

## MESSAGE FROM THE CHIEF EXECUTIVE OFFICER

### Variety the spice of life – and health research

If diversity is the spice of life, this issue of Research Advances is going to whet your appetite.

From the pages of this newsletter, it becomes clear that Nova Scotia researchers are doing groundbreaking work in a wide range of fields: public health nursing, family medicine, linguistics, industrial engineering, immunology, kinesiology, economics, and the list goes on.

Nor is the variety limited to the number of fields involved. In some cases, these investigators are taking non-traditional approaches to answering their research questions. In some, they are working in collaboration, thereby maximizing resources and creating new knowledge through the pooling of individual understanding and expertise. They are tackling questions that can save lives and improve the quality of life on an individual basis – developing a counseling service for people with cancer, for example – and on a global level – such as working to develop a safer food supply for the new millennium.

Our vision at NSHRF is to help improve the health of Nova Scotians by developing and supporting a vibrant and sustainable health research community throughout the province. When we speak of health, we speak in broad and encompassing terms. We have followed the example of the Ottawa Charter for Health Promotion, developed at the First International Conference for Health Promotion in 1986, in adopting the World Health Organization's definition of health. We believe that:

- health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity;
- the fundamental conditions and resources for health are peace, shelter, education, food, income, a stable eco-system, sustainable resources, social justice and equity; and

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KRISTA CONNELL  
CHIEF EXECUTIVE OFFICER

- improvements in health require a secure foundation in these basic prerequisites.

It follows that we would provide support not only for research in basic or applied sciences, medical, and traditionally health-oriented fields, but also for investigations in, but not necessarily limited to, the following areas:

- the social sciences (e.g., political science, administration, sociology, business, management, economics, education, law, ethics, communication, psychology);
- the humanities; and
- collaborations between universities/research institutions and community organizations.

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Krista Connell  
CEO

## From metaphor to memory loss – a linguist explores the brain

“I’ve always been interested in knowledge and language and the relationship between them,” says Elissa Asp, Associate Professor of English and Linguistics at Saint Mary’s University. Dr. Asp did her Ph.D. research on metaphor but has since developed a new field of interest: the study of language use as a means to better understand the neuropathology of Alzheimer’s and other dementias.

She received a Capacity Building Grant from NSHRE, which provided one-half course relief from her teaching responsibilities. She spent the time reading deeply and broadly on neurology and neuroimaging, to supplement her knowledge of linguistics with an understanding of the landscape of the brain. She also completed a perceptorship with Dr. Kenneth Rockwood at the Geriatric Medicine Research Unit of Dalhousie University and the Memory Disability Clinic in the QEII Health Sciences Centre.

One aspect of the work of the Research Unit is to develop detailed descriptions of patients participating in clinical trials. The purpose, in part, is to develop tools to evaluate individual patient responses to cholinesterase inhibitors – the main pharmacological treatment currently available for Alzheimer’s disease.

“Language use is one of the most sensitive indicators of a patient’s cognitive status,” notes Dr. Asp, “and this is where I came in.” As a general linguist and discourse analyst, she has a background in describing recurrent patterns in language use. At the clinic, she applied this background to the search for more sensitive measures of treatment response.

The grant also allowed Dr. Asp to develop a poster, “Self-referential tags in the discourse of people with Alzheimer’s disease before and after treatment with donepezil,” which she presented to the 9th International Conference on Alzheimer’s Disease and Related Disorders in Philadelphia.

“Checking tags” such as “aren’t I?”, appended to a statement about the self, are quite rare in ordinary speakers, but occur fairly frequently in the discourse of Alzheimer’s patients. This reflects the fact that episodic, or contextualized, memory is impaired. A “monitoring tag” such as “I asked you that already, didn’t I?” – also common in Alzheimer’s patients – shows a compensation for impair-

ment in information flow, which is controlled by a different part of the brain.

Neuro- and psycholinguists often focus on two regions of the brain – Broca’s area and Wernicke’s area – which have long been associated with language and language



“When you look at language use,” says Dr. Asp, “you’re looking in essence at the whole brain: attention, working memory, long-term memory, emotive centres, as well as the classic language centres. When we talk, we’re using the whole brain.”

impairment. However, the study of language use to understand neuropathology is only just beginning.

“When you look at language use,” says Dr. Asp, “you’re looking in essence at the whole brain: attention, working memory, long-term memory, emotive centres, as well as the classic language centres. When we talk, we’re using the whole brain.”

Can the study of language use hold one of the keys to treating dementia? “Absolutely,” maintains Dr. Asp. “Being able to relate the language people use to both normative patterns and the patterns that occur in the context of neurological diseases provides opportunities for new understanding of brain-behavioral relationships, which can point us to new directions in understanding the disease and developing possible treatments.”

