



Lady Davis Institute Research Newsletter



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First annual symposium honours the legacy of Mark Wainberg

The first annual Symposium on Emerging and Complex Infectious Diseases, co-hosted by the Lady Davis Institute, Division of Infectious Diseases at the Jewish General Hospital, and McGill University's Faculty of Medicine, honoured Mark Wainberg, paying homage to his achievements as scientist, activist, and mentor to a new generation of researchers and clinicians who are preserving and advancing his legacy. Dr. Wainberg, who died tragically last year, was among the world's leading experts on HIV infection and was credited with, among other achievements, the discovery of 3TC, one of the first effective therapies that contributed to the transformation of AIDS from fatal to chronic illness.

Dr. Wainberg was praised for his contributions to the development of antiretroviral drugs that have saved millions of lives and for his passionate advocacy on behalf of patients, particularly those in the developing world who have had the most trouble getting access to critical medication.

Dr. Françoise Barré-Sinoussi, 2008 Nobel laureate for her role in the discovery of HIV, said, "Mark was convinced that science and advocacy go hand in hand," noting his passion for both elements of the fight against AIDS.

Dr. Bluma Brenner, a long-time colleague at the LDI and McGill AIDS Centre, lauded him as a "consummate scientist with a moral and ethical conscience." Community health advocate Ron Rosenes discussed the important role Dr. Wainberg played in destigmatizing AIDS patients from the earliest days of the epidemic. When they needed a champion, he stood with them. Dr. David Eidelman, Dean of Medicine at McGill, praised him for "bringing humanity to science."

"At the Lady Davis, we feel the loss of Mark every day," said Dr. Roderick McInnes, Director of the LDI and acting President of the Canadian Institutes of Health Research.

With the inception of this Symposium, the LDI and JGH are highlighting research and developments in clinical treatment of infectious diseases. The second Symposium is scheduled for November 8, 2018.



Andréa LeBlanc awarded Senate 150th Anniversary Medal

Dr. Andréa LeBlanc, Senior Investigator at the Lady Davis Institute and James McGill Professor of Neurology and Neurosurgery at McGill University, has been awarded the Senate 150th Anniversary Medal. Struck to commemorate the first sitting of Canada's Senate on November 6, 1867, the medals are bestowed upon "Canadians whose dedication, volunteerism, hard work and expertise make Canada and their communities a better place to live."

Dr. LeBlanc is internationally recognized for her pioneering research into Alzheimer disease. Having identified Caspase-6 as an indicator of early onset of neurodegeneration, she is studying how this protein is activated in the brain and how it might serve as a target for therapies to prevent the progressive degeneration of this disease. Her work is bringing hope to the 750,000 Canadians afflicted with Alzheimer disease, a number expected to double within 20 years, according to the Canadian Institutes of Health Research.

"As a basic research scientist, it is an honour to be recognized with a Senate of Canada 150 medal," said Dr. LeBlanc. "Many scientists, young and old, dedicate tireless efforts to finding mechanisms of disease that will allow the development of efficient treatments and medications. This medal recognizes their efforts to improve the health of many Canadians."

Dr. LeBlanc was nominated for her Medal by The Honourable Judith G. Seidman.



TD Bank Group makes \$1 million donation

The Jewish General Hospital Foundation announced a \$1 million donation from TD Bank Group that will allow the Lady Davis Institute (LDI) to grant scholarships to their Master and PhD students and the JGH Department of Nursing to grant scholarships for excellence in nursing.

"The TD Bank Group's generous support of the Jewish General Hospital's academic mission is an inspiring and meaningful example of corporate, community philanthropy. The nursing scholarship program and Lady Davis Institute's studentship awards advance both patient care and medical research," says Myer Bick, the President and CEO of the Foundation.

Several Master and PhD students have already benefited from a scholarship in the areas of breast and prostate cancer and of Parkinson disease research, among other things.

