

# IBR

*June 2004*

## Fourth International Board of Review

A review of the operation of  
the Alberta Heritage Foundation  
for Medical Research  
for the period 1998-2004



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the Alberta Heritage Foundation  
for Medical Research  
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*Trustees during  
4th International Board of Review  
June, 2004*

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**Ralph Young (from 2004)**  
Edmonton

**President and CEO of AHFMR until July, 2004**  
Matthew W. Spence, MD, PhD

**President and CEO of AHFMR as of July, 2004**  
Kevin Keough, PhD

Alberta Heritage Foundation  
for Medical Research  
Suite 1500,  
10104 - 103 Avenue  
Edmonton, Alberta T5J 4A7

Phone: (780) 423-5727

Fax: (780) 429-3509

E-Mail: [ahfmrinfo@ahfmr.ab.ca](mailto:ahfmrinfo@ahfmr.ab.ca)

Internet: [www.ahfmr.ab.ca](http://www.ahfmr.ab.ca)



**AHFMR**

ALBERTA HERITAGE FOUNDATION  
FOR MEDICAL RESEARCH

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# Terms of Reference of the International Board of Review (IBR)

**The Terms of Reference of the Fourth IBR, approved by the Trustees of the Alberta Heritage Foundation for Medical Research (AHFMR), are as follows:**

1. Review the Foundation's programs advised by the eight goals of the Foundation, which in turn support the objects of the Foundation — to establish and support a balanced long-term program of medical (health) research in Alberta directed to the discovery of new knowledge, and the application of that knowledge to improve health and the quality of health services in Alberta.
2. During its review, the Board should consider and provide advice on all matters with respect to the programs of the Foundation, and particularly:
  - > the development and maintenance of a balanced, responsive and appropriate spectrum of support for research from the basic biological through to health services and population health research,
  - > the capacity for producing and using health research throughout the Alberta health system through selective support of various elements of a research-in-practice cycle,
  - > the application of health research through technology commercialization,
  - > a perspective on the relative roles of the Foundation, the universities, the regional health authorities, the Alberta government, national and international agencies, and the private sector in the promotion and maintenance of health research,
  - > the Foundation's activities and priorities in relation to comparable national and international organizations,

- > the challenges and opportunities offered through the Health Research Collaboration with Alberta Health and Wellness, and the nature and extent of their realization, and
  - > the development and implementation of output and outcome measures to evaluate the impact of the Foundation's investment in health research.
- 3. Provide a report to the Trustees of the Foundation:**
- > commenting on the impact and effectiveness of the present programs and activities in achieving the goals and objects of the Foundation, and
  - > advising on the emerging opportunities in health research in the next decade and on modifications to current programs, and/or new initiatives and their application to improved health that could help realize globally recognized leadership in health research in Alberta. ■

# AHFMR General Information

## 1. Act

The Foundation was established by the Government of the Province of Alberta through the Alberta Heritage Foundation for Medical Research Act (Chapter A-21), Revised Statutes of Alberta, 2000. The Act establishes a Corporation called the Alberta Heritage Foundation for Medical Research, consisting of nine individuals appointed by the Lieutenant Governor in Council.

The Act states (Section 3) that the objects of the Foundation are to establish and support a balanced long-term program of medical research based in Alberta directed to the discovery of new knowledge and the application of that knowledge to improve health and the quality of health services in Alberta and, without limiting the generality of these objects, to

- > stimulate research in medical sciences,
- > implement effective means of using the scientific resources available in the medical sciences in Alberta,
- > support medical research laboratories in related facilities in Alberta,
- > promote cooperation in research in medical sciences in order to minimize duplication in and promote concentration of effort in that research, and
- > encourage Albertans to pursue careers in research in the medical sciences.

Other factors of note in the Act are:

- > The Foundation is not an agent of the Crown in the right of Alberta.
- > The Provincial Treasurer shall hold and administer the Endowment Fund and has the same powers of investment with respect to the Endowment Fund that he has with respect to the general revenue fund under the Financial Administration Act.
- > The Provincial Treasurer shall not pay money out of the Endowment Fund if the payment would result in the value of the assets of the Endowment Fund being less than \$300 million.
- > The Foundation shall also establish a Scientific Advisory Council and may establish any committee they consider appropriate to act in any advisory, administrative or technical capacity in connection with any matter pertaining to the objects of the Foundation.

## 2. Mission

Throughout its 24-year existence, the Foundation has been guided by the Act. In the early 90s, the Trustees and management of the Foundation executed a strategic planning process, following a wide consultation with a broad group of stakeholders in medical and health research in the Province of Alberta. This plan has been revisited and confirmed periodically, with the last major review in 2002. As a result of this process, the Trustees of the Foundation adopted the following Mission Statement.

*“We support a community of researchers who generate knowledge whose application improves the health and quality of life of Albertans and people throughout the world.*

*Our long-term commitment is to fund health research based on international standards of excellence and carried out by new and established investigators and researchers in training.”*

The Trustees confirmed the following AHFMR Beliefs and Values:

*“Because we believe that health research leads to improved health, the Foundation is committed to:*

- > excellence through international standards in health research,
- > continuance of AHFMR for future generations,
- > responsible management of financial resources,
- > investment in health researchers at all career stages,
- > collaboration with research organizations, the private sector and other granting agencies,
- > maintaining autonomy and independence, and
- > responsible stewardship of a public trust from the people of Alberta.”

### 3. Goals

In 2002, the Trustees of the Foundation also reaffirmed the goals for the Foundation, originally developed as part of the 1992 Strategic Plan, and periodically reviewed and modified over the intervening 10 years.

#### Goals related to Outputs and Outcomes (the “Results”):

- > To maintain, strengthen or expand established programs, and lead initiatives in health research in Alberta,
- > to maintain research education and training programs and encourage young Albertans to pursue research careers,
- > to encourage increased collaboration in Alberta, Canada and elsewhere among investigators, research institutions, governments, other granting agencies and the private sector, and
- > to continue to promote the development of medical research-related economic activities in Alberta, including the commercialization of innovations.