Dr. Asp, who is continually surprised and heartened by the strength and courage of Alzheimer’s patients and their families, will be involved in every way she can. “You spend the first half of your life acquiring a set of skills – in my case a knowledge of linguistics – and the next half of your life learning how to apply them in the way that seems most meaningful,” she says.

For her, there is no question: “This is it.” ■

### Contact Information:

Elissa Asp  
Associate Professor of English and Linguistics  
Saint Mary’s University  
(P) 902.420.5717  
elissa.asp@smu.ca

# Bacterial food-borne infections: A safer food supply for the new millennium



RAFAEL A. GARDUNO

## INVESTIGATORS

Rafael A. Garduno  
Assistant Professor  
Department of Microbiology and Immunology, and Department of Medicine  
Faculty of Medicine  
Dalhousie University

Tom Gill  
Professor  
Department of Food Science and Technology  
Dalhousie University

Walter Schlech  
Infectious Diseases Specialist  
Queen Elizabeth II Health Sciences Centre and Department of Medicine,  
Dalhousie University

Three Nova Scotian scientists from three complementary disciplines are working together to improve the safety of the food supply. Microbiologist Rafael Garduno, food scientist Tom Gill and infectious diseases specialist Walter Schlech are investigating listeriosis and the bacterium that causes it, *Listeria monocytogenes*. Listeriosis is a serious, often fatal, systemic infection that results in septicemia and inflammation of the brain, caused by eating food contaminated with *L. monocytogenes*.

*Listeria monocytogenes* is commonly found in soil and water and sometimes in food-processing plants. But human listeriosis is infrequent. In spite of modern sanitation, better quality control and stringent legislation, epidemic outbreaks of listeriosis occasionally occur. Dr. Garduno and his colleagues speculate that the epidemic strains of *L. monocytogenes* (those involved in causing outbreaks) are rare and differ from environmental strains commonly found in nature, and food products, and even from strains involved in sporadic cases of listeriosis. Detection of epidemic strains of *L. monocytogenes* would be highly desirable, but there are no established markers of virulence that would reliably distinguish environmental from epidemic strains. The three Dalhousie University researchers suspect this difference is only apparent *in vivo*, i.e., within the animal host.

Dr. Garduno and his team are attempting to identify virulence factors of the bacterium that could be relevant for its growth and survival within a host. They built a basic *in vivo* technology to systematically study differences between epidemic and environmental strains of *L. monocytogenes*. For this, they developed an intraperitoneal diffusion chamber model to grow the bacterium and invented an *in vivo* co-culture technology, in which host cells and bacteria are placed inside the same chamber, to study host cell and pathogen interactions.

The research team is also using protamine, a peptide capable of killing bacteria, as a tool to probe the cell surface of *L. monocytogenes*. Protamine causes defined changes to the surface of the bacterium, so the isolation of mutant *L. monocytogenes* that are resistant to protamine may lead to identifying surface molecules involved in virulence or the survival of the bacterium in processed food products. In the long term, it may be possible to use these surface markers to distinguish epidemic from non-epidemic strains.

Dr. Garduno found that *L. monocytogenes* mutants that are resistant to protamine indeed have altered cell surfaces, display a different molecular composition in their cell walls, and cannot efficiently infect mice. Eventually the addition of protamine to food products may significantly influence the ecology of *Listeria* and potentially increase the safety of food products. The research of Dr. Garduno and his colleagues has the potential to affect food safety regulations and advance our knowledge of epidemic listeriosis. ■

## Contact Information:

Rafael A. Garduno  
Department of Microbiology and Immunology, and Department of Medicine  
Faculty of Medicine  
Dalhousie University  
(P) 902.494.6575  
Rafael.Garduno@dal.ca

## PROJECT FACT SHEET

# Using business techniques to better manage Nova Scotia's supply of platelets

Blood is essential to human life, and there is a growing need for blood and blood products in the health care system. So it is critical that the blood supply continues to be efficiently and effectively managed. In Canada, blood is gathered from volunteer donors and distributed to health care institutions by Canadian Blood Services (CBS). CBS is the agency responsible for managing Canada's blood supply system. Platelets, a component of blood, are essential in the treatment of cancer and hemophilia. With a shelf life of five days and natural fluctuations in supply and demand, platelets are an inherently difficult product to manage.

