“THE MIND IS LOOKED AT THROUGH THE LENSE OF THE BRAIN. THEY ARE INSEPARABLE, SO BOTH ARE INCREDIBLY RESILIENT AND FRAGILE”

- Dr. David Park

CONNECT.EXCITE.HEAL.
The University of Ottawa Brain and Mind Research Institute (uOBMRI) is Ottawa’s largest collection of basic researchers and clinician scientists that are focused on brain and mind related health.

The uOBMRI helps orchestrate research in a collaborative and innovative fashion by overcoming the barriers that exist between research at the basic and clinical levels. It does so by helping to coordinate research efforts of its research members at the various uOttawa faculties, resident hospitals, affiliated networks and local research institutes.

The uOBMRI supports its members by enhancing the research environment, facilitating access to resources and expanding programs in order to attract the best candidates.

We are working together to promote awareness and education of brain and mind related health in the community.
MESSAGE FROM THE DIRECTOR

Since our inception in 2012, the University of Ottawa Brain and Mind Research Institute (uOBMRI), has aimed to advance brain health research, while at the same time positively impacting the existing healthcare services and improving the quality of life standards for patients and their families.

We have built an intensely collaborative team made up of a large number of exceptionally talented scientists and clinicians who are all working together toward our common goal of becoming a world-class leader in neuroscience research and treatment of brain disorders.

We have succeeded in generating growing support of our community by engaging in many scientific, social and fundraising activities where we convey research breakthroughs emerging from our labs, clinical advancements implemented in our clinics and the impact those efforts have on the lives of individuals, families and communities in Ottawa.

The past five years have been very productive as we reach out to Connect. Excite. Heal. Our initiatives have taken off with great momentum and are producing very favorable results. We look forward to continue to share our exciting discoveries with our community and making a difference for patients and families everywhere.

With your support, we will continue to do great things.

David S. Park, Ph.D., FRSC
Director, uOttawa Brain and Mind Research Institute

MESSAGE FROM OUR WHITE COAT CABINET

It has been my great honour and pleasure to co-chair, with Jim Dunrell, the University of Ottawa Brain and Mind Research Institute’s White Coat Cabinet – a dedicated group of Ottawa area citizens with a keen interest in advancing awareness of, and support for one of Ottawa’s lesser known crown jewels the uOBMRI.

The uOBMRI is a fascinating organization that orchestrates research in a collaborative and innovative fashion and accelerates both brain related basic research and medical outcomes for patients by identifying more integrated, personalized treatment plans based on findings from clinical care research.

The uOBMRI, under the outstanding leadership of Dr. David Park, advances the brain- and mind-related research and clinical activity of over 200 highly qualified and world renowned individuals in a cohesive fashion.

The uOBMRI’s rather unique approach accelerates medical advances and outcomes by overcoming the barriers that exist between research at the basic and clinical levels, by building on the success of four highly respected research centres associated with the University (the Parkinson Research Consortium, the Canadian Partnership for Stroke Recovery, the Centre for Neural Dynamics, the Centre for Neuromuscular Disease, and CARE for RARE based out of the CHEO Research Institute), and importantly by following a strategic plan developed in consultation with stakeholders and the uOBMRI Scientific Council (the Council that directs the allocation of research funding to the most promising research areas and to gaps in the health care research continuum from basic research to clinical research).

The White Coat Cabinet supports the uOBMRI awareness activities (such as Brain Health Awareness Week) and the uOBMRI fundraising activities (such as the Strokes for Stroke Golf Tournament).

Please support the uOBMRI.

Brian Reinke
Chair, uOBMRI White Coat Cabinet
OUR MEMBERS

Who are our members?

The University of Ottawa Brain and Mind Research Institute (uOBMRI) is Ottawa’s largest collection of basic researchers and clinician scientists that are focused on brain and mind related health. We currently have over 230 scientific members. Our members include clinicians, clinician scientists, fundamental researchers from across numerous specialties and work to understand the nervous system (central and peripheral) in order to make an impact on brain health.

