On behalf of the uOttawa Brain and Mind Research Institute (uOBMRI), we are pleased to share with you this year, a special edition of the uOBMRI annual reporting of 2021-2023. Over these past two years, the uOBMRI team has highlighted some of its key achievements during this period, most notably in our research community since the implementation of our 5-year strategic plan. One of our key achievements since actioning the strategic plan is the recruitment of leadership roles for the institute’s thematic research hubs that will be announced below.

In 2022, we proudly celebrated the uOBMRI’s 10-year anniversary. To mark this milestone achievement, the institute hosted a commemorative research day on Friday, December 9th, at the Ottawa Conference and Event Centre. To close the research program, the institute opened its doors to a public reception that welcomed more than 390 participants from our research community and the public. To honor this milestone achievement, we have shared a timeline to review some influential moments that the institute has accomplished in a decade.

We also want to take the opportunity to thank our many incredible stakeholders who have supported us. We are particularly grateful for the many generous contributions that have supported innovative research initiatives, specifically in Parkinson’s disease, Alzheimer’s disease & other dementias, neuromuscular disease and multiple sclerosis. We are also very thankful and appreciative for the generous contributions in supporting our next generation of young researchers!

In addition to these few highlighted achievements, we hope that you enjoy reading this special edition of the uOBMRI’s annual report and the meaningful work that is being implemented to broaden our research impact.

Sincerely,
Ruth Slack, PhD, FRSC
Director, uOBMRI
2010 - The Planning Phase
The concept of the uOBMRI was conceived by Dr. Jacques Bradwejn and Dr. Bernard Jasmin

2012 - Its Inception
The founding director, Dr. Antoine Hakim, launched the uOBMRI

2014 - Strategic Direction
Dr. David Park named its new Director and the uOBMRI's 5 year Strategic plan was developed. Stroke, Parkinson's disease, depression, dementia, neuromuscular disease and neural dynamics were identified as the uOBMRI research priorities

2016 - 2018 - Expanded Research Outreach
Concussion, Mental Health, Memory and Cognition and MS were added as research priorities.

2019 - Welcomed new Director
Dr. Ruth Slack named its new Director

2020 - Launched new Strategic Plan
Under Dr. Slack's leadership, the new 5 yr Strategic plan was developed 2021-2026. New research themes and leads identified: injury and regeneration, mental health, neuromuscular health and neurodegeneration.

2020 - 2023 - Fostering collaboration
Launch of collaborative, multi-disciplinary and multi-partner team grant opportunities

2023 - Brain-Heart Interconnectome (BHI)
Launch of BHI co-led by Dr. Ruth Slack, uOBMRI and Dr. Peter Liu, uOttawa Heart Institute
10 Years in Review: Milestones

Supporting Research

Supported research programs via multidisciplinary team grants, collaborative opportunities, recruitment, platform support, equipment, etc...

Supported our next generation of trainees with Scholarship and Fellowship opportunities (~$330K per year)

Fostering Partnerships (examples include)

- Established the Éric Poulin Centre for Neuromuscular Disease. The Centre for Neuromuscular Disease was named in memory of Dr. Éric Poulin (2019)
- MS Society of Canada (2022)
- Institute of Music and Brain Health (2022)
- Hebrew University Collaboration (2023)
- Parkinson Canada (2023)
- Brain-Heart Interconnectome (2023)

Prioritizing Community Outreach (examples include)

Launched Brain Health Research Day and hosted over 2,500 trainees, faculty and members of our research community over 10 years (2013-2023)

Launched Brain Health Awareness Week and hosted over 5,000 participants since its inception in 2014

Hosted a variety of workshops, research spotlights, summer schools, educational and partner events, fundraising initiatives (Tea Time with the Docs)

Collaborated with the Academy of Mindfulness and Contemplative Studies including two annual events (2017 & 2019) and hosted a series on mindfulness (2021, 2022)

Launched Dementia Prevention Webinar series and website during the pandemic (2020)
Our Vision

The uOBMRI leads neurodiscovery through innovative research that transforms prevention and care for the health of individuals and society.

Our Mission

- Support world-class research on brain and mind that fosters engagement and collaboration across disciplines, partners and communities;
- Accelerate the creation and application of research-informed innovations that improve prevention, care and policies for the health and well-being of individuals and society; and
- Recruit, inspire and develop the next generation of researchers, leaders and innovators.

Quick Facts Over 10 years. We ...

