

The internal newsletter of the Ottawa Health Research Institute

March 2009

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**About OHRI and Research Matters:**

The Ottawa Health Research Institute (OHRI) is the research arm of The Ottawa Hospital and an affiliated institute of the University of Ottawa, closely associated with the University's Faculties of Medicine and Health Sciences. For more information on this newsletter or to suggest a story, contact Jennifer Paterson at 798-5555 x 19691 or [jpateron@ohri.ca](mailto:jpateron@ohri.ca).

## Lab researchers get a taste of the clinic

The OHRI and the Stem Cell Network are spearheading a unique "Regenerative Medicine Observership" program that pairs students investigating the biology of stem cells with physicians who are applying this knowledge in the clinic.

So far, four students and five clinicians have participated in the program. Jeffrey Landreville, a 4th year uOttawa undergrad at the OHRI's Sprott Centre for Stem Cell Research, says he found it very motivating:

"When you're in basic research, you spend a lot of time at the lab bench, but going into the clinic gives you another perspective. It allows you to see how your research could eventually be applied to help patients in the clinic."

The program is part of a larger OHRI effort to create opportunities for basic and clinical researchers to work together to develop new therapies and answer important clinical questions.

Five clinicians affiliated with The Ottawa Hospital are participating:

- Drs. Harry Atkins and David Allan (bone marrow transplantation)
- Dr. Mark Freedman (multiple sclerosis)
- Dr. Chris Glover (University of Ottawa Heart Institute)
- Dr. Michael Sharma (stroke)

*Story continues on next page...*



**Jeffrey Landreville (left), a student in Dr. Michael Rudnicki's lab, participated in the Regenerative Medicine Observership Program organized by Dr. Harry Atkins (right).**

## Lab researchers get a taste of the clinic (continued from previous page)

Dr. Atkins, the lead organizer, says patients have been enthusiastic about meeting the young researchers. He also says it raises awareness among clinical staff about the important research going on at the hospital, and how it impacts them. He hopes to eventually develop a similar program to

bring more clinicians into OHRI laboratories.

The Stem Cell Network, a national Network of Centres of Excellence based in Ottawa, provided support for this first phase of the program and is planning to expand it across the country.

## Vision researchers awarded \$3.1M to develop regenerative therapies to reverse blindness

Vision researchers affiliated with OHRI, TOH and the University of Ottawa are embarking on two major projects aimed at developing regenerative therapies to reverse blindness. The Canadian Institutes of Health Research and the Foundation Fighting Blindness are partnering to provide \$2.4M for one team grant, while the Stem Cell Network is funding a complimentary project worth \$700,000. Both projects are led by Dr. Valerie Wallace, Acting Director of Vision Research at OHRI and Associate Professor at the University of Ottawa.

Dr. May Griffith and Dr. Bernard Hurley of Ottawa are also key players on the team. Dr. Griffith has developed the world's first bioengineered artificial cornea (currently being tested in early phase human trials), while Dr. Hurley is a renowned expert in retinal surgery. The other team members are Dr. Derek van der Kooy and Dr. Vincent Tropepe of Toronto (who were first to identify stem cells in the adult eye), Dr. Carol Schuurmans (a retinal development expert from Calgary) and Dr. Per Fagerholm (a corneal surgeon from Linköping University in Sweden).

Together the team hopes to develop better methods for controlling stem cells, so that they can coax these cells into producing different kinds of eye cells. They will also develop more efficient transplantation methods that help



**Drs. Bernard Hurley, Valerie Wallace and May Griffith.**

new eye cells integrate with existing tissue to restore lost vision. And they will work towards combining cells, genes, biomaterials and pharmaceuticals to create an improved artificial cornea.

The announcement of this funding was covered by CTV Ottawa, the Ottawa Sun and The Ottawa Citizen earlier this week.

