



HEART-BRAIN CONNECTION SUMMER SCHOOL

August 16-18, 2023

University of Ottawa Campus

Desmarais Hall

55 Laurier Avenue, East

PROGRAM

The Heart-Brain Connection Summer School is designed to inspire and bring together trainees in the heart-brain fields of research. Our goal is to start a movement of interdisciplinary inter-organ system science and clinical translation.



uOttawa



Wednesday, August 16, 2023

Lectures will be held in the Plenary Room (Desmarais Hall 1120) unless otherwise indicated.

- 11:30 – 12:30** **REGISTRATION AND LIGHT REFRESHMENTS** | Desmarais Hall Room 1120
- 12:30 – 1:00** **LAND ACKNOWLEDGEMENT**
Alexandra King, MD, Cameco Chair in Indigenous Health and Wellness, University of Saskatchewan
INTRODUCTORY REMARKS
Peter Liu, MD, Chief Scientific Officer/VP Research, University of Ottawa Heart Institute (UOHI)
Nadine Wiper-Bergeron, PhD, Assistant Dean, Graduate and Postdoctoral Studies, University of Ottawa
- 1:00 – 1:30** **INDIGENOUS PEOPLE IN CANADA: PERSPECTIVES ON HEALTH**
Alexandra King, MD, Cameco Chair in Indigenous Health and Wellness, University of Saskatchewan
Malcolm King, PhD, Scientific Director, Saskatchewan Centre for Patient-Oriented Research
- 1:30 – 2:15** **INDIGENOUS PEOPLE IN RESEARCH WORKSHOP** | Desmarais Hall Rooms 1110, 1120, 1130, 1140
Moderated by Malcolm King, PhD and Alexandra King, MD
Engaging Indigenous People with Lived Experience
Interactive, small-group sessions
Introduction to the IRLET (Indigenous Research Level of Engagement Tool)
- 2:15 – 2:45** **NETWORKING HEALTH BREAK**
- 2:45 – 3:15** **PATIENT PARTNERS IN RESEARCH**
Jennifer Monaghan, Patient Partner
Risa Mallory, Patient Partner
- 3:15 – 3:25 **PANEL DISCUSSION**
- 3:30 – 4:00** **WHY AN OPEN SCIENCE APPROACH WILL HELP YOUR RESEARCH SUCCEED**
Kelly Cobey, PhD, Scientist, UOHI
- 4:05 – 4:35** **THE DEVELOPMENT AND UPTAKE OF EVIDENCE-BASED PRACTICES: WHERE KNOWLEDGE TRANSLATION, BUSINESS, AND IMPLEMENTATION SCIENCE COLLIDE**
Kerri-Anne Mullen, Scientist, UOHI; Director, Canadian Women's Heart Health Centre
- 4:40 – 4:45** **CLOSING REMARKS**
Peter Liu, CSO & VP Research, UOHI
- 6:30 – 8:00** **SOCIAL NETWORKING AT HEART & CROWN**

Thursday, August 17, 2023

7:00 – 7:45 **BREAKFAST** | [Desmarais Hall Room 1120](#)

7:45 – 8:30 **FUNDER INSIGHTS: WHAT OPPORTUNITIES EXIST TO SUPPORT TODAY’S EMERGING LEADERS?**

Panel Discussion Moderated by Peter Liu, MD, CSO/VP Research, UOHI

Ryan Perry, PhD, Associate Scientific Director, CIHR

Sarah Overington, PhD, Director, Science & Engineering Promotion, NSERC

Harry Koundakjian, BSc, Advisor, Business Development, uOttawa, Mitacs

Julia Segal, PhD, Program Manager, Brain Canada

8:30 – 8:45 **PANEL DISCUSSION**

8:45 – 9:30 **HEALTH INNOVATIONS**

Panel Discussion Moderated by Christopher Sun, PhD, UOHI & uOttawa

AI AND ANALYTICS: ALGORITHMIC BIAS AND FAIRNESS

Christopher Sun, PhD, Scientist, UOHI & Telfer Business School, uOttawa

INCORPORATING DIGITAL HEALTH STRATEGIES IN RESEARCH

Abhinav Sharma, MD, PhD, Faculty of Medicine & Health Sciences, McGill University

9:30 – 9:50 **PANEL DISCUSSION**

9:50 – 10:20 **NETWORKING HEALTH BREAK**

10:20 – 11:15 **CAREER PANEL – NON-ACADEMIC PATHWAYS**

Panel Discussion Moderated by Joe Irvine, PhD, University of Ottawa

Sarah Overington, PhD, Director, Science & Engineering Promotion, NSERC

Harry Koundakjian, BSc, Advisor, Business Development, uOttawa, Mitacs

Julia Segal, PhD, Program Manager, Brain Canada

Ryan Perry, PhD, Associate Scientific Director, CIHR

11:15 – 11:30 **PANEL DISCUSSION**

11:30 – 12:30 **LUNCH & CAREER MENTORING**

12:30 – 1:00 **TOP 5 GREAT GRANT TIPS – ARE THERE MORE?**

Moderated by Peter Liu, MD, CSO/VP Research, UOHI

Jodi Edwards, PhD, Scientist, UOHI & uOttawa

Katey Rayner, PhD, Scientist, UOHI & uOttawa

Erin Mulvihill, PhD, Scientist, UOHI & uOttawa

1:00 – 1:15 **PANEL DISCUSSION**

1:15 – 2:00 **CONCURRENT WORKSHOPS**

[Desmarais Hall Room 1110](#)

