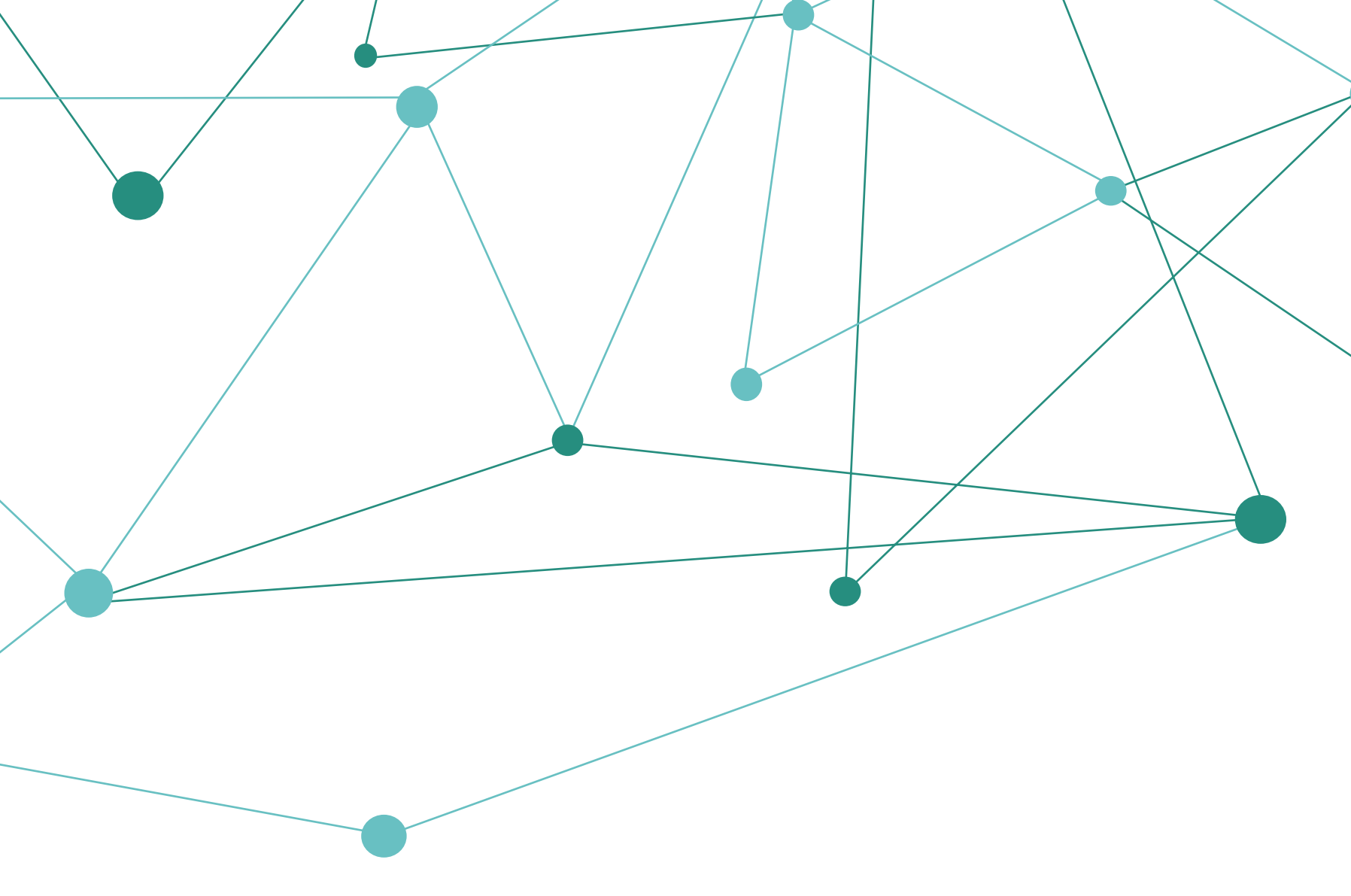
We are proud to be celebrating the 15th annual year of hosting CHRD and its history of highlighting the cutting-edge child health research happening in Manitoba, across the country, and around the world.

The focus of this year's conference is to critically appraise sources of data and to be better able to integrate large data into your research design. Whether you are an expert or a beginner, this conference will present good practices everyone should be aware of to access and integrate data. We hope to arm conference attendees, invited guests and patient partners with the tools and approaches needed to navigate this information avalanche.

Finally, I would like to extend a warm welcome to everyone visiting us from out of town for the conference. I hope you have an opportunity to explore our beautiful city during your stay. A special welcome to our guest speakers who have travelled from as far as the United Kingdom to share their knowledge and experiences with us here this week.

Thank you again for attending the 15th Annual Child Health Research Days, I hope you are inspired!

Terry Klassen, MD, FRCPC
CEO & Scientific Director,
Children's Hospital
Research Institute of
Manitoba





2019 PROGRAM

Child Health Research Days

OCTOBER 22-24

Tuesday, October 22, 2019

7:30 - 8:30 AM

Breakfast & Registration

8:30 AM - 12:00 PM

WISDOM & CHRIM Mentorship Pre-Conference Symposium

Equity, Diversity, Inclusion - Navigating the Scientific Landscape

Chairs: Drs. Neeloffer Mookherjee & Kristy Wittmeier

8:30 - 8:45 AM

Introduction to WISDOM

Dr. Neeloffer Mookherjee

8:45 - 9:45 AM

Dr. Jamilah Hackworth | University of Cincinnati

Did I Really Hear That? Strategies for Responding to Bias

9:45 - 10:45 AM

Dr. Marcia Anderson | University of Manitoba

Ten Ways Organizations Get in Their Own Way in Indigenous Achievement/Reconciliation/Anti-racism/Diversity/Inclusion

10:45 - 11:00 AM

BREAK

11:00 AM - 12:00 PM

Panel Discussion

Marcia Anderson, Janilyn Arsenio, Jamilah Hackworth, Jackie Gruber, Jacqueline Richelle, Shayne Taback

12:00 - 1:15 PM

Lunch / Registration

1:30 - 1:55 PM

Greetings

Dr. Terry Klassen, CEO & Scientific Director, Children's Hospital Research Institute of Manitoba
Elder Sherry Copenace, Treaty 3, University of Manitoba
Scott Lancaster, Board Chair, Children's Hospital Research Institute of Manitoba

2:00 - 5:15 PM

Session 1 | Advances in Metabolic Disease Research

Chair: Dr. Vern Dolinsky

2:00 - 3:00 PM

Dr. Michael Mendelson | Harvard Medical School

Dissecting Epigenetic Contributors to the Intergenerational Inheritance of Cardiometabolic Disease in Human Populations

3:00 - 3:15 PM

Mateo Tomczyk | DREAM Trainee

Cardiac SIRT3 Attenuates Doxorubicin Induced Dilated Cardiomyopathy

3:15 - 3:30 PM

BREAK

3:30 - 4:00 PM

Dr. Ayesha Saleem | University of Manitoba

Harnessing the Potential of Extracellular Vesicles to Treat Metabolism-Related Disorders

4:00 - 5:00 PM

Dr. Greg Steinberg | McMaster University

Cellular Energy Sensing and Metabolism: Implications for Treating Diabetes

5:00 - 5:15 PM

Matthew Martens | DREAM Trainee

Defending the Neonatal Heart: Misoprostol Attenuates Hypoxia-Induced Cardiomyocyte Proliferation through Bnip3 and Perinuclear Calcium Signaling

7:30 - 10:00 PM

Networking Mixer | Trainee Host: Stephanie Kereliuk

The Blaze @ the Delta

Wednesday, October 23, 2019

7:30 - 8:30 AM

Breakfast & Registration

8:30 - 8:40 AM

Greetings

Dr. Terry Klassen, CEO & Scientific Director, Children's Hospital Research Institute of Manitoba
Dr. Gary Glavin, Vice-President (Research & International), University of Manitoba

