



DALHOUSIE UNIVERSITY

**STRATEGIC RESEARCH PLAN
FOR THE
CANADA FOUNDATION FOR INNOVATION
AND
CANADA RESEARCH CHAIRS PROGRAM**

**Revised January 2006;
Updated October 2008**

1. Introduction and Objectives

Dalhousie University and its affiliated teaching hospitals constitute the largest, comprehensive, research-intensive, academic organization in Atlantic Canada with eleven Faculties and eighty academic departments. Building on a strong undergraduate base, Dalhousie has internationally recognized programs in research and graduate and professional studies.

The “June 2007 President’s Strategic Focus” outlines a vision: *“Advancing provincial and regional development by offering a diverse student body of 17,000 (by 2010) an outstanding personal experience at a national university built around an excellent learning environment, acclaimed research strengths, broad program choices, and successful career preparation in cooperation with supportive external stakeholders.”*

Canada and the world are experiencing great social and economic change. This revolution, driven by new knowledge, technology and innovation, has led governments and industries to recognize the need for investing in knowledge to steer their organizations through future developments. Dalhousie’s objectives in research, training and innovation are responding to these changes in areas of importance to the institution and the region.

The objectives of this plan are:

- to maintain and build capacity for excellent research in areas of current strength or emerging strategic opportunities that are of importance to the region;
- to recruit outstanding scholars to Dalhousie;
- to enhance research networking and collaboration in the institution and region, as well as nationally and internationally;
- to provide an excellent training environment for highly qualified personnel;
- to achieve translation of research results for the benefit of society.

The plan has been developed to encompass research areas in which the University plans to build capacity in terms of recruitment of Canada Research Chairs and investment in infrastructure through the programs of the Canada Foundation for Innovation.

2. Research Planning and Priority Setting

Dalhousie encourages diverse strategies to enhance research programs and activities. These include the identification of strengths, the definition of priorities and the creation of strong interdisciplinary groups. Department, Faculty and University planning sessions have been used to refine research goals. The research plans that have evolved from these sessions have been important in reinforcing cooperative, collaborative and interdisciplinary approaches to research and education at Dalhousie. These processes have also fostered new partnerships with other regional, national, and international Universities, the affiliated teaching hospitals, governments and industry. This research plan has been reviewed by Faculty representatives and Deans, affiliated teaching hospitals, the Dalhousie Research Advisory Committee and approved by the University Senate and the President.

3. Major Themes for Research and Research Training

This plan identifies six strategic themes of research strength and emphasis. Health Studies and Ocean Studies remain as long-standing areas of special emphasis. Other important, developing themes are Materials Science, Information and Communication Technology, Energy, and Society and Culture. There are two major cross cutting themes throughout the University - Environmental Studies and High Performance Computing - that are important aspects in several of the major research themes.

3.1 Health Studies

Global health and wellness are increasingly prominent issues faced by governments. An aging population, increased concern for global pandemics, unprecedented medical and technical advances and greater emphasis on disease prevention all present research challenges. Advancements through research will benefit the physical and mental health and well-being of the world's citizens in direct and indirect ways. By answering moral, ethical and legal questions as well as health issues, progressive public policy can be affected for the benefit of all.

Health Studies encompasses the largest area of research at the University and affiliated teaching hospitals representing 60% of external research funding and the activities of over five hundred faculty members. Dalhousie is the major training centre in the Maritimes for life sciences and health professions research personnel. This area embraces the three Health Science Faculties of Medicine, Dentistry and Health Professions, with other relevant elements found in the Faculties of Architecture and Planning, Arts and Social Sciences, Computer Science, Engineering, Law and Science as well as close working relationships with the Capital Health, IWK Health Centre, Atlantic Health Sciences Corporation and Atlantic Provincial Departments of Health. The research undertaken involves extensive collaboration with National programs such as the Networks of Centres of Excellence, the Canadian Institute for Advanced Research, numerous network initiatives supported by the Federal granting agencies, three of the National Research Council's Institutes (Marine Biosciences, Biodiagnostics, Nutrisciences and Health), the Dalhousie Medical Research Foundation, the Nova Scotia Health Research Foundation, and the Nova Scotia life sciences industry.