- Welcomed 270+ Research Members
- Obtained 10,000+ Community Followers
- Established 20+ New Partnerships
- Organized 70+ Conferences, Meetings & Events
- Supported $2.5M For Our Next Generation of Researchers
- Hosted ~20k Attendees at Our Research & Community Events
The uOBMRI have been working diligently to launch their strategic plan. The team worked very closely with its scientific council and we are very pleased to announce the leaders who will collaborate and bring our teams together from across the city to promote partnerships and accelerate our research programs.

Our thematic research pillars are led by experts in their respective fields and these include:

- Injury and Regeneration (Stroke, Concussion, Spinal Cord Injuries)
- Mental Health (Anxiety and Mood Disorders, Substance Abuse, Neuro Developmental Disorder (e.g. Autism)
- Neurodegeneration (Parkinson's disease, Alzheimer Disease and other Dementia's, Multiple Sclerosis, Huntington Disease)
- Neuromuscular Health (Motor Neuron Disease (ALS), Nerve Disorders, Neuromuscular Junction Disorders, Muscle Disorders)

We are excited to introduce our thematic research hub and cross-cutting theme leads.

We look forward to sharing their progress in the months to come! Learn more about our experts here.
Dr. Dar Dowlatshahi, is a Stroke Neurologist at The Ottawa Hospital, a Professor in the Faculty of Medicine at the University of Ottawa, and a Senior Scientist at the OHRI. His research focuses on intracerebral hemorrhage, neuroimaging, and acute stroke therapy.

Dr. Diane Lagace is an Associate Professor in the Department of Cellular and Molecular Medicine at the University of Ottawa. Her lab uses preclinical models and molecular, cellular, histochemical, and behavioural techniques to identify the mechanisms that produce new neurons and determine their functional role in the healthy and pathological adult brain.

“The Injury and Regeneration pillar brings together researchers from different fields to achieve a common goal: minimize brain and spinal cord damage and advance the science of recovery. We believe the nervous system can bounce back after injury, whether it be from stroke, concussion or spinal cord trauma. We are here to make that happen.” ~ Dr. Dar Dowlatshahi
The Mental Health pillar of the uOBMRI is the newest pillar of the institute and includes basic scientists, clinical researchers, and clinicians who are working together to understand the fundamental mechanisms and factors involved in the onset of mental health disorders across the lifespan, to develop effective preventative measures and treatments for various mental illnesses, and to facilitate access to mental health professionals and effective multicultural clinical care.

**MENTAL HEALTH**

**RESEARCH LEADS**

**Dr. Nafissa Ismail** is an Associate Professor at the School of Psychology at the University of Ottawa. She is the holder of a University Research Chair in Stress and Mental Health. Her research expertise is in neuroimmunology and neuroendocrinology. Her research program focuses on examining the mechanisms underlying stress-induced mental illnesses during critical periods of development.

**Dr. Jennifer Phillips** is a Scientist at the University of Ottawa Institute of Mental Health Research (IMHR) at The Royal. She is the Director of Research (Interim) and an Assistant Professor in the Department of Psychiatry at the University of Ottawa, and an Adjunct Research Professor in the Department of Neuroscience at Carleton University. Her expertise is in clinical neuroscience, focusing on depression and suicide prevention.

"The decreasing stigma around mental health makes it easier for us to confide in and support each other. To respond to increased needs, our Mental Health pillar is finding new ways to increase access to care and accelerating research into novel treatment strategies." ~ Dr. Jennifer Phillips
The Neurodegeneration pillar focuses on various neurodegenerative diseases such as Parkinson's disease, Alzheimer disease and other dementias, Huntington disease, amyotrophic lateral sclerosis and multiple sclerosis. Members concentrate on the characterization, development and pathophysiology of these diseases and novel therapies to treat them. The pillar collaborates with basic scientists, clinical researchers and clinicians to investigate the fundamentals of disease progression and create novel therapies to treat these diseases.

**RESEARCH LEADS**

**Dr. Baptiste Lacoste** is an Assistant Professor and scientist in the Neuroscience program of the Ottawa Hospital Research Institute (OHRI). His field of interest is studying neuro-vascular interactions as an essential gain to a better understanding the brain and mental health.

**Dr. Lisa Walker** is an Assistant Professor of Medicine and an Adjunct Professor of Psychology at the uOttawa. She is a Clinical Neuropsychologist at The Ottawa Hospital and a Clinician Investigator with the OHRI. Her research program evaluates cognitive health in multiple sclerosis.

