



CONNECT. EXCITE. HEAL.

Institut de recherche  
sur le cerveau

Brain and Mind  
Research Institute

# uOBMRI 2014 in Review

IN THIS ISSUE

## Learn about the uOBMRI

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.

### Our Vision

To create one of the world's top neuroscience centres for the treatment of brain disorders.

### Our Mission

To develop new therapies, by harnessing the brain's internal potential for regeneration, protection, and recovery, and to implement fundamental changes in patient care.

**Connect. Excite. Heal.**

### Paving the Way into the Future

This had been an exciting year! The uOBMRI is hard at work and has laid the foundational framework required for creating positive impact. The uOBMRI has successfully established the **Scientific Strategic Plan** by effectively identifying key collaborative areas of strength and priority, which informed and initiated central scientific projects and validated great collaborations.

We are looking forward to developing further endeavours.

### SEMINAR INFORMATION

To keep the doors of collaborative networking and scientific discussion open, the uOBMRI has amalgamated a comprehensive list of all the Brain and Mind related seminars being held throughout Ottawa.

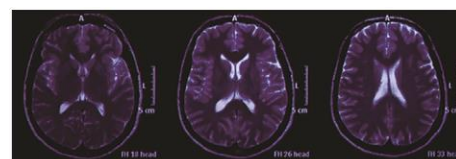
For more information, please visit our website at:

<http://www.uottawa.ca/brain/training>



### Strategic Scientific Initiatives

Page 2



### Brain Health Awareness Week

Page 3



### Semi-Annual Brain Health Research Days

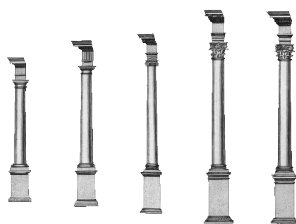
Pages 4-5



### Highlights from Some of Our Networks

Pages 6-7

# Research Pillars



At the start of 2014, the uOBMRI sat with many stakeholders and evaluated the local neuroscience scene, with a focus on establishing a scientific strategic plan.

From these discussions stemmed the initial research plan that identified the uOBMRI strengths and areas of expertise.

The uOBMRI is proud to announce its

## 5 Pillars of Research

### Integrated Parkinson's Care Network (IPCN)

This is a unique program where patients will meet with a healthcare coordinator that will create a personalized healthcare portfolio by: 1) identifying **all** the aspects (movement, dementia, depression etc.) of **their** everyday living conditions and 2) then linking the patient to the proper hospital/community resources. Through this process, patients will provide information that will help advance PD-related health services and research and the results of their health outcomes will determine the effectiveness of this program. ***This program is currently in Phase I of development.***

### Early interventional Rehabilitation care for Stroke (ERS)

This program will help determine whether management of depression, dementia and physical rehabilitation in the early phases of post-stroke care can affect the long-term recovery of patients. Rather than waiting for patients to enter rehabilitation programs, this program will bring rehabilitation to the hospitalized patient almost immediately; a critical time which research indicates that the brain has the greatest capacity for self-renewal and healing following a stroke. ***Patients have already enrolled in this program!***

### Vision 20X20

The uOBMRI supports this innovative program for suicide prevention which brings together multiple hospital and community partners including the Community Suicide Prevention Network to reduce the local suicide rate by 20% in the next 5 years (2020). This is the first time that a strategy for reducing the suicide rate in a North American urban centre has ever been attempted. This program integrates: community education, research of populations at risk, early monitoring programs, effective follow-up initiatives and the implementation of guidelines for suicide related media coverage. ***The monitoring system, Phase I of the project, has been established.***

### Protect and Repair (PandR)

This program is centred on the basic scientific research aspect of brain disorders. It focuses on understanding how brain circuit connections are altered in disease and how protective and regenerative strategies can improve brain circuit function. The early phases of this project will have a particular emphasis on the primary health-related conditions identified by the uOBMRI: depression, stroke and Parkinson's disease. ***Funding for the University of Ottawa Centre for Neural Dynamics is underway and has supported research in: the computational analysis of neural activity, networking of the prefrontal cortex and optogenetics for mapping and treatment of psychiatric disorders.***

