



CIHR IRSC

Canadian Institutes of Health Research  
Instituts de recherche en santé du Canada

Winter 2010

# Your Health Research Dollars at Work

An Update from the Canadian Institutes of Health Research

## The Time to Battle Dementia is Now



One of the greatest health challenges Canada faces over the next decade is the “grey tsunami” – the tide of chronic diseases rising from an aging population which threatens to swamp our health-care system, economy, and quality of life.

To help tackle this challenge, the Canadian Institutes of Health Research (CIHR)

has partnered with Statistics Canada to launch the groundbreaking Canadian Longitudinal Study on Aging. This unprecedented study, which will track 50,000 Canadians aged 45 to 85 over the next 20 years, will help Canada develop better strategies to combat diseases of aging.

Alzheimer’s disease is a prime example of a disease that will grow at an alarming rate as the population ages. An estimated 500,000 Canadians have Alzheimer’s disease or related dementias – a number that will more than double within a generation, according to the Alzheimer Society of Canada. The economic burden of dementia in this country has reached almost \$15 billion a year and could increase tenfold by 2038.

We are fortunate in that Canadian scientists have made major advances in the understanding of Alzheimer’s disease. To build on this success, CIHR is working to set up an international collaborative program on Alzheimer’s disease. This program will make it possible to jointly develop new early diagnostic tools and treatments for Alzheimer’s with countries such as France, the U.S. and China.

But more needs to be done. We need to make the fight against Alzheimer’s disease a national priority. Our future depends on it.

Alain Beaudet, MD, PhD  
President, Canadian Institutes of Health Research

## CIHR Launches Major Effort to Prevent Violence Against Women and Children



Dr. Neil Andersson, Executive Director of CIET Canada, speaks at the announcement of federal funding for three new research centres that will study violence and health. Shown seated are (from left to right): Dr. Joy Johnson, Health Minister Leona Aglukkaq and Dr. Alain Beaudet.

Preventing violence against the most vulnerable in our society – particularly children and women – has taken on a heightened prominence among health researchers, following a January announcement by the Government of Canada to invest \$6 million over five years in three new regional research centres.

“Violence is a major public health and human rights problem in Canada and around the world,” said the Honourable Leona Aglukkaq, Minister of Health. “By funding these innovative research centres, we hope to make strides in eliminating violence in our society and help Canadians overcome the devastating effects of violence on physical and mental health.”

The three centres are:

### **Centre for Intercultural Research on Prevention of Gender Violence:**

Dr. Neil Andersson (University of Ottawa) will look at the positive roles of parenting and cultural origins in preventing violence.

**Centre for Research Development in Gender, Mental Health and Violence Across the Lifespan:** Dr. Harriet MacMillan (McMaster University) will develop strategies to prevent or reduce child maltreatment, intimate partner violence and subsequent mental health problems.

### **Centre for the Study of Gender, Social Inequities and Mental Health:**

Dr. Marina Morrow (Simon Fraser University) will study why social disparities exist, and how they contribute to problems such as violence and addiction.

“Violence is, fundamentally, a health issue,” said Dr. Alain Beaudet, President of CIHR. “Health researchers, therefore, have a role to play in better understanding this phenomenon and in finding solutions to counter it.”



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## NATIONAL

### Experts Develop Action Plan to Battle High Sodium Intake

Parliamentary Secretary to the Minister of Health, Dr. Colin Carrie, represented the Government of Canada at the CIHR Sodium Reduction Workshop in Toronto on January 25. The workshop convened the country's top researchers, international experts, government officials, NGOs and food industry representatives to develop a research agenda for reducing sodium consumption. The agenda will support a Health Canada working group which is in the process of setting sodium-reduction targets for different food categories. Canadians consume dangerously high amounts of sodium. The recommended daily intake for adults up to age 50 is 1,500 mg—the average intake is more than double that. High salt consumption is one of the country's most pressing public health issues.

### Canadian Health Research Awards



CIHR's Eighth Annual Canadian Health Research Awards ceremony, held November 17 in Ottawa, recognized Canada's best and brightest health researchers and lead supporters of health research for their outstanding contributions. The 2009 winners included Dr. Michael Boyle (second from left), Dr. Lynne-Marie Postovit (third from left), and Dr. Nahum Sonenberg (centre).

