Strengthening Knowledge to Action
Workshop Summary Report and Recommendations

CIHR Institute of Genetics in partnership with
the CIHR Knowledge Synthesis and Exchange Branch
# Strengthening Knowledge to Action Workshop Report

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Recommendations

The central question that initiated the “Strengthening Knowledge to Action Workshop”, and one of major interest to the Canadian Institutes of Health Research (CIHR) is: “How can we better support research that translates research findings more successfully to patients, populations and policy makers?” In other words:

- How can we foster more research of the type that has led Canadian investigators to be awarded the CIHR KT Award?
- What are the impediments for the improved translation of research findings to patients, populations and policy?
- What funding opportunities and other mechanisms are required to foster the translation of research findings more successfully to patients, populations and policy?

Two central recommendations emerged over the workshop:

1. **CIHR Institutes, together with the CIHR Knowledge Synthesis and Exchange (KSE) Branch, must be the “push” behind knowledge translation.** CIHR Institutes and the KSE branch must work together to fund knowledge translation initiatives in an effort to increase the impact; and to minimize the number of independent initiatives. **Where does the push/pull for knowledge translation originate?** CIHR Institutes must be the “push”, and must budget for knowledge translation activities relevant to their research communities. There was agreement that there should not be a 14th CIHR Institute focused on knowledge translation.

2. **Strategic funding for knowledge translation is necessary.** To build the community and the knowledge translation research base, there is a significant need for funding opportunities above and beyond the CIHR Operating Grant Program, especially since Canada is currently in a position to demonstrate international leadership in building an evidence base on “how to do” knowledge translation successfully.

Moreover, funding of knowledge translation resources and its implementation continues to be a huge challenge, due to limited funding sources.

In addition to unanimously agreeing on the two central recommendations, the workshop attendees felt that the following important recommendations, issues and questions about knowledge translation need to be further examined by CIHR and the Institutes.

**What Must CIHR do to Enhance Knowledge Translation, Including the Science of Knowledge Translation**

- Clearly define knowledge translation for the research community
- Explicitly articulate CIHR’s expectations of researchers with respect to knowledge translation, and in particular, distinguish between the knowledge translation of research findings and research on the science of knowledge translation
- Continue to refine knowledge translation evaluation guidelines
- Foster a culture of knowledge translation early in the career of a researcher
- Require grantees/awardees in Pillars 2 (clinical), 3 (health services and policy) and 4 (population health) to be responsible for the active dissemination of their research results to the appropriate receptor audiences, given the greater potential for application of their findings beyond the research community
- Ongoing monitoring and evaluation efforts are critical and should be undertaken in collaboration with knowledge translation receptors
Resources

- Organize a cadre of knowledge translation experts to help researchers across Canada, so that knowledge translation expertise and training is readily available
- Provide knowledge translation training
- Host an annual knowledge translation practices meeting that would bring together leaders in knowledge translation as a forum to document best practices
- Facilitate a pan-Canadian network for researchers in the field of knowledge translation

Recognition

- Recognize researchers for engaging in knowledge translation efforts (e.g., in the Common CV, Awards, etc)

Support

- The CIHR Knowledge to Action program needs to be modified to (i) fund large knowledge to action program grants of up to $200K/year for a term of 5 years, and (ii) continue to fund less substantial projects
- Reduce the number of small, under-funded knowledge translation opportunities, and increase the number of large concerted funding programs such as the CIHR Knowledge to Action program
- Continue support for the CIHR End-of-Grant Knowledge Translation supplement program
- Offer sustained, long-term funding opportunities in support of stakeholder relationships, tool development and other knowledge translation efforts, often in the form of interdisciplinary team support

Requirements for Knowledge Translation Efforts to Succeed in Canada

Successful Knowledge Translation Requires a Strong Research Base

- Evidence must be at hand, before it can be translated
- Critical need for research syntheses to establish the evidence base