### Goals related to Resources, Planning and Procedures (the “Tools”):

- > To maintain international standards of excellence through an appropriate and effective peer review system,
- > to manage expenditures to ensure the continuance of AHFMR for future generations while avoiding significant fluctuations in annual spending,
- > to maintain and improve communication with the public, government, the research community, universities, and health-related institutions, and
- > to regularly review and update AHFMR’s future plans and priorities.

## 4. Governance

The Foundation is governed by a nine-member Board of Trustees, appointed by the Lieutenant Governor in Council for terms of up to five years. The term may be renewed once for a total of up to ten years. Five Trustees are nominated by specific constituencies – the Board of Governors of the University of Alberta, the Board of Governors of the University of Calgary, the College of Physicians and Surgeons of Alberta, the M.S.I. Foundation (when Alberta’s former health care plan was abolished in the early 1960s, residual funds were put into a charitable foundation to foster and support research into any aspect of providing medical and allied health), and one is a nominee of the Trustees of the Foundation. Four members are public Trustees.

The current Trustees are: (current as of the date of the IBR)

**Mr. Harley Hotchkiss, Chair**, Calgary businessman

**Mr. Louis (Lou) Hyndman, Vice-Chair**, Edmonton lawyer

**Dr. Roderick Fraser**, President, University of Alberta (until 2004);

**Mr. Ralph Young**, Edmonton businessman and Board of Governors,  
University of Alberta (from 2004)

**Mr. David Kitchen**, Calgary banker

**Dr. Cledwyn Lewis**, Grande Prairie physician

**Mrs. Jo-Anne Lubin**, Edmonton educator

**Dr. Eldon Smith**, Calgary physician, former Dean of Medicine, University of Calgary

**Mayor Gail Surkan**, City of Red Deer

**Dr. Harvey Weingarten**, President, University of Calgary

# Membership of the 2004 AHFMR International Board of Review

## Chair

### Dr. Joseph B. Martin

Dean of the Faculty of Medicine  
Harvard Medical School, Boston, Massachusetts

## Members

### Dr. Elizabeth Blackburn

Professor, Department of Biochemistry & Biophysics, UCSF;  
former Chair, Department of Microbiology and Immunology,  
University of California, San Francisco

### Dr. Denis Gagnon

former Vice President, Research, Laval University;  
former Vice President, Canada Foundation for Innovation;  
former member of MRC and NSERC Councils

### Dr. Robert Miller

Vice-Chancellor, Research, University of California, Santa Cruz;  
former Director and Associate Vice Provost for Research,  
University of Washington

### Professor Sir John Pattison

Director of Research and Development, Analysis, and Information,  
Department of Health, London, England, United Kingdom;  
former Head of Biomedicine, Vice Provost, University College, London

### Dr. Steven Schroeder

Distinguished Professor of Health and Health Care, UCSF;  
former President and CEO, Robert Wood Johnson Foundation

### Dr. Duncan Sinclair

former Chair, Health Services Restructuring Commission (Ontario);  
Emeritus Dean (Health Sciences and Arts and Science) and  
former Vice Principal, Queen's University

# Summary of Recommendations

- 1. a** The International Board of Review recommends that the Alberta Heritage Foundation for Medical Research initiate a *de novo* strategic planning exercise together with its partners, including the universities, the regional health authorities and provincial boards, government departments and agencies, voluntary agencies, and the private sector.
  - 1. b** The International Board of Review recommends that the Alberta Heritage Foundation for Medical Research develop stronger ongoing communication with interested and relevant parties, including the universities, health authorities, governmental departments and agencies, voluntary agencies, the private sector and other partners to support the strategic planning process and subsequent implementation of its new strategic plan.
  - 1. c** The International Board of Review recommends that the new strategic plan of the Alberta Heritage Foundation for Medical Research designate and support, in close collaboration with other interested and committed partners, including the universities and regional health authorities, up to three or four world class centers of excellence.
- 2.** The International Board of Review recommends that the autonomy of the Alberta Heritage Foundation for Medical Research be maintained as defined in the Alberta Heritage Foundation for Medical Research Act. This independence should not be compromised in any way. At the same time, the Foundation should initiate the necessary discussions with a wide variety of stakeholders, including government departments and agencies, other provincial research funders, and other relevant organizations so that plans and activities that collectively support health research in Alberta can be better coordinated.

3. The International Board of Review recommends that the President of the Alberta Heritage Foundation for Medical Research continue to work with his provincial counterparts (Fonds de la recherche en santé du Québec, and the Michael Smith Foundation in British Columbia, and other equivalent provincial organizations as they may be developed) to develop ways and means of working with the federal agencies, such as Health Canada, the Canadian Institutes of Health Research, the Canada Foundation for Innovation, and other federal granting programs to best mutual advantage.
4. The International Board of Review recommends that, regarding the Foundation's endowment and financing, the endowment of the Alberta Heritage Foundation for Medical Research be maintained and protected against erosion of its purchasing power.
5. The International Board of Review recommends that, regarding the selection and support of personnel, the Alberta Heritage Foundation for Medical Research:
  - > continue its current policy of applying rigorous and fair criteria to select and support outstanding investigators and trainees as the principal component of its portfolio of programs,
  - > continue to increase its support of "health" personnel, driving toward increased parity with biomedical research personnel, and
  - > develop and implement, together with the employing organizations such as, primarily the universities, a strategy to move to a "term limit" of support above the Scholar level.
6. a The International Board of Review recommends that AHFMR:
  - > continue broad general support for health research, and
  - > foster collaboration between clinical and the full spectrum of health research wherever possible.

- 6. b** The International Board of Review recommends that the Health Research Collaboration Agreement between AHFMR and Alberta Health and Wellness should be renewed and that the primary responsibility for management of “health-related” programmes it covers should remain with the Foundation.
  - 6. c** The International Board of Review urges the Alberta Heritage Foundation for Medical Research to mobilize support among its partners and others for increased access by researchers to provincial health data.
- 7.** The International Board of Review recommends that the Alberta Heritage Foundation for Medical Research should enter into discussions with the appropriate partners, including government departments and agencies, the universities, and the private sector to transfer responsibility for technology commercialization activities to some other entity.
- 8.** The International Board of Review recommends that the Foundation henceforth limit its contribution to capital construction only to those construction projects demonstrated to be highly transformative and that are consonant with the Foundation’s strategic plan. Consideration for an AHFMR involvement in capital construction projects should therefore provide a rationale for a clear competitive advantage for the researchers and/or permit the undertaking of research endeavours by the Foundation that would not be possible otherwise.
- 9. a** The International Board of Review recommends that the Alberta Heritage Foundation for Medical Research re-examine facets of its communications activities in order to:

    - > prepare a plan to communicate the thrust of the new strategic plan to all stakeholders,
    - > further strengthen its communications with the public, and
    - > consider starting an association of alumni and other supporters.