### Bench to Bedside & Back - Neuromuscular Disease (B3 for NMD)

This initiative unites Ottawa's world-renowned basic and clinical neuromuscular disease (NMD) researchers to work towards unveiling the mechanisms by which NMDs are caused. It will efficiently advance promising therapies from discovery phases to clinical trial settings and transforming healthcare strategies for patients affected by NMD. ***The rejuvenation of the University of Ottawa Centre for Neuromuscular Disease is underway! See pg.7 for more details.***

# Funding Successes

## Ontario Brain Institute Research Funding

The Ontario Brain Institute (OBI) has awarded 2 large scale grants that are basic and clinical in nature to Ottawa-based research teams. A total of **\$1.3 Million** from the OBI with matching funds from the uOBMRI (through the uOttawa Development Team and the Faculty of Medicine), will be dispersed by the uOBMRI to include its networks.

The first is through their **Ontario Neurodegenerative Disease Research Initiative (ONDRI) Basic Science Program (BSP)** and was awarded for the submission, "*Generation and analyses of novel preclinical models of Parkinson's disease,*" to local researchers within the uOBMRI to develop better animal models of disease for preclinical testing and monitoring or disease progression which provide insight to causes, outcomes and the validation of therapeutic targets and treatment strategies.

The second is through their **Ontario Neurodegenerative Disease Research Initiative (ONDRI), Clinical Research Program**, for the submission entitled, "*The Role of Ischemic Vasculopathy in Adult Onset Neurodegenerative Disease and the creation of the Dementia Network of Ontario Research Database (DNORD),*" which is being led through our partner - The Ottawa Hospital's Parkinson's Disease and Movement Disorders Clinic and Stroke Prevention Clinic. This work focuses on cognitive decline and will help to define genetic outcomes in well characterized patients, while scanning for commonalities between PD and stroke cases.



# Brain Health Awareness Week

In 2014, the uOBMRI proudly hosted it's very first, annual Brain Health Awareness Week.

This exciting week kicked off with open discussion from three Canadian athletes, who delved into their personal stories and struggles with depression and mental illness.

They also helped re-iterate the importance of both basic and clinical research in the fight against mental health conditions.

Day two featured the Complicated Brain: Brain Anatomy, Brain Imaging and Brain Diseases in partnerships with the University of Ottawa - Faculty of Medicine's Mini-Medical School.

This was followed on Wednesday with Mayor Jim Watson's official proclamation of September 22<sup>nd</sup> – 26<sup>th</sup>, 2014 as the city's "Brain Health Awareness Week."

Thursday evening session, which featured an open, exciting debate surrounding the topic **"Antidepressants: Are they overprescribed and ineffective?"**

Friday's session focused on research discoveries and current efforts with: Dr. Ruth Slack – stem cell regulation for post-stroke recovery, Dr. Dennis Bulman – Care for Rare genetic screening and Dr. Georg Northoff – imaging techniques to diagnose patients with depression.

The week wrapped up on Saturday evening with the 2<sup>nd</sup> Annual Faculty of Medicine Gala: *Abracadabra: A Night of Magic and Medicine*, which featured the talented Juno award winning Canadian artist - **Serena Ryder**.



Canadian Figure Skater and Olympic silver medalist Elizabeth Manley (left), National Hockey League player Stéphane Richer (centre) and Canadian Olympic Team Cyclist and Triathlete Shelley McKay (right) all came forward to help end the stigma around mental illness.

The evening also highlighted uOBMRI researchers: Dr. Schlossmacher (Parkinson's Initiative), Dr. Dowlatsahi (Stroke Initiative), Dr. Northoff (Depression Initiative), Dr. Slack (Regeneration Initiative) and Dr. Côté (Neuromuscular disease Initiative).