"The Neurodegeneration Pillar is dedicated to improve the lives of people currently affected by dementia and neurodegenerative illnesses, and target the underlying mechanisms with new treatments to ultimately eradicate these conditions. By listening to people with lived experience, and bringing together researchers with varied expertise, we aim to give people impacted by neurodegenerative conditions hope for the future." ~ Drs. Baptiste Lacoste and Lisa Walker
The Neuromuscular Health pillar of the uOBMRI focuses on motor neuron diseases such as ALS, nerve disorders, neuromuscular junction disorders and muscle disorders. The pillar concentrates on the development and pathophysiology of these diseases and novel therapies to treat them.

It includes basic scientists, clinical researchers, and clinicians collaborating on projects with the common goal of expanding the limits of care for those suffering from a neuromuscular disorder.

**NEUROMUSCULAR HEALTH**

**RESEARCH LEADS**

**Dr. Jodi Warman Chardon** is the Director of the Ottawa Neuromuscular Centre in The Ottawa Hospital. She is a clinician-scientist in the Dept. of Medicine at The Ottawa Hospital, Ottawa Hospital Research Institute in Neurosciences and Clinical Epidemiology, and Department of Genetics at the CHEO/RI.

She is also the co-Director and Associate Professor of the Centre for Neuromuscular Disease at the uOttawa. Her primary research interest focuses on identifying the molecular basis and the clinical characterization of rare neuromuscular diseases by combining next-generation sequencing (NGS) and whole-body muscle imaging to drive gene discovery and phenotypic expansion.

**Dr. Robin Parks** is a Professor in the Dept. of Medicine and the Dept. of Biochemistry, Microbiology, and Immunology at the uOttawa. He is also a Senior Scientist in the Regenerative Medicine program at the Ottawa Hospital Research Institute. His research interests range from characterizing various aspects of basic adenovirus (Ad) biology to exploring the efficacy of Ad-based vectors to the delivery of therapeutic genes in animal models of genetic or acquired disease.
Dr. Jean-Claude Béïque is a Professor in the Dept. of Cellular and Molecular Medicine (CMM) at the uOttawa. His lab uses electrophysiological, imaging, computational and behavioural approaches to study the brain's synaptic, neuronal, and network dynamics. By bridging these levels of investigation, his research activities seek to identify basic computations governing behaviour in health and disease.

Dr. André Longtin is a Professor of Physics at the uOttawa, cross-appointed to CMM at the uOttawa. His research interests are nonlinear dynamics, stochastic dynamics, biological physics, and mathematical biology. The main focus of his research is on theoretical and computational studies of the nervous system. The long-term goals of his research are to understand how neurons and other biological units self-organize and perform computations and what links cellular biophysics and biological complexity.

“Our Brain Dynamics cross-cutting theme fosters world-class interdisciplinary research into the fundamental dynamical workings of brain circuits at all scales, and also brings together the associated trainees and fellows in this exciting emerging area” ~ Dr. André Longtin

Dr. Jodi Edwards is the Director of the Brain and Heart Nexus Research Program at the University of Ottawa Heart Institute (UOTI), Assistant Professor in the School of Epidemiology and Public Health at the University of Ottawa, Co-Director of the UOHI Population Outcomes Research Unit and an ICES Scientist. Dr. Edwards' expertise is in cardiovascular epidemiology.

Dr. Richard Naud is an Associate Professor at the uOttawa. Research in the Naud lab relies on bidirectional interactions between artificial intelligence and neuroscience. The lab constructs statistical methods to extract more specific features from large-scale neural data. Complimentarily, it tests functional properties of neurons and synapses with artificial intelligence benchmarks.
Dr. Smita Pakhalé is a Scientist at the Clinical Epidemiology Program at the Ottawa Hospital Research Institute and an Associate Professor in the School of Epidemiology, Public Health, and Preventive Medicine at the University of Ottawa.

She leads the Bridge Engagement Centre, a community research office that conducts community-based participatory action research with Ottawa's homeless, at-risk for homeless individuals, and racialized (including Indigenous) populations. Her fields of interest are chronic lung diseases, tobacco cessation, global health, health equity, social determinants of health, Indigenous health, and poverty.

Jennifer Chandler is a Professor of Law in the faculty of Law at the University of Ottawa and a founding member of the Centre for Health Law, Policy, and Ethics. She is cross-appointed to the Faculty of Medicine and holds the Bertram Loeb Research Chair.

Her main areas of research relate to the ethical, legal, and social issues raised by the brain sciences and neurotechnologies, as well as to organ donation and transplantation law, ethics, and policy.

