SYMPOSIUM & AWARD PRESENTATION

OVERCOMING BARRIERS TO CANADA'S GLOBAL COMPETITIVENESS IN HEALTH RESEARCH

IN CONJUCTION WITH
THE 7TH ANNUAL
OTTAWA EVENING

Amis des instituts de recherche en santé du Canada
FCIHR/AIRSC
Friends of Canadian Institutes of Health Research

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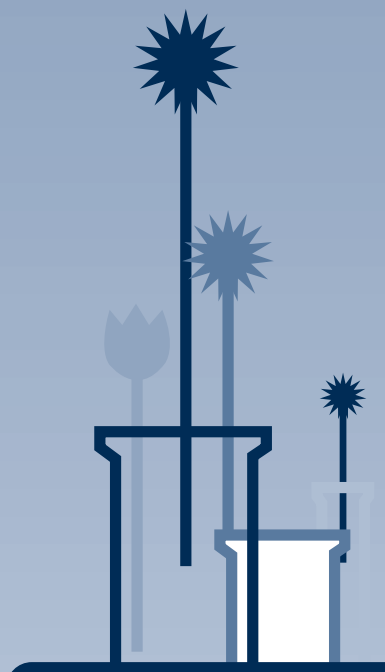

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Perspective

Our national goal in health research is to be internationally competitive and thereby contribute to the health of society and to our economic well-being. This Symposium draws attention to the fact that achieving these goals requires a concerted effort at many levels including governments, industry, universities, research institutes, volunteer agencies and people on the ground. In order to be productive and leading edge, there must be a critical mass of talent, funded adequately to ensure innovative science. This is insufficient by itself because of capacity problems and so mechanisms must be built-in for renewal. Training streams should be created that cover a broad spectrum of health research including basic and clinical science, population health, social sciences and outcome studies. No single agency has the resources or capacity to satisfy all national needs and so we must find the will and long-term commitment towards Federal/Provincial collaborations in the health sciences.

But what about the business case! Have we capitalized fully on our scientific strengths or is there an ideological blind spot? Many people view biomedical research as a cost burden and luxury when in fact there is an enormous potential for enterprise and profits. Why is it that we lag behind other nations and don't fully harness the economic spin offs and social benefits from health related industries? It is appropriate to ask why so little money is set aside for R&D from the multi-billion dollar health care budgets the way other mature industries do. We can do better in: new drug development, health care innovation, biotechnology, nano-technology, and health policy initiatives that can help invigorate our science enterprise. Can our policies and partnerships be aligned to attract into the life sciences the almost unlimited resources of Canada's sophisticated individual, industry and institutional investors?

Knowledge translation is also a responsibility of our research agencies and extra efforts are called for to ensure that everyone in society benefits sooner rather than later from our research achievements. The importance and value of clinical trials research cannot be overstated because it provides the essential evidence that benchmarks the best care. Finally, the public is hungry for high quality, reliable health information. We must communicate our research findings in an ethical way and collaborate with journalists and the various media to provide the most up to date and reliable information that scientific methods can provide. Our role includes the promotion of knowledge that is based on the best science and in so doing contribute to healthy behaviors and effective medical care.

Aubie Angel, M.D.
President FCIHR / AIRSC

OVERCOMING BARRIERS
TO CANADA'S GLOBAL COMPETITIVENESS IN HEALTH RESEARCH

Opening Remarks

Dr. Aubie Angel, President FCIHR

Dr. Aubie Angel welcomed attendees to the symposium held in conjunction with the 7th annual Ottawa gala fundraising and awards dinner in support of health research.

There is much to celebrate, he said, as he highlighted FCIHR's public outreach aspect. He showed a slide of brochures of FCIHR public forums that have been held over the past three years to discuss crucial health research issues. The topics include "The Translation of Genomic Science to Social Well-Being and Human Health," "The Scientist and the Media," and today's focus on "Overcoming Barriers to Canada's Global Competitiveness in Health Research." Each forum has attracted 100 to 300 participants. FCIHR preserves the events by recording the proceedings and distributing and sharing them nationally.