*(Back left to right) Mr. George Weber, President & CEO, Royal Ottawa Health Care Group; Dr. Bernard Leduc, President & CEO, Hôpital Montfort; Dr. Jack Kitts, President & CEO, The Ottawa Hospital, Mr. Alex Munter, President & CEO Children's Hospital of Eastern Ontario; and Mr. Allan Rock, President and Vice-Chancellor, University of Ottawa. (Front) Dr. Jacques Bradwejn, Dean of the Faculty of Medicine; Dr. David Park, Director of the uOttawa Brain and Mind Research Institute, City of Ottawa Mayor Mr. Jim Watson; Mr. Daniel Levac, CFO and Sr. Vice-President Corporate Services Bruyère Continuing Care; and Mr. Tim Kluge, President & CEO, The Ottawa Hospital Foundation.*

## BRAIN HEALTH AWARENESS WEEK 2015

This year's Brain Health Awareness Week is shaping up to be quite exciting! Check out the Session Research Themes listed below:

**When:** Monday, September 14<sup>th</sup> – Saturday, September 19<sup>th</sup>, 2015

**Where:** uOttawa Main Campus, Faculty of Social Sciences Building

Monday – Parkinson's disease

Tuesday – Stroke

Wednesday – Vision 2020 & Mental Health

Thursday – Neuromuscular Disease

Friday – Open Debate: Stem Cell Therapy

Saturday – Community Event - **Yoga & You for Brain Health**

**More details to come on our website:**

BRAIN HEALTH AWARENESS WEEK  
<http://brainhealthawarenessweek.ca>



# Brain Health Research Days

On Friday, June 13<sup>th</sup>, 2014 the uOBMRI hosted its 7<sup>th</sup> Brain Health Research Day (BHRD) at the Desmarais Building of the University of Ottawa's Main Campus.

The full day event featured a Keynote address, by Dr. Jean-Pierre Changeux, a professor at the Collège de France, and the Director of the Laboratory of Molecular Neurobiology and Institut Pasteur (*centre, front*). He presented an address entitled, "*Theoretical and empirical approaches to conscious processing: from molecular biology to cognition.*"



Poster and Oral Trainee Award Winners with Dr. Jean-Pierre Changeux (centre front) at the June 2014 Semi-Annual Brain Health Research Day.



*Congratulations to the 2014 Image Contest winner, Sébastien Maillé who is currently pursuing his BSc in Biomedical Science within Dr. Jean-Claude Béique's lab in the Department of Neuroscience here at the University of Ottawa Faculty of Medicine. The winning image was from a cobalt uptake staining experiment of a rat hippocampus taken at 4x. The staining labels neurons expressing GluA2-lacking AMPA receptors (the brighter neurons in the image). The colours are inverted and a filter was applied to accentuate the blue and black in the image.*

The program also featured seminars presented by local researchers covering topics ranging from electrophysiology to mental illness and neurogenesis.

## Awards and Winners

The day was also filled with much excitement, as prizes were awarded to trainees who demonstrated excellence in presentation and research. Congratulations to our 2 oral presentation winners, who were selected to present a seminar: **Dr. Cynthia Solek**, a post-doctoral fellow from the laboratory of Dr. Marc Ekker and **Dr. Grace Iyirhiaro**, a doctoral graduate from the laboratory of Dr. David Park.

Also, we would like to congratulate the winners of our poster presentations. The best undergraduate poster award recipient was **Lydia Richardson**, the best Master's level poster award winner was **Karah Lee**, the best junior (1st and 2nd year in the program) PhD poster award winner was **Maheen Ceizar**, while the best poster award in the senior PhD (3+ years in the program) category was **James Jun**. The best postdoctoral fellow and research associate poster award prize winner was **Timal Kannangara**. The Brain Health Research Day Image Contest Award was presented to **Sébastien Maillé** for his submission.