### CIHR Hosts Nobel Laureates



The Rt. Hon. Stephen Harper (right) met in October with four Nobel Laureates, as part of the 50th Anniversary celebrations for the Gairdner Foundation. (Left to right) the Hon. Leona Aglukkaq, Minister of Health, Dr. Rolf Zinkernagel (Switzerland), Dr. Peter Doherty (Australia), Dr. Bengt Samuelsson (Sweden) and Dr. Harald Zur Hausen (Germany).

## INTERNATIONAL

### Researchers Heal Lung Tissue Using Stem Cells

**Canada, U.S., France:** An international team headed by Dr. Bernard Thébaud at the University of Alberta has used stem cells to heal and protect the lungs of newborn rats. The research could help premature babies – about half of which are affected by chronic lung disease. "This is the first attempt to use stem cells to cure lung disease in babies," Dr. Thébaud told Canwest News in November. "We believe that in three to five years, we could start clinical trials [in babies] on this, which is pretty fast." The research team includes physicians and scientists from Edmonton, Montreal, Chicago and Tours, France.



Dr. Bernard Thébaud

## WESTERN CANADA

### Helping Doctors Assess Older Drivers' Abilities

**Winnipeg:** Dr. Michelle Porter at the University of Manitoba is involved in a national CIHR-funded study aimed at designing a simple test Canadian doctors can use to assess elderly people's driving skills. The Candrive (Canadian Driving Research Initiative for Vehicular Safety) project will monitor the driving habits of 1000 drivers, aged 70 years and older, from seven communities: Victoria, Winnipeg, Thunder Bay, Hamilton, Toronto, Ottawa and Montreal. "Most Canadian provinces require doctors to report elderly drivers who are not medically fit to sit behind the wheel, but they are often hesitant because of the lack of tools to reach a proper conclusion. Candrive seeks to address that problem," said Dr. Porter. Besides falls, motor vehicle crashes are the most common cause of injury in seniors.



Dr. Michelle Porter

## Supporting Cancer Patients in Making Informed Decisions about Complementary Therapies

**Vancouver:** The BC Cancer Agency and the University of British Columbia School of Nursing have launched the Complementary Medicine Education and Outcomes Program (CAMEO) – the first program of its kind in Canada to offer unbiased and credible education and decision support on which complementary therapies are safe and effective for cancer patients. “With cancer patients, the general rule around complementary medicine is that if you are going to consume or ingest anything you should have a discussion with your health providers about that first,” CIHR-funded researcher Dr. Lynda Balneaves told the Vancouver Sun in December. Complementary therapies include such things as natural health products, massage therapy, meditation, acupuncture, traditional Chinese medicine and First Nations traditional healing.



Dr. Lynda Balneaves

## Salt Crisis Prompts Call for National Surveillance System

**Calgary and Toronto:** Treating hypertension could reduce cardiovascular problems for up to a quarter of Canadians—yet the condition continues to be unrecognized and under-treated. Researchers at the University of Calgary and University of Toronto believe part of the solution is a national surveillance system. Drs. Hude Quan, Brenda Hemmelgarn and Karen Tu are developing such a system to monitor incidents of hypertension across Canada and determine how well newly diagnosed patients fare after receiving treatment. Overconsumption of salt is one of the leading causes of hypertension.

## CENTRAL CANADA

### Made-in-Canada Microscope Moves Closer to Market



From left: Dr. Yiwei (Kevin) Jia, Dr. Roman Szumski, Dr. John Pezacki, Michelle Gagnon, Dr. David Courtman, Dr. Osamu Joji, Dr. Michael Sowa, Dr. Dan Wayner, Dr. Ji-Xin Cheng  
Photo courtesy of the National Research Council Canada

**Ottawa:** Japanese camera maker Olympus will soon be manufacturing a new made-in-Canada microscope that will give doctors a better picture of what's happening inside live cells. The CARS Multimodal Microscope module was created by researchers supported through CIHR's Regenerative Medicine and Nanomedicine Initiative Team, working in collaboration with the National Research Council. “This technology will enable researchers and doctors to diagnose disease much earlier. It's an excellent example of how collaborations with industry can advance the commercialization of pioneering technology developed by researchers supported through granting agencies like CIHR,” said Eric Marcotte, associate director of CIHR's Regenerative Medicine and Nanomedicine Initiative.