To view our membership profiles, please visit our website at: http://www.uottawa.ca/brain/about-institute/faculty

How to become a Member?

Membership Guidelines:

- Must have expertise or major interest in brain and mind related research
- Must provide a CV as a new member and ongoing on an annual basis
- Request for membership can be submitted to the Director at any time throughout the year. Please email uOBMRI@uottawa.ca for all membership requests

Members have access to:

- Opportunities for project funding based on approval from the Scientific Council
- Opportunities to participate in collaborative uOBMRI Projects
- Updates on activities within the Brain and Mind Research community
- Programs and groups within the uOBMRI that facilitate interactions and provide direction to Brain research activities within Ottawa

As a Member you must:

- Acknowledge uOBMRI in published works, presentations and press releases
- Submit your CV once a year
Emerging research has shown that early and intensive rehabilitation efforts during the first two weeks after stroke significantly enhance recovery and improve outcome.

However, 50% of Canadian stroke survivors cannot access rehabilitation therapy during these first two weeks, and miss this crucial time window for recovery.

Sadly, 60% of stroke survivors’ time in the acute-care hospitals is spent on downtime; time that would be better dedicated to rehabilitation.

RecoverNow approach is the first to identify these gaps and does not wait for patients to be “cleared for rehab”!

RecoverNow brings rehabilitation into inpatient setting (almost) immediately after stroke by using unique mobile tablet-based rehabilitation treatments.

In 2016, RecoverNow was first introduced into Ottawa Hospital where 30 stroke survivors took part in the initial trial. Given the success stories streaming from patients, families and health professionals that are involved in the trial we are excited about sharing our results!

“WE HOPE TO PROVE TABLET-BASED STROKE REHABILITATION IS BOTH FEASIBLE AND EFFECTIVE IN THE ACUTE CARE SETTING. WITH RECOVERNOW, PATIENTS CAN ENGAGE IN RECOVERY THERAPY WITHIN HOURS OF RECEIVING THEIR EMERGENCY STROKE TREATMENT”

- Dr. Dariush Dowlatshahi
THE INTEGRATED PARKINSON CARE NETWORK PROJECT LEAD BY DR. TIAGO MESTRE AND DR. DAVID GRIMES BRINGS CARE INTEGRATION, PATIENT SELF-MANAGEMENT, AND HEALTH TECHNOLOGY TO PEOPLE WITH PARKINSON’S DISEASE.”

- Dr. Tiago Mestre

RESEARCH IMPACT

One of the biggest accomplishments of the PRC-uOBMRI this year was the launch of the Integrated Parkinson’s Care Network (IPCN), an initiative aimed at improving quality of life for PD patients, today!

The IPCN ‘one stop’ approach was carefully designed to meet the unique needs of each Parkinson’s patient through orchestrating all aspects of care, spanning from drug therapies to community-based services.

In fact, the IPCN ensures that patients get the best, and most comprehensive, care possible in a timely manner.

The implementation of the IPCN approach at the Parkinson’s disease and Movement Disorders Clinic in Ottawa begun in 2016 and already shows remarkable results!

Within one year, the IPCN achieved tenfold increase in patients’ access to health care professionals and made dramatic differences in PD patients’ lives, including substantial increase in autonomy and quality of life.

Just as one example, one of the patients at the clinic who previously spent most of the day in bed is now mobile and active. In fact, 75% of IPCN patients report that their condition had significantly improved. In the little time since its launch, the IPCN has already impacted patients’ lives for the better!
In 2016, the uOBMRI made significant progress towards establishing the first specialized Neuromuscular Clinical Research Centre (NCRC) in Ottawa.