Dr. John Blake of Dalhousie University's Department of Industrial Engineering and Dr. David Anderson, medical director of Blood Transfusion Services at the Queen Elizabeth II Health Sciences Centre, in cooperation with CBS Halifax, are leading a team to develop an integrated management system for the supply and distribution of platelets within Nova Scotia. While more than 30 health care institutions in the province use some platelets, 70% are consumed at two hospitals in Halifax. Dr. Blake and his team are developing supply-management techniques and inventory policies that balance the necessity of having platelets available when needed with the requirement that they not be unduly wasted. They found that up to 18% of potential inventory costs can be saved if certain quantitative inventory models are applied to platelet management.

Platelets are one of the components required to make blood clot. They are fragile cell fragments found in bone marrow. Their sticky or adhesive qualities help to control bleeding by plugging holes in a blood vessel wall and assisting in forming a clot to prevent blood loss. People with prolonged bleeding associated with diseases such as cancer, leukemia, aplastic anemia and hemophilia need large quantities of platelets as part of their treatment.

"Nova Scotia has an active blood liaison committee and is

## INVESTIGATORS

John Blake  
Department of Industrial Engineering  
Dalhousie University

David Anderson  
Blood Transfusion Services  
Queen Elizabeth II Health Sciences Centre

Ramiro Arellano  
Department of Anesthesia  
Queen Elizabeth II Health Sciences Centre

Dorothy Barnard  
Division of Pediatric Hematology  
IWK Health Centre

**CBS Contact:**  
Susan Smith  
Canadian Blood Services  
Halifax



JOHN BLAKE

well placed to take advantage of supply chain management techniques," says Dr. Blake. The team developed infrastructure and management tools to support integrated management of the platelet supply. Various models were created and operational scenarios were run. Results suggest that overall efficiency, effectiveness and costs are improved when an end-to-end, integrated planning structure is in place. The system performs best when Canadian Blood Services and large volume customers are able to work together to jointly identify and coordinate their ordering policies.

Adopting a consignment policy of shipping outdated platelets to the Queen Elizabeth II Health Sciences Centre, but not counting them as part of the hospital's inventory unless they are used in transfusions, has the potential to reduce both wastage and costs. Research results also suggest changing the collection method from five days a week to a twice-weekly schedule may provide better availability of this valuable blood product.

Dr. Blake and his team also recommend extending supply chain management techniques within the province to manage supplies of red cells, plasma and fractionated blood products. ■

## Contact Information:

John Blake  
Department of Industrial Engineering  
Dalhousie University  
(P) 902.494.6068  
John.blake@dal.ca

# Replacing brain cells in the diseased or injured brain

## INVESTIGATOR

Ivar Mendez  
 Director  
 Neural Transplantation Laboratory  
 Dalhousie University  
 Chair, Brain Repair Centre



IVAR MENDEZ AND BARBARA NEWMAN

Dr. Ivar Mendez has a vision and a quest – to repair human brains damaged by disease.

His work has attracted international attention and helped to establish the Brain Repair Centre in Halifax, Nova Scotia, a multidisciplinary collaboration linking outstanding researchers and physicians specializing in revolutionary treatments and technologies in brain repair. Dr. Mendez's research at the Neural Transplantation Lab is centered on repairing damaged brain circuitry in people with Parkinson's disease and spinal cord injuries.

One in every 300 people in Canada and the United States has Parkinson's. A progressive disease of the brain that slowly robs a person of their ability to walk and speak, it affects more than 150,000 Canadians. Brain cells that produce dopamine, important in controlling muscle movement, are lost. Drug therapy provides only partial relief and loses its effectiveness over time. Replacing brain cells that control muscle movement may be a viable treatment. Transplanting fetal cells in animal models and in patients produced promising results; however, not enough tissue exists to make this a routine treatment and the source of the cells raises important ethical issues. Dr. Mendez's study focuses on cell replacement, and specifically on finding an alternative to using fetal cells.

His team is investigating stem cells, "master" or "parent"

cells from which other cell types derive. They are determining if other cells from the human body grown in culture

can be used to restore function and mobility in the rodent model of Parkinson's disease, how these alternative cells proliferate and differentiate, and how they can be used to replace those that are lost in the disease.

Dr. Mendez's laboratory also investigates the potential

synergy of trophic factors and stem cells transplants to repair the brain in animal models of traumatic brain injury, stroke and spinal cord injury.

The research results will provide additional information on cell replacement therapy and a better understanding of the potential benefits of this strategy, not only for Parkinson's disease, but also for other intractable neurological conditions. ■



IVAR MENDEZ DEMONSTRATES

## Contact Information:

Ivar Mendez  
 Neural Transplantation Laboratory  
 Dalhousie University  
 Brain Repair Centre  
 (P) 902.494.8896  
[Ivar.Mendez@dal.ca](mailto:Ivar.Mendez@dal.ca)

## PROJECT FACT SHEET

# Is there a care gap in the treatment of atrial fibrillation?

Does a “care gap” exist in the treatment of atrial fibrillation patients in Nova Scotia?