Angel said the goals of health research are lofty, and knowing more about the obstacles is key to overcoming them and to achieving the goals. This year's panel will present insight on priority areas for supporting Canada's global competitiveness. The symposium will also include a Distinguished Service Award presentation to honour esteemed medical scientist Dr. Henry G. Friesen for his contribution to health research.

Welcome From CIHR

Dr. Alan Bernstein, President CIHR

Dr. Alan Bernstein proposed that Canada is in fact globally competitive in health research, "but we just don't know it." One recent success story is based on data released from the Institute for Scientific Information, which measured the publication impact of the world's scientific literature. An analysis of the fastest growing area of health research—breast cancer research—showed that this topic's most cited author is Dr. Stephen Narod of the University of Toronto. Of the top 20 papers on health research, all based on international collaboration, the top six had strong Canadian contributions. Of the top 20 institutions, three are Canadian.

Moreover, Canada ranks third among nations for the number of citations. Bernstein asserted that if corrected for population size, Canada would rank first place.

Bernstein said the above is only a short list. There are examples of Canada's leading role in many areas, including stem cell research, evidence-based medicine and health services research, and the social determinants of health. Canadians should not be complacent, however, as there is much more to be done, but they should do better in trumpeting their successes.

Global Competitiveness —What Are We Striving For?

Chair: **Glenn Brimacombe**, CEO, Association of Canadian Academic Healthcare Organizations (ACAHO)

In his opening remarks, Mr. Brimacombe noted that as we think about the multiple impacts of health research, a meta-level public policy objective is to make Canadians one of the healthiest populations in the world. Yet, at the same time, it is important to understand that the notions of "health" and "wealth" are not mutually exclusive, but intertwined in the sense that there are at least three related dimensions to the health research paradigm:

1. improving our individual and collective health status;
2. impacting on the manner in which we deliver a range of increasingly cost-effective health care services; and
3. contributing to sustained economic prosperity via an increasingly knowledge-driven and competitive global economy.

Mr. Brimacombe also observed that research is the "oxygen" of an evidence-based health system, and is the foundation of a sound public policy decision-making process. Equally important is the need to translate knowledge not only into the health system and to providers, patients and the public, but how we convert the process of medical discovery into innovative goods and services that can compete in world markets. In many ways - given the spectrum of investments by the federal and provincial governments in Canada's health research enterprise - many of these issues have been recognized; from supporting basic research and its infrastructure, to incentivizing the commercialization process.

In closing, Mr. Brimacombe noted several challenges:

- it is important to communicate to all levels of government, as well as the public that research takes time. Thus, investing in health research and its potential requires a sustained effort and patience;
- given the value chain that is involved in supporting health research in Canada, we must continue to look for ways which promote its integration. Not only must the public sector look for ways in which to work more effectively, but we must also identify ways in which we can nurture public/private relationships;
- more concrete discussion and methodological development is required to demonstrate the different rates-of-return (i.e., health social and economic) that accrue from health research; and
- health research advocates must develop a more powerful common voice around policy issues that impact on how we invest in health research.

Provincial Research Agencies and Knowledge Translation in Health

Dr. Kevin Keough, President and CEO, Alberta Heritage Foundation for Medical Research (AHFMR)

Dr. Kevin Keough agreed with Bernstein that investment in health research is paying off, as Canada is beyond a doubt a world leader in a number of areas. The investments over the last 10 years have indeed been phenomenal and transformative. At this time, however, although the glass is three-quarters full, Canadian researchers should consider their achievements and imagine how much more they can do, including some areas for expansion or improvement.

Canada is a small nation with a small economy, and it cannot emerge as a leader in all areas at all times, but it would do well to take advantage of its natural strengths. For example, how should Canadian researchers use their unique health care system to do useful studies, making use of its emphases on prevention, health promotion, treatment, etc? What about Canada's position as the second most urbanized country in the world, and one with a large rural population? How can researchers take advantage of Canada's population diversity?