**RESEARCH IMPACT**

**THIS NEW CLINICAL RESEARCH CENTRE WILL BRING THE BASIC RESEARCHERS AND CLINICIANS CLOSER TOGETHER AND GREATLY ENHANCE OUR ABILITY TO DEVELOP NEW TREATMENTS FOR PATIENTS AFFECTED WITH NEUROMUSCULAR DISEASES AND ALS.**

- Dr. Jodi Warman

The Neuromuscular Clinical Research Centre (NCRC) brings together leading neuromuscular disease experts that will train, work, research and practice in Ottawa.

NCRC mission is to provide the highest-level of diagnostic expertise and therapeutic management currently available as well as to develop innovative therapies, diagnostic methods and processes to enhance the current array of existing treatments.

The NCRC will take a progressive “bench-to-bedside” approach where the latest research findings from the uOBMRI laboratories would be translated into clinical trials that will be readily available to patients in the Ottawa region. This structure requires a breakdown of institutional and research barriers and a concerted effort by all researchers working closely together, an approach that the uOBMRI fosters and prioritizes.

We are excited and look forward to the upcoming launch of NCRC, a center that will have the capacity to deliver and develop better treatments to thousands of Ottawa-area patients who struggle with the debilitating disease.
UNDERSTANDING THE FUNCTION OF THE HILAR MAY REVEAL DEEP INSIGHTS INTO MEMORY FUNCTION. APART FROM ITS IMMEDIATE RELEVANCE TO MEMORY E.G. ALZHEIMER RESEARCH, IT IS ALSO A LOCUS WITH A HIGH POTENTIAL FOR DYSREGULATION IN DISEASES LIKE EPILEPSY. THIS NEW PROJECT MAY THUS IMPACT BOTH THE THEORY OF MEMORY FORMATION AND RECALL AS WELL AS CLINICAL TREATMENT OF THE AFOREMENTIONED DISEASES.

- Dr. André Longtin

RESEARCH IMPACT

One of the high profile Neural Dynamics projects at uOBMRI currently explores exciting new therapeutic strategies wherein brain implanted microchips use “thought” signals and brain-computer interface (BCI) technology to control external assisted living devices.

The BCI technology relies solely on the use of neural thought signals derived from the participant’s brain which is then interpreted through a computer intermediate to produce movement through external apparatus. The study already shown favorable outcomes in a preclinical primate study and the preliminary clinical trial is about to begin in 2017!
Full article here

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Full article here

Full article here

Full article here

Full article here

NSERC Press Release: Drs. Len Maler & André Longtin win the NSERC’s Brockhouse Canada Prize for Interdisciplinary Research in Science and Engineering

André Longtin and Leonard Maler have combined their expertise in physics, mathematics and neurobiology to uncover the neural code that underlies the operation of the brain. The University of Ottawa researchers use electric fish to trace the journey of signals as they move through the entire sensory process, observing the hidden traits of brain activity in moments of focus. Their research expands our understanding of neurosceince and benefits the development of artificial intelligence and treatments for neurological disorders. Dr. Longtin and Dr. Maler won NSERC’s Brockhouse Canada Prize for Interdisciplinary Research in Science and Engineering in 2017. For more information see here.

Welcome to the uOBMRI’s New Recruits!

TOH/OHR/Faculty of Medicine (FoM)
Baptiste Lacoste: Blood Brain Barrier
Pierre Matar: Neurodevelopment
Tadeu Fantaneanu: Neurology Clinician Research

CHEO/FoM
Bill Gardner: Health Systems and Child Psychiatry
John McLennan: Systems and Child Psychiatry
Kathleen Pajer: Chief psychiatrist at CHEO

FoM
Stephen Ferguson: Tier 1 CRC, Mental health/Neurodegeneration

Greg Silasi: Stroke
Patrick Giguère: Opioids
Simon Chen: Tier 2 CRC, Motor Control
Richard Naud: Computational Neuroscience
Tanuj Gulati: Brain Computer Interface in progress
Woo Jae Kim: Neural Pathways and Behavior