- 9. b** The International Board of Review recommends that the Alberta Heritage Foundation for Medical Research foster ways to improve collaboration among and mentoring for students, fellows, and junior scientists.
- 10.** The International Board of Review recommends that the Alberta Heritage Foundation for Medical Research take advantage of the confluence of Alberta's 100th and the Foundation's 25th anniversaries in 2005, respectively, to convene an event in celebration of its achievements in medical research and its promise for the future.
- 11.** The International Board of Review supports strongly the efforts of the Trustees of the Alberta Heritage Foundation for Medical Research to encourage the Province of Alberta to increase the endowment in order to:
- > continue the extraordinary progress already made toward achievement of its mission, and
  - > support the initiatives developed in the new strategic plan. ■

# Preamble

This fourth International Review of the Alberta Heritage Foundation for Medical Research (hereafter AHFMR) has come at a particularly critical time in the Foundation's 24-year history. A new President is picking up the reins of leadership from the very capable hands of Dr. Matthew Spence, who has held them for the past 14 years, a very long period of time in the fast-changing contemporary world of health, health research and care.

Alberta is vastly changed from the province it was 24 years ago, not least in its high reputation among Canadian provinces and internationally for the quality and quantity of medical/health research conducted in its universities, hospitals and regional health authorities. Leading the way in the government's devolution of operational responsibilities from the department of Health and Wellness, Alberta's nine regional health authorities now provide a transformed environment in which to conduct research and apply its results to benefit Albertans' health. The population of the province has grown substantially and become increasingly urbanized. With its robust economy and increasing demand for its abundant energy resources, Alberta offers opportunities in this first decade of the 21st century that are unmatched in Canada and beyond to further advance the objects of the Alberta Heritage Foundation for Medical Research Act of 1980:

*"...to establish and support a balanced long-term program of medical research based in Alberta directed to the discovery of new knowledge and the application of that knowledge to improve health and the quality of health services in Alberta..."*

Accordingly, deviating somewhat from its predecessors, the 2004 International Board of Review has addressed its attention to two themes in discharging its terms of reference:

- > the present state – a review of the Foundation’s programs and contributions to date toward meeting its goals and objectives, and
- > the future prospects offered by the fast-changing environment for even greater contributions to the health and health care of Albertans in the years ahead.

It is appropriate to begin, as previous International Boards of Review have done, with some commentary on what the Foundation has accomplished in the past. Simply put, AHFMR has been what one witness described to the IBR as “the single most transformative event” in terms of its generating effect on:

- > Alberta’s excellent reputation for individual opportunities (“the Alberta Advantage”),
- > the recruitment of excellent investigators to Alberta and their retention in the province,
- > the quality of education offered to its health professionals and life science students and trainees,
- > the range, quality and sophistication of the clinical health care services available to its people,
- > the amount and quality of its medical and health-related research, and
- > its growing effect on the diversification and growth of the provincial economy.

That Alberta is a significant player at the “leading edge” of health research, particularly of biomedical research, is attributable in very substantial measure to AHFMR and its prescient and far-sighted founders. Whereas in 1979 medical researchers in Alberta attracted approximately 7% to 8% (representing about \$5 million) of the funding offered in competition by the Medical Research Council of Canada, 24 years later the support has risen to around 12% (for a total of about \$70 million) in grants from the Canadian Institutes of Health Research (the successor to MRC) to support medical/health research in Alberta’s universities. In total, the three universities attract well over \$250 million annually in support of such research, a total that translates into 10,000 to

15,000 jobs, directly and indirectly, in the province. Much of this very substantial progress, – the “transformation” – can be directly attributed to AHFMR’s work and to its steadfast adherence to its policy of commitment to excellence in the support of individuals.

For the initial investment of a \$300 million endowment, the government and people of Alberta have certainly had their money’s worth.

In research, health care, and most endeavours, success is the result of teamwork, of the synergy gained from many people, organizations and institutions working together. This is so for AHFMR, its partners (universities, regional health authorities, Alberta Health and Wellness, and many others) and the people in them.

Special mention must be made of the contributions over the past 14 years of the Foundation’s President, Dr. Matthew Spence. It has been on his watch and under his leadership that the early promise of AHFMR in biomedical research has been brought to its present very satisfactory state of fruition. The Foundation’s broader mandate has been expanded to encompass the initiation of programs to build capacity in clinical and health services and population research comparable to that in biomedical research and to apply the fruits of the complete research spectrum to benefit the health of Albertans and the effectiveness of the wide range of health care services available to them. The remarkable success of AHFMR owes much to Dr. Spence’s ambitious, optimistic and very effective leadership. Here too, the province and people of Alberta have been well and truly served. ■

# AHFMR Strengths

A widely recognized and praised strength of AHFMR, enthusiastically endorsed by the International Board of Review, is its consistent commitment to excellence. This has taken the form of supporting individuals showing great promise and accomplishment at many levels in their careers. Much of the success of this crucial, core aspect of the Foundation has been attributable to its consistent application of strong, international-standards and criteria for the selection of investigators worthy of funding by the Foundation. This has been achieved through high-level selection committees and the robust but fair competition processes used. The Foundation's marked success in the recruitment of excellent talent to Alberta, and the associated ability to bring back to the province trainees, scholars and investigators who left to pursue their studies and work elsewhere in the world, has increased the profile of Alberta as a site of world class medical research. This enviable profile is widely acknowledged to be directly attributable to the Foundation's support of personnel of great promise and achievement primarily, to this point, in the broad area of biomedical research. It has also been a magnet, however, that has attracted leading trainees and researchers in clinical medicine.