Atrial fibrillation (AF) – rapid, irregular beating of the atria, the two upper chambers of the heart – increases the risk of a stroke. An anticoagulant – medication that impairs the ability of the blood to form clots that could lead to a stroke – can substantially reduce the risk and is the preferred treatment. Evidence suggests a sizable percentage of AF patients who might benefit from anticoagulation are not receiving it, leading a team of investigators in the Department of Family Medicine to investigate if a care gap in treatment exists.

The team measured this care gap, exploring with patients and physicians the clinical and individual reasons that account for treatment choices. They found that anticoagulation of patients with AF is much closer to the optimal level than previously thought. Half of those not receiving anticoagulants either had valid reasons for not taking them, had declined treatment, or had started treatment after the project began. One obstacle facing AF patients is the challenge of getting to a lab for blood collection or having their blood drawn at their homes for delivery to a lab. Home-based services to help patients needing transportation could overcome that barrier for some elderly and rural Nova Scotians.

The untreated patients included those who refused treatment. For others, in the clinical judgment of the treating physician, the benefits did not outweigh the risks to the individual. Obstacles to anticoagulation include drug interactions, patient aversion to “rat poison” (Warfarin, a leading anticoagulant, was initially marketed for eradicating this rodent), and grey areas in diagnosis. Facilitators of anticoagulation included doctors spending adequate time discussing anticoagulation in depth, a person’s fear of stroke, good working relationships between family physicians and consultants (cardiologists and general internists), and the Improving Cardiovascular Care in Nova Scotia (ICONS) project.

The team recommends evaluating the role of other health care providers, such as nurses, to educate patients on the pros and cons of anticoagulation therapy. Atrial fibrillation or anticoagulant clinics are not needed to achieve a high proportion of patients treated with warfarin, but they could instead focus on assisting people with unusual difficulties with anticoagulation. Aids aimed at staying on long-term anticoagulant therapy could be developed and evaluated. ▣



WAYNE PUTNAM

## INVESTIGATOR

Wayne Putnam  
Department of Family Medicine  
Dalhousie University

“Evidence suggests a sizable percentage of AF patients who might benefit from anticoagulation are not receiving it, leading a team of investigators in the Department of Family Medicine to investigate if a care gap in treatment exists.”

## Contact Information:

Wayne Putnam  
Department of Family Medicine  
Dalhousie University  
(P) 902.473.4740  
Wayne.Putnam@Dal.ca

## PROJECT FACT SHEET

# Individualized telephone counseling intervention for people with cancer

Telephone counseling provided by a registered nurse can play an important role in the fight against cancer in Nova Scotia. Recent research shows problem solving counseling by a registered nurse on a telephone can help cancer patients cope better with their disease and at the same time reduce health costs.

The emotional impact of a cancer diagnosis can be as devastating as the physical effects and the depression that often results affects how a person deals with their illness. Telephone counseling by nurses can help people adjust to and better cope with the situation. Participants in a Nova Scotia study led by Dr. Barbara Downe-Wamboldt and Dr. Lorna Butler of Dalhousie University's School of Nursing said such counseling was extremely helpful to them by providing support, someone to listen to them, and a sense of empathy and understanding. The randomized, controlled study revealed those in the control group without access to telephone counseling became more depressed over a one-year period, whereas the study group with access to telephone counseling did not.

Dr. Downe-Wamboldt and Dr. Butler led a team to determine the effectiveness of individualized, problem-solving counseling provided by registered nurses over the telephone for people with breast, lung or prostate cancer living in urban and rural communities in Nova Scotia. Twenty-eight percent of the group studied showed poor to fair adjustment to illness. Patients' main concerns included the physical impact of their illness and/or its treatment, emotional responses, stress related to symptoms, work, perceived causes of their cancer, relations with family and friends, and seeking or communicating information related to their illness. The protective effect of telephone counseling did not increase the overall cost of providing health care.

The researchers say telephone counseling by nurses could also save the health care system money. It is more expensive to treat patients with poor or fair adjustments than it is to treat someone who has adjusted well, and poor adjustments were related to depression and evasive coping. Their year-long study found clinically important differences in depression scores between the experimental and control groups.