The grants come at a particularly good time, as they will provide a solid base of operating funds to support research in OHRI's new regenerative medicine and vision labs, which will soon be developed on the south side of the sixth floor of the Critical Care Wing. Infrastructure funding for these labs was recently provided by the Canada

Foundation for Innovation, as part of the TIMEx grant led by OHRI CEO Dr. Duncan Stewart.

### Other Grants and Awards

Congratulations to the following researchers on their recently awarded CIHR operating grants: **Dr. Richard Bergeron** (Putative therapeutic role of endogenous NAAG), **Dr. Dennis Bulman** (Identification & characterization of a gene responsible for inherited myoclonus dystrophy), **Dr. Michel Chrétien** (PCSK9 in Cholesterol homeostasis: The key role of phosphorylation and hormonal sta-

*Story continues on next page...*

## More grants and salary awards (continued from previous page)

tus), **Dr. Jeff Dilworth** (Delineating the role of epigenetic modification of histones in establishing tissue specific gene expression), **Dr. Chris Kennedy** (Prostanoid Signaling in Diabetic Nephropathy), **Dr. John Kowal** (Attachment theory, chronic pain and treatment outcomes: A longitudinal investigation), **Dr. Robin Parks** (Structure/function studies of adenovirus in the infected cell), **Dr. Marc Rodger** (Recurrent Venous thromboembolism risk Stratification Evaluation (REVERSE): Long Term Follow-up to Define if Lifelong Anticoagulation is Required in High Risk Patients with a First Unprovoked Venous Thromboembolism) and **Dr. Valerie Wallace** (Interrogation of neuron-mediated morphogen signaling in the nervous system). Also, **Dr. Anne McCarthy** was awarded a CIHR meeting grant to "Review Success to Date and to Establish the Canadian Influenza Knowledge Exchange Network".

Other research grants include: **Dr. Carol Gonsalves** received a grant from the University of Ottawa titled "Development and application of an innovative, methodologically triangulated approach for needs assessment in curriculum development". **Alanna Keenan** received a grant from the Canadian Nurses Foundation titled "The needs of family members of patients with severe traumatic brain injury". Drs. **Lauralyn McIntyre** and **Alan Timmouth** received a

grant from Canadian Blood Services titled "Five Percent Albumin Versus Normal Saline as Fluid Resuscitation Strategies for the Management of Early Suspected Septic Shock: the PERCISE trial". Drs. **Marc Carrier** and **Rebecca Auer** received a grant from The Ottawa Hospital Department of Medicine titled "The Use of Extended Perioperative Low Molecular Weight Heparin to Improve Cancer Specific Survival Following Surgical Resection of Colon Cancer: A Pilot Randomized Controlled Trial". **Dr. Kevin Burns** also received a grant from the Department of Medicine, titled "Vascular Progenitors and Recovery of Renal Function Following Acute Kidney Injury". **Dr. Alan Chaput** received a grant from Physicians Services Inc titled "Perioperative Administration of Pregabalin in Reducing the Incidence of Postoperative Delirium". Finally, **Candyce Yue Sun** in Dr. Duncan Stewart's group received a studentship from the Stem Cell Network.

Several OHRI researchers were also awarded major grants from the Ontario Ministry of Research and Innovation and the Ontario Institute of Cancer Research. We anticipate announcing these in the spring.

Please contact OHRI Grants Officer Rob Lajeunesse if you have received a grant or salary award (rlajeunesse@ohri.ca; x 19658)

## OHRI Open Forums to be held March 13

The OHRI is holding Open Forums for all scientists, trainees, clinical investigators and staff on March 13. The forums will include:

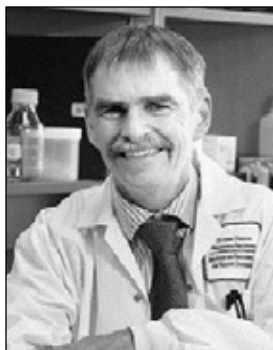
- A brief update on OHRI activities over the last year (basic and clinical)
- A look at possible future developments
- An opportunity to ask questions and provide suggestions about any aspect of the OHRI
- Presentation of long service awards (those receiving awards will receive an email with details)

The Open Forums will take place from 9-10 a.m. at the General Campus (Sprott Centre for Stem Cell Research, Room 5225, 5th floor Critical Care Wing) and from 10:30-11:30 at the Civic Campus (Amphitheater). Light refreshments will be provided.