A second major strength of the Foundation has been its support of the universities in constructing new research facilities. This support has been provided in several *tranches*, beginning in the 1980s and continuing intermittently to the present; new facilities are currently under construction or recently completed at the University of Alberta, the University of Calgary, and the University of Lethbridge. The decision to initiate construction in the 1980s was based on the conclusion of all involved that the recruitment of new investigators could not occur until more space was made available to accommodate their work. It is not as evident to the International Board of Review that the current ambitious building plans are the result of equally careful planning; the possibility of Alberta's universities providing more space than is now needed is a concern, especially given the paucity of additional non-Foundation support for the recruitment of many more investigators, particularly in biomedical research.

Albertans should take considerable pride in the impact that medical/health science conducted in this province has made on the international scene. Notwithstanding the IBR's previous comments in relation to space, there is the strong potential to build further on Alberta's current strengths to become an even more attractive locus for recruitment of the best and brightest students and postdoctoral candidates, and to junior and senior scientists.

Third, an additional area of strength has been the Foundation's support of research infrastructure that has facilitated the development of core facilities for imaging, mass spectroscopy, and NMR. These centres, developed primarily in the universities of Alberta and Calgary, provide scientific accessories infrastructure that have been critical to the recruitment and retention of Alberta's most accomplished basic biomedical scientists.

Finally, another of the Foundation's accomplishments has been the initiation of a comparable thrust to build in Alberta the capacity to lead Canada in population and health services research. AHFMR again has focused on funding the salaries of expert personnel to facilitate their training, recruitment, and retention in Alberta. During the, as yet, relatively early stage of this initiative, a well-chosen cadre of individuals has been brought into the province's universities. They are forming a dynamic new community of health researchers in Alberta, where such a community barely existed before. The Foundation merits praise for using and applying the same commitment to excellence and focus on personnel support that served it so well for biomedical researchers, a commitment in which the Foundation has accumulated great expertise and long experience. The International Board of Review salutes the dedicated work of AHFMR's President in this accomplishment. The clearly evident devotion of the Scientific Advisory Council and Health Advisory Committee deserve accolades also. Although the recruitments to faculty positions have been slower than hoped and the Foundation's research support programs are yet to fulfill their promise, real progress is being made. The IBR supports strong continuation of capacity-building in these fields of "health" research.

Notwithstanding the IBR's high opinion of what has been accomplished and AHFMR's continuing progress, there is room for substantial improvement. For example, very careful attention should be given to establishing a specific collaborative engagement with Alberta's three universities that focuses on the

creation of a small number of centres of international excellence in ways that avoid duplication and redundancy and utilize combined strengths to the full. The challenge for Alberta's universities is to focus on competing successfully with institutions elsewhere in Canada and beyond, rather than with one another.

Given the accomplishments of the Foundation and the impressive strengths described above, the IBR gave serious consideration to a recommendation to, in effect, "stay the course." It was persuaded by a number of factors, however, that simply continuing the *status quo*, doing more of the same, is not the best course for the Alberta Heritage Foundation for Medical Research and the people of Alberta. As one member put it, it appears that in 2004 the Foundation is at or near a "tipping point" created by the following environmental factors:

- > decline in the value of the Foundation's endowment attributable to:
  - lowered rates of return on investment. These have improved recently but are very unlikely to return to the rates that applied in the 1990s, and
  - less purchasing power of the investment income as a result of continuing inflation in health sector salaries and other costs that exceed the rate of return on investment, coupled with the Foundation's ongoing salary support of more increasingly senior research personnel.
- > the change in leadership of AHFMR and the opportunity it presents for new directions,
- > the increasing maturation of the regional health authorities and their growing capacity to partner effectively both with Alberta's universities and AHFMR in support of research,
- > political considerations arising out of the fact that Alberta will soon discharge the provincial debt and celebrate its centennial (and AHFMR's 25th anniversary) in 2005, and
- > the government is likely to call an election in the near future and may welcome new initiatives by AHFMR that more strongly address the second part of its mandate, "the application of (new) knowledge to improve health and the quality of health services in Alberta." ■

# Strategic Planning

## *Tools for the Future*

1. a **The International Board of Review recommends that the Alberta Heritage Foundation for Medical Research initiate a *de novo* strategic planning exercise together with its partners, including the universities, the regional health authorities and provincial boards, government departments and agencies, voluntary agencies, and the private sector.**

The purpose of this strategic planning exercise is to redevelop the goals and objectives most appropriate to discharge its mandate and mission in medical/health research, and the application of the results of that research to enhance the health of the population. In developing the goals, objectives and strategies to achieve them, AHFMR ought to work closely in partnership with Alberta's universities, especially those faculties involved in medical/health research, regional health authorities, the Alberta Mental Health Board, the Alberta Cancer Board, Alberta Health and Wellness, Alberta Ingenuity Fund, Alberta Innovation and Science, the Alberta Science and Research Authority, other government departments and agencies, and any other appropriate and/or interested partners.

In the assertion of this strategic planning effort:

1. b **The International Board of Review recommends that the Alberta Heritage Foundation for Medical Research develop stronger ongoing communication with the universities, health authorities, government departments and agencies, voluntary agencies, the private sector, and other partners to support the strategic planning process and subsequent implementation of its new strategic plan.**

One of the Foundation's major strengths is its "arm's length" relationship to government and the autonomy of its governance by its Board of Trustees. The Government of Alberta should be lauded for its continued support of this

independence and the insulation it provides from political influence and bureaucratic interference. It is important that this be maintained, primarily because it is this feature of AHFMR that allows continued application of its bedrock strength – namely, its steady, long-term commitment to excellence in the individuals and programs it supports.

It is also important, however, especially in the changing environments of biomedical/health sciences and health/healthcare, that the Foundation be connected with the large number of other “players” with whom partnership is essential for its vision to be realized and its mission achieved. The new strategic planning exercise recommended by the IBR must take into account the vital necessity of better coordinating the work of the AHFMR with that of its partners.

- 1. c The International Board of Review recommends that the new strategic plan of the Alberta Heritage Foundation for Medical Research designate and support, in close collaboration with other interested and committed partners, including the universities and regional health authorities, up to three or four world class centers of excellence.**

Over time, the range of disciplines supported has expanded from the initial focus on biomedical sciences (from 1980) with the addition, sequentially, of clinical sciences (from 1985), and population health and health services research (from 1992). This emphasis on people should continue into the future, no matter what the strategic goals. The goals of AHFMR will only be achieved if first class individuals are in place to do the work.