Through an allocation of twenty-two Canada Research Chairs to this research theme (Table I), the University will continue to emphasize and build capacity in Health Studies in three main sub-themes which have extensive interaction and interdependence: a) genomics, genetics and biomolecular structure and function, b) clinical research and translation to care, and c) health, environment and society. They are further connected by three cross-cutting themes: informatics, bioethics, and health law.

3.1.1 Genomics, Genetics and Biomolecular Structure and Function

Dalhousie University has increased capacity substantially in **comparative and microbial genomics** through the Canada Research Chairs and other programs such as the Evolutionary

Biology Program supported by the Canadian Institute of Advanced Research and Genome Atlantic in collaboration with Genome Canada and the Atlantic Innovation Fund. Research initiatives will involve large scale sequencing projects in microbial genomics which are related to human health, aquaculture, forestry and agriculture, and biotechnology and environmental remediation. This area also has strong links with bioinformatics (Computer Science) that is necessary for the extraction of information from large biological databases. In this regard, the Faculty of Computer Science is developing expertise in handling and analysis of large databases through collaborative research initiatives and new faculty recruitment. The University is also building capacity in human **genetics** and gene identification by taking advantage of unique resources of the Atlantic region for the analysis of genetic defects, particularly those related to neuroscience and vision. Finally, the entire area of genomic and genetic research has important links with the interests of researchers in Bioethics and Health Law regarding the impact of such research on humans.

In **neuroscience** Dalhousie has major strengths in fundamental research concerning neuroplasticity, neuroregulatory control of behaviour and vision and auditory science as well as in the elucidation of genetic defects in neurological function and mental dysfunction. Recruitment of faculty members in neuroscience will ensure a close linkage of fundamental research with the development of the Brain Repair Centre which will develop the tools of functional magnetic resonance imaging, stem cell biology and nerve regeneration to explore brain and nerve function and repair. Dalhousie and the QEII Health Sciences Centre of Capital Health have major strengths in fetal tissue neural transplantation and in basic research in neural regeneration.

Cardiovascular and stroke research is widely developed in basic and clinical sciences related to biomolecular processes influencing atherogenesis, cell death related to ischemia, the physiology of heart function and the genesis of heart failure. New initiatives involve cardiovascular and stroke outcomes research as well as exercise-based cardiac rehabilitation.

Cancer research is developing very rapidly following a major provincial initiative to improve the entire cancer-care delivery system. Recent initiatives through endowed and Canada Research Chairs have increased expertise in fundamental cell biology processes related to development and treatment of cancer as well as research directed toward improved health systems and sociobehavioural aspects of cancer care and prevention, areas that are developing in close collaboration with hospitals and charitable foundations.

The University has considerable research strength in **infection, immunity and inflammation** and the mechanisms of host response in relation to tissue/organ transplantation, infectious diseases and cancer. In collaboration with the IWK Health Centre, and an industry-sponsored research chair, major new developments are underway in vaccine development and testing for a variety of infectious agents. Further development in this area will be linked with developments in comparative and microbial genomics, viral research, cancer biology and materials science and engineering.

Dalhousie is rapidly developing capacity in quantum pharmacology (molecular modeling) for the development of novel small molecules for treatment of neurological disorders and infectious diseases. There are strong interdisciplinary links with the **neuroscience**, **cancer** cell biology and infectious diseases with this initiative.

Dalhousie has created a new **School of Biomedical Engineering** (jointly in Engineering and Medicine with assistance from the Faculty of Dentistry) as well as graduate programs in this area. Various initiatives are in progress including a new Tissue Engineering Laboratory. This research has strong ties with the area of Materials Science.