## In the news

### Dr. Duncan Stewart's heart research profiled

In an article titled "[Turning research into medicine](#)", the Ottawa Citizen profiled Dr. Duncan Stewart, CEO and Scientific Director of OHRI, VP Research, TOH and Professor of Medicine, uOttawa. The article focuses on Dr. Stewart's groundbreaking clinical trial of combined gene and cell therapy in pulmonary hypertension patients, as well as his upcoming trial of a similar therapy in heart attack patients. Dr. Stewart's research was also recently featured in Canadian Living and [Maclean's](#).



### Researchers to study 1,000 older drivers

The Ottawa Citizen has published a number of articles recently on issues surrounding older drivers, with the most recent example being a [feature on the CanDRIVE research study](#) led by Drs. Shawn Marshall and Malcolm Hing (right). The program recently received more than \$5M from CIHR to track 1,000 older drivers across the country for five years. A computer and GPS system will allow the researchers to track driving patterns over time and correlate this with clinical and other factors. CanDRIVE originated at Élisabeth Bruyère Research Institute in 2002 and the Institute continues to be a valued partner in the project.



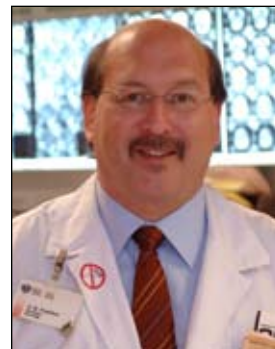
### Changing patient transfers could save money

Ontario newspapers covered a new study by Dr. Doug Manuel that suggests that changing how patients are transferred between hospitals and other care facilities could save millions of dollars. Most transfers currently rely on ambulances and highly-trained paramedics, even though 80 per cent of cases are routine and non-urgent. Approximately 1,000 patient transfers occur in Ontario each day, at a total yearly cost of \$283 million. Dr. Manuel's study is the first population-based analysis of patient transfers in Ontario. It is published in the journal *Healthcare Policy*.



### Stem cell research for multiple sclerosis

CTV National News (W-Five) ran a lengthy [piece on stem cell therapies for multiple sclerosis](#), focusing on a clinical trial led by Dr. Mark Freedman (right) and Dr. Harry Atkins. The story featured Jennifer Molson, a patient who continues to experience a remarkable recovery after entering the trial more than five years ago. It contrasted Jennifer's story with that of another MS patient who was treated in China.



### Guidelines to help make sense of genetics studies

Seven high-profile medical journals recently published guidelines developed in Ottawa to enhance the transparency of reporting in genetic association studies. A number of the journals also published editorials on the topic. The guidelines are designed to help experts in the field make sense of the increasing number of reports linking genes with common illness. The initiative was led by Dr. Julian Little at uOttawa, in collaboration with Dr. David Moher (above) and Dr. Jeremy Grimshaw at OHRI. For more information, see the [STREGA Statement](#) on the uOttawa Department of Epidemiology and Community Medicine website.



### Ottawa doctor to be president of CMA

Dr. Jeffrey Turnbull was in news across the country regarding his recent election to become President of the Canadian Medical Association (CMA). Dr. Turnbull has been involved in health research related to homelessness and he helped launch Ottawa's Inner City Health Project. He is also the Chief of Staff at The Ottawa Hospital, Professor of Medicine at the University of Ottawa, and a Clinical Investigator at OHRI. One of Dr. Turnbull's goals as head of CMA will be to "seek out and highlight best practices for improving health care... [and] insist that both the CMA and governments use evidence and best practices to drive policy-making."