To fulfill its mission, AHFMR must continue to support a thoughtfully balanced range of basic biomedical and applied “health” sciences relevant to promoting the health and health care of Albertans. The previous investment by AHFMR and others has created in Alberta considerable strength in biomedical and clinical sciences; the process of establishing comparable strength in population health and other health sciences is well underway. But it will not be possible for Alberta to be competitive nationally and internationally across the whole range of these three broad research areas, essential as it is to have all of them conducted to greater or lesser degrees in the province’s universities and regional health authorities.

In the future, the strategy of AHFMR should include a particular focus on up to three or four areas with a view to achieving and maintaining them at world class status. The choice of these highly select areas of research should be made in full consultation with AHFMR partners such as the universities and others, including government departments and agencies, whose full collaboration is essential to create and maintain such “pinnacle programs.” It should be noted that this recommendation applies principally to the biomedical sciences, which have now achieved sufficient maturity to warrant such concentration, but not yet to clinical or population research.

It is not within the remit of the IBR to suggest the areas to be chosen; that should be one outcome of the new strategic planning process. Were it possible in the Alberta context, however, one factor to consider in the selection is that the choice will provide an important signal to the research community throughout the province of the importance of the continuum of basic, clinical, population and “health” sciences and, in particular, how vital interdisciplinary work is to the betterment of health and the improvement of health care.

It is often (and correctly) said that the truly exciting, challenging scientific discoveries today lie in the “cracks between the cooling cores” of the traditional disciplines. As this argues for inter- and multi-disciplinarity in the medical/health sciences, a trend that has been fostered increasingly by AHFMR, so it argues for extension to include the life sciences, more broadly defined, physical sciences, and even social sciences and humanities – wherever relevant enquiry is pursued. The application of economics, politics, ethics and the law to population and health sciences research also provides a case in point.

This recommendation is not intended to erode support for recruitment or awards to personnel working in those areas that are not chosen for targeted support – the “pinnacle programs.” AHFMR should preserve the capacity to support outstanding individuals whatever their particular fields and interests. It is impossible to predict the disciplines or fields that might be of critical importance in the future; the only certainty is that exceptionally talented and able people will be the common denominator of progress. ■

# Provincial Policy and Planning

## *AHFMR Autonomy*

The International Board of Review is in strong agreement with its predecessors and the Foundation's Trustees that the "arm's length" independent nature of AHFMR is vital to preserve its capacity to operate independently of short-term political and bureaucratic influences. But the IBR is also convinced of the need for better coordination of the several research and innovation-supporting endeavours in Alberta and the need to reduce barriers at the boundaries between them. To do both, to maintain the advantages of independence and capture those of wider collaboration, especially in planning:

- 2. The International Board of Review recommends that the autonomy of the Alberta Heritage Foundation for Medical Research be maintained as defined in the Alberta Heritage Foundation for Medical Research Act and this independence should not be compromised in any way.**

**At the same time, the Foundation should initiate the necessary discussions with a wide variety of stakeholders including government departments and agencies, other provincial research funders, and other relevant organizations so that plans and activities that collectively support health research in Alberta can be better coordinated. ■**

# Trans-Canadian Partnerships

The Canadian landscape for research support has evolved significantly over the last three decades. In early days, leadership was left with the federal government; provincial stakeholders considered themselves primarily as clients of funding programs established and managed at the federal level.

Over the years, a few provinces, including Alberta, have realized the worth of developing their own visions of research and the education and training of graduate students and others, to make sure that they could influence more directly the course of events and meet their missions and objectives in terms of scientific development. Some provincial jurisdictions created *de novo* various types of organizations whose mandates were to develop and fund specifically-targeted programs in support of research and graduate studies. The Fonds de la recherche en santé du Québec (FRSQ) in Québec, AHFMR in Alberta, and the relatively new Michael Smith Foundation in British Columbia are good examples of such provincial initiatives. In most cases, the programs of these agencies/foundations were oriented so as to increase the provincial research community's capacity to compete and secure from federal granting agencies a larger piece of the funding pie than would have been possible otherwise.

This is still a valid provincial strategy today, but over time it has become evident that the provincial research supporting organizations could do a lot more than enhance their supported investigators' ability to compete for "outside" money. It is obvious that the pan-Canadian research scene would greatly benefit from better collaboration among provincial and federal bodies. The creation of new collaborative programs and new partnerships would most certainly embrace Canada's capacity to innovate successfully.

- 3. The International Board of Review recommends that the President of the Alberta Heritage Foundation for Medical Research continue to work with his provincial counterparts (Fonds de la recherche en santé du Québec and the Michael Smith Foundation in British Columbia and other equivalent provincial organizations as they may be developed) to develop ways and means of working with the federal agencies, such as Health Canada, the Canadian Institutes of Health Research, the Canada Foundation for Innovation and other nationally focused research organizations to their best mutual advantage. ■**

# Finance

There has been a decline in the purchasing power of the endowment of the Foundation. The endowment must be maintained and protected against inflation and from erosion of its purchasing power by other factors. Recently, spending has risen to approximately 6.5% of endowment. The rate of spending from endowments at most universities is at 4.5 – 5.0%, a more realistic rate given the present uncertainties in financial markets. Were the Foundation to match this lower rate, an objective favoured by the International Board of Review, expenditures would have to be reduced and curtailed into the future. Simply adding more capital to the endowment will not, in and of itself, solve the problem that has been created by continuing growth. That is, more senior scientists of high quality have been appointed than can be supported on a continuing basis. Because of their high quality and productivity, such researchers have remained eligible to compete at ever higher levels. Unless this practice is changed, the current financial problem will recur; its resolution will simply be postponed.

Without additional funds, cuts to existing programs will be essential. If these are necessary, they should be made “across the board” (each program being cut on the same percentage basis, as described subsequently) given that the current pyramid of support is considered to be optimal. But, in addition, consideration ought to be given to term limits for senior scientists in the future, as described below (under **Personnel**).

