

McGill University

STRATEGIC RESEARCH PLAN FOR THE CRC/CFI PROGRAMS

SUMMARY

McGill University has defined its mission as:

“...the advancement of learning through teaching, scholarship, and service to society: by offering to outstanding undergraduate and graduate students the best education available; by carrying out scholarly activities judged to be excellent when measured against the highest international standards; and by providing service to society in those ways for which we are well-suited by virtue of our academic strengths”.

The ways through which knowledge is developed, acquired and transmitted have shifted considerably in recent years and will continue to shift in the years ahead, demanding both unprecedented versatility and increasing focus for research intensive institutions such as McGill University.

McGill has undertaken a number of planning exercises, the most recent led to the document entitled “Tradition and Innovation: An International University in a City of Knowledge” (available online at <http://www.mcgill.ca/publications>). Given the broad range of federal and provincial initiatives as well as our own University five-year plan for capital investment in new buildings and facilities for research and teaching, that report and its recommendations are in a process of continuous evolution, especially as they relate to plans for academic renewal at McGill.

The summary of the strategic research plan reported herein refers to the Canada Research Chairs (CRC) and the Canadian Foundation for Innovation programs (CFI) in support of research in the university context. It is, therefore, only a part of McGill’s global academic renewal plan. The Senate Steering Committee, the Executive Committee of the Board of Governors and the Deans have reviewed the strategic research plan described here.

Major Objectives

More than half of McGill’s 1200 faculty members are expected to retire within the next 10 years. We will be required to make 100 new appointments each year for the next ten years to meet our teaching and research obligations. Given these demographics and the above-mentioned changes in the academic, research, and fiscal environments, we are being afforded a unique opportunity to revisit and renew our institutional priorities. Our emerging academic renewal plan, fashioned to assist in the intense recruitment activity, will guarantee the (a) continuation of McGill’s core disciplines in their most updated and rigorous form; (b) assurance of excellence in research and teaching at both the graduate and undergraduate levels; (c) adoption of innovative approaches to research and teaching; (d) provision of state-of-the-art professional training; (e) shifting emphasis to important emerging and integrative areas.

Recruitment Management

McGill University will use the Canada Research Chairs Program (CRCP) exclusively for external recruitment. In order to increase the impact of the CRCP, the University will also establish from its own resources a new internal program for our own distinguished researchers who already hold faculty positions at McGill. These will be called James McGill Professors and the William Dawson Scholars. At the senior and junior levels respectively, these awards will match competitively the CRCP in our priority areas of intellectual interest. The McGill-Dawson program will enable us to retain important individuals while at the same time allowing us to compensate for some of the imbalances in strategic staff development that the CRCP might induce.

Major Research Thrusts

The major thrusts for research listed here relate to the planning at McGill in connection with the Canada Foundation for Innovation (CFI) and CRC programs. Since the CRCP is tied with those disciplines (and their relative priority in funding) supported by CIHR, NSERC and SSHRC, these thrusts will not allow the University to address all its research priorities. Efforts will nevertheless be made to have as many units as possible participate and be involved in the CRC and CFI programs.

Given these parameters, our strategic research plans can be grouped into four broad categories: Foundation Disciplines, Health and Life Sciences, Technology Areas, and Multidisciplinary Domains.

i. Foundation Disciplines

The disciplines (humanities, social sciences, and natural sciences) typically associated with a liberal arts and science education form the backbone of all major research universities. At McGill, our strategic foci in this area are as follows: quantitative methods in the social sciences, Quebec-Canada studies, comparative and historical studies in society and culture, mathematics, and music. These areas also overlap with professional schools such as law and medicine. McGill's development plan calls for new buildings and facilities for Music and Arts, and we have already constructed a new law library.

ii. Health and Life Sciences

This is an area in which McGill has traditionally been very strong, and within it, we must pay special attention to both the core sciences and several clinical areas. In the core science areas McGill will concentrate its strategic efforts in four fields: (i) structural biology, (ii) integrative genomics, (iii) cellular information systems, and (iv) neurosciences. In the clinical areas our emphasis will be on (i) medical genomics, (ii) cognitive and behavioural neurosciences, (iii) clinical research and health care delivery, and (iv) multi-modality and minimally invasive surgery.

iii. Technological Areas

McGill University has a strong international reputation in a variety of technology fields, but for purposes of our strategic academic renewal plans tied to the CFI and CRC programs, we will focus primarily on five areas: (i) information sciences and technologies, (ii) advanced materials research, (iii) bio-technologies, (iv) aerospace engineering and aerodynamics, and (v) agriculture, food and nutrition.

iv. Multidisciplinary Domains

More and more, the interesting new questions for research are located as between the boundaries of the traditional disciplines. At McGill, our strategic research focus will be on six multidisciplinary domains: (i) language acquisition, (ii) bio-informatics, (iii) pain studies, (iv) ethics, (v) environmental research, (vi) social aspects of health.

Given the realities of the increasingly competitive market for outstanding knowledge workers, we do not believe it is appropriate to decide in advance how many appointments at either the junior or senior level will be made in any particular sub-domain. With the context of the CRC program, however, it is our intention to allocate appointments across the four major domains in the following manner: 40 % Health and Life Sciences and 20% to each of the major areas of research focus (Foundation Disciplines, Technology Areas, Multidisciplinary domains).

Inter-institutional collaboration

McGill expects that CRC appointments will – as is the expectation for all McGill faculty – actively seek out collaborators in their respective domains both inside and outside of our own University - within Canada and abroad where appropriate. As the CRC program develops, we anticipate that “collaborative appointments” might evolve, after discussion and consideration, so that McGill University might coordinate its choices with those planned in other institutions.

Performance Evaluation

Our internal accountability processes, including annual reports and cyclical reviews, have over the past several decades allowed us to monitor our performance. Traditional indicators such as peer reviewed publications, the award of competitive research grants from provincial and federal councils, and from international agencies, and the extent to which the research produced at McGill is cited widely will continue to play a significant role in our performance evaluation. We plan to introduce new components to our internal processes to allow us to monitor the comparative effectiveness of our CRC and our own internal McGill-Dawson allocations towards our overall objectives.