Faculty of Science (FS)
Tanya Schmah: Department of Mathematics, image registry
Maia Fraser: Department of Mathematics, advanced mathematics
Adam Shuhenl: Tier 2 Chair in Chemical Biology

Matthew Pamentier: CRC in Comparative Neurophysiology
Corrie daCosta: Chemistry and Biological Sciences
Faculty of Social Science (FSS)
Stuart Fogel: Memory and Sleep
Faculty of Health Science (FHS)
Keir Menzies: NM and Mitochondria expertise
Yan Burelle: Mitochondria
Jason Steffener: Memory and Aging
Michael De Lissio: School of Human Kinetics

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uOBMRI BY THE NUMBERS

1,759 NUMBER OF PARTICIPANTS AT uOBMRI EVENTS IN 2016-2017

221 ACADEMICS AT BRAIN HEALTH RESEARCH DAY 2016

72 Trainee and Student Posters presented

6 Internal Speakers
2 Trainee Speakers

Keynote Lecture from Dr. Tracy Bale, Professor of Neuroscience, Center for Neurobiology and Behavior, Perelman School of Medicine, University of Pennsylvania

928 ATTENDEES AT BRAIN HEALTH AWARENESS WEEK 2016

5 Topics covered during Brain Health Awareness Week 2016

Monday: Mindfulness
Tuesday: Stroke
Wednesday: Depression
Thursday: Concussion
Friday: Parkinson’s

100% OF OUR DONATIONS GOES TOWARDS RESEARCH

EXAMPLES OF RESEARCH PROJECTS FUNDED THIS YEAR

<table>
<thead>
<tr>
<th>Amount</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>$70,000</td>
<td>The Choice And Partnership Approach (CAPA): Does It Increase Access And Improve The Mental Health Care Experiences Of Patients, Families, And Care Providers?</td>
</tr>
<tr>
<td>$15,000</td>
<td>CARE FOR RARE: Investigating The Effect Of Disease Causing TRNT1 Mutations On Cellular Stress Response: A Pathway Treatment</td>
</tr>
<tr>
<td>$16,000</td>
<td>CARE FOR RARE: Epilepsy Zebrafish Project</td>
</tr>
<tr>
<td>$75,000</td>
<td>Post-Concussion Research Consortium (PCRC): Fostering solutions to Post Concussion Disorder (PCD) through research into better prevention, identification and management</td>
</tr>
<tr>
<td>$50,000</td>
<td>Centre for Neuromuscular Disease Scholarship Program</td>
</tr>
<tr>
<td>$80,000</td>
<td>The Function Of Sleep For Learning New Cognitive Strategies In Young And Older Adults</td>
</tr>
<tr>
<td>$60,000</td>
<td>The Integrated Parkinson’s Care Network (IPCN)</td>
</tr>
<tr>
<td>$50,000</td>
<td>Towards a Network - Level Understanding of Prefrontal Cortex Function</td>
</tr>
<tr>
<td>$20,000</td>
<td>The Ontario Neurodegenerative Disease Research Initiative (ONDRI) Integrated Discovery Program</td>
</tr>
<tr>
<td>$70,000</td>
<td>Early Interventional Rehabilitation Care for Stroke (ERS)</td>
</tr>
<tr>
<td>$50,000</td>
<td>Vision 20X20: A strategy to reduce suicide in the Ottawa Region by 20% by the year 2020 by initiating an integrated model of education, early monitoring, and effective treatment and research of populations at risk for suicide</td>
</tr>
<tr>
<td>$40,000</td>
<td>Integrated Parkinson’s Care Network: eConference Project</td>
</tr>
<tr>
<td>$30,000</td>
<td>Research Manager for Participant Recruitment &amp; Partnership Development</td>
</tr>
<tr>
<td>$50,000</td>
<td>Equipment for Neural Dynamics</td>
</tr>
<tr>
<td>$220,000</td>
<td>Parkinson Research Consortium – Fellowships and Research Projects</td>
</tr>
</tbody>
</table>