3.1.2 Clinical Research and Translation to Care

Major initiatives in this sub-theme involve **clinical trials**, **translational research**, **health outcomes** and **health services**. Clinical research is engaged across the full life-course from the unborn fetus to the frail, elderly patient. Nova Scotia has one of the highest incidence of chronic disease in Canada. The **clinical and translational research** programs at Dalhousie and its two Halifax affiliated teaching hospitals, (QEII and IWK) focus on the development and implementation of patient-centred, evidence-based medicine. Translational research at these teaching hospitals is focused in several areas, particularly visual sciences, hearing and balance, vaccines, autism, **pain** and transplantation. These areas have multi-disciplinary research groups comprising clinicians and biomedical scientists, working towards the development of better prevention and treatment, innovative medical technologies and improved models of care. Clinical research in rehabilitation medicine, mental health, pediatrics, obstetrics, drug efficacy, and the care of the frail, elderly patient will directly transform the clinical care of patients.

Work continues in the development of **health outcomes** research as an integrated initiative across Atlantic Canada through the development of a network that will focus on evaluation of outcomes of health care interventions and health services delivery. Using evaluation of clinical outcomes, clinical research programs such as transplantation and evidence-based prescribing will focus on improved interventions and clinical best practices. Emphasis will be placed on the integration of research activities with the collection and analysis of health information by policy makers, and on catalyzing development of health informatics to permit the effective evaluation of outcomes.

Dalhousie has several major research initiatives, and acts as the coordinating centre of several networks, concerning the control and treatment of chronic intractable **pain** from accidents, cancer and degenerative diseases and the diagnosis and management of **pain** in infants and children.

Health Services research focuses on delivery of care related to geography, special populations, limited resources and special needs. For example, Cancer Care Nova Scotia represents a developing strength in which there are research programs to evaluate the effectiveness of the new provincial approach to cancer care and a patient navigation program that is gaining international attention. Other initiatives are under development concerning effective drug use policies.

3.1.3 Health, Environment and Society

Social, cultural and environmental determinants of health, population health and health policy are areas of strength and emphasis at Dalhousie, the affiliated teaching hospitals and the Provincial Department of Health. The Population Health Research Unit houses many of the provincial administrative health databases while the Perinatal Epidemiology Research Unit at the IWK Health Centre has developed an extensive database on child births in Nova Scotia. Dalhousie has also developed the Atlantic Regional Data Centre to hold Statistics Canada data. These databases have facilitated numerous initiatives and many links across Faculties for the study of social, cultural and environmental determinants of health. Dalhousie has established programs for the protection of health through improvements in food safety in the Faculty of Engineering and drinking water through the School for Resource and Environmental Studies, and the Centre for Water Resources Studies.

In **sector health**, Dalhousie has established strengths in the areas of health of children, youths, women, and the aged or frail patient. There are many successful joint initiatives between Dalhousie's Faculties of Arts and Social Sciences, Computer Science, Health Professions, Law and Medicine and the affiliated teaching hospitals.

Health promotion at Dalhousie has been successfully fostered through the Atlantic Health Promotion Research Centre which supports interdisciplinary approaches to health research that extend from the academic and health care institutions to the community. Current projects include improving rural health outcomes in stroke and cardiovascular disease. Health education through the development of web-based patient programs is a major initiative of several health care programs such as cancer care and child care.

3.1.4 Interdisciplinary Links in Health Studies

Dalhousie has identified **informatics, bioethics and health law** as three cross-cutting themes for development. The place of information and information technology in health care delivery is of great importance, and several initiatives are underway involving the health-related Faculties, the Faculties of Computer Science and Engineering and the private sector in relation to enhanced management and provision of health information in rural areas. Research and education in the critical analysis of moral issues in health are central to the mission of the Department of Bioethics and the Department of Philosophy. The Health Law Institute, supported by the Faculties of Law, Medicine and Dentistry, is committed to the advancement of health law and policy and to the improvement of health care practice and delivery.

