MEASURING ECONOMIC BENEFITS OF HEALTH RESEARCH
A summary of a recent report by the Canadian Academy of Health Sciences

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In these times of economic turmoil all of us must energetically and publicly support sustained, even increased funding for scientific research in general and for health research in particular. Unfortunately, the recent Federal budget, while announcing some targeted science infrastructure spending, paradoxically proposed cuts to the three research councils. Sadly, despite infusion of money into so many other sectors of the economy, the government appears to have forgotten that health research is among the investments that produce the greatest return.

Amid the skepticism in the face of the economic downturn, we must convince politicians desperately looking for ways to end the downward economic spiral, that research investment is part of the solution.

This effort must be built around evidence. We need solid and reliable data concerning the economic returns on investment of health research, using indicators that can be easily understood by politicians and by the public at large. In this regard, the Canadian Academy of Health Sciences (CAHS) published a report on January 27, 2009, which is aimed at tackling this problem head-on. The report provides a framework for the evaluation of returns on investment in health research. Borrowing from the “payback model” adopted by the CIHR, the CAHS framework can be used to track the impact of health research on knowledge advancement, capacity building, informing decision making, health impacts and socio-economic impacts (click here for the payback model framework). It is proposed that all funders of health research in Canada make use of the framework and the indicators identified by the CAHS. Rather than rely on single indicators or metrics that can be dismissed as partial, imperfect or even likely to distort findings, it is further proposed that sets of indicators be developed as a means of evaluating health research impact.

An inherent challenge is that the understanding of health research impact indicators and metrics remains embryonic. More work needs to be done to develop methodologies and to expand data collection so as to ensure that accurate measurements of the full impact of health research can be assessed. Nevertheless, we cannot wait. Canadian research funders must begin to collaborate on establishing the practical prerequisites for measuring returns on investment.

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in Canada. For example, the nomenclature describing various aspects of health research needs to be standardized across the country. Similarly, all funders need to work toward uniform approaches to data collection. By working together it should be possible to develop a library of impact indicators and metrics that could form the basis of a core set of health research impact questions based on what is practical and feasible in the Canadian context. In closing, the CAHS report calls for a national collaborative effort to begin to measure the impacts of Canadian health research based on its framework. Rather than wait for ideal indicators and metrics, Canadian funders need to begin to apply the framework to those data that are already available, updating as new and improved indicators become available.

In the face of economic uncertainty, public mistrust of elected officials and pervasive bad news, the Canadian health research community must arm itself with the tools needed to convince policy makers that an investment in health research will translate into practical and measureable economic, social and health benefits. Only by a concerted effort on the part of those who fund Canadian health research can this be achieved.

The CAHS report panel on the Return on Investments in Health Research was chaired by Dr. Cy Frank, and was sponsored by Canadian Health Services Research Foundation (CHSRF), CIHR, Canada’s Research-based Pharmaceutical Companies (Rx&D), Public Health Agency of Canada (PHAC), with contributions as well from Heart and Stroke Foundation of Canada, Alberta Heritage Foundation for Medical Research, CMA, FRSQ, NCIC among many other organizations including other provincial health funding agencies and health charities involved in funding and advocacy of health research.

A summary and commentary on the Return on Investments report by Dr. C. Frank and by E. Nason is available online in CMAJ.

Electronic copies of the report are available at: http://www.cahs-acss.ca/e/assessments/completedprojects.php

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NUNAVIK: UNITING RESEARCH AND HEALTH ADVOCACY

Dr. Barbara Young
General Internal Medicine

It has now been two and a half years since the launch of the Nunavik Centre project at the Montreal General Hospital. The project was conceived first and foremost as an administrative and clinical one -- an attempt to improve the quality and decrease the cost of tertiary care services for adults in the most remote region of the McGill RUIS. Some challenges were...
expected: the mind-boggling geography, the cultural and linguistic barriers and the difficulty of recruiting busy academic physicians to travel north of the 55th parallel to run clinics under frontline conditions. Some of the challenges have been less predictable, at least to someone new to the work: the fact that the root of many tertiary care issues lies so clearly in lack of basic infrastructure in Native communities, the fact that recruitment of primary care personnel has quickly become the most important “tertiary care” issue and the fact that what the Inuit communities really want for themselves in terms of health and wellness is still unclear to most of us.

