

### FRQS site visit to the LDI

In February, reviewers from the [Fonds de recherche du Québec – Santé \(FRQS\)](#) performed their quadrennial site visit to the LDI. The results of their assessment of the scientific output, knowledge translation, and training achievements of the Institute will impact funding they provide over the coming four years.

In the summary overview of the accomplishments of the LDI since 2010 that was submitted to the FRQS, the following highlights were included:

- 27 national/international honours conferred on principal investigators (PIs). These include Mark Wainberg receiving the 2012 *Killam Prize*, Canada's highest honour for health research; Ernesto Schiffrin, the 2011 *Excellence Award in Hypertension Research* from the American Heart Association; Carmen Loiselle, the 2012 *Prix Florence* for excellence in nursing research; Brett Thombs, the 2014 *Principal's Award for the Outstanding Emergent Researcher at McGill*; Fackson Mwale, the 2011 *Canadian Orthopaedic Research Society Founders' Medal*; and, in consecutive years, Michael Pollak (2012) and William Foulkes (2013) the *O. Harold Warwick Prize* of the Canadian Cancer Society for research that has had a major impact on cancer control in Canada. Five PIs were made Fellows of the *Canadian Academy of Health Sciences* and five received the *Queen Elizabeth II Diamond Jubilee Medal*.
- LDI researchers are leaders in pan-Canadian research initiatives, including the Canadian Consortium on Neurodegeneration in Aging (CCNA), Canadian Network for Observational Drug Effect Studies (CNODES), the National Centre of Excellence – PreThera for personalized medicine in cancer, the first pan-Canadian proteomics initiative (in partnership with the University of Victoria – Genome BC Proteomics Centre), and CanCURE (the Canadian HIV Cure Enterprise).
- Altogether, LDI researchers received \$106 million from 683 peer-reviewed grants awarded by provincial, national and international agencies. Of the 117 regular PIs, 86% held peer-reviewed funding over the past four years.
- In addition to grants, LDI PIs received 52 salary awards, including 35 from the FRQS, eight Canada Research Chairs, seven CIHR Investigator awards and two from other agencies.
- Over the past four years, more than 200 trainees (68 MSc's, 43 PhDs, and 92 post-doctoral fellows) have graduated from the LDI, and we are currently training 256 graduate students and PDFs.
- Altogether, the Institute averages in excess of 520 peer-reviewed papers per year.
- 16 new PIs, who have contributed enormously to the continuous rejuvenation of the LDI's culture and research, have been added: five molecular oncologists, one computational biologist, two stem cell researchers, and eight who have enriched epidemiology and several clinical research programs.
- Additions to the core facilities include a Consultation Service for Bioinformatics and Statistics and a NanoString nCounter Analysis System for high throughput gene expression analysis.
- The creation of two new research centres: the Dubrovsky Molecular Pathology Centre and Ludmer Centre for Neuroinformatics & Mental Health.
- Investigators at the LDI are leaders or board members of 19 national or international research organizations.

## JGH creates new Office of Human Research & Regulatory Affairs

In adopting the new [Cadre de référence des établissements publics du Réseau de la santé et des services sociaux \(RSSS\) pour l'autorisation d'une recherche menée dans plus d'un établissement](#), the Ministère de la Santé et des Services Sociaux (MSSS) has allowed for a single positive ethics review by a recognized Research Ethics Committee within the Réseau to be accepted by all sites within the RSSS for multi-centre clinical research initiatives. The purpose for this is to streamline the review process, thereby creating a more efficient multi-centre mechanism.

The JGH has mandated **Franca Cantini**, Chief, Office of Human Research & Regulatory Affairs (OHRRA), to be responsible for authorizing JGH participation in multi-centre research activities within the RSSS, in compliance with the above-mentioned *Cadre de référence*.

The mandated person initiates the evaluation by the Feasibility Committee to ascertain the project's impact upon, or overlap with, other research activities; the availability of adequate facilities, equipment, and human resources; correlation between the institution's research environment and the proposed project; contractual and financial elements; and medication management.

The *Research Ethics Office* of the JGH has undergone reorganization and is now the *Office of Human Research & Regulatory Affairs*. It will report to the Hospital's Associate Executive Director and will operate independently of the Research Ethics Committee, which reports to the Board of Directors, in order to avoid any potential conflicts and to ensure the scrupulous protection of patient rights and the rigour of scientific research undertaken at the JGH.