It costs Nova Scotia about \$28,000 a year to treat a person who has adjusted well to their diagnosis and about \$48,000 for someone who has adjusted poorly. Dr. Downe-



## INVESTIGATORS

Barbara Downe-Wamboldt  
Director and Professor  
School of Nursing, Dalhousie University

Lorna Butler  
Professor  
School of Nursing, Dalhousie University

Wamboldt said, "Moving people from fair adjustment to good adjustment has the potential to save approximately \$20,000 per person per year. Improving the capacity of only three patients with cancer to live with their illness with less distress and less interference in their lives could generate \$60,000 in one year in savings."

Telephone counseling is also a cost-effective way of reaching rural residents with cancer who have less ready access to counseling and health services. Further research is needed to determine what types of people benefit more than others from telephone counseling. ■

## Contact Information:

Barbara Downe-Wamboldt  
Dalhousie University School of Nursing  
(P) 902.494.1143  
Barbara.Downe-Wamboldt@dal.ca

## Stories “On the ground”: The real life work of public health nurses

In one Nova Scotia town a public health nurse (PHN) brings schools, health centres, service clubs and businesses together to form a mental health support group for youth. Her counterpart in the next town helps an overwhelmed young mother learn to breastfeed. Be it one-to-one support or community leadership, the foundation is the same. “The important thing is trust,” said one PHN who was interviewed for an NSHRF-funded study. “Trust is incremental. It comes in little waves.”

Partly due to the incremental and contextual nature of public health nursing, it is often invisible and seldom researched. The study, “Fostering Citizen Participation and Collaborative Practice: Tapping the Wisdom and Voices of Public Health Nurses in Nova Scotia” helps fill the gap.

A research team led by Dr. Donna Meagher-Stewart and Dr. Megan Aston, both of Dalhousie University’s School of Nursing, examined the primary health care practices of PHNs in the context of health service restructuring in Nova Scotia. They gathered PHNs’ narratives as their primary data source and also interviewed health care managers to get a full picture of “life on the ground” – from visiting rural outpatients who are stranded without cars to talking to sex workers about AIDS.

“Public health nurses have been providing primary health care for decades. Their social justice vision locates them in a unique and strategic function as linking agents between clients and a broad range of services. During the 90-minute interviews – followed up by phone calls and focus group sessions – some of the PHNs described themselves as ‘connectors,’ especially for vulnerable groups,” says Dr. Meagher-Stewart.

The study was collaborative, involving district health authorities as well as universities. Data collection began in December 2002 and concluded in April 2004 –hundreds of



DONNA MEAGHER-STEWART



MEGAN ASTON

“PHNs are front-line health care providers who are well positioned to be important contributors to this process,” says Dr. Meagher-Stewart. “Research on PHNs’ practice is critical to comprehensive primary health care planning.”

pages of narrative reports later – when the researchers shared their findings with participating PHNs. They later presented aspects of their findings at national and international conferences, and held a forum for Nova Scotia policy-makers, educators, PHNs, researchers and public health officials.

“The nature of our grant requires that our findings be useful,” stresses Dr. Meagher-Stewart. She notes that the Nova Scotia government is currently moving toward primary health care renewal – an initiative that began in September 2001, following a federal government lead. “PHNs are front-line health care providers who are well positioned to be important contributors to this process,” says Dr. Meagher-Stewart. “Research on PHNs’ practice is critical to comprehensive primary health care planning.”

Results of the study will also be used in nursing education and will provide PHNs themselves with documentation of their grassroots contribution to the health of Nova Scotians. Though secondary in one sense, these applications are significant. At its core, says Dr. Meagher-Stewart, “the study is for nurses, not about them.” ■

### Contact Information:

Donna Meagher-Stewart  
School of Nursing  
Dalhousie University  
(P) 902.494.2143  
donna.meagher-stewart@dal.ca

# Running their troubles away: Exercise a novel component of new treatment for AS

Anxiety sensitivity (AS) refers to the fear of anxiety-related sensations. People with high levels of AS are frightened by anxiety sensations because they think they indicate harmful consequences. “For example, your heart speeds up and you think you might be having a heart attack,” says Margo Watt, a member of the faculty in the Psychology Department at St. Francis Xavier University.

Often, AS sufferers avoid stimulating activities such as physical activity because a racing heart or sense of shakiness will make them anxious. Sadly, as a result, they may lose out on exercise’s benefits for mental health. To cope with AS, a high percentage turn to alcohol – a step that leads to problems of its own.

Dr. Watt and Dr. Sherry Stewart, a clinical psychologist at Dalhousie University, have designed a short-term cognitive-behavioural treatment for AS, aimed specifically at groups of young adults. The treatment was first developed at McGill University for individual substance abusers, but the two researchers have adapted it for group use and added a groundbreaking new element – namely, a running exercise.