Keough suggested some ways of translating these strengths into research for the betterment of both people's health and the economy. First, Canada is undergoing enormous change, with a big challenge being migration health. Immigrants are different now from 100 years ago, and opportunities exist for Canada to lead the world by studying the different risks and backgrounds of diseases now and before. Second, Canada's significant rural and northern populations allow exploration and excellence in the use of distance medicine. Third, mental health is a big challenge linking the health and economic systems, but it is one that offers many research possibilities, including mental health, workplace health and safety, and injury in the rural and manufacturing sectors. Other potential research areas include fetal and infant health, early childhood health, Aboriginal health, the determinants of health, and the prevention and treatment of disease and injuries.

Provincial foundations are well positioned to help the national system, Keough commented, since the provinces deliver health care. They can provide for closer communication, take a bit more risk, make decisions more nimbly, and allow a program to be tried at a smaller scale before running it nationally. They can also be more selective in what they do in serving local interests. Furthermore, they can work with other foundations of common objectives within the same province or in other provinces more easily than with national organizations.

Keough also noted that, whenever appropriate, provincial foundations should be recognized as leaders, since they can start to do things that national organizations cannot do. Different regions have different advantages. In working with each other and with national interests they can help move up the agenda more lightly and quickly, making Canada as a whole more competitive. In closing, Keough stressed that in health research there are selective advantages in working closer to the local environment.

Career Insecurity in the Canadian Health Care System—The Hospital-Based PhD

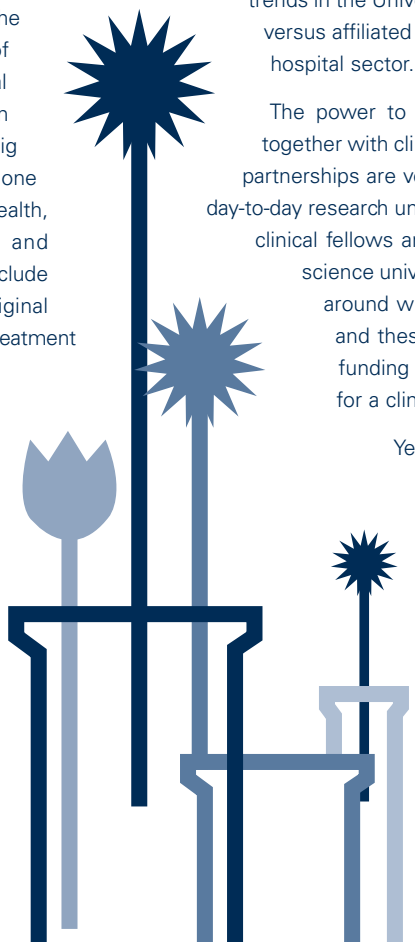
Dr. David Hill, Scientific Director, Lawson Health Research Institute

The only way to stay at the cutting edge and be number one is to specialize and be selective, commented Dr. David Hill. As a nation, Canada must come to grips with that concept. Furthermore, excellence and the demands for it are growing exponentially.

Hill then turned to the subject of his presentation—career insecurity of the hospital-based PhD. He explained that this focus is not meant to invalidate the urgent need for clinician-scientists and other professionals. He suggested that the cog that turns the wheel of the health of Canadians is hospital- and institution-based research. For example, research hospitals and their affiliated institutes make up 70% of the total academic health research in Ontario, and health research typically accounts for 40–50% of entire university budgets. Research funding trends in the University of Toronto's Faculty of Medicine on campus versus affiliated hospitals show the most growth occurring in the hospital sector.