**STATISTICAL ANALYSIS & PREDICTIVE MODELS
BOOTCAMP**

Jodi Edwards, PhD, Scientist, UOHI & uOttawa

[Desmarais Hall Room 1130](#)

EQUITY, DIVERSITY & INCLUSION

Emilio Alarcón, PhD, Scientist, UOHI &
uOttawa

2:00 – 2:30 **NETWORKING HEALTH BREAK**

2:30 – 3:15

CONCURRENT WORKSHOPS

<p>Desmarais Hall Room 1130</p> <p>EQUITY, DIVERSITY & INCLUSION</p> <p>Emilio Alarcón, PhD, Scientist UOHI & uOttawa</p>	<p>Desmarais Hall Room 1110</p> <p>STATISTICAL ANALYSIS & PREDICTIVE MODELS BOOTCAMP</p> <p>Jodi Edwards, PhD, Scientist UOHI & uOttawa</p>
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3:15 – 3:30

Return to Plenary room Desmarais Hall Room 1120

3:30 – 4:00

KT/KMB: FROM DISSEMINATION TO CO-CREATION, THE PATHWAY TOWARDS RESEARCH WITH IMPACT

Roberto Ortiz Núñez, MSc, Senior Advisor, Knowledge Translation, uOttawa

4:00 – 4:30

SCIENCE COMMUNICATION

Emilio Alarcón, PhD, Scientist, UOHI & uOttawa

4:30 – 5:15

BRAIN AND HEART INTERACTIONS

Moderated by Georg Northoff, MD, PhD, The Royal and uOttawa

FROM BRAIN-HEART INTERACTION TO THE MIND

Georg Northoff, MD, PhD, The Royal and uOttawa

THE BRAIN BIT OF THE BRAIN-HEART INTERACTIONS

Jean-Claude Béique, PhD, uOttawa Brain and Mind Research Institute (uOBMRI)

LASTING EFFECTS OF PUBERTAL STRESS EXPOSURE ON MENTAL HEALTH

Nafissa Ismail, PhD, Professor, School of Psychology, uOttawa

METABOLIC STRESS AND NEURODEGENERATION

Yubing Liu, PhD, Research Associate, uOBMRI

5:15 – 5:30

PANEL DISCUSSION

5:30 – 6:00

RAPID FIRE ORAL PRESENTATIONS

6:00

CLOSING REMARKS

Peter Liu, CSO & VP Research, UOHI

FREE EVENING

Friday, August 18, 2023

7:30 – 8:30 **BREAKFAST** | Desmarais Hall Room 1120

8:30 – 8:35 **OPENING REMARKS**

8:35 – 9:35 **INNOVATIVE TRIALS**

Moderated by Peter Liu, MD, UOHI

INNOVATIVE TRIALS

George Wells, PhD, Scientist, UOHI and uOttawa

INNOVATIVE TRIALS : ACCELERATING CLINICAL TRIALS (ACT)

Dean Fergusson, PhD, Senior Scientist, Ottawa Hospital Research Institute (OHRI)

INNOVATION IN ACUTE STROKE TRIALS

Michel Shamy, MD, Neurologist & Scientist, uOttawa

9:35 – 9:55 Panel Discussion

9:55 – 10:05 **NETWORKING HEALTH BREAK**

10:05 – 10:35 **TECH INNOVATOR PERSPECTIVES**

Moderated by Adim De, PhD, Innovation Advisor, UOHI

CAPITALIZING ON THE BIOTECH SECTOR'S GENERATIONAL MOMENT

Andrew Casey, CEO, BIOTECCanada

CROSSING THE INNOVATION VALLEY OF DEATH

Michael Weider, BEng, Partner, Fundfire Ventures

HOW TO START A STARTUP DURING YOUR PHD

Aidan Macadam, PhD Candidate, UOHI

10:35 – 11:15 Panel Discussion

11:15 – 11:30 **SOCIAL MEDIA IN RESEARCH**

Discussion facilitated by Marcelo Muñoz, PhD, Postdoctoral Fellow, UOHI

11:30 – 12:00 **AWARDS, CLOSING REMARKS**

Peter Liu, CSO & VP Research, UOHI

FACULTY BIOGRAPHIES

Emilio Alarcón, PhD

Scientist, Division of Cardiac Surgery, University of Ottawa Heart Institute
Director, Bio-nanomaterials Chemistry and Engineering Laboratory (BnCE), University of Ottawa Heart Institute
Associate Professor, Department of Biochemistry, Microbiology and Immunology, University of Ottawa
Email: ealarcon@uottawa.ca

Dr. Alarcón's research is focused on the fabrication, development, and implementation of new materials with regenerative capabilities for tissue regeneration of the heart, skin, and soft tissues. He is also the Director of the INterdisciplinary Training in BIOmedical TECHnologies Program (INTBIOTECH) CREATE program (www.intbiotech.ca). Dr. Alarcón is an Equity-Diversity-Inclusion (EDI) champion at the University of Ottawa Heart Institute, member of the Disability Justice group at uOttawa Professors Union, and part of the CIHR External Advisory Committee on Accessibility and Systemic Ableism, and leader of the IDEAS (Inclusion, Diversity, Equity, Accessibility and Social Justice) Committee of the Brain Heart Interconnectome (BHI, <https://www.uottawa.ca/research-innovation/brain-heart-interconnectome>) funded by the Canada First Research Excellence Fund (CFREF).