The pair are testing and refining their new treatment with the help of a grant from the Nova Scotia Health Research Foundation. They are studying female undergraduates who have been divided into four groups: those who scored high on AS measures (about 15 percent of everyone sampled) and those who scored low, with people from each of these groups assigned to either the active treatment or a control group. Says Dr. Watt, “There are three elements to the program: psycho-educational, cognitive restructuring, and the exposure component, which is where the running comes in.”

During one-hour sessions over three consecutive days, the participant groups of eight to 10 young women learn the connection between physical sensations, thoughts, feelings and actions. “Learning to identify and challenge the



MARGO WATT

thoughts that increase their fear is important for gaining control over anxiety,” Dr. Watt explains.

During the third session, the participants go running. This exposes high AS individuals to the sensations they fear, but in a safe and relaxed environment. It may be the first step toward changing what psychologists call “implicit cognitions” – automatic associations in memory.

The study marks the first time a physical exercise has ever been used in a cognitive-behavioural approach for reducing AS. One year into the three-year study, it is too soon to determine how various factors interact, but the good news is that the treatment appears to be working.

Data is collected before the sessions and again three months later, during which time the participants have continued their running exercises at home. Results indicate a significant reduction in the proportion of high AS individuals with clinically significant alcohol problems, and a trend, although nothing can yet be confirmed, for the reduction in actual levels of AS.

Young adult undergraduates were chosen for the study because they’re at a vulnerable age for developing alcoholism as well as depression and panic disorder – all three of which can follow from AS. All the participants are female, the most frequent high AS sufferers, because of a need to limit variables, but it is hoped that young men will be included in future research.

Understanding AS can help people – young and old – to understand themselves. Dr. Watt recalls a student who was nodding vigorously when AS was described in class. “I refused to help my mother carry groceries up the stairs,” she said. “I just couldn’t, but I didn’t know why.”

Being able to reduce AS levels and maintain that reduction over time could represent an important first step in developing an anxiety disorder prevention program. The ultimate goal? In Dr. Watt’s words: “To help people gain more control over their fear of fear.”

## Contact Information:

Margo Watt  
Psychology Department  
St. Francis Xavier University  
(P) 902.867.5215  
mwatt@stfx.ca

## PROJECT FACT SHEET

# The effects of a home-based strength training program on independence and immune function of older Nova Scotians



RENÉ J.L. MURPHY

## INVESTIGATORS

René J.L. Murphy  
Associate Professor  
School of Recreation Management  
and Kinesiology  
Acadia University

Julia Green-Johnson  
Assistant Professor  
Biological Sciences  
University of Ontario Institute of  
Technology

L. Darren Kruisselbrink  
Assistant Professor  
School of Recreation Management  
and Kinesiology  
Acadia University

Jonathon R. Fowles  
Assistant Professor  
School of Recreation Management  
and Kinesiology  
Acadia University

The mere mention of “endurance training” and “strength/resistance training” conjures up images of someone bench-pressing 100 kilograms or preparing for Hawaii’s grueling Iron Man Triathlon. But moderate intensity strength and endurance exercise training also contributes to healthy aging. Endurance training is important for cardiovascular and heart health while strength/resistance training helps maintain and increase muscle mass and strength and is the most important type of exercise for older individuals. Moderate-intensity strength/resistance training can easily be designed to benefit older people. And it seems that it’s almost never too late to start.

Dr. René J.L. Murphy and his colleagues at the Centre of Lifestyle Studies at Acadia University study a variety of behaviours that can improve health. Their recently completed research revealed that a year of home-based strength training for older individuals increased muscle strength and mass, improved mobility, and had a positive impact on the ability to perform activities of daily living. In addition, the home-based training programs improved the immune function of participants, suggesting that this type of exercise could be an effective prevention tool. The regular exercise program also reduced the risk of heart attacks by reducing such things as “bad cholesterol” or LDL (low-density lipoprotein), which sticks to blood vessel walls.

Dr. Murphy’s team devised a home-based strength training program for 32 retired people (10 men, 22 women), who were monitored before, during and after 11 months of training. The purpose of the study was to examine the effects of a long-term, moderate-intensity resistance-training program on immune function, muscle strength and lipid profile in older adults. The researchers found muscle strength increased significantly, while total cholesterol and LDL substantially decreased. They also measured natural killer cell activity (NKCA) and neutrophil cytotoxicity as well as several hormones and cytokines (powerful chemical substances secreted by cells) that influence immune function, among other things. The results suggested that after training, the immune function was significantly better at fighting off bacteria and viruses.