April 30 2016—May 1 2017
**OUR INTEGRATED CONSTITUENTS**

The success of the University of Ottawa Brain and Mind Research Institute depends on its institutional members: The Ottawa Hospital and the Ottawa Hospital Research Institute, The Royal Ottawa Health Care Group and the University of Ottawa Institute of Mental Health Research, Bruyère Continuing Care and the Bruyère Research Institute, the Children’s Hospital of Eastern Ontario (CHEO) and the CHEO Research Institute, as well as, Hôpital Montfort and Institut de recherche de l’Hôpital Montfort. Five University of Ottawa faculties are involved as well—the faculties of Medicine, Science, Health Sciences, Education and Social Sciences.

We are also building on our unique strengths in neurology, epidemiology, basic neuroscience and systems biology, fields that are crucial to mapping the complicated pathways that lead to disease.

Our affiliated hospitals and research institutes help to create productive relationships with medical research communities across Ottawa and around the world, to stimulate engagement with relevant scientists and clinicians and to support education and research across a wide range of neuroscience specialties.

**OUR INTEGRATED NETWORKS**

Our integrated networks result from our efforts to help bridge the gap between the needs of the community and the research going on at the uOBMRI. These networks are primarily comprised of our members, patients, caregivers, community leaders and ambassadors of the uOBMRI. We come together to share ideas, build awareness and ultimately thrive to advance community outreach and engagement.

**Parkinson Research Consortium**: The PRC was established with the goal to be an incubator for innovative ideas in Parkinson’s disease research. Comprised of a select group of scientists from the Ottawa Hospital Research Institute (OHRI) and the uOBMRI with diverse scientific talents and expertise in genetics, molecular biology, neuroscience and patient care. The PRC continues to grow in productivity, personnel and resources to help find a cure for Parkinson’s disease.

**Canadian Partnership for Stroke Recovery**: The HSF Canadian Partnership for Stroke Recovery is a joint initiative of the Heart and Stroke Foundation and Canada’s leading stroke recovery research centres. Headquartered at the University of Ottawa, the Partnership is restoring lives through research.

**Centre for Neural Dynamics**: The Center brings together researchers from the Faculties of Medicine, Science and Health Sciences. They have a common interest in molecular, cellular and systems neuroscience, mathematical modeling and imaging.

**Centre for Neuromuscular Disease**: The CNMD represents a multidisciplinary research and training initiative that unites world-class basic and clinical researchers working towards the common goal of diagnosing, characterizing and developing transformative therapies for patients with neuromuscular disease.

**Multiple Sclerosis (MS) Group**: The uOBMRI MS Group was founded in order to systematically research the underlying mechanisms of MS, unravel regeneration processes, develop new approaches for treatment and implement innovative rehabilitation processes at our partnering hospitals in Ottawa. With the belief that a collaborative approach is key, the group features members with a wide range of interests and expertise.

**The Academy of Mindfulness and Contemplative Studies**: The Academy is an interdisciplinary group of faculty and students who share a common interest in the study and application of mindfulness and contemplation.

**CARE for RARE**: CARE for RARE is a nation-wide research program focusing on the improvement of both the diagnosis and treatment of rare diseases. Led out of the Children’s Hospital of Eastern Ontario (CHEO) Research Institute in Ottawa, Canada, CARE for RARE includes 21 academic sites across the country, and is recognized internationally as a pioneer in the field of genomics and personalized medicine.

**Stroke Research Consortium**: In 2015, the leading stroke researchers in Ottawa established the SRC in order to systematically research the underlying mechanisms of injury, unravel regeneration processes, develop new approaches to optimize recovery and implement innovative rehabilitation processes at our partnering hospitals in Ottawa.

**Concussion Injury Group**: The Concussion Injury Group (CIG) is a unique partnership between the uOBMRI researchers/clinicians, patients and community, working to address the urgent needs of concussion injury survivors. Guided by the goal to “Eliminate the Wait”, the CIG is working towards making the healthcare system more accessible and clearer to navigate for others.