Engage Receptor Audiences and Partners

- Knowledge translation receptor capacity must be further developed in Canada
- Building receptor capacity in Canada is incredibly difficult but equally important to building research capacity
- Knowledge translation cannot be just a researcher ‘push’ burden; the demand for knowledge in decision-making and stakeholder groups must increase
- The role of CIHR in building receptor capacity in the health care system must be defined, given that CIHR’s mandate does not include non-research implementation
- Receptor audiences must be involved in the range of activities, where appropriate, that surround a research project (integrated KT approaches)
- Systematic review training for members of the receptor audiences is very useful
- Partnerships with stakeholders are a key component of knowledge translation activities, yet they are very time-consuming and often expensive to cultivate, making it difficult to entice researchers to engage in KT activities
- Funding, resources and tools designed to enable researchers to seek and sustain stakeholder relationships would fill a critical gap
- Knowledge translation is critical to Voluntary Health Organizations (VHOs), yet there is a general feeling amongst VHOs that they are not being actively included in CIHR strategic discussions related to knowledge translation
RATIONALE FOR THE WORKSHOP

Knowledge translation (KT) is a broad concept, which the Canadian Institutes of Health Research (CIHR) defines as a dynamic and iterative process that includes synthesis, dissemination, exchange and ethically sound application of knowledge to improve the health of Canadians, provide more effective health services and products and strengthen the health care system.

Each year CIHR recognizes the merit of exceptional individuals and teams involved in a collaborative health research or development project that aims to advance the understanding of knowledge translation that will improve the health of Canadians.

Invariably, the nominations for the CIHR Knowledge Translation Award describe many impressive researchers, from all across the country, who have made important contributions that affect the lives of patients and populations, and that facilitate the work of decision and policy makers. It has become very clear that there are outstanding knowledge translation success stories that have emerged from the efforts of Canadian leaders who have had to navigate a complex environment of funding, policy and stakeholders.

CIHR is positioned to play a pivotal role in increasing the number and impact of Canadian knowledge translation success stories. On June 5 and 6, 2007 the CIHR Institute of Genetics and the CIHR Knowledge Synthesis and Exchange Branch hosted a meeting in Toronto with 27 participants (Appendix 1), including recipients of CIHR’s Knowledge Translation Awards, leading knowledge translation researchers, policy and decision makers, and several CIHR Scientific Directors, to address the following central question “How can we better support research that translates research findings more successfully to patients, populations and policy makers?”

In other words:

• What are the impediments for the improved translation of research findings to patients, populations and policy?
• What funding opportunities and other mechanisms are required to foster the translation of research findings more successfully to patients, populations and policy?

In addition to identifying strategies and mechanisms to increase the number of Canadian knowledge translation success stories, this meeting was designed to capture expert advice to address a significant observation made by the CIHR International Review Panel. The Panel report (June 2006) specifically commented on a lack of consistent understanding of knowledge translation in the Canadian health research community.

The meeting agenda is shown in Appendix 2.

Insights into the Current State of Knowledge Translation in Canada

Dr. Roderick McInnes (Scientific Director, CIHR Institute of Genetics) opened the meeting by stressing the importance of knowledge translation for the success of CIHR. Liz Stirling (Director, CIHR Knowledge Synthesis and Exchange) then provided an overview of knowledge translation at CIHR, highlighting CIHR’s Knowledge to Action funding opportunity. Appendix 3 provides an overview of all CIHR knowledge translation related funding opportunities.

The CIHR Knowledge to Action funding opportunity is part of CIHR’s long-term commitment to promote and sustain linkages between the generation of new knowledge and its application, to meet the needs of decision-maker(s) and community partners. The purpose of this program is (i) to build and strengthen teams engaged in KT at the community, local or regional level by funding KT and implementation activities of researchers and users of research situated in the same community or region; (ii) and evaluate the success of implementation activities.
The discussions began by featuring the Canadian success stories of three recipients of the CIHR Knowledge Translation Award (Drs. Stanley Zlotkin, Patricia Martens and Jack Tu), which included recommendations to enable effective knowledge translation activities. In addition, presentations by Drs. Andreas Laupacis and Jeremy Grimshaw identified critical issues in the field of knowledge translation.