As part of the Nunavik Centre project, I have been visiting Nunavik regularly to see patients myself, and this work has posed its own set of unimagined questions. How do you manage a patient from Ivujivik in end-stage renal failure who says he would rather die than move to Montreal for dialysis? Or a patient who refuses to wear her CPAP since her husband’s violent death in a ski-doo accident? How do you do a stress test in Inuktitut? How do you defrost a pacemaker interrogation device, which has frozen in the hold of the airplane? What should diabetics eat in a land with no vegetables?

In their uniqueness and isolation, the Inuit are tantalizing research subjects. However research seems hard to justify in this underserved context unless it is likely to have direct and practical benefits for the population. At the Nunavik Centre, we are currently collaborating on four projects:

- **Cancer Genetics:** Study on the prevalence of a mutation in the DNA mismatch repair enzyme, PMS-2, which has been found to be responsible for the development of early-onset cancers in several Inuit families. Collaboration with Dr. W. Foulkes and Dr. M. Tischkowitz, McGill Cancer Genetics.

- **Osteoporosis, The BoHN Program:** Study on the use of an osteoporosis risk factor survey to identify women at risk for fracture in Nunavik. *Bone Health Nunavik*, a collaboration with Dr. S. Morin, McGill General Internal Medicine.

- **Chronic Renal Disease:** Study on the prevalence and causes of chronic renal failure in the Inuit population of Nunavik. Collaboration with Drs. A. Shabah, Santé publique de Montréal, C. Kim, McGill Internal Medicine and S. Iqbal, McGill Nephrology.

- **Palliative Care Nursing:** A nursing research project investigating the quality of palliative care services offered to Inuit clientele at the MUHC. Collaboration with nurses Andréanne Robitaille and Mary Lou Kelly.

Our next hope is to bring the “tail” of research full circle to begin to answer some of those most profound questions about what the Inuit community wants for itself. So-called “participatory research” in collaboration with community partners will not only ensure the enactment of truly relevant projects, but also hopefully help empower the community to address the issues that lie at the root of the determinants of health. In the end, is this not what we truly owe a community as tertiary care providers?
CONGRATULATIONS!

We are delighted to recognize the following milestones.

CFI-LOF AWARDS

Dr. Stella Daskalopoulou: Based at the Montreal General, Dr. Daskalapoulou’s research is focused on vascular disease and its prevention and involves the application of ultrasound to the measurement of vascular stenosis and plaque formation.

Dr. Thomas Jagoe: Director of the Cancer Nutrition-Rehabilitation Program based at the Jewish General, Dr. Jagoe’s research is focused on the mechanism of muscle wasting, muscle metabolism and cancer.

Dr. Simon Rousseau: Dr. Rousseau is a new recruit to the Meakins-Christie Laboratories, whose research is focused on protein kinases and signaling pathways and their relationship to inflammatory lung disease.

CIHR - INSTITUTE OF GENETICS CLINICAL INVESTIGATORSHIP AWARD

Dr. Brent Richards: A member of the Endocrine Division based at the Jewish General, Dr. Richards' research is in the areas of genetic epidemiology, osteoporosis and aging.

RECRUITMENT

We are pleased to announce the recruitment of Dr. Brian Chen to the Division of Neurology of the Department of Medicine and jointly to the Department of Neurology and Neurosurgery. Dr. Chen received his Ph.D. in neurobiology and behavior at the State University of New York at Stony Brook in 2003. He then completed a postdoctoral fellowship at the Dana-Farber Cancer Institute where he learned fly genetics. He studied the function of DsCAM in axonal guidance and synaptic connectivity in flies. He is now completing a second fellowship at Harvard University where he is developing a new strategy to identify synapse-specific molecules in flies and chicks CNS. Dr. Chen will be based at the Center for Research in Neuroscience at the MGH.