## Introducing new members of bioinformatics team

In the last year, OHRI has welcomed two new members of the bioinformatics group: Dr. Theodore Perkins and Dr. Carol Perez-Iratxeta. Bioinformatics is a growing area of research that involves using computer science and math to mine genetic data and tease out how cells are controlled at the molecular level. The OHRI already has a strong bioinformatics research group, based at the Sprott Centre for Stem Cell Research. Previous work by this group has helped identify factors that stimulate stem cells in the heart to repair damaged tissue. The bioinformatics group also complements research done through the International Regulome Consortium (led by Dr. Michael Rudnicki).

Dr. Perkins obtained his PhD in Computer Science from the University of Massachusetts and then did postdoctoral studies in computer science and physiology at McGill. Be-



**Dr. Ted Perkins,  
Scientist, RMP**

fore joining OHRI, he was an Assistant Professor at McGill. His most recent publications have provided novel insight into how gene transcription is regulated in the “noisy” cellular environment.

Dr. Perez-Iratxeta first came to OHRI in 2003 to work as a postdoctoral fellow in Dr. Miguel Andrade’s group. She obtained her PhD at the University Autonoma of Madrid, where she worked on advanced applications for aligning protein sequences. She has also done postdoctoral work at the European Molecular Laboratory in Heidelberg. Her most recent publications involved identifying candidate disease genes for asthma and metabolic syndrome.

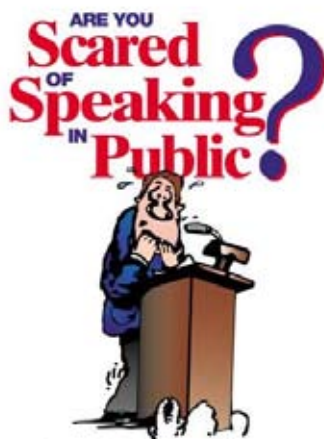
Both Drs. Perkins and Perez-Iratxeta anticipate holding University of Ottawa appointments.



**Dr. Carol Perez-Iratxeta, Associate  
Scientist, RMP**

### Join TOH Toastmasters to improve public speaking skills

For “Better Speaking, Thinking, and Listening Skills” come visit The Ottawa Hospital Toastmasters Club! People who get ahead in life are those who can communicate effectively! Wouldn’t you like to develop this priceless skill? Now you can! Toastmasters will show you how to: listen effectively, think on your feet and speak confidently. You will learn valuable leadership & management skills, how to comfortably give and receive constructive evaluations, and effectively develop and present ideas. Come for a visit and find out more. TOH Toastmasters Club meets every Tuesday from 6:30-8:30 in The Civic Parkdale Clinic, Kaminski Room, 737 Parkdale Avenue. For further information contact: Joanne Hakkaku (613-825-5492; akemi.toast@gmail.com)



### Merger to streamline rehab and hospital ethics approval

The Ottawa Hospital Rehabilitation Centre Research Ethics Board (TOHRC REB) is in the process of merging with the Ottawa Hospital Research Ethics Board (OHREB). The merger will streamline the review process while ensuring that the Rehabilitation Centre’s high standard for research is maintained. It will also allow researchers to track the status of their applications in real-time, using OHRI’s Integrated Research Information System (IRIS).

The merger will involve replacing TOHRC REB with a Research Advisory Committee, which will review applications and recommend either expedited review or review by the full board of the OHREB. Prior to the Advisory Committee review, projects will still be submitted for scientific peer review and administrative review by the departments that may be impacted by the research. The Advisory Committee will formally replace TOHRC REB on April 1, 2009.

For more information, including links to the relevant application forms, please see <http://www.irrd.ca/ethics/>. The OHREB website will be updated with this information in the near future.