## Brain Health Research Day June 2015 Event

Please keep an eye out for announcements and registration for our next semi-annual Brain Health Research Day (**June 12, 2015**).



Institut de recherche  
sur le cerveau  
Brain and Mind  
Research Institute

Connecter.Exciter.Guérir.  
Connect.Excite.Heal.

NOTEZ LA DATE!

SAVE THE DATE!

JOURNÉE DE RECHERCHE SUR LA SANTÉ DU CERVEAU  
Le vendredi 12 juin 2015

BRAIN HEALTH RESEARCH DAY  
Friday June 12<sup>th</sup> 2015

9:00 AM – 5:00 PM

uOttawa Roger Guindon Hall, Health Sciences Building  
451 Smyth Rd



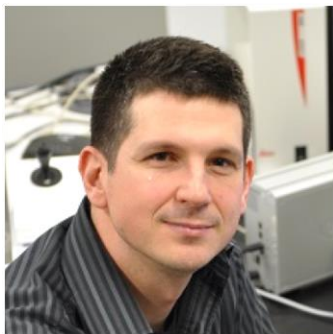
The **Antoine Hakim Lecture** presents:

**Eric Nestler, PhD**

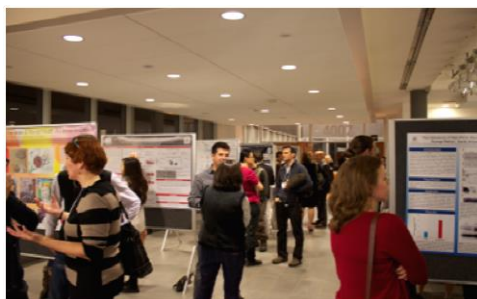
Professor of Neuroscience, Icahn School of Medicine,  
Mount Sinai, New York City,  
Chair of the Department of Neuroscience,  
Director of the Friedman Brain Institute

**Transcriptional and Epigenetic  
Mechanisms of Depression**

## KEYNOTE SPEAKER &amp; HIGHLIGHTS



Keynote -Dr. Michel Cayouette



Poster and Scientific Discussions



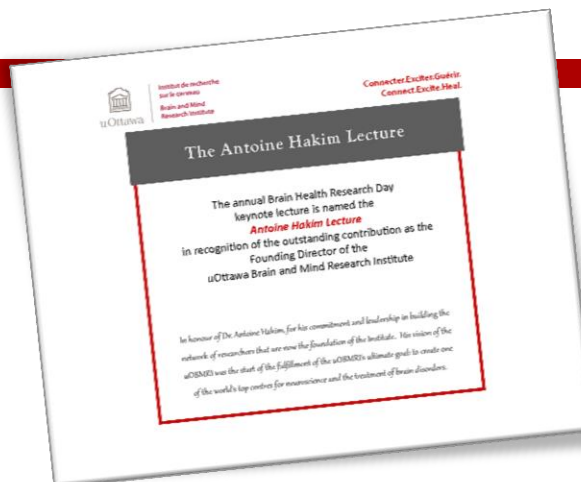
An Evening of Dinner and Fun

## BRAIN HEALTH RESEARCH DAY

Please visit our website at:  
<http://www.uottawa.ca/brain/events/brain-health-research-day>

The uOttawa Brain and Mind Research Institute announced that the June Semi-Annual Brain Health Research Day keynote lecture is now officially "**The Antoine Hakim Lecture**" in honour and recognition of the founding-director of the uOBMRI; a great visionary and leader, Dr. Antoine Hakim.

(Left to Right) Dr. Mary Senterman - wife of Dr. Hakim, Dr. Koszycki, Dr. Jasmin, Dr. Antoine Hakim, Dr. Bradwejn, Dr. Cayouette, Dr. Park, Dr. Nemer, Dr. Grimes and Dr. Lagace celebrate the announcement.