Jean-Claude Béïque, PhD

Professor, Department of Cellular and Molecular Medicine, Faculty of Medicine, University of Ottawa
University of Ottawa Brain and Mind Research Institute
Email: jbeique@uottawa.ca

The Béïque lab is interested in studying synapses, the site of functional connections between neurons in the brain. Dr. Béïque's research activities all share the common thread of seeking to study, in mechanistic terms, the fundamental features of the central neuron's function and plasticity. To achieve this, they are using a combination of cellular electrophysiology, multiphoton imaging of neuronal morphology and calcium dynamics, and optogenetics. Current projects seek to understand the fundamental features of dendritic processing (using rapid activation of individual synapses by two-photon uncaging of glutamate and calcium imaging) as well as basic plasticity mechanisms (ex: homeostatic plasticity). Moreover, the lab is interested in understanding how synaptic plasticity processes are engaged or altered following brain insults such as stroke. Finally, they are using optogenetic methods and cellular electrophysiology to study fundamental aspects of long-range connectivity in the brain, with a focus on regions involved in mood regulation.

Andrew Casey

CEO, BIOTECanada

Andrew Casey became president and CEO of BIOTECanada in August, 2012. In his role as President & CEO of BIOTECanada Andrew is responsible for the strategic operations of the Association which represents Canada's biotechnology sector. As the head of BIOTECanada, he is the lead spokesperson for Canada's biotechnology industry communicating on the industry's behalf with government, regulators, international bodies, media and the Canadian public. Prior to joining BIOTECanada, Andrew served from 2004-2012 as Vice President, Public Affairs and International Trade with the Forest Products Association of Canada.

Kelly Cobey, PhD

Scientist, University of Ottawa Heart Institute
Adjunct Professor, School of Epidemiology and Public Health, University of Ottawa
Email: KCobey@ottawaheart.ca

Dr. Kelly Cobey is a scientist at the University of Ottawa Heart Institute where she leads a program in meta-research and open science. She is also an adjunct professor in the School of Epidemiology and Public Health at the University of Ottawa. Dr. Cobey is interested in a range of themes pertaining to meta-research and open science. She has interests in topics including the implementation of open science, the reporting quality of research, data management and sharing best practices, research reproducibility, and patient engagement in research.

Adim De, PhD

Innovation Advisor, University of Ottawa Heart Institute
Email: AdDe@ottawaheart.ca

With a background in Biomaterials Science and Tissue Engineering, Adim obtained his BEng and MSc from the University of Sheffield before pursuing a PhD in Biomedical Engineering/Regenerative Science at Hannover Medical School with a focus on cardiopulmonary regeneration. After his PhD, he became the Chief Operating Officer at Sleepiz, a Swiss Medtech startup that used AI-based systems to monitor cardiopulmonary biomarkers through radar. From there, he took on the exciting challenge of establishing the first Biomaterials Innovation Hub in Costa Rica, where he is building an ecosystem to support R&D&I. He is currently an Innovation Advisor for the University of Ottawa Heart Institute.

Jodi Edwards, PhD

Scientist, University of Ottawa Heart Institute
Director, Brain and Heart Nexus Research Program, University of Ottawa Heart Institute
Associate Professor, School of Epidemiology and Public Health, University of Ottawa
Email: jedwards@ottawaheart.ca

Dr. Jodi Edwards is the Director of the Brain and Heart Nexus Research Program at the University of Ottawa Heart Institute (UOHI). She is a cardiovascular epidemiologist whose research program involves risk assessment and predictive modelling for the heart-brain interface, with a specific focus on the identification of novel cardiac markers of stroke and dementia risk and women's heart and brain health and innovative health technologies for risk detection.

Dr. Edwards receives funding from CIHR, the Canadian Cardiovascular Society, the Heart and Stroke Foundation of Canada, Brain Canada and NSERC and is one of the 10 named PIs on the Brain-Heart Interconnectome CFREF program and is lead PI on the STROKECOG CIHR Clinical Trials Training Platform for innovative clinical trial training initiatives in stroke and cognition. She is Co-PI of the Canadian Platform for Trials in Non-Invasive Brain Stimulation, and Co-Chaired the International Stroke Recovery and Rehabilitation Alliance Roundtable on Non-Invasive Brain Stimulation and is a member of the Health Systems and Policy Working Group for the Canadian Women's Heart Health Alliance. She was awarded the 2020 Heart and Stroke Foundation (HSF) National New Investigator in Women's Heart and Brain Health award, UOHI Investigator of the Year, and Faculty of Medicine Early Career Researcher of the Year.