The results of the training program clearly indicate that an inexpensive exercise program monitored by kinesiologists can reduce cardiovascular risk factors and significantly improve muscle strength, immune function, and independence of older people. Such programs could be an effective strategy to reduce the health care costs associated with an aging population. ■

## Contact Information:

René J.L. Murphy  
Associate Professor  
School of Recreation Management and  
Kinesiology  
Acadia University  
(P) 902.585.1559  
rene.murphy@acadiu.ca

# Poverty, policy and the health of children in the Maritimes



Children in the Maritime Provinces are more likely to have asthma (18 vs 13.5%), more likely to be obese (22.3 vs 17.8%), more likely to have ear infections (58 vs 52.9%), and more likely to have chronic health problems (26.3 vs 24.1%) than children elsewhere in Canada. They are also poorer – 40.2% of Maritime children were poor at least once between 1994 and 1998 compared to 32.7% of other Canadian children – and 10% were poor throughout those four years compared to 5.7% living outside the region.

Dr. Shelley Phipps of Dalhousie University discovered this unsettling information while investigating the socioeconomic determinants of children's health. As long-term poverty has an impact on a person's health, she wanted to assess the difference in chronic poverty experienced by Maritime children compared to children living elsewhere in the country.

Using data from Statistics Canada's National Longitudinal Survey of Children and Youth, she followed children over a period of time to distinguish between children who are touched only briefly by poverty from those who experience long-term poverty. Dr. Phipps's research team then compared a wide range of health indicators for children living in the Maritimes to children living in the rest of Canada. They then conducted a more detailed study of the links between chronic poverty and the higher prevalence of childhood asthma in the Maritimes.

The bottom line: Higher unemployment and underemployment of parents are the major reasons for differences in child poverty throughout Canada – and poverty has a direct effect on children's health. ■

## Contact Information:

Shelley Phipps  
Department of Economics  
Dalhousie University  
(P) 902.494.6987  
Shelley.Phipps@dal.ca


# Developing strength: Mobilizing health research capacity

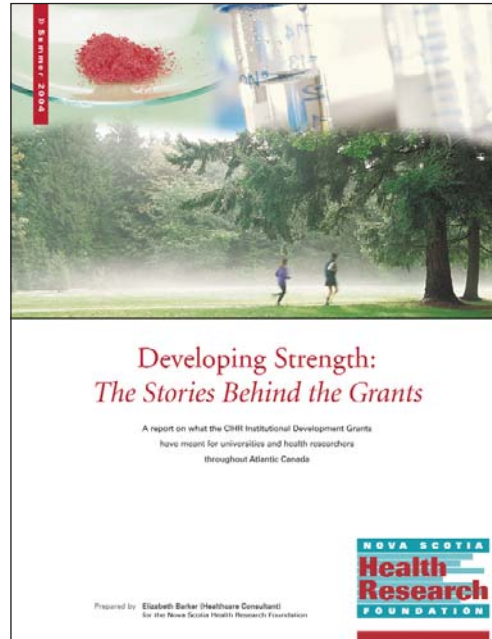
The Canadian Institutes of Health Research (CIHR) provided, through its Institutional Development Grants competition, an opportunity for under-developed institutions across Canada to build and mobilize their health research capacity.

Consisting of a one-time grant of up to \$100,000 per institution, the development grants were intended to be used at the discretion of the institution to “foster the development of health research within the institution, for example, by providing seed grants or release time for investigators, start-up funds for new recruits, strategic planning exercises to identify institutional strengths or priorities for collaboration or recruitment.”

Ten universities in New Brunswick, Newfoundland and Labrador, Nova Scotia, and Prince Edward Island were awarded a total of \$920,000 in development grant funding. Within less than two years after the grants were awarded in 2001-02, the funding has already begun to revitalize the region’s research infrastructure.

The Nova Scotia Health Research Foundation has compiled a follow-up report on behalf of the successful grant recipients in Atlantic Canada. The report, *Developing Strength: The Stories Behind the Grants*, describes how the universities used their grant funds to launch new initiatives, to stimulate partnerships, to support existing research, and to seek innovative approaches to problems in health-related research.

This document is not a formal or required report on the research projects. Those reports have already been compiled. Our intention is to tell the universities’ and the researchers’ own stories of what the development grant funds have meant for them, their research and the Atlantic Region. To see what they had to say, please visit [www.nshrf.ca/news/reports.shtml](http://www.nshrf.ca/news/reports.shtml) for a copy of the report. 