“Our network pursues a unified theoretical approach to the ethical-legal assessment of intelligent neuroprostheses, informed by the perspectives of users, the neuroengineering community and other key stakeholders.”

~ Jennifer Chandler, LLB, LLM
In April 2023, the family very generously committed $655,000 towards a novel project called “Tallman Family Energizes Research to Help Alleviate Neuroinflammation in PD and nicknamed “TALLER THAN PD.” Read more here.

The uOBMRI was thrilled to announce a unique collaboration with Hebrew University’s Faculty of Medicine and its Brain Disease Research Centre in Jerusalem, Israel (HUJI) to spearhead research in Alzheimer’s Disease.

This partnership was made possible due to the generosity of Ron Prehogan, a philanthropic leader and community ambassador in the city of Ottawa and the Jewish National Fund (JNF).

Our mental health research pillar strives to develop effective treatments for individuals and society. Especially on days such as Bell Let’s Talk, we are reminded of the importance in taking action and creating positive change not only through our research initiatives but by raising awareness in our greater community.
IN THE NEWS

Dr. Smita Pakhale
Scientist, Clinical Epidemiology Program, Ottawa Hospital Research Institute, Associate Professor, Faculty of Medicine, University of Ottawa, uOttawa

“Our research team, led by a racialized woman like me, prioritizes the inclusion of researchers and trainees from diverse experience and those with non-typical research careers”

- Dr. Pakhale, as quoted by the Office of the Vice-President, Research and Innovation, University of Ottawa, May 2023

IN THE NEWS

Dr. Dar Dowlatshahi
Senior Scientist at the CIHR Research Institute, Professor and Vice Chair of Research at the University of Ottawa, uOttawa

“We are hoping this is going to be the first big landmark discovery that changes this disease,”

- Dr. Dowlatshahi, as quoted by The Ottawa Citizen, February 2023

IN THE NEWS

Dr. Roger Zemek
Senior Scientist at the CHRI, Research Institute,q, Professor and Director of the Uottawa-Citizens Hospital, uOttawa

“What we’ve learned is that rest is not always best, that waiting to be symptom-free isn’t the best.”

- Dr. Zemek, as quoted by The Ottawa Citizen, January 2023

IN THE NEWS

Schlossmacher Lab

Discovery reveals how Parkinson’s-linked gene protects the brain

Researchers at The Ottawa Hospital and the uOttawa recently made a major contribution to an ongoing debate in Parkinson’s disease research. Their study showed that parkin acts like a powerful antioxidant that disarms potentially harmful oxidants in the brain.

IN THE NEWS

Dr. Natalia Jaworska
Scientist at the University of Ottawa, Institute of Mental Health Research (IMHR), uOttawa

“Whenever you can learn more about the neurobiology or the mechanisms of a symptom, then you can think about how to better manage that symptom”

- Dr. Jaworska, as quoted by The Royal, March 2023

IN THE NEWS

Dr. Jinc Wang
Senior Scientist at the Ottawa Hospital Research Institute and Associate Professor at the University of Ottawa, uOttawa

“Based on our findings we advise pregnant people to limit their exposure to methylmercury by following Canadian guidelines for fish consumption,”

- Dr. Wang, as quoted by The Ottawa Hospital Research Institute, March 2023

Dr. Slack and Dr. Dowlatshahi on CTV News

Groundbreaking Stroke Research in Ottawa

Dr. Walker and John Chafe on CTV News

Ottawa Scientists Working on Neurodegeneration

Join us in celebrating the International Day of Women and Girls in Science

Joignez-vous à nous pour célébrer la journée internationale des femmes et des filles de science

International Women’s Day

Journée internationale des femmes
In January 2023, we launched our new Connect.Excite.Heal. series. Each month we connect with our research community, explore how we excite innovation, or share how we support healing. Follow us to catch our monthly edition!
MARCH

Meet the uOBMRI's Research Lead in Neuroethics, Law, and Society

“Our network pursues a unified theoretical approach to the ethical-legal assessment of intelligent neuroprostheses, informed by the perspectives of users, the neuroengineering community and other key stakeholders.”

- Jennifer Chandler, LLB, LLM

Vice-Dean, Research, Faculty of Law & Bertram Loeb Research Chair, University of Ottawa Centre for Health Law, Policy and Ethics

uOBMRI's Jennifer Chandler Featured in MIT Technology Review

Challenges Faced with Remote Brain Stimulation

“Both approaches involve collecting, storing, and sharing brain data, which might reveal the state of the brain at any given time and hint at what the person is doing or feeling at that moment. Is this a problem? Jennifer Chandler, who studies legal, ethical, and policy issues in neuroscience at the University of Ottawa in Canada, asked the audience. It depends how it will be used.”