**The Sprinkles Global Health Initiative**

**Dr. Stanley Zlotkin** (Hospital for Sick Children, University of Toronto) reported on his experience in translating nutritional health evidence, by engaging in public and private partnerships and employing a breadth of KT strategies to transform health research into action on an international scale. The size of this on-going project is enormous and the key to success has been the tenacity of the researcher in ensuring that nutritional knowledge was transformed into action.

Iron deficiency anaemia is the most prevalent nutrient deficiency in the world today and its effects are far more severe for children than for adults. Dr. Zlotkin developed Sprinkles - a dry, tasteless, single-serving packet that is inexpensive to manufacture and easy to distribute. Best of all, Sprinkles, which includes a mix of iron, vitamins A, C and D, and zinc, doesn't change the taste or appearance of food into which it is mixed, increasing the likelihood of it being used.

Through the **Sprinkles Global Health Initiative**, Dr. Zlotkin is ensuring that children in rural areas of the developing world, those who are ultra-poor, and other vulnerable children, are receiving Sprinkles. The health impact of the program has been demonstrated in many countries, including Bangladesh and Mongolia. Partners in the initiative have included UNICEF, USAID, the World Bank and CIDA, among others.

Dr. Zlotkin’s work is an outstanding example of knowledge translation in which health evidence, public and private partnerships. A broad range of strategies were employed to transform health research into action at an international level.

The following knowledge translation enabling strategies were highlighted in Dr. Zlotkin’s presentation:

- A strong, solid research base is required – i.e., the evidence must be at hand, before it can be transferred
- It is critical to identify who makes important decisions about public health interventions
- Make no assumptions regarding the role that different groups will play – i.e., roles and responsibilities must be clearly identified and agreed on
- Influence key players to take ownership of the problem
- Convince the key players that there is an intervention available that is efficacious, effective and acceptable
- Put in place prospective plans on how to influence the important decision makers
- Research in a single jurisdiction is inadequate – i.e. adopters have a preference for local evidence supporting an innovation
- The researcher must play both an advocacy role and a continuing education role in support of the issue
- Ongoing monitoring and evaluation efforts are critical

The impact to date of Dr. Zlotkin’s efforts has been a 40-50% reduction in the prevalence of vitamin and mineral deficiencies in the communities where the Sprinkles program has been in place. Moreover, 7 countries have a national nutrition policy that includes Sprinkles.

Even with the demonstrated impact of this initiative, Dr. Zlotkin identified knowledge translation resources and implementation as a continuing huge challenge, because funding sources for these activities are very limited. It was clear to all the meeting participants that the primary key to success for this initiative was the tenacity of the researcher in ensuring that the goal was reached - that the knowledge was transformed into action.
The “Need to Know” Team of the Manitoba Centre for Health Policy

**Dr. Patricia Martens** *(University of Manitoba)* described a health services research program that engages provincial government decision makers and health authorities in Manitoba in defining the goals of the research. The decision makers and health authorities are involved in order to ensure that the research is relevant to them, as the ultimate users of the research. This program was supported by the CIHR Community Alliance for Health Research Initiative. The combination of the Manitoba government and availability of CIHR team funding were key success factors.

Since 2001, *The Need to Know Team* of the Manitoba Centre for Health Policy (MCHP), headed by Dr. Patricia Martens, has been a textbook example of the process of knowledge translation. Researchers, regional health authority representatives and provincial planners collaborate on research at all stages, from the development of the research questions to ensuring that the resulting data are used in evidence-based decision making and planning. Working together as a team built capacity among the academics and the planners.

One of the key recommendations made by Dr. Martens focused on the need for sustained, long-term funding in support of stakeholder relationships, tool development and other knowledge translation efforts. Dr. Martens pointed out that the primary key to success for this project was the combination of support and funding from both the Manitoba government and CIHR, to implement and sustain this initiative.