Dean A. Fergusson, MHA, PhD, FCAHS

Senior Scientist & Director, Clinical Epidemiology Program, Ottawa Hospital Research Institute
Full Professor, Departments of Medicine & Surgery, & School of Epidemiology and Public Health, University of Ottawa
OHRI/uOttawa Clinical Epidemiology Program Endowed Chair
Scientific Lead, Ontario SPOR Support Unit (OSSU)
Email: dafergusson@ohri.ca

Dr. Fergusson is a Senior Scientist and Director of the Clinical Epidemiology Program (CEP) at the Ottawa Hospital Research Institute and a Full Professor in the Department of Medicine with cross-appointments to the School of Epidemiology & Public Health and the Department of Surgery at the University of Ottawa. His two areas of research scholarship are: 1) transfusion medicine and transfusion alternatives; and 2) innovative methodological research into the design and analysis of clinical trials. His methodological work in clinical trials includes the areas of clinical equipoise, innovative pragmatic trials, patient and public engagement, post-randomization exclusions, ethical use of placebo controls, and statistical approaches. He has served or chaired CIHR panels (RCT, New Investigator, Mentoring) and is an active member on editorial boards (Transfusion Medicine Reviews, Transfusion Medicine, Clinical Trials, Trials). He has also been an active member of renowned disease clinical trial networks in transfusion, critical care, and thrombosis.

Nafissa Ismail, PhD

Professor, School of Psychology, University of Ottawa
Holder of the University Research Chair in *Stress and Mental Health*
Director – LIFE Research Institute, University of Ottawa
Email : nafissa.ismail@uottawa.ca

Dr. Ismail completed her Bachelor of Science in Psychology with a specialization in Neuroscience at Concordia University in 2002 and received her Ph.D. from Concordia University in 2009. She then completed her post-doctoral fellowship in neuroendocrinology at the University of Massachusetts. She is a full professor at the School of Psychology at the University of Ottawa and director of the [LIFE Research Institute](#) and [the NISE \(Neuroimmunology, Stress and Endocrinology \(NISE\) Lab](#). She is holder of the University Research Chair in *Stress and Mental Health*. Dr. Ismail's research interests are to investigate the neurochemical mechanisms through which immune challenge and hormones during the prenatal and pubertal periods alter behavior. The behavioral outcomes that her laboratory is examining are social behaviors, depression and cognition with the use small rodents, such as laboratory mice and rats, to gain mechanistic insight into these questions.

Alexandra King, MD, FRCPC

Cameco Chair in Indigenous Health and Wellness, University of Saskatchewan

Email: alexandra.king@usask.ca

Dr. King is a citizen of the Nipissing First Nation (Ontario). She is an Internal Medicine Specialist with a focus on **HIV/AIDS, hepatitis C (HCV)** and **HIV/HCV co-infections**.

Dr. King had a successful career in web-based software engineering and management before pursuing her passion for medicine. She got her MD at the University of Toronto in 2009, completed her core internal medicine residency at the University of Alberta, and did a general internal medicine fellowship at the University of British Columbia. She taught courses in Indigenous health at Simon Fraser University, where she also mentored the Faculty of Health Sciences in the implementation of their response to the Truth and Reconciliation Commission's Calls to Action.

As a First Nation physician, Dr. King's practice is grounded in Indigenous philosophy, with a focus on care for HIV/AIDS, HCV and related conditions, for which First Nation, Inuit, and Métis people bear a disproportionate burden. She is a Principal Investigator on various Canadian Institutes of Health Research (CIHR) and Saskatchewan Health Research Foundation (SHRF) research grants and holds a program grant from the Public Health Agency of Canada (PHAC). Research interests include Indigenous wellness and Indigenous research ethics. She is re-visioning an Indigenous version of community-directed research so it is centred on Indigenous ancestral wisdom and lived/living experience, as well as Indigenous research philosophies and methodologies. Similarly, she co-creates intervention research that is grounded in Indigenous epistemology, culture and wellness.

Malcolm King, PhD

Scientific Director, Saskatchewan Centre for Patient-Oriented Research

Email: malcolm.king@usask.ca

Dr. Malcolm King, a member of the Mississaugas of the Credit First Nation, is a health researcher at the University of Saskatchewan, joining the Department of Community Health & Epidemiology in October 2017. There, he serves as the Scientific Director of SCPOR, the Saskatchewan Centre for Patient-Oriented Research; he also continues to teach and research in Indigenous health, with a particular focus on wellness and engagement.

From 2009 to 2016, Dr. King led the CIHR Institute of Aboriginal Peoples' Health as its Scientific Director, spearheading the development of a national health research agenda aimed at improving wellness and achieving health equity for First Nations People, Métis and Inuit in Canada. Dr. King's international Indigenous health interests include improving Indigenous health through workforce development and provision of culturally appropriate care, and developing Indigenous health indicators to monitor progress in programs aimed at achieving wellness and health equity.