8:40 AM - 12:00 PM

Session 2 | Big Breaths: Navigating Early Challenges on the Road to Lung Health

Chairs: Drs. Shyamala Dakshinamurti & Neeloffer Mookherjee

8:45 - 9:45 AM

Dr. Rosalind Wright | Icahn School of Medicine

Disentangling Social and Chemical Environmental Influences on Childhood Asthma Disparities: Moving Toward the Exposome Concept

9:45 - 10:00 AM

Thomas Mahood | BOB Trainee

Combining Lung Proteomic Profiles Identifies Common and Hidden Biological Insight in a Mouse Model of Allergic Asthma

10:00 - 10:15 AM

BREAK

10:15 - 11:15 AM

Dr. Vivek Lal | University of Alabama

Lung Microbiome: Acquisition and Role in Chronic Lung Disease of Prematurity

11:15 AM - 12:00 PM	Dr. Richard Keijzer University of Manitoba MiRacles for Babies with Abnormal Lung Development and a Hole in Their Diaphragm
12:00 - 12:45 PM	Lunch / Vendor Show (opens)
12:45 - 6:00 PM	Session 3 Ready, Set, Go! Fueling CHRM Research Chair: Dr. Andrew Halayko
1:00 - 2:00 PM	Dr. Tobias Karakach Children's Hospital Research Institute of Manitoba Lessons from Wilm's Tumor Multi-Omics Data Integration: Obtaining Biologically Relevant Information
2:00 - 3:30 PM	Goodbear's Den Moderators: Chelsea Day & Landon Falk
3:30 - 6:00 PM	Trainee Poster Session Vendor Show (continued)
6:30 - 9:00 PM	Public Event Presented by the Children's Hospital Foundation of Manitoba Sponsored by the Winnipeg Rh Institute Foundation
6:30 - 7:00 PM	Registration
7:00 - 9:00 PM	Professor Timothy Caulfield University of Alberta Pop Culture vs. Science: How to Survive the Avalanche of Health (Mis)Information!

Thursday, October 24, 2019

7:30 - 7:55 AM

Light Breakfast

7:55 - 9:00 AM

Grand Rounds | Hosted by the Department of Pediatrics & Child Health

7:55 - 8:00 AM

Greetings

Dr. Patricia Birk, Department of Pediatrics & Child Health, University of Manitoba

8:00 - 9:00 AM

Professor Timothy Caulfield | University of Alberta

Scienceploitation, Unproven Therapies & the Public Face of Research

9:00 AM - 12:00 PM

Session 4 | Pediatric Neurodevelopmental and Rehabilitation Research in Manitoba

Chair: Dr. Florincia Ricci

9:10 - 10:00 AM

Dr. Peter Rosenbaum | McMaster University

Developmental/Behavioural Paediatrics in the 21st Century: Is Anything New, and Why Should I Care?

10:00 - 11:00 AM

Dr. Alison Gerlach | University of Victoria

Orienting Children's Rehabilitation Towards Equity

11:00 - 11:10 AM

BREAK

11:10 AM - 12:10 PM

Panel Discussion

Carrie Costello, Alison Gerlach, Ana Hanlon-Dearman, Peter Rosenbaum, Rachel Vanderzwaag

12:15 - 1:00 PM

Lunch / Vendor Show

1:00 - 4:30 PM

Session 5 | Transdisciplinary Research on the Developmental Origins of Health: From Biology to Policy

Chairs: Drs. Nathan Nickel & Andrew Tse

1:00 - 1:45 PM

Dr. Kaitlin Wade | Bristol Medical School

Mendelian Randomization: Integration of Genetics with Population Health Data to Improve Causal Inference

1:45 - 2:15 PM

Dr. Nathan Nickel | University of Manitoba

Leveraging and Integrating Cross-Sector Whole-Population Data for Child Health and Development Research

2:15 - 2:30 PM

Sanjana Syeda | DEVOTION Trainee

Development of a 3D-Bioprinted Pulmonary Arterial Smooth Muscle Tissue Model to study Persistent Pulmonary Hypertension of the Newborn

2:30 - 2:45 PM

BREAK

2:45 - 3:30 PM

Dr. Fiona Brinkman | Simon Fraser University

Integrating data. Integrating communities.

3:30 - 4:00 PM

Dr. Alex Singer | University of Manitoba

Using Electronic Medical Record Data for Surveillance and Research of the Most Common Diseases in Children

4:00 - 4:15 PM

Sarah Turner | DEVOTION Trainee

Infant Feeding, Human Milk Polyunsaturated Fatty Acids and Child Behaviour at Age 5 Years: Preliminary Results from the Longitudinal CHILD Birth Cohort Study

5:30 - 9:00 PM

Awards Dinner and Gala | York Ballroom | Host: Dr. Terry Klassen

5:30 - 6:00 PM

Cocktails

6:00 - 9:00 PM

Awards Dinner and Gala



2019

CHILD HEALTH
RESEARCH DAYS

SPEAKER LINEUP





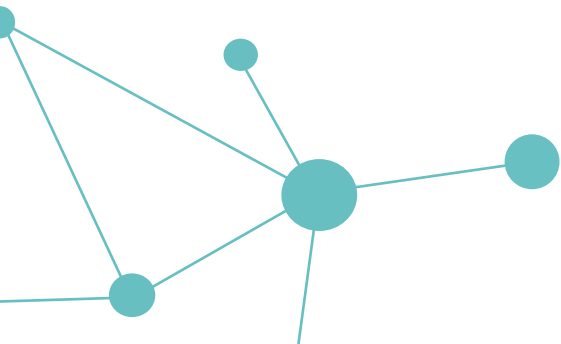
Marcia Anderson, MPH, MD, BSc

University of Manitoba

Dr. Marcia Anderson is Cree-Anishinaabe and grew up in the North End of Winnipeg. Her family roots go back to the Norway House Cree Nation and Peguis First Nation in Manitoba. She practices both Internal Medicine and Public Health as a Medical Officer of Health with the Winnipeg Regional Health Authority.

She is the Executive Director of Indigenous Academic Affairs in the Ongomiizwin Indigenous Institute of Health and Healing, Rady Faculty of Health Sciences, University of Manitoba. Current active areas of work include leading the development and implementation of Truth and Reconciliation Response Action Plans, Indigenous youth health, and Indigenous health care quality.

She serves as the Chair of the Indigenous Health Network of the Association of Faculties of Medicine of Canada. She is a Past President of the Indigenous Physicians Association of Canada and Past Chair of the Pacific Region Indigenous Doctors Congress. She was recognized for her contributions to Indigenous peoples health with a National Aboriginal Achievement Award in March 2011. In 2018, she was named one of the 100 most powerful women in Canada by the Women's Executive Network and one of the 100 most fascinating people in Manitoba.



Dr. Fiona Brinkman is a Professor in Bioinformatics and Genomics at Simon Fraser University, most known for R&D of widely used computer software that aids more integrative, systems-based analyses of microbe and human genomics data.

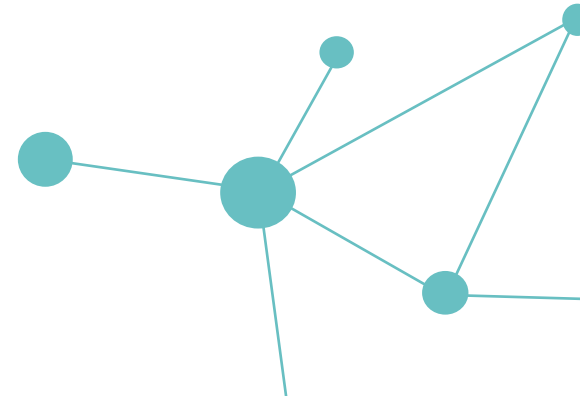
She co-leads CHILDbd development, to enable more integrative analysis of diverse CHILDbd Study data, and she co-leads development of the IRIDA.ca platform, which is now used as the primary platform for Canada's Public Health Agency to track infectious disease outbreaks using combined epidemiological, lab, and genomics data. She coordinates two large consortiums, involving hundreds of researchers from 15 countries, enabling better genomic data sharing in an ethical framework.