Additional key recommendations made by Dr. Martens included the following:

- **Capacity building at the level of both the research and receptor audiences is required - e.g., learning to understand systematic reviews for receptors, learning to understand government context for researchers**

  In response to the question “How do you deal with the government when they do not like your results? How do you respond?” Dr. Martens replied that it is all about building relationships, plus the need for the research team to be independent from the government body requiring the research evidence (i.e., working in partnership with the government body rather than working for them). As part of the relationship building, it is critical to identify early wins and provide frequent briefings so that the government body is in a position to respond to the research results.

  A recurring point that emerged from the discussion was that the Canadian health care system needs to see itself as a receptor of knowledge. If you look at the private sector, R&D is undertaken to improve products and processes. If you look at the health sector, the R&D of researchers is sometimes disconnected from products, policy and services.

What Does Knowledge Translation Mean for a Hospital-Based Research Institution?

**Dr. Andreas Laupacis** *(The Li Ka Shing Knowledge Institute, University of Toronto)* highlighted the significant challenge of KT being entirely context dependent by describing one of his experiences at the Institute for Clinical and Evaluation Sciences. This example also highlighted that KT activities must follow the acquisition of a strong research base.

Dr. Laupacis began by describing one of his experiences at the Institute for Clinical and Evaluation Sciences (ICES). The ICES is an independent, non-profit organization that conducts research on a broad range of topical issues to enhance the effectiveness of health care for Ontarians. Internationally recognized for its innovative use of population-based health information, ICES knowledge provides evidence to support health policy development and changes to the organization and delivery of health care services.
The Ontario Ministry of Health and Long-Term Care (OMHLTC) approached ICES for information related to the evidence-base on PET scanning. The report was submitted without a discussion of the policy and systems implications of the research findings between the authors and the Ministry. Several months later, when the question of the effectiveness of PET scanning became a critical issue for the Ministry, the provincial government approached the authors for policy and program advice based on the evidence that was commissioned earlier. This example identifies the significant challenge of knowledge translation being entirely context dependent – i.e. in some instances, a large knowledge translation intervention is required to effect change while in other instances knowledge translation happens relatively spontaneously.

During the discussion, it was noted that the researcher must take responsibility for the knowledge translation activities that follow the acquisition of a strong research basis on an issue that has the potential to have a significant impact on patients, populations or policy. It was recognized that there are a variety of contextual factors that need to be in place before a researcher embarks on translating research findings (which were identified in the preceding presentations - e.g., a strong evidence base, engagement of stakeholders). A coordinated suite of incentives at the level of funding organizations, provincial governments and universities would go a long way in fostering enthusiasm. It was also determined that there is still a strong role for CIHR in supporting research that will generate knowledge on “how to do knowledge translation” (i.e. the science of knowledge translation).

The Canadian Cardiovascular Outcomes Research Team (CCORT) is one of the CIHR Interdisciplinary Health Research Teams that has generated important results to help physicians provide better care to their patients, while providing policy makers with information that ensures a consistent quality of care for all individuals with cardiovascular disease. After highlighting CCORT’s and the top four keys to knowledge translation success (i.e., team, data, institutional support and funding), Dr. Tu made the following recommendations:

A. Research Community

- Without good research there is nothing to translate
- Identify and involve all key stakeholders early
- Invest in the web
- Need to become comfortable with working with the media
- Budget realistically for knowledge translation costs
- Consider taking a multi-faceted approach to translate research results: e.g., publications, website and media
B. Canadian Institutes of Health Research

- The definition of appropriate knowledge translation activities for each CIHR theme would provide greater clarity for the research community
- Improve website
- Provide media training/press releases to junior investigators
- Fund randomized control trials of alternative knowledge translation strategies
- Assist with stakeholder introductions, e.g., email lists of government decision makers
- Provide training in knowledge translation for researchers
- Mandate knowledge translation (5%?) as a percentage of the CIHR operating grant budget

A focal point of discussion centred on Canada’s need to expand commercialization beyond products to also include our well-documented expertise in systems and services. Currently, there is no push to commercialize systems and services. A model could be developed whereby, for those working in Canada, access to the systems and services would be free. Those working outside Canada could purchase expertise and access to systems and services.