Harry Koundakjian BSc

Mitacs

Advisor at University of Ottawa

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Harry works closely with members of the Mitacs Business Development, Research, and Program teams to deliver high-quality programming. He also interacts with stakeholders at uOttawa to fully understand the needs of researchers and trainees to find industry opportunities and identify the best programs to leverage uncovered research opportunities. His goal is to create and maintain a network of partners/clients in industry and academia on the Ottawa and Kanata North Region.

Peter Liu, MD

Chief Scientific Officer/ Vice President , Research, University of Ottawa Heart Institute

Director, [Cardiac Function Laboratory](#), University of Ottawa Heart Institute

Professor, Faculty of Medicine, University of Ottawa

Professor, Faculty of Medicine, University of Toronto

Email: PLiu@ottawaheart.ca

Dr. Peter Liu is the Chief Scientific Officer and Vice President of Research at the University of Ottawa Heart Institute. Well known for his contributions to heart failure and cardiac inflammation research, Dr. Liu discovered how viruses can enter the myocardium and trigger inflammation, and how innate and acquired immunity contribute to cardiac remodelling and heart failure progression following injury. His laboratory currently focuses on innovative proteomic biomarkers to more precisely detect and diagnose different forms of heart failure at early stages, develop personalized treatments and elucidate novel mechanisms of disease. Dr. Liu is also interested in knowledge translation, having harmonized and simplified the major national guidelines using a novel evidence-based consensus approach (C-CHANGE program), and finding ways to maximize knowledge translation globally using innovative technologies.

Yubing Liu, PhD

Research Associate, University of Ottawa Brain and Mind Research Institute

Yubing Liu is a research associate in Dr. Ruth Slack's lab. Their research group's long term goals are to promote the regeneration of the damaged brain after stroke or in neurodegenerative diseases. Dr. Slack and her team have shown that proteins that regulate cell replication can also play important roles in the regulation of neural stem cell self-renewal and long term maintenance in the embryonic and adult brain. Dr. Slack's group has also shown that mitochondrial dynamics and function have a major impact on adult stem cells and their differentiation, thus changes in metabolism or defects in mitochondrial function in the context of neurodegenerative diseases may have a major impact on neurogenesis, regeneration and neurological function. By exploiting new knowledge of these key regulatory pathways, they plan to activate the neuronal precursor and stem cell pools in order to facilitate regeneration of the damaged brain.

Aidan MacAdam, M.Sc.

PhD Candidate, Biomedical Engineering, University of Ottawa (supervisor Emilio Alacron)

Bio-nanomaterials Chemistry and Engineering Laboratory (BnCE)

University of Ottawa Heart Institute

Email: AiVile@ottawaheart.ca

Aidan MacAdam is a PhD student in Biomedical Engineering at the University of Ottawa. He completed a dual bachelor program in biochemistry and chemical engineering at uOttawa back in 2020. He is currently the CTO of ReKuPERA, a company that develops biosynthetic materials for tissue repair, and CEO and founder of GastroTrackAI, a digestive health app that uses artificial intelligence to determine the cause of digestive symptoms.

Risa Mallory

Patient Partner

Risa is a retired psychotherapist who, as a result of a serious cardiovascular event, has become passionate about heart health advocacy, collaborative medical care and knowledge translation. As such, she volunteers with local, national and international health care organizations providing a voice for those living with or affected by cardiovascular disease. She believes that knowledge is power and that every person can impact their own health and that of their community through education, conversation and advocacy.

Jennifer Monaghan, LLB, BA

Patient Partner

Having heart disease and a stroke has not defined Jennifer, but rather given her the experience and passion to become an active volunteer and advocate. A lawyer by training, she served on the Heart and Stroke Foundation (HSF) Mission Council on Vascular Cognitive Impairment and as the British Heart Foundation's International Advisory Panel for the "Big Beat Challenge" – a global competition for a £30 million research award won by CureHeart. She is currently a member of this Summit's Planning Committee, a Co-Chair of CWHH Alliance's Training and Education Working Group, the BC Recovery & Rehabilitation Steering Committee as well as the Interior Health Stroke Innovation and Research Strategic Planning Committee. She was only 43 when, without any risk factors, her stroke and discovery of heart disease happened, so she feels particularly invested in supporting health care and research on the heart and brain.

Kerri-Ann Mullen, PhD

Scientist, University of Ottawa Heart Institute

Director, Canadian Women's Heart Health Centre and Prevention and Wellness Centre

Email: KMullen@ottawaheart.ca

Dr. Mullen is a Scientist with the Ottawa Heart Institute Research Corporation. Kerri-Anne has been with the University of Ottawa Heart Institute since 2006 where, until 2019, she managed the Ottawa Model for Smoking Cessation. Since 2019, she has been Director of the Canadian Women's Heart Health Centre and Prevention and Wellness Centre. Dr. Mullen's research interests include the health services, economic, and health impacts of prevention interventions.