All research projects are subject to the new mechanisms. There is a transition period until March 31, 2016.

Prepared by the Research Communications Office, Lady Davis Institute at the Jewish General Hospital. Any suggestions with respect to content are welcome. Not to be reproduced without attribution.

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## Kudos for Foulkes Lab's discovery in small cell carcinoma of the ovary

Dr. **William Foulkes'** discovery of mutations in a single gene in multiple cases of small cell carcinoma of the ovary, hypercalcaemic type (SCCOHT), the most common undifferentiated ovarian cancer to strike women under 40, was selected by the American Society of Clinical Oncology for inclusion in *Clinical Cancer Advances 2015*, the Society's annual review of progress against cancer and emerging trends in the field. The study, "Germline and somatic SMARCA4 mutations characterize small cell carcinoma of the ovary, hypercalcemic type," originally published in *Nature Genetics*, is featured as one of the year's major achievements in clinical cancer research and care. To learn more, read the report at : [www.cancerprogress.net/CCA](http://www.cancerprogress.net/CCA).

This same discovery earned Leora Witkowski, a PhD candidate in human genetics in Dr. Foulkes' lab the February [Étudiants-chercheurs étoiles award](#) from the Fonds de recherche Québec – Santé. The paper was also recognized as the LDI Paper of the Month for April 2014.



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*Deadline: May 1*  
*for the*  
*6th Annual LDI Scientific Retreat*  
**FRIDAY JUNE 5, 2015**

**Keynote Speaker: Dr. Peter St. George-Hyslop**  
Director, Centre for Research in Neurodegenerative Diseases, University of Toronto,  
Toronto Western Research Institute  
Professor, Experimental Neuroscience, University of Cambridge

Location: La Plaza, 420 Sherbrooke St. West

## Rare response reveals distinct disease in pulmonary hypertension

In a paper published in the *Annals of Internal Medicine*, **Dr. David Langleben**, Director of the Centre for Pulmonary Vascular Disease at the JGH, has revealed that patients with idiopathic pulmonary arterial hypertension (IPAH) who respond to an acute vasodilator challenge likely have a condition distinct from those who do not respond. These so-called “responders” are so rare – one in 20 million of the general population – that this clinical observation is based on a sample of only two out of fourteen patients evaluated for IPAH.

IPAH is characterized by progressive deterioration of, and blockage of blood flow through, tiny arteries within the lungs, resulting in a build-up of pressure.

IPAH generally strikes younger people, and women are more susceptible than men. The prognosis for non-responders is poor, with a five year survival rate following diagnosis of only 40-60%.

“It had thus far been unclear whether responders had a milder form of IPAH or a different disease altogether,” said Dr. Langleben. “Now, it appears as though they have a constriction as opposed to cellular obstruction. Because acute vasodilators relieve this constriction, we can bring them back to normal.”

Responders are placed on high dose calcium channel-blocker therapy, which controls their pulmonary hypertension and they go on to enjoy what seems to be a normal lifespan.

Dr. Langleben and his colleagues developed a technique for evaluating the lung bed whereby a very mildly radioactive substance is introduced to the lungs via a catheter to measure the functional capillary surface area. He has discovered that the patients who don’t respond to the acute vasodilator challenge are incapable of recruiting more blood vessels, whereas responders do have this capacity.

“The differences we observe are so evident that we are confident we’re dealing with a different disease,” he points out. “We now have to determine the genetic characteristics that distinguish responders from non-responders.”

Dr. Langleben evaluates and treats pulmonary hypertension, high blood pressure in the blood vessels of the lungs.

In 1986, he established the first pulmonary hypertension clinic in Canada at the JGH.

## Sports medicine doctor launches on-line physical activity course

In an effort to make physical inactivity as socially unacceptable as smoking in public buildings or driving under the influence of alcohol, **Dr. Ian Shrier** has embarked on an ambitious “massive open online course” (MOOC) on sports and exercise. The ten-module course, called *The Body Matters*, launched on February 25. More than 22,000 people from 180 different countries registered.