In the event that the endowment is supplemented by the government, undoubtedly the new strategic planning process will feature an enhanced debate relating to the programs on which the additional funds should be spent. The IBR believes that the additional income from the expanded endowment should be devoted to continued expansion of the Foundation’s current medical research/health care initiatives. Any new government-mandated responsibilities should be undertaken only with caution and should be limited to programs falling within the mission of the AHFMR.

4. The International Board of review recommends that, regarding the Foundation's endowment and financing, the endowment of the Alberta Heritage Foundation for Medical Research be maintained and protected against erosion of its purchasing power. ■

# Personnel

The core strength of the Foundation is universally recognized as its support of personnel. Those research trainees and summer students who testified to the IBR uniformly expressed gratitude for the opportunities presented to them through the Foundation's auspices, acknowledging it to be a, if not the, major reason they were able to do research, and/or receive training, in Alberta. Similar enthusiasm and sentiments were expressed by supported personnel at nearly all levels, including senior scientists. The exceptions were the Clinical Fellows who, while enthusiastic about and appreciative of the Foundation's support, expressed concern, primarily about their ability to remain competitive in research while continuing to add to their clinical acumen. This concern, however, reflects current worldwide realities about the ability to sustain a career embracing both clinical medicine and research; it is not attributable to shortcomings particular to the Foundation.

With the extraordinary role the Foundation has played in the establishment of biomedical research of very high quality in Alberta, and the more recent genesis of a vibrant, though still developing, health research culture in the province, the IBR was struck by the following key points. The success of the Foundation's personnel support programs has produced an expanded cadre of senior scientific research personnel. The university faculties in which they work have become dependent upon ongoing Foundation support which is now seriously constrained, leading to a consequent risk of destabilization and loss of morale, not to mention personnel, as Foundation support cannot, of course, support all who apply for renewals at the higher ranks. The IBR strongly believes that a gradual but deliberate phasing in of a 10-year limit on support above the Scholar level is preferable to the present situation. Present personnel at the Scientist level who continue to be competitive could be "grandfathered" in, but new personnel starting at the Scholar level and above should be initiated with the clear understanding of the 10-year term limit on support at the more senior levels.

A clear and positive consequence of such a “term-limit” policy, in addition to creating sustainable financial exposure for the Foundation, would be that as an intrinsic part of the recruitment process, the universities would have to partner with the Foundation in their staffing strategies at the beginning of the hiring process, with a view to their ultimately taking on the long-term support of academic personnel. Such a policy would emphasize a “career development” policy for AHFMR rather than a “career stream” function. Presently, the universities depend too heavily on the Foundation for “career stream” support. Furthermore, the IBR suggests that having the AHFMR stick to a “career development” policy would help both the Foundation and the universities create what would amount to an Alberta-wide staffing plan for medical and health research. A “term-limit” policy above Scholar level would have the following anticipated positive outcomes:

- a)** If transparently implemented, such a policy could remove much of the negative morale effects that ensue when the uncontrollable fortunes of the investment climate affecting the Foundation’s endowment necessitate swings in the success rates of applicants for renewal of support.
- b)** Provide a framework by which the universities would, of necessity, partner more closely with the Foundation at the outset of recruitment. For example, the Foundation may follow a policy of bringing in Scholars or Scientists with a “start-up” package of AHFMR support, shifting the burden of such support away from the university concerned. The savings to the universities could then be “banked” and applied to long-term salary support, which can be budgeted for on a longer term, more predictable basis than can “start up” funding.
- c)** Provide the Foundation with a mechanism to cap its otherwise inexorable and unsustainable increase in expenditures. That said, the IBR also wishes to re-emphasize that this problem exists as a measure of the great success of the Foundation; because of the high quality and productivity of the superior researchers attracted to Alberta by AHFMR, they have remained eligible to compete at higher levels.

5. The International Board of Review further recommends that, regarding the selection and support of personnel, the Alberta Heritage Foundation for Medical Research:
- continue its current policy of applying rigorous and fair criteria to select and support outstanding investigators and trainees as the principal component of its portfolio of programs,
  - continue to increase its support of “health” personnel, driving toward increased parity with biomedical research personnel, and
  - develop and implement, together with the employing organizations, such as the universities, a strategy to move to a “term limit” of support above the Scholar level. ■

# Health Research

The achievement of best possible health status for Albertans will need more than the provision of excellent medical care and the generation of new biomedical research. It will require ensuring that medical practice follows evidence-based information, adopting systems that facilitate optimal quality of care and embracing strategies that lead to healthy personal behaviour.

AHFMR focused its initial efforts on traditional biomedical research but subsequently added clinical and then population health research and translational activities. The IBR applauds AHFMR's wisdom of including such research in its portfolio and looks forward to the day when a robust group of health researchers is embraced within Alberta's academic community. At present, the health personnel support tends to be concentrated at the more junior levels but the IBR was very impressed with the quality and enthusiasm of these health scholars and their success to date in winning national grant support and recognition. Investment in them brings good value to Alberta.

Given that Alberta lacks a school of public health, its existing universities must invest in those disciplines necessary to achieve a critical mass of "health" scholars – including the disciplines of epidemiology, biostatistics, health psychology, health economics, health communications, and the law.

We feel it is not yet timely in the Alberta context to develop a full-spectrum health research strategy based on steeples of excellence, though such a strategy may be appropriate at a later date. However, the demarcation between clinical and the full spectrum of health research is becoming increasingly blurred.

**6. a The International Board of Review recommends that AHFMR:**

- **continue broad general support for health research, and**
- **foster collaboration between clinical and the full spectrum of health research wherever possible.**

AHFMR also supports a series of operating programs in health research and translation. Beginning in 1995 and supported in large part by the Health Research Collaborative Agreement (HRCA) with Alberta Health and Wellness, these programs include a Health Research Fund, Health Technology Assessment, the SEARCH Program (Swift Efficient Application of Research in Community Health), the Community Research Ethics Board of Alberta (CREBA), and the Research Transfer Network of Alberta (RTNA). Funds to the level of \$4.8 million annually are provided by the department to support these operating activities, supplemented by staff and internal support of AHFMR.

In the opinion of the IBR, the HRCA has been a “win-win” both for AHFMR and for Alberta Health and Wellness. We believe both parties have derived greater benefit from the present arrangement than if Alberta Health and Wellness had continued since 1995 to manage the relevant programs itself, rather than contracting with AHFMR to perform that function.