## Developing Strength: The Stories Behind the Grants

A report on what the CIHR Institutional Development Grants have meant for universities and health researchers throughout Atlantic Canada



Prepared by Elizabeth Barker (Healthcare Consultant) for the Nova Scotia Health Research Foundation

“To foster the development of health research within the institution, for example, by providing seed grants or release time for investigators, start-up funds for new recruits, strategic planning exercises to identify institutional strengths or priorities for collaboration or recruitment.”

## Developing Strength: The Stories Behind the Grants

### 1. INTRODUCTION

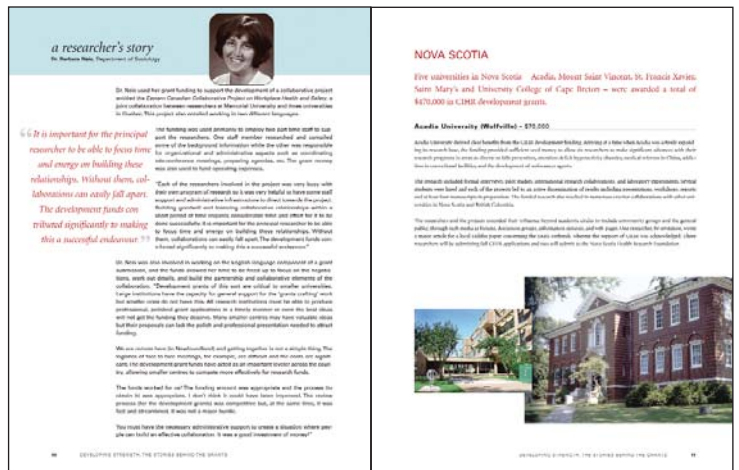
Through 2002, the Canadian Institutes of Health Research (CIHR) provided, through its Institutional Development Grants competition, an opportunity for under-developed institutions across Canada to build and mobilize their health research capacity. Consisting of a one-time grant of up to \$100,000 per institution, the development grants were intended to be used at the discretion of the institution to foster the development of health research within the institution. For example, by providing seed grants or release time for investigators, start-up funds for new recruits, strategic planning exercises to identify institutional strengths or priorities for collaboration or recruitment.

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We relied on two principal sources of information. Each university provided a written account describing how they used their grant funds. At our request, they also provided the name of a researcher who had benefited from the development grant funding. In a separate interview, these researchers described, in their own words, the impact of the CIHR development grant on their own areas of research. They also offered a number of suggestions, based on their experience, about how future development grant funds might be made even more effective.

This document is not a formal or required report on the research projects. These reports have already been compiled. Our intention is to tell the universities’ and the researchers’ own stories of what the development grant funds have meant for them, their research and the Atlantic Region.



### a researcher's story

Dr. Nancy Nadeau, Professor of Biology

Dr. Nadeau used her grant funding to support the development of a collaborative project between the Queen's Graduate Collaborative Program and the Centre for Health and Safety, a joint collaboration between researchers at Memorial University and Queen's University.

It is important for the principal researcher to be able to focus time and energy on building these relationships. Without these collaborations, one easily just goes. The development funds can contribute significantly to making this a successful endeavor.

The funding was used primarily to employ two part-time staff to support the researchers. One staff member researched and collected data on the impact of the grant funding on the other staff member's organizational and administrative aspects such as understanding institutional priorities, assessing agreements, and the grant process. The other staff member provided administrative support.

Each of the researchers involved in the project was very busy with their own projects. It was not until the grant funding was received that the researchers could meet and discuss the project. The grant funding was used to support the researchers' time and energy for the project. The grant funding was used to support the researchers' time and energy for the project.

We are very grateful to the Nova Scotia Health Research Foundation for providing the grant funding. The grant funding was used to support the researchers' time and energy for the project. The grant funding was used to support the researchers' time and energy for the project.

You may have the necessary administrative support to create a situation where you can build an effective collaboration. It was a great experience of success!

### NOVA SCOTIA

Five universities in Nova Scotia - Acadia, Mount Saint Vincent, St. Francis Xavier, Saint Mary's and University College of Cape Breton - were awarded a total of \$470,000 in CIHR development grants.

### Acadia University (Wolfville) - \$70,000

Acadia University received four benefits from the CIHR development grant funding. Funding allowed for the hiring of two research assistants to support the research program in the area of early childhood, maternal and fetal health. The research program is a collaborative effort between Acadia University and the University of Prince Edward Island.

The research and the project provided that offshore-based students could be made university groups and the general public through an online database. Academic grant administration services and staff support were provided to ensure a more stable and a high quality team covering the needs of the research. The support of the Nova Scotia Health Research Foundation was instrumental in providing the CIHR application and staff support in the Nova Scotia Health Research Foundation.

