**Competitive Capacity Grants
Funded Applicants: 2005-2006**

Community Research Alliance Grants

1. **Identifying the Service Needs of Persons with Intellectual Disabilities**

   **Deborah Norris
   Department of Family Studies and Gerontology
   Mount Saint Vincent University**

   Co-applicants: Cathy Crouse, Janice Keefe, Adele McSorley, Mount Saint Vincent University; Kathleen MacPherson, Christopher Murphy, Dalhousie University

   Community care sounds more personal – and, therefore, better – than institutional care for people with intellectual disabilities. But how well is it working? Now that Nova Scotia has joined in the cost-effective and well-intended shift to community-based care, are people receiving appropriate service? The right level of service? Are family caregivers getting the support they need? In this project, a broad-based alliance of university researchers, advocates, and consumers has come together to compile the information needed for future planning. Areas of focus include in-home support, respite care, and support for independent living.

2. **Community Partnership Approach to Addressing Prescription Drug Addiction in Cape Breton**

   **Jane Lewis
   Cape Breton University**

   Co-applicants: Stephen Kavanagh, John Harker, Joanne Gallivan, Cape Breton University; John Malcolm, Cape Breton District Health Authority; Edgar MacLeod, CBRM Police Department; Edward Davis, Cape Breton-Victoria Regional School Board

   The much-publicized problem of oxycodone addiction in the Cape Breton Regional Municipalty is not surprising. The area has all the hallmarks of high oxycodone abuse rates – relative isolation, high unemployment, low economic status, and many people with the pain-symptomatic disorders that are linked to jobs in fishing, mining and steelmaking. A Community Partnership on Prescription Drug Abuse has formed. It will take a multi-agency approach to working with individuals and communities – dealing with such issues as increased crime, health crises, and accidental deaths. The guiding principle? That local research is required to understand a local problem.

1. **Surveillance of Adverse Effects of COX-2 Inhibitors Using Administrative Data**

   Stephen Kisely
   Community Health and Epidemiology
   Dalhousie University

   Co-applicant: Leslie Anne Campbell, Dalhousie University and Capital Health

   Prescription drug use is growing rapidly, partly due to an aging population. But sometimes the cure is worse than the disease. This research project will investigate the effects of COX-2 inhibitors among Nova Scotians over 65. These anti-inflammatory drugs used for conditions such as arthritis were among the most widely prescribed for seniors until they were withdrawn from the market due to concerns about heart attack and stroke. The overall goal of the project is to develop a feasible and accurate means of drug surveillance using routine administrative data from the Population Health Research Unit. It will serve as a pilot for a broader program to monitor the adverse effects of other medications.

2. **Advancing a Method to Image Functional Neural Correlates of Visual Object Recognition from Static and Motion Cues**

   Patricia McMullen
   Department of Psychology
   Dalhousie University

   Co-applicants: Charles Colin, University of Ottawa, Gail Eskes, David Westwood, Dalhousie University

   This research project seeks to support the theory that the human brain has different pathways for recognizing moving objects and stationary objects. The team will develop the capacity to use cutting-edge brain-imaging technology to conduct research into the functional organization of the brain. This project is the first step in a new collaboration between scientists who are interested in basic visual cognitive neuroscience and those who are interested in rehabilitation. It will have implications for the treatment of impairments resulting from visual agnosia, multiple sclerosis, amblyopia and other brain disorders.

3. **Reversible Inhibition of Neurogenesis by the Inducible Apoptotic Death of Neural Progenitor Cells in a Transgenic Mouse**

   George Robertson
   Departments of Psychiatry and Pharmacology
   Dalhousie University

Co-applicants: Peter Liston, University of Ottawa, Derrick Rancourt, University of Calgary

This project represents hope for an aging population and has research implications for scientists around the world. The ultimate goal? A treatment that would halt the insidious processes responsible for neurodegenerative disorders, or would repair the resultant brain damage. The research team will test the growing evidence that neurogenesis – the growth and development of nerves – can play an important role in recovery from brain injury, learning and memory disorders, and in treatments for several mental illnesses. They will do so by developing a transgenic mouse in which neurogenesis can be induced and blocked, selectively, without causing brain inflammation.

4. **Classification of Neuromuscular Impairments Associated with Low Back Pain in the Older Adult**

   Cheryl Kozey,
   School of Physiotherapy
   Dalhousie University

   Co-applicants: Edwin Hanada, Kevin Deluzio, John Kozey, William Stanish, Dalhousie University

   This project will lead to a greater understanding of lower back pain (LBP) – a significant health problem in Nova Scotia and elsewhere, with serious economic and personal costs. The consequences of LBP in working-age adults have been well-documented. However, this study will focus on seniors, including those who fall into North America's fastest-growing age group: people over 85. Specifically, the program aims to improve diagnostic assessment tools of the stabilizing muscles of the trunk and to increase our understanding of therapeutic exercises used in the management of LBP.

5. **Targeting Nucleoside Anticancer Agent**

   Pollen Yeung
   College of Pharmacy
   Dalhousie University

   Co-applicant: Amyl Ghanem, Dept of Chemical Engineering, Dalhousie University

   Nova Scotia has one of Canada's highest rates of cancer – and the goal of this project is to benefit patients by improving the quality of treatment. Specifically, the research will focus on chemotherapy. The team will aim to improve anti-cancer pharmacotherapies by maximizing their effectiveness and minimizing the adverse effects that can be debilitating for many patients. The plan is to develop a novel strategic approach to target one of the prototypes of the nucleoside anti-cancer agents, using an *in vivo* rat model. The results will further our understanding of the pharmacokinetics of this class of therapeutic agent and their interactions with many pivotal bodily functions.

6. **Computerization and Modeling of Clinical Practice Guidelines for Clinical Decision Support and Best-Evidence Retrieval**

   Syed Sibte Raza Abidi
   Faculty of Computer Science
   Dalhousie University

   Co-applicants: Michael Shepherd, Dalhousie University, Eva Grunfeld, Cancer Care Nova Scotia

   The good news is that the majority of women with breast cancer are now diagnosed at an early stage and over 80 percent become long-term survivors. Follow-up care is traditionally provided at cancer clinics – thus putting a strain on much-needed specialist resources – while evidence indicates that follow-up by a family physician can be a safe alternative. The research team will computerize and translate a specific Clinical Practice Guideline (CPG) for breast-cancer follow-up and make it available to family physicians. Next, they will evaluate the clinical benefits of adherence to the CPG and assist in its successful adoption.