



AFMC

The Association of Faculties of Medicine of Canada
L'Association des facultés de médecine du Canada

Mobilizing Science and Technology to Canada's Advantage

**A Response by the Association of Faculties of Medicine
of Canada**

The Context

In November 2006, Canada's federal government released its economic plan - *Advantage Canada*. The plan was touted as one which would establish Canada's position as a global economic leader, and was based on the premise that Canada already has a series of strengths—"the drive and ingenuity of our people, the relative strength of our fiscal position, and a strong research base"; strengths that could be further leveraged to our national advantage. More specifically, the document asserted that Canada needs to do more to turn our ideas into practical innovations that improve our economic competitiveness and help to solve pressing problems in social areas such as the environment and health.

In May of 2007, the government released its science and technology (S&T) strategy—*Mobilizing Science and Technology to Canada's Advantage*. The strategy sets out a comprehensive, multi-year science and technology agenda.

AFMC's position

The association of Faculties of Medicine of Canada (AFMC) is very supportive of the need for a national science and technology strategy to help Canada set national priorities and to ensure a national competitive advantage. We believe that as we develop and implement our national strategy, particularly one which directs resources to priority areas, there is a need for careful deliberation in order to maximize the impact of our vision and minimize any unintended negative consequences.

The need for balance

- Canada must invest in the entire spectrum of health research. While biomedical and clinical research is vital, health services research and broader social science research as it relates to health is also critical for the health of the nation. Innovations in health services delivery, for example, can save lives as well as money.
- A balance must be struck between the funding of basic and applied research, both of which are essential in order to achieve the government's goals. While the latter is most obviously tied to the commercialization agenda, it cannot be forgotten that great discoveries and innovations also stem from investigator-driven, basic research. It is essential that as we increase the targeted nature of our research funding enterprise that we do not do so at our own peril.
- Priority research areas identified in any focused strategy must take into consideration both current and emerging research areas that are on, or just below, the horizon. The latter is particularly important to recruit and retain the best and the brightest researchers – those most likely to be conducting innovative, groundbreaking research with enormous potential for return.

- Canada must continue to make investments in science and technology that are balanced between funding for researchers, direct and indirect costs of the research they perform, operating grants to support infrastructure purchased through research grants, and research networks. Ensuring the right balance, derived through consultation with a broad cross-section of the Canadian research community and considering international comparators, will enhance research opportunities for Canadian scientists and allow them to stay in Canada while remaining at the leading edge of their fields.

Efficiency

- Canada needs to continue building efficiencies into its research granting processes. Well-integrated and aligned programs across the granting councils will lead to an efficient grant application system that recognizes that research often crosses disciplines.
- In order to maximize efficiencies to Canada's research granting processes, researchers need to be made aware of any revised grant application procedures and any newly integrated funding systems in a timely fashion. Researchers may well need to be given a period of time to adjust their work to new granting processes; this will be particularly important in order to ensure the continued excellence of submissions.

Evidence-based ROI assessments

- Canada must continually assess the returns on our considerable investments in science and technology. We believe that any assessment of these returns must be evidence-based, employing useful, relevant, and equitable metrics and indicators that take into account the time frame for research impact to be realized. Research has both short-term and long-term effects and as such, much of science builds on findings from the past. Impacts cannot be measured effectively using short timeframes; the impacts of research must be measured over decades rather than over shorter periods of time.
- Canada spends a substantial sum of money every year on initiatives and programming in the name of 'knowledge transfer' or "knowledge translation" (KT). These investments are being made despite a virtual absence of a coherent national conceptual framework for KT or significant evaluation criteria to measure its potential impacts. While AFMC believes that knowledge transfer is an important area of activity for Canada, we must develop a conceptual framework and logic model to assess the value we receive as a nation for these expenditures.

Engaging the public

- The Canadian public must be educated about the importance of science and technology investments to both Canada and the global community. This public education must include information about the role of universities and other institutions of higher education as places of research as well as education.

Attracting Students

Canada must do a better job in encouraging students to study science and engineering, particularly at the post-graduate level. Financial incentives and modifications to the Canada Student Loans Program are needed in addition to the proposed enhancements to the Canada Graduate Scholarships program. Support should also be enhanced for those students pursuing simultaneous training in research and business.