-MIT Technology Review

APRIL

TALLER THAN PD

Tallman Family Energizes Research to Help Alleviate Neuroinflammation in Parkinson's Disease

“Many individuals can take a simple problem and make it complicated -- not many can take a complicated problem and make it simple.”

- The Tallman Family Motto

From left to right are: Don Tallman, Diana Tallman, Bev Tallman, and Gordon Tallman.

Celebrating our PRC's Young Researcher Fellowship Awardees

From left to right:

- Pranali V. Ason
- Benjamin Nguyen
- Melissa MacIntosh
- Anjali Chatton
- Dongqian Chan
- Karm Zafir Eddin

MAY

Hope for Hemorrhagic Stroke Recovery: FASTEST Trial

“We are thrilled to be the Canadian lead for the global FASTEST clinical trial. If successful, we will have the first proven therapy for the most severe form of stroke: intracerebral hemorrhage.”

- Dr. Dar Dowlathshahi

Co-Lead, uOBMRI Injury and Regeneration Pillar

Scientist, Ottawa Hospital Research Institute; Professor, University of Ottawa; Stroke Neurologist, The Ottawa Hospital; Director of Research, Ottawa Stroke Program

Introducing the Injury and Regeneration Pillar Co-Leads

Dr. Diane Lagace

Associate Professor, Faculty of Medicine, University of Ottawa

Interested in defining the molecular mechanisms that underlie stem cell proliferation, neuronal differentiation, and ultimately integration into existing neural and synaptic circuits.

Dr. Dar Dowlathshahi

Scientist, Ottawa Hospital Research Institute; Professor, University of Ottawa, Stroke Neurologist, The Ottawa Hospital; Director of Research, Ottawa Stroke Program

Interested in intracerebral hemorrhage, neuroimaging and hyper-acute stroke, and acute stroke therapy.
From 2021-2022, the uOBMRI launched a series of promotional research videos. Check out some of the exciting work being done by Our Future Generation of Researchers below.
## Trainee Researchers in Multiple Sclerosis Awards

**Awarded to Tamanna Islam**  
**Title:** “Anodal Transcranial Direct Current Stimulation to Improve Cognitive Fatigability in Multiple Sclerosis”  
Mentor: Dr. Lisa Walker

**Awarded to Arthur Chaves**  
**Title:** “Sinergetic Effects of Aerobic Exercise Paired with Non-invasive Brain Stimulation to Prime Neuroplasticity in MS”  
Mentors: Drs. Lara Pilutti & Sara Tremblay

## Mark and Gail MarcoGliese Graduate Scholarship for Research

**Awarded to Meggan Porteus**  
**Title:** “Understanding the Biological Factors Contributing to Shallow Sleep in Insomnia Cooccurring with Depression”  
Mentor: Dr. Rebecca Robillard

**Awarded to Pavel Kotchetkov**  
**Title:** “Cellular and Molecular Mechanisms Underlying Altered Brain Metabolism in Autism Mouse Models”  
Mentor: Dr. Baptiste Lacoste

## Saroj and Kishori Lal Family Scholarship

**Awarded to Adelaide Jensen**  
**Title:** “Memory and "the Pill": Reconciling the Objective and Subjective Cognitive Effects of Short- and Long-term Oral Contraceptive use”  
Mentor: Dr. Patrick Davidson

**Awarded to Patricia Burhunduli**  
**Title:** “Metabolic Correlates of Antidepressant Response to Ketamine & Electroconvulsive Therapy: A pilot FDG-PET study”  
Mentors: Drs. Pierre Blier & Jennifer Phillips

**Awarded to Marie Huc**  
**Title:** “Sex Differences in Emotional Processing and Associated Electroencephalographic (EEG) Profiles”  
Mentor: Dr. Natalia Jaworska
Audrey Grant Parkinson's Research Fellowship
Awarded to Allison MacDonald
Title: “Investigating the Role of Alpha-synuclein in Host Immunity”
Mentor: Dr. Michael Schlossmacher
************

Bonnie and Don Poole Parkinson’s Research Fellowship:
Awarded to Dennis Chan
Title: “Utilization of a DNA-based Aptamer to Impede Protein Aggregation Properties of Alpha-synuclein”
Mentor: Dr. Matthew Holahan
************