Workshop participants were asked: “How do we use existing mechanisms to foster commercialization in the clinical, health services and population health domain?” Given the potential return on investment, all agreed that identifying ways to foster the commercialization of our experiences and platforms in the clinical, health services and population health domains is an important avenue to explore. Expanding the CIHR Proof of Principle program was identified as a potential strategy.

It was also recognized that undertaking knowledge translation activities and research must be viewed as a desirable career path. For this to happen, researchers require stable support for knowledge translation activities throughout their career trajectories. It was also recognized that researchers require recognition for knowledge translation efforts in the Common CV and by their host department and institution.

The Science of Knowledge Translation in Canada

Dr. Jeremy Grimshaw (University of Ottawa) reported that in the current situation, most knowledge translation practice is supported by a weak evidence base. As a result, current KT efforts may be ineffective or inefficient. This situation highlights the need for KT to be based on a mature research basis and the critical need for research syntheses. There are a wide range of KT research questions but few research groups globally working in this field. There is a need for KT methods (statistical methods, appraisal instruments, theories) to emerge, and capacity needs to be enhanced within Canada. There is an emerging critical mass of expertise developing in Canada but networks are weak and these must be facilitated. Canada is in a position demonstrate international leadership in building an evidence base on “how to do” KT successfully.

Dr. Grimshaw stated first that knowledge translation that focuses on practice or policy change needs to be based on a robust evidence base. Results of individual studies are rarely sufficient by themselves to justify practice or policy change. Overall, knowledge syntheses of global research evidence will provide the best evidence for knowledge translation activities. Second, we have limited evidence about how best to do knowledge translation and so need further research on the science of knowledge translation to optimise approaches.

Moreover, to build the knowledge translation community and research base, there is a clear need for funding opportunities above and beyond the CIHR Operating Grant Program, especially since Canada is currently in a position to demonstrate international leadership in building an evidence base on “how to do” knowledge translation successfully.

Dr. Grimshaw also noted that there is an emerging critical mass of researchers aligned with this field but there is currently no strong network through which researchers can interact with each other. The formation of a
pan-Canadian network for researchers in the field of knowledge translation was viewed as a critical next step. It was also noted that there are individuals outside the traditional fields – such as environmental sciences, urban planning and education – who have implemented successful knowledge translation efforts in their respective fields. It would be useful to explore whether these experiences are relevant to health care.

It was suggested that CIHR host a knowledge translation practice meeting that would bring together leaders on an annual basis as a forum to document best practices and provide guidance to CIHR.

The issue of building receptor capacity was also identified as being incredibly difficult by equally important to building research capacity. What is CIHR’s role in building receptor capacity? Programs designed to build receptor capacity were viewed as one potentially effective role for CIHR, and such programs could be undertaken with provincial agencies.

In particular, the SEARCH (Swift Efficient Application of Research in Community Health) Canada model could be looked towards as a best practice. SEARCH was launched by the Alberta Heritage Foundation for Medical Research (AHFMR) in 1996 as a twenty-four-month program to train community-based health professionals in the "how-to's" of applied health research, including accessing and assessing high quality information, and applying it in decision making. In April 2005, SEARCH Canada began operating independently, governed and funded by member organizations, which include AHFMR, Alberta’s nine health regions, and the University of Calgary. Today, SEARCH Canada is an Alberta-based public service organization dedicated to knowledge access, creation, and use by health managers, health providers, and their organizations.

Mechanisms to Foster Knowledge Translation and Knowledge Translation Research in Canada

Dr. Ian Graham (Vice-President, CIHR Knowledge Translation Portfolio) described the plans for the CIHR Knowledge Translation Portfolio, including clarifying “what knowledge translation is” at CIHR. When thinking about “what funding opportunities and other mechanisms are required to foster the translation of research findings more successfully to patients, populations and policy makers”, Dr. Graham asked the group to think in terms of the Science of Knowledge Translation, Integrated Knowledge Translation and End of Grant Knowledge Translation.