The IBR also strongly supports the health-promoting programs because they bring the benefits of diffusing knowledge into the community, improving the ability of community researchers to obtain funding, and developing a constituency for AHFMR and its efforts.

The innovative SEARCH program has already received national and international recognition as a way to transfer knowledge into the community, to create an expanded body of health researchers throughout the province and to increase the efficiency and quality of medical care.

- 6. b The International Board of Review recommends that the Health Research Collaboration Agreement between AHFMR and Alberta Health and Wellness be renewed and that the primary responsibility for management of “health-related” programs it covers should remain with the Foundation.**

Nevertheless, in an era when AHFMR is facing reductions in resources, it may be desirable to seek other partners for the support and eventually the management of some of these activities, particularly those that are successful and demonstrably in high demand. To that end, we endorse efforts by AHFMR to explore the creation of other entities to run some of these programs.

For Alberta to become fully competitive with other provinces and with the rest of the world in health research, two additional things must occur. First, Alberta-based researchers must have better and more timely access to population health data within the province. Otherwise, Alberta residents are deprived of the opportunity to learn from their own health experiences as well as handicapping its health research community. We urge those in a leadership position to work with the provincial government to address possible solutions to this problem.

- 6. c The International Board of Review urges the Alberta Heritage Foundation for Medical Research to mobilize support among its partners and others for increased access by researchers to provincial health data. ■**

# Technology Commercialization Programs

The International Board of Review was impressed by the opportunities for technology commercialization within the province of Alberta. However, to date, the full advantages of these opportunities are only beginning to emerge. It became apparent to the IBR that the technology transfer offices of the universities have improved their capacity for commercialization, but that their activities remained too isolated from the nascent technology commercialization programs headed at the Foundation. The IBR was impressed with the quality of the individuals who have undertaken responsibility for this area of development at the Foundation, but believe that the opportunities more broadly involving the universities, the private or business sector and other relevant government authorities should activate a more vigorous plan for technology transfer than is currently evident within the province. Accordingly, the International Board of Review recommends that:

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- 7. The Alberta Heritage Foundation for Medical Research enter into discussions with the appropriate partners, including government departments and agencies, the universities, and the private sector to transfer responsibility for technology commercialization activities to some other entity.**

Technology commercialization is important for the development and application of new technologies that will both improve health care and diversify and contribute to the economy. The private sector is critical for this development. In this context it is important to note the following:

Commercialization or technology transfer is a multi-faceted complex process. It is very difficult to do well; the perception of success is in the eye of the beholder. The International Board of Review believes strongly that managing or even reviewing the process of technology transfer is a distraction for

AHFMR which is, in any case, playing a relatively minor role in the province. Responsibility for commercialization programs carries significant opportunity costs and can bring unwarranted, unnecessary criticism to an organization that conducts it. Therefore AHFMR should reconsider its decision to continue its efforts in this field.

The financial support for technology commercialization should be reconsidered. It is probably true that creation of technology based start-up companies is an ideal development of such activities. Experience in British Columbia, Washington State and California indicates that when compared to typical venture-funded start-up companies, a much higher fraction of successful start-ups occurs in partnerships between university support and private investment. Consequently, an optimal use of public funds in this regard is support of research in the laboratories in which the technology forming the basis of the start-up company was generated. However, a comparison of the British Columbia Science Council, the Washington State Technology Center and the California Discovery Program indicates that the California model works best. The British Columbia Science Council invested funds directly in companies. The Washington State Technology Center funds research in the university laboratory with a small, fractional watching brief. The California Discovery plan, on the other hand, demands an equal dollar for dollar match of the direct cost of the project with Discovery contributing one dollar for each contributed by the company. In addition, the company pays full indirect costs on its portion. The total direct costs are invested in the university laboratories, and the resulting intellectual property is licensed to the company. Thus public funds are matched and invested in a project of direct benefit to the sponsoring company.

Therefore, AHFMR should reconsider its decision to continue its efforts in this field despite the recommendation of the previous IBR to discontinue them. AHFMR should work hard to transfer management, review, and responsibility for financial support to a different organization with greater high-tech management and financial expertise. To facilitate the process, AHFMR should establish a small set of workshops focusing on intellectual property management between AHFMR personnel and those representing a new organization that, unlike AHFMR, has the potential of pursuing this activity as one of its principal programs. In order to ensure a workable process

for business and the universities, the AHFMR should promote the development of a system of intellectual property management that recognizes:

- > the critical role of inventors/developers/authors in commercialization,
- > the goal of building research, not creating revenue for AHFMR or the universities (or the new organization referred to above), as the primary rationale for the activity,
- > the essential role of private rather than public investment in commercialization,
- > the ability of professional personnel to serve as liaison officers rather than simply patent licensing agents, and
- > the necessity of recruiting to Alberta people who have significant experience in intellectual property and company management in a start-up environment. ■

# Capital Investments

Canada's capacity to compete in the globalization of economic and scientific developments depends largely on the capacity of our research institutions to provide their researchers with the tools and the research infrastructure they need to meet international standards and to compete with the very best in the world.

Alberta's creation of AHFMR has been very successful. Over the last decade, many federal and provincial initiatives have been launched to help Canadian institutions achieve the national objective of reaching the top five of OECD countries in terms of investments in the development of science and technology. On a national level, the Canada Foundation for Innovation (CFI) was the most important of these initiatives in terms of total funding. In partnership with provincial jurisdictions, it funds a research infrastructure that has permitted Canadian researchers to embark on research endeavours that would not have been possible otherwise.

At their inception, none of these organizations considered capital investments in construction (space) as a major component of their programs. Decision makers believed then, and still do, that the construction of a research building requires very thorough planning by both provincial and university authorities. Buildings, once built, require ongoing operating budgets to provide the salary support both of the personnel who will work in and maintain them, and provide for their maintenance and upgrading over many years. The fear of creating "white elephants" has clearly influenced discussions related to all such projects requiring capital investments. These are important lessons to be learned from the experience of the CFI.

Given the case made by the health research community for better financial support of the personnel components of AHFMR programs, the International Board of Review is concerned by the recent decision of the Foundation to

support the construction of two major research buildings, diverting large sums of money that might have been used more effectively for personnel recruitment and support, including the development of “health” research.