The power to turn the wheel lies in PhD scientists working together with clinician- and nurse-scientists. Hill said clinician-PhD partnerships are very powerful if done properly, leading to efficient day-to-day research unit management, single-team training of basic and clinical fellows and students, and strong relationships with basic science university departments. Basic scientists can be a hub around which clinicians can contribute to research output, and these partnerships are a compelling combination for funding agencies. Thus, they are the most effective way for a clinical department to use its PhD resources.

Yet, where do PhD salaries originate? Very selective and limited capacity exists through research councils, federal grants, health charities, provincial health research foundations, and industry. Studies show that salaries mostly come from internal funds for health R&D in Ontario teaching hospitals and research institutes. Moreover, trends indicate that the institutional sector has been steadily increasing investment in the last 15 years and is doing better than the federal scheme. For example, at the Lawson Health Research Institute



where Hill is located, of the 81 PhDs on staff in 2004, 52% depended on institute/hospital funding, 22% on university funding, and 26% on external funding.

Hill said the PhD wheel is "short of oil." Hospital restructuring and system redesign has created an enormous burden on teaching hospital foundations to fund infrastructure for care. Also, the traditional use of community funds to support research has been seriously eroded, undesignated funds as a foundation source of research support are drying up, and lower interest rates have seriously harmed the buying power of endowed funds.

At present, many PhDs—about 60% of the scientific staff in institutes—have no income source other than hospital discretionary funds or funds from the community via hospital foundations. Furthermore, career development for PhDs needs better provisions for career transition, retention, etc.

Hill said this lack of career stability for PhD scientists must be a priority issue if their contribution to translational research and commercialization is to be maintained. All sectors can contribute, including federal and provincial research agencies, health authorities, and health charities to match demand to availability for the whole system.

Health Research Advocacy: Diverse and Novel Strategies

Deborah Gordon-El-Bihbety, President, Council for Health Research in Canada

While direct lobbying has been the focus of health research advocacy in the past and remains a critical component in the future, Deborah Gordon-El-Bihbety said it is no longer enough on its own. Diversifying the advocacy effort is necessary to increase health research investments, especially in the current unstable and unfocused federal environment that clearly cautions not to rely solely on relationships with elected officials.

With this background, Gordon-El-Bihbety presented the components of a diversified and novel advocacy approach for health research, including an example of such an approach adopted by the Council for Health Research in Canada (CHRC) in 2005.

CHRC is a national, non-profit, non-governmental organization mandated to build a bridge for sustained policy dialogue with the federal government to increase public investment in health research in Canada. Gordon-El-Bihbety first explained that its members include Canada's leading national health charities and health research institutes.

What is advocacy? CHRC defines it as "the pursuit of influencing outcomes—including public policy and resource allocation decisions within political, economic, and social systems and institutions—that directly affect people's lives." It consists of organized efforts and actions; requires trust building, collaboration, planning, and periodic assessment; and involves meeting decisionmakers where they are. It is built and sustained over time by many people at many levels, and it is not the amount but the consistency of effort and message that is important.

Gordon-El-Bihbety outlined the components of a diversified advocacy strategy. Such a strategy employs direct lobbying; responds to the current public policy context and other current conditions; conducts stakeholder, public, and media outreach to broaden the advocacy base; uses celebrity champions; employs effective communications tools; and involves the experts.

She followed with an overview of CHRC's 2005 Advocacy Program as an example. Some of the highlights include partnering with government and assisting it with its most pressing policy challenges; increasing CHRC's analytical capacity in order to clearly demonstrate that research is part of the solution; broadening CHRC's membership base to include other stakeholders; expanding CHRC's advocacy program to include public and media outreach; and providing researchers with advocacy tools and with opportunities to engage with policymakers, media, and consumer advocacy groups at both the national and regional levels.

Gordon-El-Bihbety listed the "Nine Laws" of successful advocacy communications:

1. Define clear goals and measurable progress.
2. Do audience identification and segmentation. Determine who the change makers are.
3. Formulate clear, simple, concise messages that motivate and capture hearts first, then minds.
4. Engage in planning.
5. Clearly specify what people should do to give support, including providing all necessary contact and other information.
6. Make the case that action is needed now.
7. Match the strategy and tactics to the target audience, keeping in mind the importance of repetition.
8. Budget for success by allocating spending on planning and testing.
9. Bring in communications experts to help communicate effectively with target audiences.