### Breakthrough Could Help Solve Donor Lung Shortage

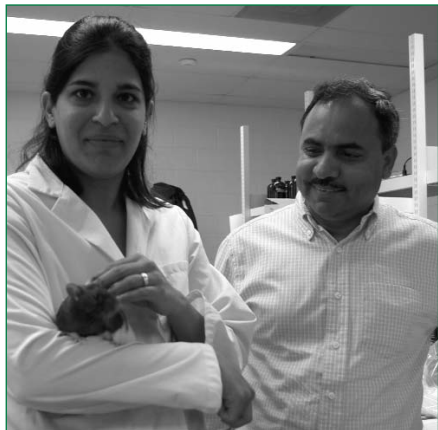
**Toronto:** A CIHR-supported scientist at the University Health Network, University of Toronto has discovered a way to repair damaged lungs with gene therapy – a breakthrough that could double or triple the number of lungs available for transplant. Dr. Shaf Keshavjee found that damaged lungs could be removed from donor's bodies after death and repaired using the gene IL-10, which lowers inflammation. The transplants were done with pigs, and lab tests showed promise that the therapy would work with human donor lungs. Dr. Keshavjee is hopeful the technique could become standard for lung transplants within five years.



Dr. Shaf Keshavjee



## Lab Tests Halt Advance of Parkinson's Disease



Mallika Somayajulu-Nitu and Dr. Siyaram Pandey

**Windsor:** CIHR-funded researchers at the University of Windsor (Drs. Siyaram Pandey and Jerome Cohen) in collaboration with Dr. Marianna Sikorska from the National Research Council, have discovered that a new water-soluble formulation of a naturally occurring compound – coenzyme Q10 – can stop degeneration of brain cells in lab rats. The discovery offers promise for halting the progression of Parkinson's disease. The compound has

since been patented and licensed to New Jersey-based Zymes LLC for commercial development. "We're optimistic the research will proceed soon to clinical testing. We're very excited by the results we've seen to date," said doctoral student Mallika Somayajulu-Nitu, who carried out the study under the supervision of Dr. Pandey.

## Granitic Sand Surfaces Safer than Engineered Wood Chips for Playgrounds

**Toronto:** Children falling off playground equipment are 4.9 times more likely to fracture an arm if they land on a wood-chip surface compared to granitic sand, concludes a study conducted by CIHR-funded researchers at SickKids Hospital and York University. "Broken arms from playground equipment falls are common and can be severe. A simple sand surface, properly maintained, can prevent many of these injuries," said Dr. Andrew Howard, the study's lead author and an orthopedic surgeon at SickKids. "We hope these findings will help update standards to reduce the most common injuries without limiting children's access to healthy outdoor play."

## About the Canadian Institutes of Health Research

The Canadian Institutes of Health Research (CIHR) is the Government of Canada's agency for health research. CIHR's mission is to create new scientific knowledge and to catalyze its translation into improved health, more effective health services and products, and a strengthened Canadian health-care system. Composed of 13 Institutes, CIHR provides leadership and support to more than 13,000 health researchers and trainees across Canada. [www.cihr-irsc.gc.ca](http://www.cihr-irsc.gc.ca)

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## EASTERN CANADA

### Training Parents to Deal With "Out of Control" Children

#### Halifax and Toronto:

Tantrums, aggression and disobedience are not uncommon among children, but most kids outgrow these behaviours. However, this often isn't the case for the 3-9% of young Canadians with Oppositional Defiant Disorder – a mental health condition that can continue into adolescence and adulthood. Dr. Patrick McGrath at IWK Health Centre and Dalhousie University and Dr. Charles Cunningham at McMaster University believe better parent training can help. CIHR is supporting their study of a 12-week, home-based program called "Strongest Families?", which has been shown to reduce behavioural problems in children. Because it is home-based, the program is also cost-effective and convenient for families. "Almost all of the 16-year-olds who are in the news as delinquents began with these behavioural problems. By training parents to deal with these problems early on, we can avoid many societal problems later," said Dr. McGrath.



Dr. Patrick McGrath

CIHR's *Your Health Research Dollars at Work* is available to Members of Parliament, Senators and policy makers to communicate the benefits of the Government of Canada's investment in health research. News items can be reproduced for use in householders and other communications materials. Visit CIHR's website to download this issue in electronic form, at [www.cihr-irsc.gc.ca/e/35235.html](http://www.cihr-irsc.gc.ca/e/35235.html). If you would like a copy, please contact Caroline Kay, CIHR's Publications Production Coordinator, at [caroline.kay@cihr-irsc.gc.ca](mailto:caroline.kay@cihr-irsc.gc.ca).

## Upcoming Events/News

Each month: Café Scientifiques in cities across Canada dealing with topical health issues.  
[www.cihr.gc.ca/cafe\\_scientifique.html](http://www.cihr.gc.ca/cafe_scientifique.html).