## December - Brain Health Research Day

The December Semi-Annual Brain Health Research Day and Joint uOBMRI / Neurosciences Program Holiday Party was one to remember!

This evening hosted our special keynote guest speaker **Dr. Michel Cayouette** from l'Institut des recherches cliniques de Montréal.

Dr. Cayouette presented a very well received seminar titled "*Mechanisms of cell fate decisions in the developing nervous system: lessons from the retina.*"

The talk was followed by a much appreciated reception and poster presentation, where trainees from the various research faculties presented their work in an open, non-competitive manner, and had the chance to network with professionals and researchers from across the different partnership organizations.

The evening progressed with a dinner followed by an open dance floor filled with scientists, all set on burning off the calories! It was great to see everyone relaxed and enjoying their time!

## The Antoine Hakim Keynote Lecture





# Parkinson Research Consortium

On Friday, November 7<sup>th</sup>, 2014, the Parkinson Research Consortium (PRC) celebrated its 10 year anniversary!

The PRC was co-founded a decade ago by Drs. David A. Grimes, *the Current Division head of neurology at The Ottawa Hospital and the Director of the Parkinson's Disease and Movement Disorder Clinic*, and David S. Park, *the current Director of the uOttawa Brain and Mind Research Institute*.



The Parkinson Research Consortium (PRC) cycling team came out to support, raise funds and challenge those who thought they had a chance against the pros!



The evening featured special guest and Master of Ceremonies, CTV Ottawa News Sportscaster, **Terry Marcotte**.

## Fellowship Awards

Congratulations to all of the 2014 Awardees!

- **Christopher Rudyk** – Toth Family Fellowship presented by: *Mr. John Toth*
- **Megan Fitzpatrick** – Audrey Grant Research Fellowship presented by: *Ms. Bea Robertson*
- **Chadwick Boulay** – Crabtree Family Fellowship presented by: *Mr. Richard Shantz*
- **Jungwoo Yang** – UCB Fellowship presented by: *Mr. Bron Vasic*
- **Nour Yahfoui** – Shelby Hayter Fellowship presented by: *Ms. Shelby Hayter*
- **Maneka Chitipolu** – Larry Haffner Fellowship presented by: *Ms. Johanne Haffner*.

## Celebratory Event Highlights

The evening continued with a set of reflection on the times – **“Progress in Motion;”** a theme that has been incorporated throughout all the PRC initiatives.

**A Focus on the Past** - with a presentation by doctoral student, Chao Chang, from the Dr. Paul Albert's laboratory of the Neurosciences Program at the Ottawa Hospital Research Institute (OHRI).

**Followed by a update on the present** – which featured the keynote address titled **“Stimulating the brain: The current state and future of neuromodulation for Parkinson's disease,”** by the recently recruited Dr. Adam J. Sachs, Neurosurgeon at the Department of Surgery, The Ottawa Hospital.

**And provided a glimpse into the future** – As Dr. David Grimes introduced the Integrated Parkinson Care Network (IPCN) to the broader Parkinson's community, shedding light on the exciting, impactful endeavours ahead.

To stay in the loop, the PRC holds its “Progress in Motion” scientific seminars on the last Friday of every month, at 3:30pm in the RGN Neuroscience Seminar Room 1421.

## Lap the Gats for Parkinson's 2015

Join us once again on:

**Saturday, May 30<sup>th</sup>; from 8am-1pm.**

Help us raise funds to support PD research!

To register as a Cyclist or pledge your support, please visit: <http://www.lapthegats.org>

Not into cycling – come out and lend a hand! To register as a Volunteer, please contact Elizabeth: [eabdelme@uottawa.ca](mailto:eabdelme@uottawa.ca)

For all other inquiries, Contact our Race Director for more Info: Natasha Hollywood: [nhollywo@uottawa.ca](mailto:nhollywo@uottawa.ca)



# Centre for Neuromuscular Disease

## CNMD Scientific Launch

The 2014 University of Ottawa Centre for Neuromuscular Disease (CNMD) Scientific Launch was held on Friday, October 24th, 2014 at The Ottawa Hospital, General Campus.