She has a strong interest in developing more preventative, sustainable approaches for disease control, and also in bioinformatics education and mentoring young scientists. She is on several committees and Boards, including the Board of Directors for Genome Canada, and Chairs the Scientific Advisory Board for the European Nucleotide Archive. Her awards include a TR100 award from MIT, Thompson Reuters "World's Most Influential Scientific Minds" and High Cited Researcher, and most recently, she became a Fellow of the Royal Society of Canada.



Fiona Brinkman, MPH, MD, BSc

Simon Fraser University





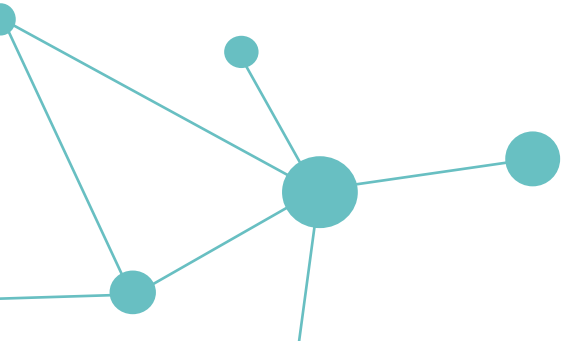
Timothy Caulfield, BSc, LLB, LLM

University of Alberta

Professor Timothy Caulfield is an unrivaled communicator who debunks myths and assumptions about innovation in the health sector— from research on stem cells to diets to alternative medicine— for the benefit of the public and decision-makers. He is a Canada Research Chair in Health Law and Policy, a professor in the Faculty of Law and the School of Public Health, and a Research Director of the Health Law Institute at the University of Alberta.

Over the past several years, he has been involved in a variety of interdisciplinary research endeavours that have allowed him to publish over 350 articles and book chapters. His research focuses on topics like stem cells, genetics, research ethics, the public representations of science, and health policy issues. The recipient of numerous academic and writing awards, Professor Caulfield is also a Fellow of the Royal Society of Canada, the Trudeau Foundation, and the Canadian Academy of Health Sciences.

Professor Caulfield also writes frequently for the popular press on a range of health and science policy issues and is the author of two national bestsellers: *The Cure for Everything: Untangling the Twisted Messages about Health, Fitness and Happiness* (Penguin, 2012) and *Is Gwyneth Paltrow Wrong About Everything?: When Celebrity Culture and Science Clash* (Penguin, 2015). His most recent book is *The Vaccination Picture* (Penguin, 2017). He is also the host and co-producer of the award-winning, hit documentary TV show, *A User's Guide to Cheating Death*, which has been shown in over 60 countries and is currently streaming on Netflix.



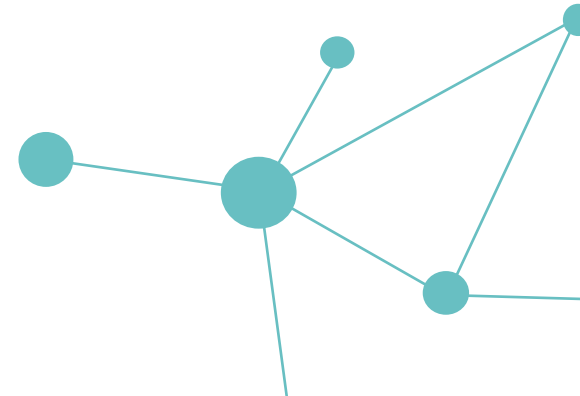
Grounded in over 25 years of being an occupational therapist with families and children in diverse settings, Dr. Alison Gerlach's research and scholarship aims to generate greater understandings of how early years and pediatric policies, practices, and models of service delivery can support the health and wellbeing of families and children who are at greater risk of health inequities.

During much of her career, she has been privileged to have, and continues to be humbled by her relationships with Indigenous communities, families, and early years programs and organizations in BC. These relationships have had a profound impact on her thinking and doing in relation to supporting family and children's health and wellbeing. Dr. Gerlach is currently an Assistant Professor in the School of Child and Youth Care at the University of Victoria. In this position, she is continuing her interdisciplinary, intersectoral, and community-engaged research to further inform how early years, early intervention therapy, and child health programming can support families and children who are 'vulnerable' as a result of social and structural factors.



Alison Gerlach, PhD, MSc

University of Victoria





Tobias Karakach, PhD

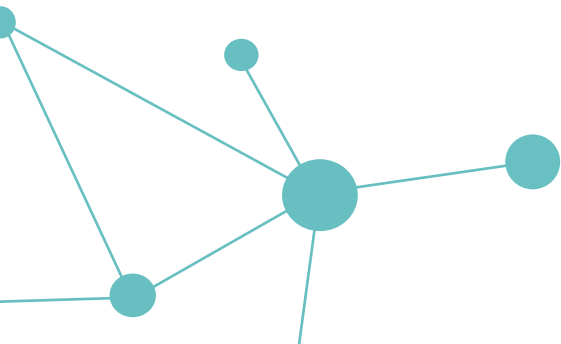
Children's Hospital Research
Institute of Manitoba

Dr. Tobias Karakach received his Bsc. (Hons) in Chemistry from the University of Nairobi, Kenya in 1999. He then came to Canada to pursue graduate studies at Dalhousie University in Halifax, NS, where he obtained a Msc. in Analytical Chemistry with a concentration in Chemometrics.

Following this, he received a PhD under the guidance of Professor Peter Wentzell in 2006. His research focused on the analysis of large scale (multivariate) data derived from the then emergent field of gene expression microarrays. During his PhD, Dr. Karakach developed methods for the analysis of these data starting from quantification of signals from raw images, pre-processing the data and, ultimately, analysing them using various statistical approaches. The focus of his thesis was in modeling microarray data designed to answer ordinal biological observations.

In 2007, Dr. Karakach moved to the National Research Council of Canada (NRC) to start an NSERC post-doctoral appointment under the supervision of Dr. John Walter. During this time, he shifted his research to the design and analysis of NMR- and MS-based untargeted metabolomics data, picking up expertise along the way in the analysis of MS derived proteomics measurements. Dr. Karakach proceeded to conduct independent research as a research officer, focusing on analysing data derived from bioanalytical technologies such as magnetic resonance, mass spectrometry, hyperspectral imaging, fluorescence, Infrared, and other vibrational spectroscopic tools.

Dr. Karakach has collaborated extensively both nationally and internationally (US, China, Africa, and Europe) and continues to seek new challenges in the general area of bioinformatics for functional genomics.



Dr. Richard Keijzer received his MD (with honours), PhD (Medicine) and MSc (Molecular Medicine) from Erasmus University Medical Center (ErasmusMC) in Rotterdam, Netherlands. Before starting his specialist training, he did a one-year research fellowship (as part of his PhD) with the Lung Biology Program at the Hospital for Sick Children in Toronto, Canada.

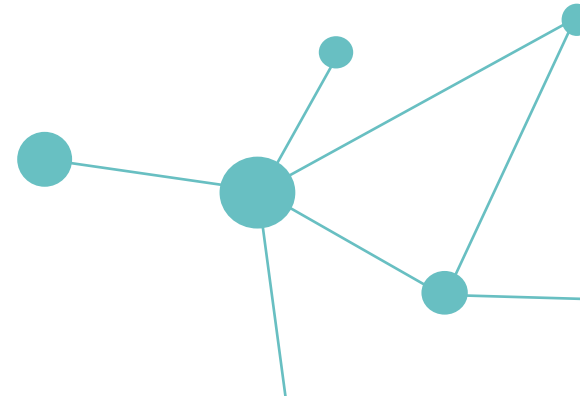
Dr. Keijzer received his training in General Surgery at ErasmusMC and did a postdoctoral fellowship in Physiology & Experimental Medicine at the Hospital for Sick Children in Toronto. He then finished his Pediatric General Surgery training at ErasmusMC-Sophia and completed a Pediatric Endoscopic Surgery Fellowship in the Children's Hospital of Alabama in Birmingham, Alabama, USA. Subsequently, he moved to Canada to pursue a career as a Pediatric Surgeon-Scientist at the University of Manitoba and the Children's Hospital Research Institute of Manitoba in Winnipeg. Dr. Keijzer's clinical interest concentrates on minimal invasive Pediatric General Surgery and his research focuses on congenital anomalies in general and congenital diaphragmatic hernia (CDH) and abnormal lung development. He has expertise in the mechanisms of normal and abnormal lung development due to congenital diaphragmatic hernia.