CIP FELLOWSHIP FUNDING OPPORTUNITY

The Faculty of Medicine is offering a one-year fellowship to residents following their final year of clinical training in order to pursue further research training as part of the Clinical Investigator Program (CIP).

Value: $50,000

To apply for this award, a CIHR Postdoctoral Fellowship application needs to be completed and submitted to Roberta Tiscione, administrative assistant for the CIP program, by April 1, 2009, (Jewish General Hospital, Lady Davis Institute, Room F-628)

The recipient will be chosen by a committee appointed by the Faculty of Medicine at McGill University. The successful applicant will be notified by May 15, 2009.

If you need any further information please contact Roberta Tiscione at roberta.tiscione@mcgill.ca

The McGill University Centre for Tropical Diseases was named the J.D. MacLean Centre on March 7th in honour of its founding director, Dr. Dick MacLean, who died January 22 of complications from surgery at the age of 68. Please see our memorial text on page 6 and the Montreal Gazette.
HONOURS

Dr. Morag Park, James McGill Professor in the Departments of Biochemistry, Oncology and Medicine and Scientific Director of the CIHR’s Institute of Cancer Research, earns top marks in Québec Science’s Top Ten Discoveries of 2008 for her groundbreaking work, which focuses on the environment surrounding tumours in the breasts. Her team has identified a panel of 26 specific genes that could be used to accurately predict clinical outcome. The next step is to produce a reliable functional test that could be performed on patients. They expect it to be ready for clinical trials at the end of 2009.

Dr. Ernesto Schiffrin has become President of the Société québécoise d’hypertension artérielle starting January 2009 and until January 2011. He was previously President of the Canadian Hypertension Society (1991-1992), Chair of the High Blood Pressure Research Council of the American Heart Association (2002-2004) and Associate Editor of Hypertension, journal of the American Heart Association since 2003. Dr. Schiffrin is one of the founding members of the Société québécoise d’hypertension artérielle.

Dr. Madhukar Pai, MUHC Medical Scientist and Associate Member in the Respiratory and Infectious Diseases Divisions of our Department and Assistant Professor in Epidemiology, Biostatistics and Occupational Health, has been selected for the Canadian Association of Medical Education (CAME) Certificate of Merit.

Dr. Jennifer Latella, R4 in the McGill GIM Fellowship Program, has been awarded the Thrombosis Interest Group of Canada Bayer Research Award for best trainee research presented at the 50th American Society of Hematology Annual Meeting in San Francisco, CA in December 2008, for her research entitled “The Relationship between D-Dimer Level, Venous Valvular Reflux, and the Development of the Post-Thrombotic Syndrome after Deep Vein Thrombosis”. This project was supervised by Dr. Susan Kahn.

GERIATRIC MEDICINE FOR PRACTITIONERS

By Dr. Gary Inglis, CME Committee Member

On behalf of the organizing committee for the GERIATRIC MEDICINE FOR PRACTITIONERS course, we are pleased to announce that this year this activity will take place at the Gelber Conference Center in Montreal on May 14 and 15, 2009.

The goal is to provide the opportunity to review some geriatric concepts and to adapt them to your practice. We aim to make this event as clinically relevant as can be so that you have many take home messages. We have used a combination of lectures and workshops so that you have ample time to discuss your own experiences with the presenters. Some topics are covered by both a lecture and a workshop again to increase exchanges.

It is with great pleasure that we invite you to participate. We look forward to welcoming you and hope that this meeting will be a worthwhile experience for you all.

Please click here for additional information.