Erin Mulvihill, PhD

Scientist, University of Ottawa Heart Institute

Director, [Energy Substrate Metabolism Research Laboratory](#), University of Ottawa Heart Institute

Associate Professor, Department of Biochemistry, Microbiology and Immunology, University of Ottawa

Email: emulvihill@ottawaheart.ca

Dr. Mulvihill is a Scientist and Director of the [Energy Substrate Metabolism Research Laboratory](#). She holds extensive expertise in lipids and lipoproteins, models of diabetes and cardiovascular disease, intestinal biology, and mouse genetics. Her research program generates and utilizes novel mouse models and experimental models of diabetes and obesity to delineate hormone action mechanisms of direct clinical translational relevance. Her work contributes to improving our understanding of the molecular events which contribute to metabolic and cardiovascular disease.

Dr. Mulvihill's lab is currently funded by CIHR, NSERC, CFI, Heart and Stroke Foundation, and Diabetes Canada. She was awarded the CIHR New Investigator Award, Heart and Stroke National New Investigator Award, Diabetes Canada New Investigator Award, and the CLVS Stewart Whitman New Investigator Award.

Marcelo Muñoz Figueroa, PhD

BioEngineering and Therapeutic Solutions (BEaTS), Division of Cardiac Surgery

University of Ottawa Heart Institute

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Dr. Muñoz holds a MSc in Pharmacy and a PhD in Chemistry. He is currently a postdoctoral fellow in Emilio Alarcón's lab. Dr. Muñoz's research focuses on regenerative medicine. Since starting his postdoctoral fellowship in 2018, Dr. Muñoz has made significant contributions to his field of research. He has authored 17 publications in prestigious peer-reviewed journals like [ACS Nano](#), [Science](#), and [ACS AMI](#), to mention a few. In addition, he developed and patented a [mask respirator decontamination device](#) (N95 masks) and published this work in Scientific Reports. With the skills acquired both in the academic and private sector, Dr. Muñoz was recently appointed as the manager of the [peptide synthesis facility](#) located in Dr. Alarcón's lab, which has contributed to several high-impact publications.

Georg Northoff, MD, PhD

The Royal's Institute of Mental Health Research - Mind, Brain Imaging and Neuroethics

University of Ottawa Brain and Mind Research Institute

Professor, Faculty of Medicine, University of Ottawa

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Georg Northoff, MD, PhD is EJLB-CIHR Michael Smith Chair in Neurosciences and Mental Health and holds a Canada Research Chair for Mind, Brain Imaging and Neuroethics at the University of Ottawa Institute of Mental Health Research (IMHR). He completed his initial training in medicine/psychiatry and philosophy in Germany. Dr. Northoff's previous academic positions included Professorships at the University of Magdeburg, Germany, and Harvard University, U.S.A. With over 100 scientific publications, his current focus is predominantly on the self - having developed the concept of cortical midline structures. Experimental research within his unit focuses on the functional and biochemical mechanisms underlying our sense of self in both healthy subjects and psychiatric patients. In addition to neuroimaging, he also focuses on neuroethical issues. Early on, he investigated issues related to personal identity in patients with deep brain stimulation and brain tissue transplantation. Another neuroethical focus is on the impact of emotions and empathy in the decision making involved in informed consent, which is of particular relevance regarding psychiatric patients.

Roberto Ortiz Núñez, MSc

Senior Advisor, Knowledge Mobilization

Research Management Services, Office of the Vice-President, Research and Innovation, University of Ottawa

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Roberto is the Knowledge Mobilization Senior Advisor at the Office of the Vice-President, Research, and Innovation of the University of Ottawa. Previously, he worked for over ten years in community-based organizations focusing on 2SLGBTQIA+ health and wellness. He holds a master's degree from Université de Montréal. He is particularly passionate about community-based research, languages, movies, and climate & social justice.

Sarah Overington, PhD

Director, Science and Engineering Promotion, Research Grants and Scholarships Directorate

Natural Sciences and Engineering Research Council of Canada

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Sarah Overington, PhD, is director of the Science and Engineering Promotion at the Natural Sciences and Engineering Research Council of Canada (NSERC). Her goal is to deliver funding programs to support research and training, science promotion, and recognition through prizes.

Ryan Perry, PhD

Associate Scientific Director Institute of Circulatory and Respiratory Health

Canadian Institutes of Health Research

Email : rjperry@ualberta.ca

Ryan Perry, PhD is the associate Scientific Director at CIHR- Institute of Circulatory and Respiratory Health. As a key member of the Institute's executive team, he work collaboratively with the Scientific Director, the Federal Health Ministry, Ottawa-based staff at CIHR and Institute committees to provide executive leadership, establish strategic direction in Research, Innovation and Training programs (with a focus in Pillar 1), and lead major programs on behalf of the CIHR-Institute of Circulatory and Respiratory Health. He engages with the Canadian circulatory and respiratory health research community and stakeholders, nationally and internationally, to identify research priorities, develop research funding opportunities, build partnerships and translate research evidence into practice to improve the health of Canadians.

Sreeraman Rajan, PhD, SMIEEE, P.Eng.