Private sector engagement

- AFMC is supportive of an increased role for the private sector in Canada's research enterprise. As the government develops new programs and strategies to achieve this, such as the proposed changes to the NCE program, transparency and effective communication will be essential to reassuring the research community. The processes by which the private sector will identify and lead new research initiatives must be developed in consultation with current research leaders and be made clear to everyone at the point of implementation. In addition, the relative level of influence of the private-sector advisory board on the implementation of the business-driven funding initiatives by the granting agencies must be clarified.
- AFMC supports the inclusion of business and community representatives on the granting councils' governing bodies. In order to ensure the protection of intellectual property, existing federal policies must be reviewed to ensure that they don't impede S&T collaborations and technology transfer. There is also a need to ensure that intellectual property policies are congruent between researchers' institutions, to further support collaborative research. In addition, the rules and guidelines which would be applied to ensure IP protection must be transparent and clear to all parties involved.

About AFMC

The Association of Faculties of Medicine of Canada (AFMC) represents the country's 17 faculties of medicine and is the national voice for academic medicine. Our organization was founded in 1943. It functions to support individually and collectively Canada's medical schools through promotion of medical education, research, and clinical care.

The strategic directions for AFMC are:

- (1) To be a leading advocate and an expert voice on issues relating to health education, health research and clinical care
- (2) To respond to changing societal needs with innovative educational programs
- (3) To provide leadership in the development of a health human resource plan
- (4) To define and advocate for appropriate funding to achieve the education and research missions of the Faculties of Medicine
- (5) To enable and sustain academic careers for health and biomedical researchers, through capacity building, education and funding
- (6) To provide leadership in enhancing our accreditation programs and in developing a world class medical education conference

Currently our schools enroll just over 2450 first-year medical students annually and supervise the postgraduate education of 8300 residents funded through Ministries of Health and an additional 2800 residents and fellows funded from non-Ministry sources. Over 9,000 graduate students (masters, PhDs) are enrolled in medical faculties. Medical schools attract funding that generally exceeds 50% of the total research revenues of their parent universities. In 2004/05, CIHR funding to faculty members in our 17 faculties totaled \$528,874,000 and total research funding was \$2,377,300,000.00.

The AFMC contributes as to the improvement of medical education in Canada in a number of other ways. With our partner, the Canadian Medical Association, we accredit programs leading to the MD degree, a process done conjointly with the Liaison Committee on Medical Education of the United States of America, a unique international collaborative effort. The AFMC, with a number of partners, also accredits offices of continuing medical education located in our faculties across the country. The AFMC plays an active role in the accreditation of programs leading to certification in family medicine and in the more than 60 specialties sponsored by the Royal College of Physicians and Surgeons of Canada. The AFMC is an active partner in the Canadian Residency Matching Service (CaRMS). The AFMC directs the Canadian Post-MD Education Registry (CAPER), a tracking system that allows us to predict entry into practice of our residents and fellows.

Faculties of medicine are unique in that their clinical faculty members engage in medical practice as an intrinsic part of their university appointment. In so doing they provide most of the specialty care in tertiary healthcare centres in Canada as well as contributing substantially to primary care. As of 2005/06 there were nearly 11,000 full-time and 19,000 part-time faculty in our medical schools. This is an important resource that needs ongoing enhancement as medical schools increase their enrollment. Medical education is now carried out in a widely dispersed and distributed system that includes physicians' offices, community health centres and hospitals. As we seek to train more physicians, this trend toward decentralization will almost certainly continue. We estimate that to keep our physician resources at its current level and meet some of the expanding need, we should be admitting approximately 3000 first-year students annually and maintaining a significant number of IMGs in our system.

2004 saw the establishment of the first new medical school in Canada in some 30 years organized uniquely by two sponsoring universities, Laurentian in Sudbury and Lakehead in Thunder Bay. As we look to increasing enrollment, it is likely that Canada may well require the establishment of additional new medical schools as well as expanding established schools.

For more information , please contact:

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