NEWS FROM ST. MARY’S

St. Mary’s Hospital has expanded its acute care medical population thought the transfer of long term care patients to community resources. This project is the result of months of planning with the Agence to initiate a new process for dealing with long term placement in which the hospital works in conjunction with the various CSSS to find suitable care settings for the elderly. Once identified as medically stable, patients are placed in the community within a few days. Our goal is to move virtually all long-term patients from the hospital by the end of April 2009. The beds made available for acute care will alleviate overcrowding in the Emergency Department. This growing base of internal medicine patients offers new opportunities for teaching and research.
IN MEMORIAM

By Dr. Brian Ward and Michael Libman

Dr. Dick MacLean, Director of the McGill Center for Tropical Diseases and Professor in the Department of Medicine, passed away suddenly and unexpectedly on Thursday, January 22, 2009.

After more than 30 years of passionate interest and effort, he was recognized across Canada and internationally as one of the most influential forces in clinical tropical medicine. He built the McGill Center for Tropical Medicine into a leading clinical laboratory and research hub. Instead of easing-up as he approached and then passed “retirement age”, Dr. MacLean just kept getting better at what he did with endless requests from governments for advice, invitations to speak at the continent's most prestigious medical schools and the publication of influential manuscripts in the most important journals. In 2006, this expertise was formally recognized when he was asked to serve as the President of the Clinical Group of the American Society of Tropical Medicine & Hygiene.

Using wit and gentle barbs, Dr. MacLean freely shared his encyclopedic knowledge of tropical diseases with generation after generation of students, residents and staff. His effectiveness as a teacher is best evidenced by the fact that virtually everyone who worked with him was inspired to at least consider pursuing a career in international health or doing work in the tropics. He loved to teach and he was very good at it. Although he was lost to McGill too soon, his influence will be felt for decades to come through the many colleagues he inspired not only to be better physicians but also to be citizens of the world.

His family legacy is his good nature, boundless curiosity and his enthusiasm for life and learning. He is survived by his wife Meta and their three children, Jenne, Sara and James.

Memorial donations may be made to the Nature Conservancy of Canada or the charity of your choice.

By Dr. David Solomon

Dr. Samuel Solomon, a leading Canadian medical researcher and administrator at McGill University who advanced the study and the role steroids and peptides play in fetal development and endocrinology, died on December 13th in Montreal. He was 83 and died at home of complications following a stroke, surrounded by his wife and children.

Samuel Solomon was born in Brest-Litovsk, Poland and immigrated to Canada in 1935 with his family. He earned his undergraduate and doctoral degrees from McGill University before conducting research at Columbia University where he began his academic career as an assistant professor in 1955. Dr. Solomon returned to McGill in 1960 and was named Associate Professor and then Professor in the Departments of Medicine, Obstetrics and Gynecology and Biochemistry in 1970. He was named Professor Emeritus in 1995.

At McGill, where he headed the Division of Experimental Medicine from 1965 to 1982, Dr. Solomon investigated how steroids and peptides are made and how these key molecules affect processes as diverse as fetal lung development and regulation of the immune system. As early as the 1960’s, Dr. Solomon had made important connections recognizing that the placenta makes critical steroids that guide fetal development and fetal lung development in particular. Dr. Solomon and others defined the fetal-placental unit, a key concept in understanding the molecular signals that guide early development. These discoveries led to new thinking in the fields of steroid biochemistry and endocrinology. In the 1980’s and 90’s, Dr. Solomon and others examined the mechanisms of how key endocrine peptides, such as ACTH, are processed and the impacts these and related peptides have on growth, development and control of the immune system.

In addition to many international awards and honors in the fields of biochemistry and endocrinology, Dr. Solomon was a member of the Royal Society of Canada, which awarded him the McLaughlin Medal. He was inducted as an Officer of the Order of Canada in 1997. As the abuse of steroids in sport became an international issue, Dr. Solomon shared his expertise in the field as a member of the Dubin Commission in 1989.

Dr. Solomon is survived by his wife of 34 years, the former journalist Dusty Vineberg Solomon. He is also survived by three sons from a previous marriage to Sheila Hom Bisaillon, Dr. David Solomon of Copenhagen, Denmark and New York City, Dr. Peter Solomon of Chelsea, Quebec, Jonathan Solomon of Ottawa and five grandchildren.

Contributions in his memory may be made to the Faculty of Medicine, McGill University.
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