Professor, Department of Systems and Computer Engineering

Carleton University

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Prof. Sreeraman Rajan's research areas include sensors and sensor systems (biomedical, defence and security applications), compressive sensing, signal processing (including biomedical signal processing, statistical signal processing, adaptive signal processing), machine learning, pattern classification. He joined Carleton University in July 2015 as an Associate Professor and a Tier II Canada Research Chair (Advanced Sensor Systems and Signal Processing). Prior to joining Carleton, he was with Defence Research and Development Canada (DRDC).

Katey Rayner, PhD

Scientist, University of Ottawa Heart Institute
Director, [Cardiometabolic microRNA Laboratory](#), University of Ottawa Heart Institute;
Professor, Department of Biochemistry, Microbiology and Immunology,
Assistant Dean, Research and Special Projects,
Faculty of Medicine, University of Ottawa
Email: krayner@ottawaheart.ca

Dr. Rayner is a Scientist and Director of the [Cardiometabolic microRNA Laboratory](#) at the University of Ottawa Heart Institute. She holds a University Research Chair in Vascular and Metabolic Inflammation and leads the Ottawa region strategic research Innovation Cluster on Vascular Inflammation and Metabolism. Dr. Rayner's research program focuses on how inflammation is dysregulated in both atherosclerotic vascular disease and other metabolic diseases. Her research also investigates the intersection of inflammation, energy metabolism, and RNA biology, and how microRNAs may be used as therapeutics in the future to treat these cardiometabolic diseases.

Dr. Rayner's research is currently funded by the Canadian Institutes for Health Research, the Heart and Stroke Foundation of Canada, and the European Cardiovascular Research Network. She has been recognized with awards such as the Joseph A Vita Award (American Heart Association), Canadian Society for Molecular Biosciences Young Investigator Award, and is a member of the College of New Scholars of the Royal Society of Canada.

Julia Segal, PhD

Brain Canada
Program Manager
Email : julia.segal@braincanada.ca

Julia holds a BSc in Neuroscience from McGill University, during which she worked as a research assistant on projects related to chronic pain and circadian rhythm. She then went on to pursue a PhD in Biomedical and Molecular Science at Queen's University, studying the circadian rhythm of pain and neuroinflammation in multiple sclerosis. Julia also served as an adjudicator for undergraduate research competitions, sat on several graduate committees, and completed a Science Writing Internship funded by NSERC and the Laurier Centre of Women in Science. As a Program Manager at Brain Canada, Julia is committed to supporting brain research to make an impact on the brain health of all Canadians.

Michel Shamy, MD

Assistant Professor and Director of the Medicine, Ethics, and Humanities Program,
Faculty of Medicine, University of Ottawa
Attending Neurologist, Ottawa Hospital - Civic Campus
Clinician Investigator, Ottawa Hospital Research Institute
Email: mshamy@toh.ca

Dr. Shamy is a neurologist and researcher based at the University of Ottawa, the Ottawa Hospital and the Ottawa Hospital Research Institute. As a stroke neurologist, his research focuses on controversies and challenges encountered in the practice of neurology, though his methods and conclusions are applicable across clinical medicine. His current research program focuses on the Physician's decision-making in the treatment of patients with acute stroke, the ethical and epistemic controversies surrounding randomized clinical trials, and the ethical complexities in end-of-life decision-making. His research applies techniques from history and philosophy to study what doctors do, and why they do it.

Abhinav Sharma, MD, PhD

Scientist, McGill University Health Center Research Institute
Assistant Professor, Department of Medicine, Faculty of Medicine and Health Sciences, McGill University
Department of Medicine, Division of Cardiology, MUHC
Email: abhinav.sharma@mcgill.ca

Dr. Sharma's research group focuses on two major themes: 1) Cardiovascular outcomes and therapy optimization in patients with diabetes and heart failure; 2) Use of digital health to streamline follow-up and therapy selection in patients with heart failure. His group aims to develop new tools to leverage novel biomarkers, digital data, and electronic health records to conduct clinical studies, optimize patient data collection, and enhance knowledge translation.

Christopher Sun, PhD

Scientist, University of Ottawa Heart Institute
Director, Advanced Analytics for Health Systems Transformation Program
Assistant Professor, University of Ottawa Telfer School of Management
Email: ChrSun@ottawaheart.ca

Christopher Sun, PhD, BSc, is a scientist at the University of Ottawa Heart Institute and an assistant professor at the University of Ottawa Telfer School of Management. Dr. Sun's research interests lie at the intersection of optimization, artificial intelligence, public health, and health equity. His research primarily revolves around utilizing data-driven optimization, machine learning, and simulation techniques to inform the design of healthcare systems and development of public health policies. He has conducted his research in collaboration with multiple health institutes including Massachusetts General Hospital (Boston, MA, USA), Boston Emergency Medical Services (Boston, MA, USA), Israel National Emergency Medical Services (Magen David Adom, Israel), St. Michael's Hospital (Toronto, ON, Canada), and Gentofte Hospital (Copenhagen, Denmark). Dr. Sun has also been active in the field of resuscitation science, specifically around optimizing the response and management of cardiac arrest.