3.2 Ocean Studies

Ocean Studies encompasses ocean-related disciplines of engineering, science, social science, law and public policy, as well as management and international development activities. It involves more than one hundred researchers in six faculties, and a wide array of disciplines, including Biology, Chemistry, Earth Sciences, Engineering, Food Science (Canadian Institute of Fisheries

Technology), History, Law, Marine Affairs, Medicine, Oceanography, Physics, Political Science, Resource and Environmental Studies, and Sociology and Social Anthropology.

A major objective of Ocean Studies is linking the various elements of the University's ocean community with the local community of marine experts in their various Federal and Provincial departments and agencies. Some areas of Ocean Studies serve as excellent training programs for management of ocean resources in developing countries. Three major sub-themes have been identified: ocean environmental processes; marine resource use and conservation; and ocean management, health and policy. Dalhousie has allocated ten Canada Research Chairs to enhance research capacity in this research theme (Table I).

3.2.1 Ocean Environmental Processes

In the area of **marine observation and prediction**, the Centre for Marine Environmental Prediction (CMEP) is emerging as a major initiative involving collaboration with government departments and the private sector. CMEP will enhance Dalhousie's strong research program on the real-time observation and prediction of the marine environment and will promote the training of highly qualified personnel in this rapidly advancing and important field. This program is continuing to build capacity for research in marine ecology and biogeochemistry through new recruitments to the University and expansion of international collaborations.

Research in **atmosphere processes and climate** at Dalhousie is strongly supported by granting agencies and government departments. Particular areas of emphasis are aerosol-cloud interactions, climate, and air quality, disciplines that are of great national and international importance. The University is increasing its capacity for remote sensing of the Earth's and other planetary atmospheres from ground-based and space-based platforms through new recruitments. There is also considerable potential for links of this theme with the research undertaken by CMEP.

The **earth system evolution** area at Dalhousie is strongly supported by the Canadian Institute for Advanced Research. There are local strengths in geodynamics, tectonics, and earth surface processes. This area of research has important links with the Energy theme particularly in regard to assessment of offshore geological structures in Atlantic Canada for petroleum resources.

Environmental statistics is a growing research activity and capability at Dalhousie that will contribute to, and benefit from, new initiatives such as CMEP. Data assimilation and assessment of the impacts of predicted marine environmental change are two areas of strength and potential for future growth. This area is closely linked to university initiatives to improve capacity and availability of high performance computing resources at the University and through networks such as ACEnet.

3.2.2 Marine Resource Use and Conservation

In the area of **endangered species and biodiversity**, a virtual Centre for Marine Biodiversity (CMB) is being created involving collaboration between Dalhousie, the Department of Fisheries and Oceans and the private sector. The CMB will enhance our scientific capacity and knowledge and training of highly qualified personnel in support of the protection of marine biodiversity in the Northwest Atlantic, and provide a focus for structuring independent research efforts toward an overall synthesis of information for integrated ocean management. Included in the CMB initiative are issues related to endangered species with associated challenges to identification, protection and recovery, requiring interdisciplinary strengths in the areas of Genetics, Physical Oceanography, Ecology, Statistics and Biology.

Research in **ocean renewable resources** at Dalhousie is strongly supported by the Department of Fisheries and Oceans and Environment Canada. In particular, research into ecosystem effects of fishing and interactions between aquaculture and wild stocks complement ongoing research activities by the federal departments and are important to, for example, the CMB mandate. The University is continuing to build capacity in this area through the use of Canada Research Chairs and links to international projects such as the Census of Marine Life, the History of Marine Animal Populations, and the development of plans for expanded capacity, through international collaboration, to monitor habitat and migratory patterns of marine species.

Biotechnology, genetics and genomics research at Dalhousie is broadly based in the Faculties of Science and Medicine, through the Resource & Conservation Genetics and Biotechnology Group (RCGB) and the Genomics and Evolutionary Biology Research Program, and is supported by the Federal Department of Fisheries and Oceans, Environment Canada, the National Granting Agencies, CIAR, and the National Research Council (NRC). The Marine Gene Probe Laboratory, a constituent of the RCGB, has established a strong track record in the area of fisheries resource and conservation genetics with strengths in the genetics of population structuring, stock mixing and forensics, informed aquaculture development through pedigree analyses, live gene-banking for endangered populations, and quantifying genetic biodiversity from the level of genes through to ecosystems. Genetics and new methods in biotechnology have important implications for the fisheries industry and link closely to questions related to endangered species, biodiversity and renewable resources.