Currently, his research focuses on delineating the role of microRNAs and circular RNAs during normal and abnormal lung development due to CDH. By improving the understanding of the pathogenesis of CDH and its abnormal lung development, Dr. Keijzer aims to develop a prenatal therapeutic intervention to modulate the natural course of the abnormal lung development in these babies before they are born. He is the Thorlakson Chair in Surgical Research and is the Director of Research for the Department of Surgery at the University of Manitoba. Dr. Keijzer was the first Pediatric Surgeon-Scientist funded in the Canadian Child Health Clinician Scientist Program.



Richard Keijzer, MD, MSc, PhD, FACS

University of Manitoba





Jamilah Hackworth, EdD

University of Cincinnati

Dr. Jamilah M. Hackworth, EdD is an Assistant Professor of pediatrics in the Division of Adolescent and Transition Medicine at Cincinnati Children's Hospital Medical Center within the University of Cincinnati College of Medicine in Cincinnati, Ohio.

Dr. Hackworth serves as the associate director of the Office of Academic Affairs and Career Development at Cincinnati Children's Hospital Medical Center. In this role, she uses her training and previous experiences in student development, adult learning theory, curriculum development, program management and higher education administration to develop, implement, and evaluate a cadre of faculty career development programs/curricula designed to support faculty and trainees in defining and achieving vitality, engagement, and personal/career success.

Dr. Hackworth's areas of interest include mentoring, faculty wellness/vitality, biomedical sciences pipeline development, minority faculty development, unconscious bias, microaggressions, cross-cultural mentorship, and resilience.



Dr. C. Vivek Lal is an Associate Professor of Pediatrics at the University of Alabama at Birmingham where he serves as the Director of Golden Week Small Baby Program and also the Associate Director of Business Development, Neonatology.

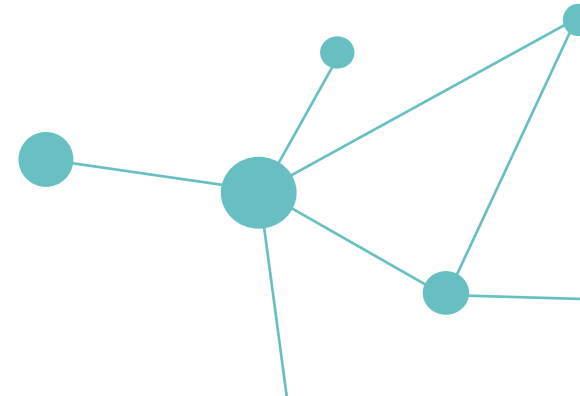
His lab studies various 'omic' mechanisms as they relate to the prediction, pathogenesis and treatment of chronic lung disease of prematurity. Dr. Lal's particular interest lies in studying the mechanisms by which pulmonary microbiome dysbiosis and exosomes affects the inflammation in premature lungs, for which his lab is funded by National Institute of Health (NIH) and American Heart Association (AHA).

His scientific contributions have been published in leading journals (Cell, JCI, Pediatric Research, etc) and he has been recognized by both the American Academy of Pediatrics and Society of Pediatric Research with young investigator research awards.



Vivek Lal, MD

University of Alabama





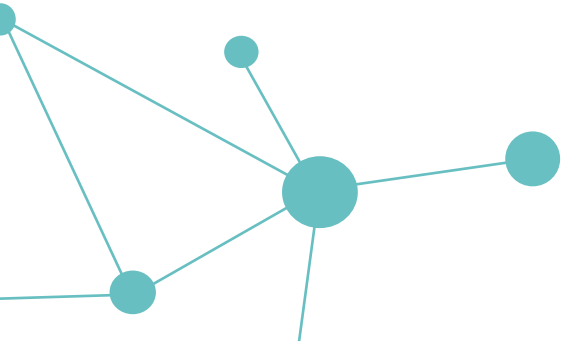
Michael Mendelson, MD, ScM

Harvard Medical School

Dr. Michael Mendelson is a pediatric cardiologist in the Preventive Cardiology Program at Boston Children's Hospital and Instructor (Pediatrics) at Harvard Medical School.

He completed his Pediatrics residency at Montreal Children's Hospital, McGill University and Cardiology Fellowship at SickKids Hospital, University of Toronto. He completed a senior fellowship in Preventive Cardiology at Boston Children's Hospital, Harvard Medical School and a Master of Science degree in Epidemiology at the Harvard School of Public Health.

This was followed by a research fellowship with the Framingham Heart Study, Boston University in cardiovascular epidemiology and a subsequent research fellowship with the National Heart, Lung, and Blood Institute (NHLBI) of the U.S. National Institutes of Health intramural research program in molecular epidemiology. He is currently funded by the NHLBI to study epigenetic contributors to cardiometabolic disease.



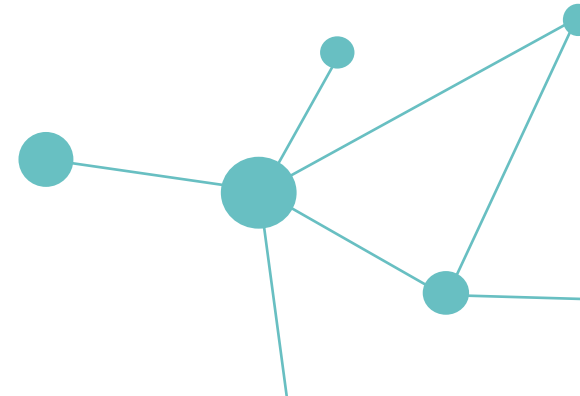
Dr. Nathan C. Nickel is a Research Scientist at the Manitoba Centre for Health Policy and an Assistant Professor in the Department of Community Health Sciences.

He received his Masters of Public Health degree in Community Health Sciences at the University of California, Los Angeles (UCLA) with a focus in maternal and child nutrition policies and global health. He completed his Ph.D. in Maternal and Child Health Policy at the Gillings School of Global Public Health, University of North Carolina at Chapel Hill.



Nathan Nickel, PhD

University of Manitoba





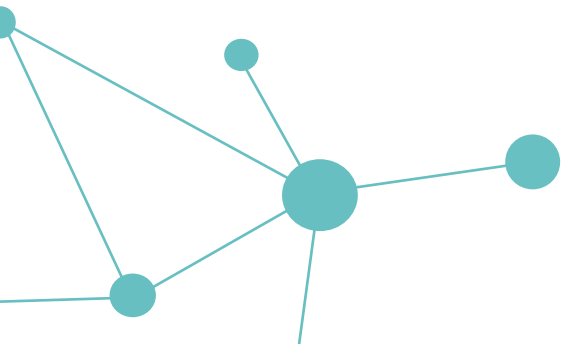
Peter Rosenbaum, MD, FRCP(C)

McMaster University

Dr. Peter Rosenbaum joined the faculty of McMaster University in July 1973 and has been a Professor of Pediatrics since 1984. He held an inaugural Tier 1 Canada Research Chair (2001- 2014). In 1989, Dr. Rosenbaum co-founded the award-winning CanChild Centre for Childhood Disability Research, a health system-linked research unit now recognized world-wide for its research and dissemination activities.

Dr. Rosenbaum has held more than 80 peer-reviewed research grants and is a contributing author to over 360 peer-reviewed journal articles and book chapters. He has been an invited lecturer and keynote speaker in more than 30 countries and co-authored/co-edited several books. Dr. Rosenbaum has worked with almost 80 graduate students, and has been a graduate supervisor or committee member at the Universities of Oxford, Utrecht, Witwatersrand, and Toronto in addition to McMaster. He has received many awards throughout his career, including the AACPDM's first Mentorship Award and its Lifetime Achievement Award.