In closing, Gordon-El-Bihbety summarized that a diversified advocacy approach enhances lobbying impact while strengthening the base of support for health research by engaging a broader audience in its advocacy efforts. Moreover, success requires effective communications as an essential element.

General Discussion

Discussant: **Pat Lafferty**, Ottawa

In discussing barriers to health research, Pat Lafferty suggested thinking big. Canadians may be making too many small academic and industry investments in a world where it is important to have scale and share risks. Think about creating large bundles of academic, clinical and industry science capable of attracting investment bankers, pension funds, the best management teams and new knowledge from anywhere in the world into $100 million investment programs operating at a world scale.

Referring to Brimacombe's talk, Lafferty suggested that the health research advocates are too fragmented. They should speak with one voice and align objectives with those of government. The separation of the health and economic portfolios through all levels of government has not helped health research, and the Ministries of Health should be given the economic development responsibilities as well.

Referring to Keough's comments on opportunity, Lafferty noted that Canada has not managing its health research human resources careers well – so much falls between the stools of individual, academic, health care, and industry responsibilities.

Referring to Gordon-El-Bihbety's presentation, Lafferty agreed that a big-picture vision is needed, as are knowing what messages to give and who the partners are, creating national consensus, and enlisting influential decision-makers, such as the chairs of banks, who are not seen as special interest groups on health issues.

Discussion

Asked how to encourage clinician-researchers, Keough said good mentoring is key. Moreover, the system must allow clinician-researchers time and flexibility so they can develop their research, perhaps alternating between three months doing research and two months doing clinic work.

Another participant asked how to encourage pension funds to invest in health research, which traditionally has been a government responsibility. Lafferty said there must also be a significant private-public pre-clinical research infrastructure. Bernstein added that the private sector must be sensitized to opportunities coming out of Canadian laboratories, as the timelines may be too long for them. Furthermore, without knowing how to invest, everything is risky, so more important than money is knowledgeable venture capital, not just venture capital, of which there is plenty. For example, US knowledgeable venture capitalists understand that science and business cannot be run from a distance. Bernstein suggested that they be convinced to open branches in Canada. It may also be necessary to go offshore to encourage investment.

FCIHR DISTINGUISHED SERVICE AWARD

2005

Presentation of FCIHR Distinguished Service Award Recipient

Dr. Henry G. Friesen

Dr. Angel announced that the 2005 recipient of FCIHR's Distinguished Service Award is Dr. Henry Friesen, for his extraordinary achievement spearheading health research in Canada over the past decade. He is the discoverer of human prolactin—a major accomplishment acknowledged worldwide—and also gave birth to a new expanded view of health research in Canada, leading to the creation of CIHR.

Bernstein told the story of this creation, begun as Friesen's idea in 1998. At first there was resistance to this vision of an inclusive agency that would be both a grant council and a research institution. In the end it was Friesen's integrity, clarity of purpose, and commitment to research and to Canada that led to the creation of CIHR. Its success is entirely due to Friesen's vision and hard work as a scientific leader.

Dr. Henry G. Friesen

On accepting the award, Dr. Friesen expressed appreciation for the great honour. He recalled some key events in the journey toward creating CIHR: the process of building coalitions and opening communication lines into the Medical Research Council of Canada (MRC) that began the mobilization, the recognition of the significance of the public policy forum in influencing policy, the transformation of MRC to a structure that embraces the whole spectrum of health research. Now, five years later, Friesen expressed amazement at the extent of transformation due to Bernstein's inspired leadership to successfully position and restructure the health research enterprise in Canada. It is rich, meaningful, and delivers on objectives consistent with today's focus on global competitiveness and meeting international standards of excellence.