3.2.3 Environmental Management, Health and Society

In **ocean law and governance**, Dalhousie has the world-renowned Marine and Environmental Law Programme, long established as a Centre of Excellence in Law of the Sea issues. Future initiatives include research in various interdisciplinary fields crucial for ensuring the "rule of law" in oceans governance: for example, implementing the principles of sustainable development, empowering coastal communities, and strengthening marine environmental protection and maritime safety. As part of the development of this research area, the Faculty of Law has created the Marine and Environmental Law and Policy Institute.

Coastal community health and **public policy** research at Dalhousie is diverse and wide-ranging. It includes occupational health and safety issues of workers and communities, safety of marine vessels, and increasingly, projects rooted in the principle of integrated coastal zone management as an enterprise that connects the sciences with the social sciences, engineering, architecture and planning.

With regard to management of the fragile ocean eco-system, Dalhousie has research strengths in assessment of marine transportation policy, and in development of methods of **risk assessment** in such areas as the aquaculture of introduced species or the selection of habitat for conservation. **Adaptation strategies** include processing information for the management of the impact of events such as oil spills or disease outbreaks among fish species.

3.3 Materials Science

This rapidly growing multi-disciplinary and inter-faculty initiative includes highly respected scientists in the Faculties of Science, Engineering, Medicine, Dentistry, and Architecture and Planning. Their work involves a range of new and innovative materials that are fostering many collaborative projects with government agencies and the private sector. Dalhousie has chosen to focus on the sub-themes of structures and properties, and structure and performance, which are linked through the Institute for Research in Materials. Dalhousie has deployed seven chairs in Materials Science (Table I).

Investigation of the relationships between **structure and properties** of materials at Dalhousie has been greatly facilitated by the CFI-funded project - Facilities for Materials Characterization. In particular, there is an important opportunity to bring strength in solid-state **NMR of materials**, and to focus on studies of **nanomaterials, high temperature superconductors, ceramics**, and use of organic polymeric materials for electronics and solar cells, as well as in batteries and fuel cells. The use of **combinatorial synthetic** approaches is central in this work.

In the theme of **structure and performance of materials** Dalhousie has strengths and opportunities in the areas of **chemical power sources, prevention of degradation of materials, tissue engineering**, and **intelligent structures and materials**. Thus, for example, research on chemical power sources is already established at a world-class level, while the studies of degradation of materials have special links with the harsh Atlantic marine environment. In addition to the development of new materials for the electronic and construction industry, Dalhousie is concerned with the innovative and sustainable assembly of new and existing materials to achieve high performance buildings. The Faculties of Architecture and Planning, Engineering and Science are involved in this work. Tissue engineering, under development in the School of Biomedical Engineering, has important connections with Health Studies and with the theme of structure and properties.

Researchers in the Materials Science theme have extensive collaboration with industry (3M, Medtronic, General Dynamics and oil and gas industry), government agencies (Defense Research Development Canada, Networks of Centres of Excellence), and foundations (CIAR, Dunn, Whitaker). Finally, the areas of structure-property relationships and of structure-performance interact with several other areas of Dalhousie research priorities, notably, Health Studies, Energy, and Information and Communication Technology.

3.4 Information and Communication Technology (ICT)

The burgeoning diversity of information and communication technology and its applications makes ICT a fundamental research theme in the modern research environment. Dalhousie has deployed six Canada Research Chairs to support research in ICT (Table I).

Dalhousie's Faculty of Computer Science has adopted a philosophy that emphasizes the 'enabling' function of ICT, and has chosen to locate its research mission in the context of interactions with other disciplines to address problems of wide interest. Of necessity, these research topics are multi-disciplinary in nature, require multi-disciplinary teams and partnerships, and address complex environments that require a deep understanding and, ultimately, the integration of information, computation, and human activity. Considerable emphasis occurs on information processing, information systems, data analysis, networking and wireless technology, privacy and security and human-computer interaction.