“We’re trying to get people to recognize that all forms of physical activity improve health and encourage them to incorporate simple changes into their lifestyle,” said Dr. Shrier, a sports medicine specialist at the Jewish General Hospital and epidemiologist at the LDI. “So, if you drive to work, why not park ten minutes away so that you build a walk into your day? Why wait two minutes for an elevator when you can take the stairs in thirty seconds?”

The course tackles three themes: the benefits of physical activity, how to prevent injuries, and what to do when injuries occur. It is given by internationally renowned experts, led by Dr. Shrier.

“The greater awareness a person has about how their body functions, the more capable they are of minimizing risk, and our course gives some tools for this,” he points out. “The course also covers topics to help people understand when certain medical tests are useful or not, and some pearls on how to manage injuries.”

The MOOC is a cost-effective means of reaching a limitless audience. It encourages the creation of a community of physical activity enthusiasts. Participants will have the opportunity to post comments, make suggestions, and pose questions to experts.

The course was developed by Dr. Shrier in collaboration with McGill’s Teaching and Learning Services.

[Click here to access the course.](#)



## 5-year team grant to promote male reproductive health

**Dr. Phyllis Zelkowitz**, head of the psychosocial research axis, has been awarded a five-year team grant from the Institute of Gender and Health of the Canadian Institutes of Health Research (CIHR) to promote physical and mental health in men facing fertility issues.

“The research will focus on men undergoing fertility treatments with their partners and men whose fertility has been affected by cancer. These are men who are at high risk for physical and emotional problems, and whose specific needs for information and support are seldom addressed in research,” she elaborated. “We also intend to promote fertility awareness in the general population.”



Her team will develop an app to provide information regarding reproductive health, fertility assessment and treatment, fertility preservation, and the health risks associated with infertility; offer tools to promote health through diet, exercise, and stress reduction techniques; and afford access to social support via peer volunteers.

“Promoting good health is an integral part of the effort because infertility in men is associated with a host of problems, such as obesity and stress – the very types of things that can contribute to infertility through poor overall health,” Dr. Zelkowitz said. “Much existing information is tailored to women, so ours is an effort to engage men.”

With the introduction of public funding in Quebec, a more diverse patient population has access to in vitro fertilization. “As many as half of those seeking treatment are foreign born and may, therefore, lack familiarity with the medical system and have linguistic challenges. Therefore, good, simple information is in demand,” she said.

Dr. Zelkowitz has assembled a multi-disciplinary team to participate in the research and app development, as well as an Advisory Board that includes patient representatives and health professionals in the community.

## 10th Annual JGH Department of Psychiatry Research Day

### *Using and Abusing the Body: Social Contagion in Youth*

**Friday March 20, 2015, 08:30—12:30**

ICFP Amphitheatre,

4333 chemin de la Cote Ste. Catherine, Montreal

[Click here for details and free registration](#)

Supported by a grant from the Gustav Levinschi Foundation.

## Dr. Brent Richards receives Dr. Jody Ginsberg Young Investigator Award

The accomplishments of **Dr. Brent Richards**, an epidemiologist at the LDI and endocrinologist at the JGH, have been recognized by the Canadian Society of Endocrinology and Metabolism and the CIHR Institute of Nutrition, Metabolism, and Diabetes with the 2014 Dr. Jody Ginsberg Young Investigator Award for his research on vitamin D. The award honours an individual who has been a faculty member at a Canadian university for between 5 and 10 years who has demonstrated excellence as an independent investigator in clinical science.

## Perinatal Mental Health video prize

A video produced by **Dr. Phyllis Zelkowitz's** Team in Perinatal Mental Health, [The Science of Motherhood](#), won a special prize as part of the CIHR's first ever Institute of Human Development, Child and Youth Health (IHDCYH) Talks Video Competition. The video presents the team's research on oxytocin, a hormone associated with pregnancy and childbirth.

## OBITUARY

**Neri Judith Bloomfield** passed away in Montreal on February 5. A dedicated philanthropist, the LDI and JGH were among the many institutions that benefitted from her support. She was the long-time President of the Eldee Foundation, which was instrumental in the founding of the LDI. The Bloomfield Centre for Research in Aging, which is at the forefront of the Institute's research into diseases of aging that proudly bears her family's name.