"At TD, we believe that our donations to hospitals and health care facilities are best spent investing in human capital. We understand that funding for research and professional development is vital to attracting and retaining talented practitioners and to ensuring that patients get the best care. That is why we are delighted to make this contribution to the JGH Foundation and the Lady Davis Institute," said Sylvie Demers, Chair, Quebec Market, TD Bank Group.

Dr. Pierre Pluye has been named 2017 Family Medicine Researcher of the Year by the College of Family Physicians of Canada. A Professor in the Department of Family Medicine at McGill University, Dr. Pluye's studies focus on assessing the outcomes of health information from the perspective of clinicians, patients, and the public. A founding member of the *Méthodes mixtes francophonie*, his work contributes to the development of mixed methods for primary research and literature reviews. This work is instrumental for combining qualitative and quantitative evidence.

"This award means a lot to me, as I used to be a practicing family physician in rural and humanitarian settings before becoming a full-time PhD researcher," said Dr. Pluye. "The CFPC Researcher of the Year Award was an amazing surprise. I am extremely thankful for this recognition."

JGH Psychiatrist researches impact of detention on immigrant families

Dr. Rachel Kronick, a staff psychiatrist at the Jewish General Hospital's Centre for Child Development and Mental Health and associate researcher with McGill University's Division of Transcultural Psychiatry, has received a grant from the Social Sciences & Humanities Research Council of Canada (SSHRC) to support the establishment of an international network for research, advocacy and policy on immigration detention. The network will bring together scholars, legal and medical professionals, advocates, non-profit organizations, and policymakers.

Dr. Kronick has conducted some of the first empirical research on how confinement in detention centres affects the mental health of immigrant families. Her findings show that children, in particular, suffer from nightmares, anxiety, and depression., while receiving inadequate nutrition, little education, and minimal stimulation.

"None of the immigrants placed in detention are there because of criminal convictions," she points out, "and research shows that they do far better in a community setting under the supervision of social workers than in the corrections system. Compliance rates are very high and it is less expensive than incarceration. We don't believe there is any justification for incarcerating non-criminal immigrant families, especially given the cost to their mental health."

Her objective is to effect real policy change. In addition to publishing her findings, she has been invited to speak to parliamentarians, the Minister of Immigration and the department of the Minister of Public Safety, the Canadian Commission of Human Rights, and the Canadian Border Services Agency.

"Our work is important at a time when rising hostility and xenophobia has brought an increase in immigration detention," she said. "The conditions of detention are wholly unsuited for families. They are traumatizing, with significant psychological consequences, and no societal benefits."

The Network will be hosting an international conference and workshop in Montreal: [Challenging Migrant Detention: Human Rights, Advocacy & Mental Health, June 19-21, 2018.](#)

Among the teams selected by the Canadian Institutes of Health Research (CIHR), the International Development Research Centre (IDRC), the Azrieli Foundation and the Israel Science Foundation to receive funding from the Joint Canada-Israel Health Research Program is a collaboration between **Dr. Ivan Topisirovic** of the Lady Davis Institute, Dr. Dan Dominissini of Israel's Sheba Medical Center, and Dr. Glauca Noeli Maroso Hajj of the AC Camargo Cancer Centre in Brazil. Their project looks at the role of epitranscriptome and translational dysregulation in cancer.

They were one of six winning teams selected from among 56 proposals. They were selected to strengthen research capacity in their countries, promote research excellence, and build long-lasting international scientific relationships. Research results are expected to enable breakthrough discoveries that can ultimately lead to new or improved therapies against high fatality cancers that affect millions of people.

Annual checkups don't bring better health outcomes

The Canadian Task Force on Preventive Health Care, chaired by **Dr. Brett Thombs**, calls for an end to the annual checkup. It advocates replacing it with focused age-appropriate health prevention activities. This conclusion was based on evidence that patients who have annual checkups do not achieve better health outcomes than those who do not. The Task Force expressed concern that annual non-specific checkups can also lead to over-diagnosis and the revelation of conditions of uncertain clinical importance, which can lead to anxiety and unnecessary medical intervention.