CNMD basic scientists and clinician researchers presented their work at the Launch, highlighting the quality and quantity of innovative breakthroughs in NMD research in Ottawa.

The "Graham Mainwood Endowed Lecture" was presented by the dynamic keynote speaker: **Dr. Elizabeth McNally** MD, PhD, Director of the Cardiovascular Genetics Clinic, University of Chicago.

Trainees had an opportunity to showcase their research through a poster session, and the top trainees demonstrating the highest quality received awards.

## Scholarships in Translational Research (STaR) Awards

Congratulations to the 2014 recipients:

- **Dr. Charles Meunier**, of Dr. Michael Rudnicki's Laboratory,
- **Emma Bondy-Chorney**, of Dr. Bernard Jasmin's Laboratory,
- **Benjamin Pryce**, of Dr. Luc Sabourin's Laboratory,
- **Andréanne Didillon**, of Dr. Jocelyn Côté's Laboratory, and
- **Ellias Horner**, of Dr. Alexander Blais's Laboratory.

## Upcoming Events

Community focused events:

To support the local NMD community, the CNMD has initiated planning for a "Community-focused CNMD Symposium" and "CNMD Scientist for a Day".

The former event will provide an informal forum for adult patients and parents to interact with CNMD researchers, and learn about our Centre and our research. The latter event is designed more for children affected with NMD to experience life as a scientist.

Dates: To Be Determined  
Key an eye on our website for more information!

### KEEP AN EYE ON

The CNMD website to learn more about the exciting advancements in NMD research:

<http://www.uottawa.ca/brain/research/neuromuscular-disease>  
<http://thinkottawamedicine.ca/research/neuromuscular/>



### 3<sup>RD</sup> OTTAWA INTERNATIONAL CONFERENCE ON NEUROMUSCULAR BIOLOGY, DISEASE & THERAPY

**September 24-26, 2015**  
**OTTAWA, CANADA**



#### BASIC & CLINICAL SESSIONS

<b>Muscle &amp; Stem Cell Biology</b> <b>Spinal Muscular Atrophy</b> <b>Muscular and Myotonic Dystrophies</b>	<b>Inflammatory Myopathies</b> <b>Amyotrophic Lateral Sclerosis</b> <b>Inflammatory &amp; Inherited Neuropathies</b>
---	--

#### CONFIRMED SPEAKERS

**Keynote Speaker – Charles Thornton, MD, USA**

<b>Hanns Lochmuller, MD/PhD, UK</b> <b>Bernard Brais, MD/PhD, Canada</b> <b>Kym Boycott, MD/PhD, Canada</b> <b>Stephan Züchner, MD/PhD, USA</b> <b>Brian Kaspar, PhD, USA</b> <b>Guy Rouleau, MD/PhD, Canada</b> <b>Michael Benatar, MD/PhD, USA</b> <b>Pamela Shaw, MBBS/MD, UK</b> <b>Volker Straub, MD/PhD, UK</b> <b>Laurent Schaeffer, PhD, France</b> <b>Louis Kunkel, PhD, USA</b>	<b>Gisèle Bonne, PhD, France</b> <b>Dawn Cornelson, PhD, USA</b> <b>Maurice Swanson, PhD, USA</b> <b>Bernard Jasmin, PhD, Canada</b> <b>Lubov Timchenko, PhD, USA</b> <b>Giovanni Meola, MD/PhD, Italy</b> <b>Alex MacKenzie, MD/PhD, Canada</b> <b>Christian Lorson, PhD, USA</b> <b>Charlotte Sumner, MD, USA</b> <b>Frederic Charbonnier, PhD, France</b> <b>Eric Shoubridge, PhD, Canada</b> <b>Carsten Bonnemann, MD, USA</b>	<b>Richard Lewis, MD, USA</b> <b>Michael Shy, MD, USA</b> <b>Jean Marc Leger, MD/PhD, France</b> <b>Emanuela Gussoni, PhD, USA</b> <b>Fabio Rossi, PhD, Canada</b> <b>Bradley Olwin, PhD, USA</b> <b>Kevin Campbell, PhD, USA</b> <b>Elizabeth McNally, MD/PhD, USA</b> <b>Alan Pestronk, MD/PhD, USA</b> <b>Bjarne Udd, MD/PhD, Finland</b> <b>Amelia Evoli, MD, Italy</b>
---	---	---