Dr. Rosenbaum's passion is childhood disability. The research and knowledge translation work he and his CanChild colleagues have done over the past 30 years have addressed family-centre service – what it is, how it is measured, and how it matters. They have created ways to classify the 'function' of children with impairments, emphasizing what children can do (as opposed to what they cannot), that are used all over the world.



Dr. Ayesha Saleem is an Assistant Professor in the Faculty of Kinesiology and Recreation Management at the University of Manitoba, and a Principal Investigator at the Children's Hospital Research Institute of Manitoba (CHRIM).

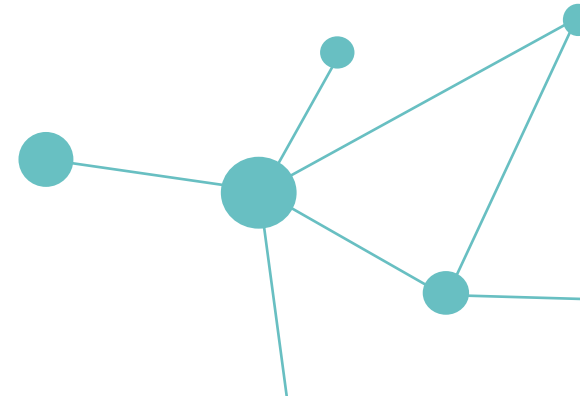
She has expertise in molecular and cellular physiology, specializing in mitochondrial metabolism and extracellular vesicle biology. Furthermore, she is passionate about the therapeutic potential of pro-metabolic signaling factors mediated by endurance exercise to promote healthy aging, and attenuate chronic pathological conditions such as diet-induced obesity, type 2 diabetes, and non-alcoholic fatty liver disease.

Her current research aim is to delineate how extracellular vesicles regulate the interplay between host tissues and imposed physiological challenges. These challenges can be physiological (exercise, age), metabolic (cancer, obesity), environmental (smoke, pollutants) or developmental (prenatal). Dr. Saleem currently holds operating grants from SSHRC New Frontiers in Research Fund, Research Manitoba, University of Manitoba and CHRIM.



Ayesha Saleem, PhD

University of Manitoba





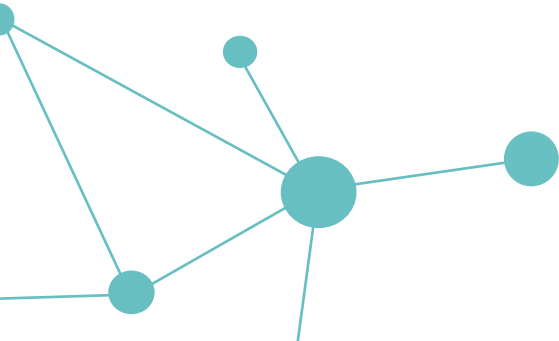
Alex Singer, MB BAO BCh, CCFP

University of Manitoba

Dr. Alex Singer is an Associate Professor in the Department of Family Medicine at the University of Manitoba where he leads the Quality Improvement and Informatics curriculum.

He is the Network Director of the Manitoba Primary Care Research Network (part of the Canadian Primary Care Sentinel Surveillance Network) and is the Manitoba eHealth Family Physician Champion. He is a family medicine clinician-teacher in Winnipeg, Manitoba.

Dr. Singer's active grant funded research studies currently underway focus on using EMR data for secondary use, specifically in the areas of natural language processing and pragmatic clinical trials based in primary care settings. He has published and presented on topics ranging from EMR data quality, antibiotic stewardship, medication prescribing patterns and Choosing Wisely recommendation adherence in primary care.



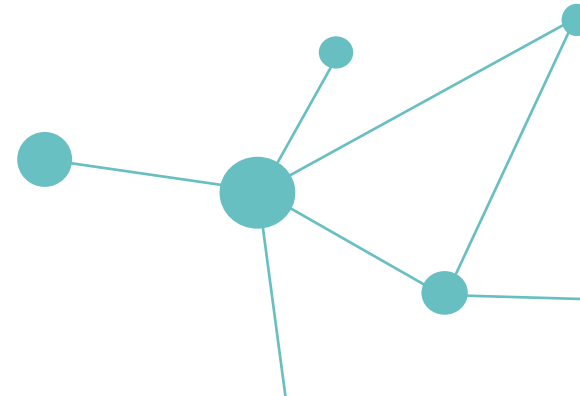
Dr. Gregory Steinberg is a Professor of medicine at McMaster University where he holds a Canada Research Chair and a J. Bruce Duncan Endowed Chair in Metabolic Diseases and is Co-Director of the Centre for Metabolism, Obesity and Diabetes Research.

His research studies cellular energy sensing mechanisms and how endocrine factors, lipid metabolism and insulin sensitivity are linked and contribute to the development of obesity, type 2 diabetes, cardiovascular disease and cancer. He has published over 160 papers many in leading scientific journals (e.g. *Nature Medicine*, *Cell Metabolism*). His scientific contributions have been recognized by the Endocrine Society, the American Diabetes Association, Diabetes Canada and the Canadian Institutes of Health Research who have each presented him with outstanding scientific achievement awards.



Gregory Steinberg, PhD

McMaster University



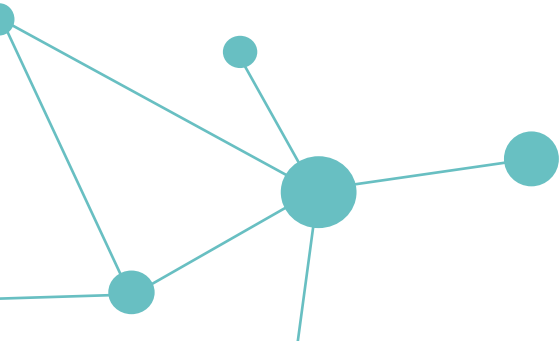


Kaitlin Wade, BSc, PhD
Bristol Medical School

Dr. Kaitlin Wade's academic career has focused on the application of methods to improve causal inference within observational epidemiological context across the life-course, including the use of comprehensive longitudinal cohorts, randomized controlled trials and Mendelian randomization.

She was involved in developing the MR-Base resource, a continuously updated online platform that collates and harmonises summary-level data from large-scale genome-wide association studies and automates two-sample Mendelian randomization analyses. Dr. Wade's research has specifically focused on the application of several causal inference methods (mainly Mendelian randomization and Recall-by-Genotype analyses) within large population-based cohorts to understand adiposity and dietary intake/eating behaviour as causal risk factors for disease and mortality within the BMI-to-Health group (PI: Professor Nicholas Timpson).

Now, as an Elizabeth Blackwell Institute Early Career Fellow based within the MRC Integrative Epidemiology Unit in the Bristol Medical School (Population Health Sciences), Dr. Wade's work focuses on the application of Mendelian randomization to understand the causal role played by the human gut microbiome on colorectal cancer, type 2 diabetes and inflammatory bowel diseases.



Dr. Rosalind J. Wright is the Horace W. Goldsmith Professor of Children's Health Research at Kravis Children's Hospital, Department of Pediatrics and Dean for Translational Biomedical Research at the Icahn School of Medicine at Mount Sinai in New York City.

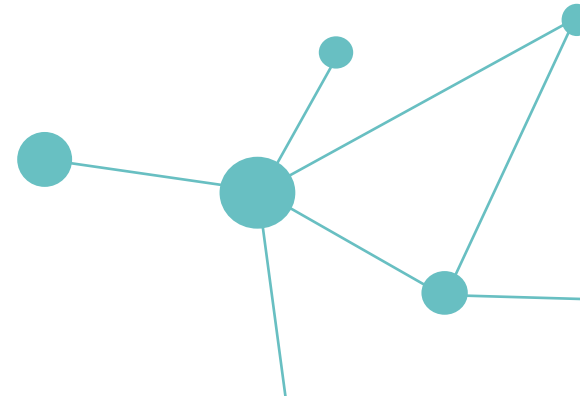
Dr. Wright obtained her MD from the University of Michigan, Ann Arbor, MI. She completed an internship in Internal Medicine at the Beth Israel Hospital, Harvard Medical School and completed her residency, including a year as Chief Medical Resident at Northwestern in Chicago, IL. Dr. Wright then completed fellowship training in pulmonary and critical care medicine at Harvard Medical School. During this fellowship, she also received a Masters in Public Health from the Harvard School of Public Health.