"There is value in periodic visits to primary care physicians for specific prevention activities," said Dr. Thombs. "However, unnecessary visits to the doctor for annual checkups make this difficult for many Canadians who do not have regular access to a family doctor."

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Unique clinical research on effect of art on senior citizens

The McGill Centre of Excellence on Longevity, the Jewish General Hospital and the Montreal Museum of Fine Arts (MMFA) are teaming up for a clinical research study to evaluate the effects of cultural activity on the health and quality of life of people over the age of 65. Participants are being recruited for this unique program.

Since 2015, almost 10,000 seniors have participated in the MMFA's Thursdays at the Museum program of free activities, including visits, guided tours and hands-on workshops in art.

"We believe that hands-on art workshops have a positive Impact on the elderly. We hope to identify and understand these effects, so that we can introduce such activities that benefit the community and senior citizens across the world."

Dr. Olivier Beauchet,
Director of the Centre of Excellence

To qualify for this study, participants must:

- Be aged 65 or older;
- Have access to the Internet at home;
- Beginners or informed amateurs, everyone is welcome!

Advance registration can be made at the website of the Centre of Excellence on Longevity at <http://cevimac.com/participate> or by telephone at 514-340-8222, ext. 26120.

"The participants in Thursdays at the Museum create, share, and come out of their isolation to meet each other in a beautiful, accessible, open and free space. Every day we see the benefits of this project. So we are proceeding to examine its real impact on this population by launching this research project conducted by experts on the subject," said Thomas Bastien, the MMFA's Director of Education and Wellness.

Zika and host cell stress response

Reports of Zika virus (ZIKV) outbreaks in Florida last year prompted fears of a potential pandemic and led the World Health Organization to declare an international health emergency. **Dr. Andrew Mouland's** lab at the LDI is part of a global effort to better understand the biology of this emerging arbovirus. He recently published a paper on host cell stress response to Zika in *PLOS Neglected Tropical Diseases*.

Zika is primarily transmitted by mosquito bites, but may also be subject to sexual transmission. While adults who contract it will most often only exhibit mild symptoms, it has been linked to neurological disorders in rare cases. Zika does pose a significant risk to pregnant women because of its association with microcephaly and other fetal malformations. With climate change, mosquito populations are moving north and, with them, people who have not built up any immunity are being exposed to Zika.

"We are trying to identify strategies by which the virus counteracts the initial stress responses elicited by infected cells and therefore potentially identify new targets for antiviral therapy," explains Raquel Amorim, a post-doctoral fellow and first author on the paper. The Mouland lab took an interest in pursuing this research because of its expertise, developed in HIV/AIDS research, in stress responses to viral infection.

"The relationship between viruses and the cellular stress response is a multifaceted and complex phenomenon that depends on the structural and genetic characteristics of the virus and the host cell," the authors write. Every virus adopts a unique strategy to overcome the stress response that confronts it.

Observing that cells don't assemble stress granules in response to Zika, the lab identified a previously unknown strategy by which zika inhibits eIF2 α -dependent stress granule assembly. Because phosphorylation of eIF2- α is a hub for all stress responses, this is important for a whole series of cellular reactions to zika. The virus is capable of pursuing multiple strategies against stress response in its frenzy to replicate.

"These data demonstrate that ZIKV elicits mechanisms to counteract host anti-viral stress responses to promote a cellular environment propitious for viral replication," the authors conclude.

Upcoming Grants and Awards Deadlines

January 20, 2018 LDI Students Internal Travel Awards

February 6, 2018 [CIHR Project Grant Registration](#) – Spring 2018

February 6, 2018 [CIHR Foundation Grant Stage 2](#)

February 15, 2018 [Cancer Research Society Operating Grants](#)

March 6, 2018 CIHR Project Grant Application - Spring 2018

March 29, 2018 Canadian Cancer Society Research Institute (CCSRI) [Innovation](#) and [Innovation to Impact](#) Operating Grants

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