Dave and Jill Hogg Family Fellowship
Awarded to Karim Eddin
Title: “Characterization of a-synuclein Pathology in Models of Nervous System Infections Induced by Neurotropic Viruses”
Mentor: Dr. Michael Schlossmacher
************

Francis Mathew Memorial Fellowship
Awarded to Faranak Vahid-Ansari
Title: Depression in Parkinson's Disease
Mentor: Dr. Paul Albert

2-Year Funding
Shelby Hayter Research Fellowship
Awarded to Ajanta Chatterji
Title: “Study Redox-protective Role of Human Parkin Against Dopamine-stress Induced Nigral Cell Degeneration in Parkinson's Disease”
Mentor: Dr. Michael Schlossmacher
************

Larry Haffner Research Fellowship:
Awarded to Benjamin Nguyen
Title: Reverse Engineering Parkinson's Disease Risk in a Dish by Evaluating Gene x Environmental Interactions”
Mentor: Dr. Max Rousseaux
Awarded to Nicolas Collao
Title: “The Effect of Resistance Endurance Training on FAPs Dynamics and Neuromuscular Junction Integrity Following Radiation Exposure.”
Mentor: Dr. Mike De Lisio

************

Awarded to David Datzkiw
Title: “Mapping the Planar Cell Polarity Interactome in Muscle Stem Cells”
Mentor: Dr. Michael Rudnicki

************

Awarded to Kaela O'Connor
Title: “Deciphering the Interplay Between Mitochondria and Neuromuscular Transmission Using iPSC-derived Models.”
Mentor: Dr. Hanns Lochmuller

************

Awarded to Terry Suk
Title: “Characterizing the role of TDP-43 SUMOylation in Amyotrophic Lateral Sclerosis”
Mentor: Dr. Maxime Rousseaux

************

Awarded to: Angelica Tristani
Title: “Role of LC3 Homologues in Degradation of TDP-43”
Mentor: Dr. Derrick Gibbings

************

Awarded to Augusto Lio Da Mota Goncalves Filho
Title: “Deep neural network-based computer-assisted detection of post-endovascular treatment complications of cerebral aneurysms in Vessel Wall MR angiography”
Mentor: Dr. Richard Aviv & Dr. Eduardo Portela de Oliveira

************

Awarded to Ryan Vimukthie Sandarage
Title: “Characterization of proliferation and differentiation of endogenous human neural stem and progenitors cells compared to rodent and porcine models”
Mentor: Dr. Eve Tsai
TRAINEES & AWARDS 2021-2022

TRAINEE RESEARCHERS IN MULTIPLE SCLEROSIS AWARDS

Awarded to Katherine Cardwell
Title: “Examining Resilience Among MS Care Patients”
Mentors Dr. Lara Pilutti
************

Awarded to Darrin Wijeyaratnam
Title: “Forcing Your Hand: Strategic Control in People with Multiple Sclerosis When Reaching with Assistive and Resistive Forces”
Mentor: Dr. Erin Cressman
************

Awarded to Simon Thebault
Title: “Dried Blood Spots for Blood Neurofilament Testing in Patients with MS: A Feasibility Study”
Mentors: Drs. Mark Freedman, Ron Booth

MARK AND GAIL MARCOGLIESE GRADUATE SCHOLARSHIP FOR RESEARCH

Awarded to Alex Castro
Title: “The Great Age Divide: Exploring The Role of Acetylcholine at Different Stages of Memory Using Transcranial Magnetic Stimulation”
Mentor: Drs. Patrick Davidson & Sara Tremblay
************

Awarded to Edward (Yiren) Sun
Title: “Pathological Reductions in Axon Connectivity and Synaptic Function Impairs SVZ Neurogenesis Within The 3xTg Alzheimer's Disease Mouse Model”
Mentor: Dr. Jing Wang

SAROJ AND KISHORI LAL FAMILY SCHOLARSHIP

Awarded to Jessica Drodge
Title: “A TMS-EEG and Neuroimaging study: Investigating Memory Performance in Schizophrenia”
Mentors: Drs. Synthia Guimond and Sara Tremblay

KANTA MARWAH ENDOWMENT FOR PARKINSON'S RESEARCH

Awarded to Vanessa Jabr
Title: “Enhancing Mitochondrial Integrity Using Mcl-1-matrix Could Rescue Neuronal Impairment in PD”
Mentor: Dr. Ruth Slack
PARKINSON RESEARCH CONSORTIUM

Audrey Grant Parkinson’s Research Fellowship
Awarded to Luis Angel Albarran-Ponce
Title: “A Novel Mouse Model to Genetically Assess the Lewy Body "ceramide hypothesis" in vivo”
Mentor: Dr. Steffany Bennett
************