Dr. Wright is a transdisciplinary lifecourse epidemiologist with a primary interest in prenatal and early childhood predictors of developmental disorders including asthma, obesity, neurobehavioral outcomes, and antecedents of chronic cardiometabolic disorders. She has expertise in environmental health, stress research, genetics/epigenetics, and nutritional epidemiology. Dr. Wright's research considers environmental interactions (e.g., stress, nutritional factors, air pollution, aeroallergens, chemicals, tobacco smoke) as well as gene x environment interactions in disease programming.



Rosalind J. Wright, MD, MPH

Icahn School of Medicine



2019 GRANTS

The Children's Hospital Research Institute of Manitoba aims to improve the health of infants, children, and youth, and to enhance maternal and societal health by creating an environment that attracts and retains the best scientists and clinicians in research. Improvement of child health through research is attained through the development and application of new knowledge, treatments, and cures.

Through the support of the donor community, represented by the Children's Hospital Foundation of Manitoba, the Institute fulfills its role of promoting excellence in research by providing funding and essential services to support child health researchers who are dedicated to the advancement of child health through an annually renewable CHRIM Membership. The Foundation invests directly into research by providing core funding for research projects through a peer-reviewed operating grant competition within CHRIM. The Institute provides space and equipment to conduct research as well as funding and support for all levels of research and research training.



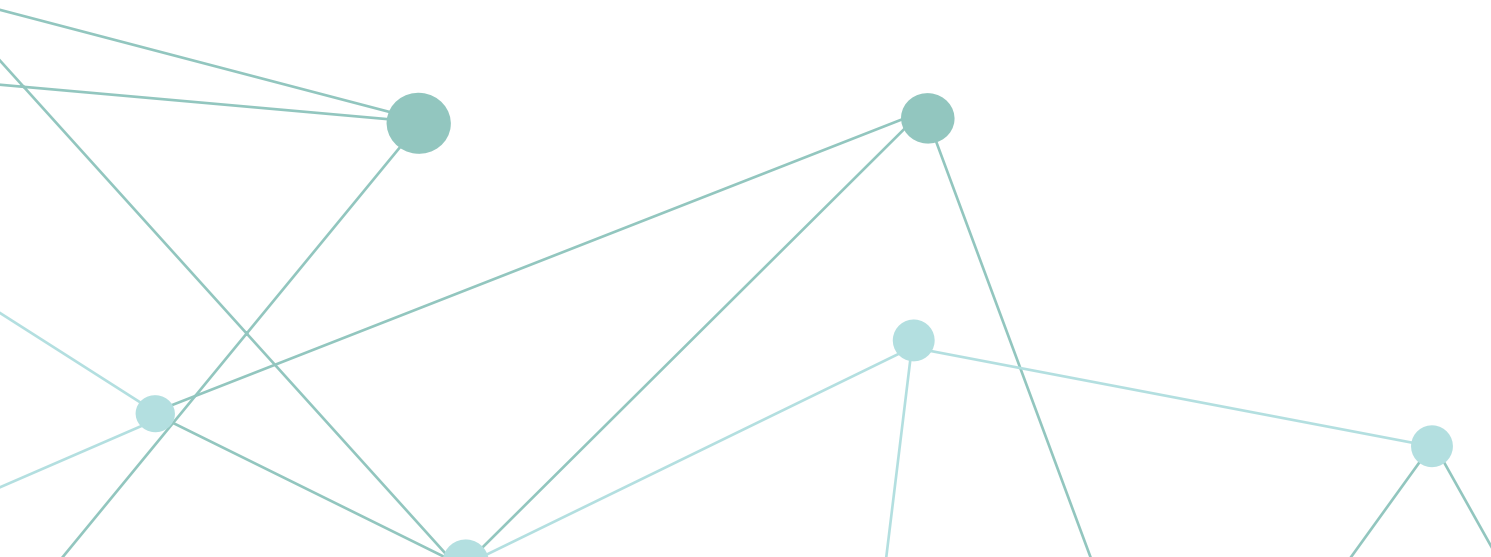
2019 CHRIM OPERATING GRANT RECIPIENTS

Name	Project Title	Amount
Allison Dart	PRO-KID	\$60,000.00
Patrick Frosk	Unexplained Pregnancy Loss Answers Now (uPLAN)	\$59,840.00
Joseph Gordon	Gene-targeting of skeletal muscle Nix to prevent cardiometabolic complications in offspring exposed to gestational diabetes.	\$59,790.00
Geoff Hicks	Vitamin A Supplementation can Significantly Reduce or Prevent Fetal Alcohol Spectrum Disorder Outcomes Following Acute Prenatal Alcohol Exposure	\$59,995.00
Depeng Jiang	The Effect of PAX Program in Promoting Mental Health for Children in MB	\$59,560.00
Meaghan Jones	Cell type specificity of epigenetic changes due to prenatal cigarette smoke in the lung	\$60,000.00
Nathan Nickel	REMAIN	\$60,000.00
Ayesha Saleem	Extracellular Vesicles in Prenatal Maternal Fetal Communication	\$60,000.00
Robert J. Schroth	A randomized controlled trial of silver diamine fluoride to arrest early childhood caries in young children	\$60,000.00
Abdelilah Soussi Gounni	The impact of airway epithelial cells derived Semaphorin3E on the development of allergic asthma	\$60,000.00
Christina West	Expressive Healing Network: Partnering to Create Meaningful Change for Children and Families in Pediatric Blood and Marrow Transplant	\$60,000.00

2019 TRAINEE AWARDS

The Children's Hospital Research Institute of Manitoba (CHRIM) recognizes the vital importance of fostering the career development and mentorship of the next generation of child health researchers in Manitoba. The Institute is affiliated with the University of Manitoba, where many of our trainees fulfill their academic degree requirements. CHRIM offers research infrastructure, support, and training opportunities to students at all levels. We welcome those interested to explore their area of study and its impact on child health. Prospective trainees are encouraged to contact our scientific members to explore new and exciting research opportunities.

Our partnerships are essential for investing in the future of child health research in Manitoba. Funding partners for the 2019 MSc, PhD, and Post-Doctoral Fellowship awards include ***Research Manitoba, CancerCare Manitoba*, and the Manitoba Lung Association**.***



2019 CHRIM UNDERGRADUATE STUDENTSHIPS

Name	Project Title	Supervisor
Owen Barber-Dueck	Does the HNF1aG319S variant, which associates with type 2 diabetes in Manitoban youth, impact pancreatic islet structure and morphology	Christine Doucette
Courtney Harris	Exploring the repurposing of leucine and MG132 in the treatment of Bowen-Conradi Syndrome	Michael Charette
Ocean Hingley-Hurl	Characterizing how fetal exposure to gestational diabetes alters microglia-neuron interactions in offspring brain	Tiina Kauppinen
Kim Hurst	Exploring the multidimensional burden of pediatric food allergy	J. Protudjer
Sarah MacEwan	Classifying forms of Real World Child-Directed Speech Across Populations	Melanie Soderstrom
Anna Liu	Baseline characteristics of patients with chronic pain seen in the preliminary clinic for chronic pain in children and adolescents in Manitoba	Kerstin Gerhold
Lara Penner-Goeke	The BRIDGE program: Building Regulation in Dual-Generations	Leslie Roos
Thomas Roberts	Improving Renal Complications in Adolescents with Type 2 Diabetes through Research	Allison Dart/Brandy Wicklow
Karim Sidhom	Effect of exercise-derived extracellular vesicles on the inflammatory response in cancer cells	Ayesha Saleem
Christian Stockl	Necrotizing enterocolitis: management and outcomes	Anna Shawyer