E-Health (electronic health) is emerging as a multi-disciplinary area that addresses how to improve the productivity of patient health care. It is a central focus of Dalhousie's new Global Information Networking Institute (GINI) and current research areas include medical outcomes, quality of service, privacy and patient records, and data compression. The Faculty of Computer Science is building capacity for research in networking since E-health, **electronic commerce**, and other areas such as tele-learning and tele-medicine, all rely on **networking**.

Dalhousie has created the first Canadian interdisciplinary Master's degree in **electronic commerce**. The program brings together the disciplines of computer science, business and law, and provides a fertile environment for the pursuit of collaborative and interdisciplinary research. The rich array of research topics includes data security and privacy, public key infrastructure, on-line consumer protection, intellectual property protection, regulatory and jurisdictional issues, dispute resolution mechanisms, web concepts and applications for business, web architectures and networking.

In **management informatics**, Dalhousie's School of Information Management and the Centre for Management Informatics Research undertake to seek solutions for complex problems in organizational management that effectively engage people and ICT. A Killam Chair supports this theme.

In communications technology in the Faculty of Engineering, the focus of the research is on internetworking, digital signal processing, wireless technology, VLSI design and digital

communications, photonics and fiber optics. Two of these areas are associated with National Centres of Excellence. A Killam Chair has been awarded to develop research in wireless technology.

3.5 Energy

Following an extensive period of discussion and consultation with the Dalhousie community, a broad research theme of Energy has evolved from a narrower focus of oil and gas research. It is clear that the development of sustainable supplies of energy as well as the conservation of energy and the impacts of energy use on the environment are major areas of research for the future. At Dalhousie, the energy research theme involves four emphases: traditional petroleum resources of **coal, oil and gas** with a focus on understanding the geophysical structures and hydrocarbon reservoirs of the Atlantic offshore; **energy transportation** with emphasis on design and assessment of pipelines; **alternative and renewable energy sources** with an emphasis on coal bed methane and power generation from biomass conversion or wind power; and **climate change and the environment** with emphasis on the effects of offshore resource development and carbon dioxide sequestration in underground coal beds or salt structures. These energy sub-themes are closely linked with more general themes at the University such as: law, public policy and society, risk management, data mining, health and safety, materials science, environmental studies and high performance computing. Research related to the energy theme involves collaboration with other Atlantic universities, Petroleum Research Atlantic Canada, the Geological Survey of Canada and NRCan, the Provincial Department of Energy, Nova Scotia Power Inc, and the petroleum industry and associated companies. Dalhousie has allocated two Canada Research Chairs in the Oil and Gas sub-theme of Energy (Table I).

3.6 Society and Culture

Dalhousie's Society and Culture research area encompasses two overlapping clusters – **societies** viewed from a local, national and global context, and **cultures** – their representations and presentations. These clusters, with a flexibility and breadth unequalled in Eastern Canada, are uniquely equipped to analyze social and cultural change. Employing a wide range of disciplinary approaches, Dalhousie research strength focuses, geographically but not exclusively, on the Atlantic Rim – Canada, United States, Central and South America, Africa and Europe. By expanding our understanding of social and cultural issues within Canada and around the globe, our research provides insights into how cultures deal with technological changes, environmental stress, and struggles among different cultures. The results of this research help in turn to create informed citizens and policy makers, as well as to shape the direction of scientific inquiry. Our strengths and commitments to these areas of research are reflected in institutes and centres such as the Centre for Foreign Policy Studies, the Atlantic Research Data Centre, and in our participation in the Atlantic Metropolis project.

Dalhousie has deployed three Canada Research Chairs with a focus on **European studies** (Table I). These Chairs will act as a catalyst for the Faculty of Arts and Social Sciences to develop an European Studies program and build upon the University's research linkages with the European

Union, NATO, the Nordic Council and the UN. They will also stimulate synergies between two multi-disciplinary areas of strength in the Faculty: Arts and Culture, and International Studies.

