



Principal Investigator: Aminu Bello, MD, PhD
Professor, Department of Medicine

Institution and location: University of Alberta

Brief overview of research program in lay language:

Aminu Bello, MD, PhD, is a professor of medicine/nephrologist in the Department of Medicine, University of Alberta. He is a member of several professional organizations and consortia in nephrology.

His research interest is in global health, Indigenous kidney health research and remote/rural kidney care, and development of innovative care delivery platforms for optimal management of patients with kidney disease. He has supervised many graduate trainees and summer students in clinical epidemiology research. He is keenly interested in outcomes research towards improving quality of care among people with chronic diseases in Indigenous communities.

Principal Investigator: Dylan Burger, PhD
Senior Scientist and Associate professor

Institution and location: Kidney Research Centre, The Ottawa Hospital Research Institute,
Ottawa, Canada

Brief overview of research program in lay language:

The Burger laboratory explores how chronic diseases including diabetes, hypertension, and kidney disease develop. We use knowledge gained from these studies to develop new treatments and tools to for early disease detection. In particular, we study "extracellular vesicles" or EVs. EVs are tiny pieces of cell that are released into the blood and urine.

Our laboratory has shown that changes to EVs in urine can identify kidney injury before current clinical tests. We have also shown that these EVs can actually contribute to kidney scarring. Projects in our lab are therefore focused on developing an EV-based test for early detection of kidney disease and on developing drugs that prevent EVs from causing kidney scarring.

Principal Investigator: Rahul Chanchlani, MD, MSc, FASN, FISN, FRCPC
Associate Professor, Division of Pediatric Nephrology

Institution and location: McMaster Children's hospital, Hamilton, ON

Brief overview of research program in lay language:

My name is Rahul Chanchlani and I am a pediatric nephrologist and clinician researcher at McMaster Children's hospital, Hamilton. My funded research program aims to address critical knowledge gaps in the field of pediatric hypertension using routinely collected healthcare data, particularly improving the screening of blood pressure (BP) among Canadian children at a primary care level.

Despite increasing HTN prevalence, only 25% of Canadian children have their BP regularly checked by primary care providers, resulting in severe under-diagnosis.

To address this gap, we are developing and validating a risk prediction tool to detect high BP among children using 5 well-defined longitudinal Canadian and UK-based birth cohorts.

Principal Investigator: Indra Gupta, MD
Pediatric Nephrologist/Clinician-Scientist

Institution and location: Research Institute of the McGill University Health Centre,
Montreal, Quebec,

Brief overview of research program in lay language:

Congenital birth defects in kidney and urinary tract formation are the most common cause of kidney failure in children. My research is focused on understanding the genetic and environmental risk factors that result in these defects. We use cell lines, animal models and the genetic study of affected individuals to do this research.

Principal Investigator: Theone Paterson, PhD
Assistant professor

Institution and location: Dept. of Psychology at University of Victoria, Victoria, BC

Brief overview of research program in lay language:

I am a clinical neuropsychologist, and a previous KRESCENT program participant/awardee during my PhD program. My research program broadly aims to improve understanding of relationships between physical health, health behaviours, psychological wellbeing, and cognitive functioning across the lifespan. Specific areas of interest include impacts of health behaviors (e.g., physical activity, medication adherence, diet) and chronic diseases (e.g., diabetes, CKD, etc.) on healthy cognitive aging, how to leverage mobile health technologies to support healthy aging, and, more recently, how the COVID-19 pandemic relates to mental health and neuropsychological sequelae of COVID-19 infection.

With reference to CKD and transplant more specifically, my focus has been on cognitive functioning among renal transplant patients, and examination of potential modifiers of cognitive function (e.g., medication adherence).

From this work, in collaboration with my colleague and previous mentor, Dr. Wendy Thornton, I have existing data that could support a project(s) for a summer student interested in these areas of focus.

Principal Investigator: Ruth Sapir-Pichhadze, MD, MSc, PhD, FRCPC
Associate Professor of Medicine

Institution and location: McGill University; Centre for Health Outcomes Research (CORE),
Research Institute of The McGill University Health Centre (RI-
MUHC), 5252 Avenue Lacombe Blvd W, Montreal, Quebec H4A 3S5

Brief overview of research program in lay language:

My current research program is translational in nature and seeks to identify genetic determinants of donor and recipient compatibility to inform strategies to optimize outcomes and experiences of kidney transplant candidates and patients.

I am also interested in contributing to the appreciation of each patient's status across a continuum of risk, which extends from rejection, on one side, and adverse effects of immunosuppressants (e.g., infection, malignancy, metabolic syndrome, and cardiovascular disease), on the other. Such initiatives are geared towards optimizing organ allocation schemes, developing clinically applicable instruments, guiding personalized surveillance schedules, and informing individually tailored therapies.

Principal Investigator: Tomoko Takano, MD, PhD
Senior Scientist,
Professor, Department of Medicine

Institution and location: Research Institute of the McGill University Health Centre, Montreal

Brief overview of research program in lay language:

Our laboratory aims to understand what causes protein leakage into the urine (proteinuria). Proteinuria is not only a hallmark feature of chronic kidney disease but also an indicator for progression to kidney failure. Also, in the disease form called nephrotic syndrome, heavy proteinuria causes body swelling, necessitating aggressive treatments with many side effects.

We use cultured cells, animal models, and blood samples from affected individuals to dissect what causes proteinuria and what are the responsible molecules and pathways. By doing so, our ultimate goal is to identify better biomarkers of the disease and identify novel therapeutic target, so that the affected individuals can receive personalized and specific treatment, rather than blind and non-specific one they are receiving now.