For more information: [OttawaNMD2015@ohri.ca](mailto:OttawaNMD2015@ohri.ca)  
[www.med.uottawa.ca/neuromuscular](http://www.med.uottawa.ca/neuromuscular)

## Achievements & Highlights

*Congratulations to our very own*

### Dr. Tracy Vaillancourt, PhD



**Professor and Canada Research Chair,  
Children's Mental Health and Violence  
Prevention**

Counselling, Faculty of Education  
School of Psychology, Faculty of Social  
Sciences; University of Ottawa.

For her acceptance to: **The Royal Society of  
Canada's College of New Scholars, Artists  
and Scientists.**

### MEET OUR NEWEST RECRUITS



### Dr. Kathleen Pajer

The new Chief of Psychiatry at CHEO:  
<http://www.cheo.on.ca/en/KathleenPajer>



### Dr. William Gardner

Senior Scientists at CHEO Research:  
<http://www.cheori.org/en/researchers?id=122>

### SEND US YOUR NEWS HIGHLIGHTS

The uOBMRI is proud of each and every member of this institute!

If you have news, highlights, achievements or stories that you wish to share with us and your fellow colleagues, please send them to:

Elizabeth Abdel-Messih  
[eabdelme@uottawa.ca](mailto:eabdelme@uottawa.ca)

We love to hear from you and share your successes!

News will be featured on our website and in our Newsletter.

For all other uOBMRI related inquiries, please

### Contact our Team

#### Director:

Dr. David S. Park x 8816  
[dpark@uottawa.ca](mailto:dpark@uottawa.ca)

#### Program Manager:

Natasha Hollywood x5461  
[nhollywo@uottawa.ca](mailto:nhollywo@uottawa.ca)

#### Administrative Assistant:

Geneviève Bureau x 5425  
[gbureau2@uottawa.ca](mailto:gbureau2@uottawa.ca)

#### Scientific Coordinator:

Elizabeth Abdel-Messih x 7102  
[eabdelme@uottawa.ca](mailto:eabdelme@uottawa.ca)

## OUR PARTNERS AND AFFILIATED NETWORKS

### OUR PARTNERS

- [The Ottawa Hospital](#)
- [Ottawa Hospital Research Institute](#)
- [Children's Hospital of Eastern Ontario \(CHEO\)](#)
- [CHEO Research Institute](#)
- [The Royal \(Royal Ottawa Health Care Group\)](#)
- [University of Ottawa Institute of Mental Health Research](#)
- [Bruyère Continuing Care](#)
- [Bruyère Research Institute](#)
- [Hôpital Montfort](#)
- [Institut de recherche de l'Hôpital Montfort](#)

### AFFILIATED NETWORKS

- [Parkinson Research Consortium](#)
- [Canadian Partnership for Stroke Recovery](#)
- [Centre for Neural Dynamics](#)
- [Centre for Neuromuscular Disease](#)
- [CARE for RARE](#)

# uOBMRI 2014 in Review

451 Smyth Rd  
Ottawa, ON K1H 8M5

[www.uottawa.ca/brain](http://www.uottawa.ca/brain)