Michael Weider

Partner, Fundfire Ventures
Email: mweider@gmail.com

Michael has over 30 years of experience in the technology industry as a founder, investor and independent board director. Michael was the Founder and CEO of 3 venture backed startups - Watchfire, Blaze and Clearwater Clinical. Michael is a Partner at Fundfire, an early-stage venture capital firm supporting over 40 startups with early-stage funding. He has served as a director on 12 different private and non-profit boards including the Ottawa Heart Institute Research Corporation.

George Wells, MSc, PhD

Director, Cardiovascular Research Methods Centre
University of Ottawa Heart Institute
Professor, School of Epidemiology and Public Health & Department of Medicine, University of Ottawa
Senior Scientist Affiliate, Ottawa Hospital Research Institute

Dr. Wells' research interests are in the design and analysis of clinical trials, statistical methodology related to disease processes and health care delivery, systematic reviews and meta-analysis, economic evaluations and the development and assessment of decision support technologies for patients and practitioners.

Nadine Wiper Bergeron, PhD

Professor, Cellular and Molecular Medicine;
Assistant Dean, Graduate and Postdoctoral Studies,
Faculty of Medicine, University of Ottawa
Email: nadine.wiperbergeron@uottawa.ca

Dr. Wiper-Bergeron hold a BSc in Immunology and a PhD in Biochemistry. Using Molecular and cell biology techniques and innovative mouse models, her research focuses on developing novel treatments for Duchenne Muscular Dystrophy and cancer cachexia.

RAPID FIRE ORAL PRESENTATIONS

#	Presenter Name, Affiliation	Supervisor	Title of Presentations
1	Rama El Hakim , Undergraduate Student Bruyere Research Institute	Lisa Sheehy, PhD	<i>Immersive Virtual Reality Companionship in Long-term Care Homes: A Feasibility Study</i>
2	Jordan Pumphrey , MA Candidate Carleton University	Lisa Walker, PhD	<i>The Impact of Multiple Sclerosis and Co-Morbid Diabetes on Social Cognition</i>
3	Joy Ezeugwa , PhD Candidate University of Alberta	Victor Ezeugwa, PhD	<i>The Whole Day Matters after Stroke: Moving towards precision rehabilitation early post-stroke</i>
4	William Betzner , MSc Candidate University of Calgary	Aravind Ganesh, MD Eric Smith, MD	<i>A Qualitative Study of the Experiences of People Living with Dementia (PLWD) Who Have a Stroke</i>
5	Claire Fong-McMaster , PhD Candidate University of Ottawa	Mary-Ellen Harper, PhD Erin Mulvihill, PhD	<i>Investigating Mitochondrial Supercomplex Assembly in the Heart-Brain Axis Using Complexome Profiling</i>
6	Arthur Chaves , Postdoctoral Fellow University of Ottawa / The Royal	Lara Pilutti, PhD Sara Tremblay, PhD	<i>Synergetic Effects of Aerobic Exercise Paired with Non-Invasive Brain Stimulation to Prime Neuroplasticity in Multiple Sclerosis</i>
7	Donguk Jo , Postdoctoral Fellow University of Ottawa Heart Institute	Jodi Edwards, MD	<i>Non-Invasive Brain Stimulation Treatment for Stroke Recovery in Considering Sex and Gender</i>
8	Isabela Marçal , PhD Candidate University of Ottawa Heart Institute	Jennifer Reed, PhD	<i>Sex differences in physical activity levels and sitting time in patients with atrial fibrillation</i>
9	Serena Pulente , PhD Candidate University of Ottawa Heart Institute	Erin Mulvihill, PhD	<i>Common Drug - Rare Disease - Can Metformin Improve Cardiac Health in PAI-1 Deficient Mice?</i>
10	Alex Ross , PhD Candidate University of Ottawa Heart Institute	Emilio Alarcon, PhD	<i>Multifunctional peptide-based engineered materials for cornea, skin, and heart repair</i>
11	Suejean Park , MSc Candidate University of Toronto	Jason Fish, PhD	<i>Techniques to Investigate Blood-Brain Barrier Integrity in a Mouse-Model of Heart Failure</i>
12	Adriana Angarita Fonseca , Postdoctoral Fellow McGill University Health Centre	Louise Pilote, MD, PhD	<i>Gender-related factors as effect modifiers of the Association Between Hypertension and Grey Matter Volume Among UK Biobank Participants</i>
13	Amanpreet Kaur , PhD Candidate Research Institute of the McGill University Health Centre	Louise Pilote, MD, PhD	<i>Sex Differences in the Association of Age at Diagnosis of Hypertension with Brain Structure</i>
14	Sumali Mehta , MSc Candidate University of Ottawa	Jodi Edwards, PhD	<i>At the Heart of Northern Canada: Incidence and Risk Factors of Atrial Fibrillation in Nunavut Inuit</i>
15	Tamanna Islam , PhD Candidate University of Ottawa	Lisa Walker, PhD	<i>Protocol for Identifying and Addressing the Needs of Those with Multiple Sclerosis-Related Cognitive Fatigability</i>

AWARDS CEREMONY: FRIDAY, AUGUST 18, 2023 AT 11:30 AM

THANK YOU TO OUR PARTNERS!



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