3.7 Cross-Cutting Themes

Dalhousie has two important cross cutting themes that interconnect Faculties and major research themes: **environmental studies** and **high performance computing**.

The interaction of humans with the environment has become an increasing concern to the global community. Considerable attention is focused on the massive consumption of carbon-based energy sources, the accumulation of carbon dioxide in the atmosphere, the reduction in the quality of the environment as a result of various types of pollution, the destruction of wildlife habitats and the need to achieve sustainable growth. **Environmental studies** of alterations to the environment, remediation of environmental damage and the effects of a changed environment is occurring in every Faculty, encompassing the ocean environment, air and water quality, health-related issues, management of risk of environmental damage, and legal and social issues associated with environmental changes. Although environmental issues are identified in the majority of the six research themes, the University plans to focus on improved linkages of the various communities and increased interdisciplinary research and education programs concerning the environment. For example, research undertaken by the Eco-Efficiency Centre demonstrates how improved environmental practices can have significant positive financial impacts on organizations, especially businesses.

High performance computing has become an essential component in many research projects that rely on large scale computing power and capacity for studies involving the analysis of massive data sets, in development and use of modeling approaches to many research questions and in the use of internet communication to achieve research objectives. High performance computing is a fundamental requirement in many of the research themes outlined in the Dalhousie research plan. It is crucial that the University builds capacity in high performance computing through partnering with the national high performance computing networks, and in particular with ACEnet, the Atlantic network. This initiative will be achieved through support of ACEnet's activities, through linking with ACEnet and through future initiatives to host ACEnet-supported infrastructure at Dalhousie. A Killam Chair in Computational Science supports this theme.

4. Gender Representation in Deployment of Canada Research Chairs

Dalhousie has addressed, and continues to address, the issue of gender representation in relation to its Canada Research Chairs nominations through three principal strategies:

1. In the allocation of Chairs, we have considered and continue to consider the likely representation of women and men in the filling of the chairs.
2. We have rigorously observed the University's policies on academic recruitment and employment equity.

3. We will split three Tier I Chairs into six Tier II Chairs, since this increase in the number of junior chairs will increase the likelihood of recruiting women.

We have set a minimum objective of 24% of Chairs allocated to Dalhousie being filled by women.

5. Assessment of Success in Meeting the Objectives of the Strategic Research Plan

Dalhousie's success in achieving of the objectives of the research plan will be assessed by:

- the quality and number of publications by faculty
- the quality of faculty recruited to Dalhousie
- the level of research funding through grants and contracts
- the quality and number of graduate students and postdoctoral fellows
- the level of involvement of faculty in national and international symposia
- the number of external prizes and awards received by faculty
- the extent of industry and community collaboration with Dalhousie
- the number of invention disclosures filed and other mechanisms of research translation

Table I
Allocation of Canada Research Chairs ¹

THEMES		CHAIRS			FUNDING SOURCE		
		Tier I	Tier II	Total	CIHR	NSERC	SSHRC
Health	1 Genomics, Genetics and Biomolecular Structure and Function	5	7	12	10	2	
	2 Clinical Research & Translation to Care	1	3	4	3		1
	3 Health, Environment and Society	1	2	3	2	1	
	4 Interdisciplinary Links	1	2	3	2		1
Oceans	1 Environmental Processes	3	3	6		6	
	2 Marine Resources and Conservation		3	3		3	
	3 Environmental Mgt, Health and Society	1		1			1
Materials Science		3	4	7		7	
Information and Communication Technology		2	4	6		6	
Energy (Oil and Gas)		1	1	2		1	1
Society & Culture (European Studies)		1	2	3			3
TOTALS²		19	31	50	17	26	7

¹ Three NSERC Tier I Chairs have been split into six Tier II Chairs.

² Twenty-one Canada Research Chairs have been approved for outstanding researchers at Dalhousie while twenty-nine Chairs have been approved for external candidates.