The IBR was not overly surprised by the comments of many of the participants in this review who suggested that, at this point in time and given the size of the health research community, investments in research building could not be considered a vital necessity.

- 8. The International Board of Review recommends that the Foundation henceforth limit its contribution to capital construction only to those construction projects demonstrated to be highly transformative and that are consonant with the Foundation’s strategic plan. Consideration for an AHFMR involvement in capital construction projects should therefore provide a rationale for a clear competitive advantage for the researchers and/or permit the undertaking of research endeavours by the Foundation that would not be possible otherwise. ■**

# Communication, Collaboration and Mentoring

- 9. a The International Board of Review recommends that the Alberta Heritage Foundation for Medical Research re-examine facets of its communications activities in order to:**
- **prepare a plan to communicate the thrust of the new strategic plan to all stakeholders,**
  - **further strengthen its communications with the public, and**
  - **consider starting an association of alumni and other supporters.**

Previous IBR reports have commented on the need for increased efforts in relation to improved communication and collaboration with others. The President and staff have responded. All forms of communication have been enhanced and much of it is of very high quality. Even so, it still appears that there is more that could and should be done.

Albertans have much to be proud of in the work of AHFMR. The Foundation has contributed to the province's having an international reputation in some areas of biomedical and clinical science and the best quality health care in North America in some specialities. Yet the IBR gained the impression from a number of well-informed witnesses that, if asked, most Albertans would not be able to give an account of the work of AHFMR. We have not been able to test this formally; some with whom we met were confident that information was being disseminated successfully, e.g., via the circulation of the well-regarded newsletter. Nevertheless, the IBR feels that AHFMR should review its strategy for communicating with Albertans outside of research and health sectors. It has some very good stories to tell.

The last IBR report commented specifically on communications with those with whom AHFMR needs to collaborate to achieve further transformations of the contributions of research to health and health care. In the past six years, the broad area of health-related science has become even more dynamic, competitive and complex. As described earlier in this report, AHFMR will achieve the best outcomes from its programs only if they are developed and delivered in collaboration with its partners such as the universities, the regional health authorities, and other research funders and “players” in Canada.

To be successful, programs undertaken under the organizational device of strategic partnerships require much more than consultation; they require an iterative process, close communication, and collaboration from the beginning. In the opinion of the International Board of Review, such partnerships are required to maximize opportunities arising in relation to other provincial initiatives such as the Alberta Ingenuity Fund and the Life Sciences Initiative of ASRA; these partnerships will be necessary whatever the size of the AHFMR endowment in the future. Moreover, as pointed out above, it is clear that in some disciplines, medical school departments are very dependent on continuing support by AHFMR for faculty members whose long-term future will depend upon effective joint strategic planning.

In 2004/05, AHFMR is at a pivotal point in its development; any changes in strategy, financial position, and balance of activities should be communicated effectively and carefully to the full range of stakeholders, including the general public – the final beneficiaries of the work of AHFMR. The IBR recommends that a communications strategy covering a range of eventualities be prepared in the immediate term.

Without exception, within the academic sector, individuals the IBR met with expressed gratitude for the support they had received from AHFMR. Many were young and were enjoying being supported at a critical point in their career development. Whatever their future, it seems likely that they will retain fond memories of their time with AHFMR. Consequently, the IBR suggests that AHFMR consider setting up an association of alumni and other supporters.

**9. b The International Board of Review recommends that the Alberta Heritage Foundation for Medical Research foster ways to improve collaboration among and mentoring for students, fellows, and junior scientists.**

As is the case in any academic setting, junior personnel need significant mentoring by senior faculty. Junior personnel face choices, complexities, and career decisions that demand analysis and advice by more experienced scientific colleagues.

Opportunities for mentoring might include:

- > proposal writing and funding possibilities,
- > program development, and
- > career alternatives and prospects.

Since AHFMR includes a wide range of senior faculty and scientists who can form networks of advisors, we recommend that they establish workshops on topics of interest to junior faculty. AHFMR scientists working together with junior colleagues can address concerns that may not always be addressed by individual supervisors. In addition, the formation of a mentoring network has the advantage of establishing a significant set of supports and a basis for advocacy for AHFMR. ■

# Looking to the Future

**10. The International Board of Review recommends that the Alberta Heritage Foundation for Medical Research take advantage of the confluence of Alberta's 100th and the Foundation's 25th anniversaries in 2005, respectively, to convene an event in celebration of its achievements in medical research and its promise for the future.**

The IBR strongly recommends that full advantage be taken of AHFMR's extraordinary accomplishments by participating in the centennial celebration planned for the Province of Alberta in 2005.

The final recommendation of the International Board of Review is perhaps the most important of all in the context of current opportunities and building a vision for the next 25 years.

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**11. The International Board of Review supports strongly the efforts of the Trustees of the Alberta Heritage Foundation for Medical Research to encourage the province to increase the endowment in order to:**

- **continue the extraordinary progress already made toward achievement of its mission, and**
- **support the initiatives developed in the new strategic plan.**

The vision that the International Board of Review has of securing the important gains the Alberta Heritage Foundation for Medical Research has already made and building on them, as we recommend, can only be realized with the addition of resources to support the Foundation's work. The IBR believes there to be a very strong case for the addition of significant funds to the Foundation's endowment.

AHFMR has played a key role in achieving Alberta's current reputation and competitive advantage in biomedical and health research. Its processes and the management of its programs are widely admired. AHFMR can facilitate collaboration and catalyze new developments throughout the province. It has clearly been a major contributor to the "Alberta Advantage" and will continue to do so as it pursues implementation of the new strategic plan we recommend be developed. The IBR recommends strongly that the Foundation's endowment be increased substantially. ■





## **AHFMR Mission**

AHFMR supports a community of researchers who generate knowledge whose application improves the health and quality of life of Albertans and people throughout the world. AHFMR's long-term commitment is to fund health research based on international standards of excellence and carried out by new and established investigators and researchers in training.



# IBR

*June 2004*

## Fourth International Board of Review

A review of the operation of  
the Alberta Heritage Foundation  
for Medical Research  
for the period 1998-2004