Toth Family Fellowship
Awarded to Haley Geertsma
Title: “Elucidating the Neurotoxic Mechanisms of Nuclear alpha-synuclein in a Novel Parkinson's Disease Mouse Model”
Mentor: Dr. Max Rousseaux
************

Bonnie and Don Poole Parkinson’s Research Fellowship:
Awarded to Maria Bilen
Title: Restoring Mitochondrial Integrity to Prevent Neurodegeneration in Parkinson’s
Mentor: Dr. Ruth Slack
************

Dave and Jill Hogg Family Fellowship
Awarded to Zoe Fisk
Title: “Elucidating the Endogenous Distribution, Topography and Cells-of-Origin of a-synuclein”
Mentor: Dr. Max Rousseaux
************

ÉRIC POULIN CENTRE FOR NEUROMUSCULAR DISEASE SCHOLARSHIPS IN TRANSLATIONAL RESEARCH (STAR) AWARDS

Awarded to Giulia DelGobbo
Title: “Application of RNA Sequencing to Identify Genetic Causes of Neuromuscular Disorders”
Mentor: Dr. Kym Boycott
************

Awarded to Adnie Etienne
Title: “Vérifier l’affinité de la distribution d’EVs (Extracellular Vesicules) provenant de différents types de cellules, pour différents organes”
Mentor: Dr. Derrick Gibbings
************

Awarded to Maria Madana
Title: “Modulating Human Skeletal Muscle Stem-like Cell Division with WNT7A and EGF”
Mentor: Dr. Michael Rudnicki
************

Awarded to Naomi Misquitta
Title: “Investigating the Therapeutic Potential of AMP-activated Protein Kinase in Myotonic Dystrophy Type 1”
Mentor: Dr. Bernard Jasmin
************

Awarded to Aoife Reilly
Title: “Investigating Liver Intrinsic Defects in Spinal Muscular Atrophy”
Mentor: Dr. Rashmi Kothary
************

MICHAEL T RICHARD CLINICAL AWARDS

Awarded to Mohamed Alshardan
Title: “Accelerating the clinical translation of a growth factor releasing duraplasty to promote stroke recovery”
Mentor: Dr. Eve Tsai
************

Awarded to Janine Hsu
Title: “Deep Learning Algorithm to Automate Cerebral Vasospasm Detection”
Mentor: Dr. Howard Lesiuk
************
In 2022, the uOBMRI proudly celebrated its 10-year anniversary. To honor this milestone achievement, the institute hosted an honorary research day event to highlight the important work of our research members and trainees, hear from a world-class keynote, and facilitated research networking. The theme for the day was dedicated towards neurodegeneration and mental health.

The full day was well-received by 390 participants overall. To close the research day, we welcomed the community for a public lecture on Merging Mind and Machine: Where are we going and why does it matter? Where we learned from experts in neuroscience, neurosurgery, and neuroethics who discuss the implications of artificial intelligence. Much of this achievement could not have been accomplished without the continuous support from our research community for their contributions over the years.

While the institute honored 10 years in service, the uOBMRI team has been actively contributing towards successful delivery of numerous educational, awareness, and outreach seminars, conferences and events. Below is a list of highlights from the uOBMRI Research Day, along with a list of events organized from the 2021-2023 annual reporting period.
BRAIN HEALTH RESEARCH DAY 2021
- 253 Virtual Attendees
- 97 Poster Presentations
- Published in Special Edition of the UOJM

BRAIN HEALTH AWARENESS WEEK 2021
- 1,321 Participants
- Proclaimed by Dr. Mona Nemer, Canada's Chief Scientific Officer
- Click Here to watch the recordings!

MINDFULNESS SERIES 2022
- Hosted 3 Virtual Series
- Total of 220 Attendees
- Topics: Intrinsic Practice, Daoism, Fostering Mindfulness

MS IN MOTION 2022 & 2023
- 70 Attendees
- $40K Funds Raised
- CTV News Coverage

TEA TIME WITH THE DOCS 2022
- 150+ Tickets sold
- 3 CTV Interviews
- Featured Coverage by Star Motors
END MS SUMMER SCHOOL 2022
- Welcomed 60 Students Across Canada
- Participants interacted with people living with MS and networked with peers in MS research from across Canada

BRAIN HEALTH RESEARCH DAY 2022
- 170+ Participants
- 73 Poster Presenters
- Published in the UOJM

CENTER FOR NEURAL DYNAMICS SPOTLIGHT 2022
- 167 Participants
- Hosted by the Neural Dynamics research pillar
- Announced New Centre for Neural AI

UOBMRI RESEARCH DAY
- 10-Year Anniversary Event
- Total of 390 Participants
- 109 Poster Presentations
- 13 Presenter Awards Valued at $14K

PARKINSON'S UPDATE 2023: MOVING FORWARD TOGETHER
- 200+ Attendees
- Perspective of people living with Parkinson's disease
- Interactive Trainee Sessions
A special thank you to our governing, advisory, and community committees who have supported us over the past few years.