2019 TRAINEE AWARDS

2019 CHRIM MASTERS STUDENTSHIPS

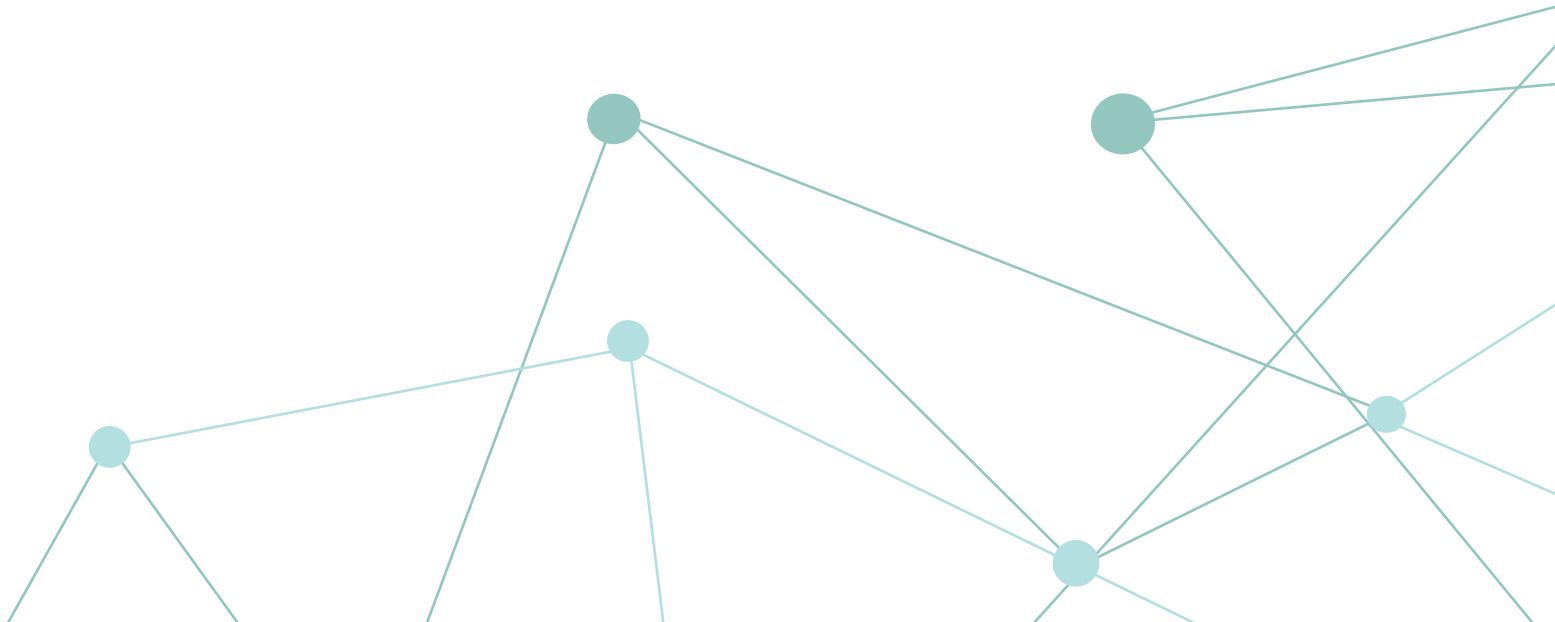
Name	Project Title	Supervisor
Chelsea Day	Treating Pulmonary Hypertension in miR-200b Deficient Lungs Associated with Congenital Diaphragmatic Hernia*	Richard Keijzer
Kazem Nejati Koshki	Investigating the Therapeutic Application of Metformin for Rett Syndrome	Mojgan Rastegar
Leo McKay	Oxytocin Deficiency Results in Maternal Care Deficits in a Mouse Model of FASD	Geoffrey Hicks
Samantha Salmon	Topologies of child maltreatment and peer bullying victimization and their associations with adolescent substance use; a latent class analysis.	Tracie Afifi
Mateusz Tomczyk	Cardiac SIRT3 Attenuates Doxorubicin Induced Cardiac Dysfunction	Vernon Dolinsky

2019 CHRIM PHD STUDENTSHIPS

Name	Project Title	Supervisor
Anthony Altieri	Interplay of Cytokine IL-17 and Cationic Host Defense Peptide LL-37 in Airway Inflammation	Neeloffer Mookherjee
Vivianne Cruz de Jesus	Role of taste genetics, sex, and oral microbiome in early childhood caries.	Prashen Chelikani
Shreya Dhume	Molecular mechanisms of lamina specific synapse development, plasticity and cognition	Tabrez Siddiqui
Md Mahamud ur Rashid	Role of Fibronectin-interacting cellular proteins in Influenza A virus infection in human lung cells.	Kevin Coombs
Matthew Martens	Determining the Protective Role of Prostaglandin Signaling in the Hypoxia-Exposed Neonatal Heart and its Interaction with Bnip3	Joseph Gordon
Titus Oluktibi	Development and Characterization of a Novel DC-Targeting Vaccine Approach against Influenza Virus	Xiaojian Yao
Jigneshkumar Vaghasiya	The Role of Prenyltransferases and Protein Lipidation in Asthma Pathophysiology	Andrew Halayko
Brenda Peters-Watral	An interpretive description of moral distress in oncology nursing.**	Roberta Woodgate

2019 CHRIM POST DOCTORAL FELLOWSHIPS

Name	Project Title	Supervisor
Taiana Martins	Role of extracellular vesicles in mediating health adaptations	Ayesha Saleem
Wai Hei (Andrew) Tse	Understanding mechanisms of transplacental nanoparticle transfer as a novel fetal therapy option during pregnancy	Richard Keijzer
Anjali Yadav	How Does Hypoxia Inhibit Adenylyl Cyclase Activity in the Hypertensive Pulmonary Artery? Investigating the Role of Cysteine Nitrosylation	Shyamala Dakshinamurti



2019 AWARDS COMMITTEE

One of the highlights of Child Health Research Days (CHRD) is the trainee development session, where emerging scientists from many health disciplines have the opportunity to share their research and be recognized for their outstanding scientific accomplishments. The trainees and research staff who are presenting their work are all winners, as you are showing the breadth and excellence of your work that stems from your personal commitment to pediatric research.

Thanks to our research community, the trainee development session has seen tremendous growth over the past 15 years. This year will be our most successful yet, with more than 80 posters showcasing the amazing research happening right here in Manitoba!

We are thankful for the diligence and work of 19 members of our Abstract Adjudication Committee, carefully assessing abstracts and identifying particularly impactful research to be featured in Dr. Goodbear's Den. Poster presentations are being assessed by a panel of more than 30 judges! We want to ensure that these sessions provide objective feedback for trainees to help strengthen their presentations and refine their work for future publications and grants. While top competitors will receive awards, all trainees gain from this experience, whether they are near the end of a long program or just beginning a project in their lab book.

We trust that the valuable connections you make with your peers, judges, and leaders in the research community will provide career-enhancing opportunities, as well as a fun and enjoyable experience for all. Your attendance and support is integral to the growth and future of child health research. Thank you for joining us and being a part of this energized and talented group of trainees!