**Memory and Cognition Group**: In 2016, the leading cognition and memory researchers in Ottawa formed the MCG to systematically research the underlying mechanisms of the cognitive decline, unravel memory loss processes, discover innovative ways to stop and heal cognitive decline and improve delivery of care at our partnering hospitals.
uOBMRI
GOVERNANCE

The University of Ottawa Brain and Mind Research Institute (uOBMRI) is a partnership with the faculties of the University of Ottawa and its affiliated hospital partners (TOH, CHEO, Bruyère, Montfort, Royal) and associated research institutes.

The uOBMRI is a uOttawa initiative which maintains a broad and inclusive membership across the University of Ottawa/Ottawa research community in Brain and Mind related research. It is under the governance of the VP research office at the University of Ottawa. However, its day to day operations resides at the uOttawa Faculty of Medicine to streamline operations and allow the uOBMRI to make a more definitive impact within the larger research community.

Because the uOBMRI relies on partnerships for its success, transparency and guidance are critical for its success. The uOBMRI operates with three branches of council: The Advisory Board – members of the partners' and internal leadership, The Scientific Council – members of the uOBMRI scientific community, and The White Coat Cabinet – external members of the community. These boards serve as a formal mechanism to advise on priorities, establishment of new programs, and scientific directions for the future of the uOBMRI. And in doing so, will contribute to strengthening the vision and mandate of the uOBMRI.

Advisory Board Members
Dr. Tim Aubry, Director, School of Psychology, University of Ottawa
Dr. Richard Barwell, Dean, Faculty of Education, University of Ottawa
Dr. Sylvain Charbonneau, Interim Vice President, Research, University of Ottawa
Mr. Guy Chartrand, President and CEO, Bruyère
Dr. Daniel Figeys, Chair, Department of Biochemistry, Microbiology and Immunology, University of Ottawa
Dr. Bernard Isomini, Interim Dean, Faculty of Medicine, University of Ottawa
Dr. Kevin Kee, Dean, Faculty of Arts, University of Ottawa
Dr. Jack Kitts, President and CEO, The Ottawa Hospital
Dr. Bernard Leduc, President and CEO, Hôpital Montfort
Dr. David Lohnes, Chair, Department of Cellular and Molecular Medicine, University of Ottawa
Dr. Zul Merali, President-CEO of The Royal’s Institute of Mental Health Research
Dr. Maurice Lévesque, Interim Dean, Faculty of Social Sciences, University of Ottawa
Dr. Alex Muter, President and CEO, CHEO
Dr. Martin Osmond, CEO and Research Director, CHEO Research Institute
Dr. Kathleen Pajer, Chair, Department of Psychiatry, University of Ottawa
Dr. Hélène Perrault, Dean, Faculty of Health Sciences, University of Ottawa
Dr. Steve Perry, Dean, Faculty of Sciences, University of Ottawa
Dr. Denis Prud'homme, Vice President, Research and Scientific Director, Institut de Recherche Hôpital Montfort
Dr. Ruth Slack, Interim Vice-Dean, Research, Faculty of Medicine, University of Ottawa
Dr. Duncan Stewart, CEO & Scientific Director, Ottawa Hospital Research Institute
Dr. Heidi Sveistrup, Interim CEO & Chief Scientific Officer, Bruyère Research Institute
Dr. George Weber, President and CEO, The Royal
Dr. Phil Wells, Chief, The Department of Medicine, University of Ottawa

White Coat Cabinet Members
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Sam Bhargava
Jim Durrell
Joseph Frangione
Lauren Haynes-Van den Weghe
Gary Lacey
Young-Hae Lee
David Loxton
Randy Marusyk
Shelley McKay
Paul Moen
Brian Reinke
Jennifer Toby
Melanie Vadeboncoeur
Jack Uppal

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Dr. Richard Bergeron
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