**Governing Council**
- Sylvain Charbonneau (Chair)
- Victoria Barham
- Jason Berman
- Florence Dzierszinski
- Bernard Jasmin
- Bernard Leduc
- Ruth Slack
- Duncan Stewart
- Lucie Thibault

**Scientific Council**
- Ruth Slack (Chair)
- Adam Shuhendler
- Amy Hsu
- André Longtin
- Baptiste Lacoste
- Dar Dowlatshahi
- Diana Koszycki
- Diane Lagace
- Eve Tsai
- Georg Northoff
- Gilles Comeau
- Hanns Lochmüller
- Jean-Claude Béïque
- Jennifer Chandler
- Jennifer Phillips
- Jodi Edwards
- Jodi Warman
- Katalin Tóth
- Lisa Walker
- Maxime Rousseaux
- Michael Schlossmacher
- Nafissa Ismail
- Neil Thomas
- Richard Naud
- Robin Parks
- Roger Zemek

Special thanks to our community members and supporters!
THANK YOU TO OUR PARTNERS, AFFILIATED NETWORKS AND COLLABORATORS

Canadian Partnership for Stroke Recovery
Carleton University
CARE for RARE
Centre for Neural Dynamics and AI
dendMS National Education and Training Office
Éric Poulin Centre for Neuromuscular Disease
Hebrew University of Jerusalem
Parkinson Canada
Parkinson Research Consortium
Mitochondrial Innovation Initiative (MITO2i)
Multiple Sclerosis Research Group
uOttawa Music and Health Research Institute
As the uOBMRI celebrated its 10-year anniversary in 2022, much reflection has been made on the important contributions that have shaped the institute’s growth over the past decade. As of today, the uOBMRI is considered one of the largest brain research institutes in Canada with more than 250 research members. As a virtual institute, we have achieved a strong research network within the Ottawa community that branches out to partnerships on a national and international level. These networks have helped solidify greater research impact and innovative approaches in brain and mind-related research in both prevention, treatment, and care.

With a goal to improve education and awareness in the community, one of the leading contributions towards our growth and research achievements is through the generous support from our donors. With a combination of monetary and in-kind support, the uOBMRI has been able to achieve greater research objectives by funding research grants, trainee scholarships and fellowships, as well as bringing education and awareness initiatives back to the very community that supports these initiatives.

As we look forward to continuing our outreach efforts, we are grateful to have the backing from our community and hope to strengthen this relationship for years to come.
## How to Learn More...

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NEW WEBSITE</strong></td>
<td>Did you know that the uOBMRI has a new website? <a href="#">Click here</a> to see what is new.</td>
</tr>
<tr>
<td><strong>OUR RESEARCH</strong></td>
<td><a href="#">Click here</a> to learn more about the uOBMRI’s Thematic Research Priorities.</td>
</tr>
<tr>
<td><strong>OUR MEMBERS</strong></td>
<td>The uOBMRI has more than 250 research members. To view the full list, <a href="#">click here</a>.</td>
</tr>
<tr>
<td><strong>NEWS ARTICLES</strong></td>
<td>Stay up-to-date with what’s happening in the uOBMRI community. <a href="#">Click here</a> to view the latest news.</td>
</tr>
<tr>
<td><strong>OUR COMMUNITY OUTREACH</strong></td>
<td><a href="#">Click here</a> to learn how the uOBMRI promotes education and awareness on brain and mind-related health in the community.</td>
</tr>
<tr>
<td><strong>SOCIAL MEDIA</strong></td>
<td>Click to subscribe to our social media channels below.</td>
</tr>
</tbody>
</table>
Meet the uOBMRI Team

Director
• Ruth Slack, PhD, FRSC

Program Manager
• Natasha Hollywood

Liaison and Communications Officer
• Candace Fortier

Academic Writer
• Sarah Schock, PhD

Program Officer
• Jordan Pumphrey

Communications & Special Projects Coordinator
• Aisling Sasaki