Andrew Halayko, PhD FCAHS ATSF

Chair, Child Health Research Days
Awards Committee



Natalie Rodriguez

Executive Director, DEVOTION
Organizer, Trainee
Development Session



*Thank you to the Developmental Origins of Chronic Diseases
in Children Network for their sponsorship and in-kind support
of the trainee development session.*

Poster Judges

Allison Dart	Lauren Kelly	Chris Pascoe	Liz Sellers
Christine Doucette	Sam Kung	Jen Protudjer	Geert tJong
Pingzhao Hu	Vivek Lal	Mojgan Rastegar	Barb Triggs Raine
Meaghan Jones	Dustin Lippert	Florencia Ricci	Kaitlin Wade
Tobias Karakach	Suyin Lummin	Leslie Roos	Rosalind Wright
Tiina Kauppinen	Neeloffer Mookherjee	Ayesha Saleem	Ann Yi

Abstract Adjudicators

Devi Atukorallaya	Chris Pascoe
Allan Becker	Mojgan Rastegar
Prashen Chelikani	Florencia Ricci
Tobias Karakach	Leslie Roos
Tiina Kauppinen	Bob Schroth
Xiaoqing Liu	Liz Sellers
Sarvesh Logsetty	Abdel Soussi Gounni
Dylan Mackay	Geert ‘t Jong
Kozeta Miliku	Ann Yi
Steven Mink	

Goodbear’s Den Judges

Carlynn Davidson
Arlene Hints
Vivek Lal
Graydon Strachon
Rosalind Wright

Goodbear’s Den Participants

Linda Ding
Stephanie Kereliuk
Kristine Kroeker
Anna Liu
Brittany Moyce
Lorine Pelly
Suzanne Robinson
Andrew Tse
Christine Vaccaro

CHRD Organizing Committee | Terry Klassen, Chair

Chelsea Bowkett	Erin Hill	Jon McGavock	Florencia Ricci
Shyamala Dakshinamurti	Meaghan Jones	Neeloffer Mookherjee	Natalie Rodriguez
Allison Dart	Lauren Kelly	Nathan Nickel	Mahmoud Torabi
Vern Dolinsky	Lily Lim	Christopher Pascoe	Nichola Wigle
Andrew Halayko	Stephanie Matthews	Jennifer Protudjer	Kristy Wittmeier

ABSTRACT IDENTIFICATION NUMBERS

Abstract numbers are listed by first authors, presenting authors may vary.

Please visit www.chrdmb.ca to read abstracts in full.

- | | | |
|---------------------------------|---|-------------------------------|
| 1. James Johnston | 13. Lisa Knisley | 25. Sarah Turner |
| 2. Anna Liu | 14. Hailey Hildebrand | 26. Laura Cole |
| 3. Stephanie Kereliuk | 15. Samira Seif | 27. Lise Hamilton |
| 4. Taylor Morriseau | 16. Tamiris Souza | 28. Kaitlin Hogue |
| 5. Mateusz Tomczyk | 17. Kelsey Fehr | 29. Melissa Gabbs |
| 6. Dina Mostafa | 18. Marie Paterson | 30. Brandy Wicklow |
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| 8. Jared Field | 20. Kristine Kroeker | 32. Ana Hanlon-Dearman |
| 9. Brittany Gruber | 21. Tyler Peikes | 33. Nicole Brunton |
| 10. Simone da Silva Rosa | 22. Thomas Mahood | 34. Abin Chandrakmar |
| 11. Philip Kawalec | 23. Wai Hei (Andrew) Tse | 35. Anthony Altieri |
| 12. M.Florencia Ricci | 24. Suzanne Robinson | 36. Jeffery Osagie |

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SPONSORS

The Children's Hospital Foundation of Manitoba is the main operating funding source for the Children's Hospital Research Institute of Manitoba (CHRIM). The Foundation invests directly into research by providing core funding for research projects, and provides administrative and infrastructure supports for researchers.

With the support of the Foundation and the resources provided by the Institute, CHRIM investigators have more opportunities and better success in applying for external funding.



**The
Children's
Hospital
Foundation
of Manitoba**



DEVOTION

Developmental Origins of Chronic Diseases in Children Network

Rady Faculty of
Health Sciences



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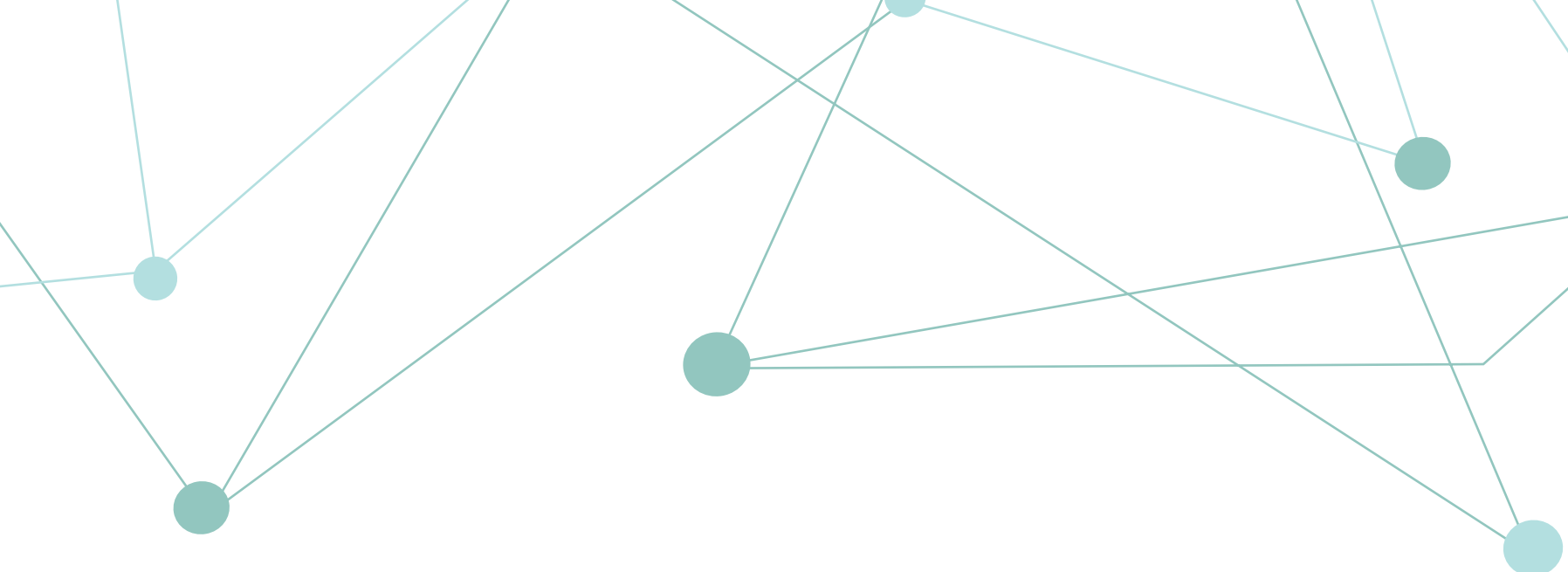
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Research Manitoba is a provincial funding agency, which provides funds for research in the health, natural and social sciences, engineering and the humanities in Manitoba through a number of grants and awards programs from moneys received from the Province. The partnership between Research Manitoba and the Children's Hospital Research Institute of Manitoba helps build the excellence of research within the Institute and augments our investments in research.



Specialized Services for Children and Youth (SSCY Centre) houses several partner agencies that provide specialized, community-based medical and social services for children and youth with disabilities and special needs. Clinicians and university researchers are encouraged to conduct research at SSCY Centre. Visit their website, [**sscy.ca/researchers**](https://sscy.ca/researchers), to learn more and to apply for research access!



GEORGE & FAY YEE

Centre for Healthcare Innovation

The **George & Fay Yee Centre for Healthcare Innovation's (CHI)** mission is to ensure the latest health research and evidence are translated into improvements to care and outcomes for Manitobans. As a partnership between the University of Manitoba and the Winnipeg Regional Health Authority, CHI collaborates with clinicians, researchers, leadership and policy makers to generate and apply patient-oriented research in the health system and health policy environment to improve care and outcomes for Manitobans.



MISSION

The mission of the Children's Hospital Research Institute of Manitoba is to improve the health of infants, children, youth, maternal health, and society by creating an environment that attracts and retains the best scientists and clinicians. As a leading voice and recognized advocate for excellence in research, the development and application of treatments and cures will lead to improvements in child health.

VISION

The vision of the Children's Hospital Research Institute of Manitoba is to be a leading contributor of science and knowledge through discoveries. The institute will improve the quality of life for infants, children, youth, and maternal health within Manitoba and beyond.

www.chrim.ca