The Science of KT - Is about studying the determinants of knowledge use and effective methods of promoting the uptake of knowledge.

Integrated KT - Is a collaborative, participatory research approach that requires “integrating” stakeholders into the entire research process. Study stakeholders can be investigators from different disciplines, policy makers, decision makers, research funders, the public, clinicians and media. Examples of activities that these stakeholders can be involved in include shaping the research questions; deciding on the methodology; helping with data collection and tools development; interpreting the study findings, crafting the dissemination messages, and apply the findings.

End of Grant KT - Involves a broad spectrum of activities ranging from "diffusion" (e.g., publications, presentations), to “dissemination” (e.g., targeting messages to specific audience using strategies such as educational sessions, media engagement) to “application” of research findings. The application of research findings involves moving research into practice in cases where: (a) the strength of evidence is sufficient; and (b) there is a potential importance/impact of using the findings.
### Strengthening Knowledge to Action Workshop - Participant List

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<tr>
<th>Name</th>
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<tr>
<td>AUBIN, Jane</td>
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<td>KORNELENSEN, Jude</td>
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<td>ROBERTSON, Stephanie</td>
<td>Assistant Director, CIHR Institute of Genetics</td>
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<td>STIRLING, Elisabeth</td>
<td>Director, CIHR Knowledge Synthesis and Exchange Branch</td>
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<td>HAYDEN, Michael</td>
<td>Director and Senior Scientist, Centre for Molecular Medicine and Therapeutics, University of British Columbia</td>
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<td>TU, Jack</td>
<td>Senior Scientist, Institute for Clinical Evaluative Sciences</td>
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<tr>
<td>HÉBERT, Réjean</td>
<td>Dean, Department of Medicine, Université de Sherbrooke</td>
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# Strengthening Knowledge to Action Workshop - Agenda

**June 5, 2007**

## 1:00 – 1:30 PM

### Welcoming Remarks & Introductions
*Chair: Rod McInnes, Scientific Director, Institute of Genetics*

**Knowledge Translation at CIHR**
*Liz Stirling, Director, Knowledge Translation (KT)*
*Michelle Peel, Deputy Director, Commercialization Programs*

- CIHR mandate, vision, KT definition & strategic directions
- International Review Panel: KT and Commercialization
- Current tools and activities

### Hong Kong Room

## 1:30 – 2:45 PM

### KT Success Stories
*Chair: Rod McInnes, Scientific Director, Institute of Genetics*

- Stanley Zlotkin, University of Toronto
- Patricia Martens, University of Manitoba
- Andreas Laupacis, La Ka Shing Knowledge Institute
- Jack Tu, University of Toronto
- Jeremy Grimshaw, University of Ottawa

## 2:45 – 5:00 PM

### Analysis
*Chair: Rod McInnes, Scientific Director, Institute of Genetics*
*Facilitators: Patrick McGrath, Dalhousie University & Jeremy Grimshaw, University of Ottawa*

**What obstacles can we identify?**
- What obstacles did you have to overcome? (i.e., at the level of funding, at the level of host institution, etc.)
- What are the barriers that CIHR can remove?
- What are the gaps in existing funding opportunities?

**What enablers can we identify?**
- What have you found to be successful KT strategies?
- What conditions and enablers were in place that facilitated your KT successes?

**What else is required to increase CIHR KT success stories?**

### Break-out Groups:
*Hong Kong Room & Tokyo Room*

## 4:00 – 4:15 PM

### Health Break

### Hong Kong Room

## 4:15 – 5:15 PM

### Report Backs from Break-out Groups: What have we heard?
*Chair: Andreas Laupacis, Li Ka Shing Knowledge Institute*
*Facilitators: Patrick McGrath, Dalhousie University & Jeremy Grimshaw, University of Ottawa*

### Hong Kong Room
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<th>Time</th>
<th>Session</th>
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<td>8:00 – 8:30 AM</td>
<td>Re-visit Previous Day’s Discussion</td>
<td>Chair: Cy Frank, University of Calgary&lt;br&gt;Jeremy Grimshaw, University of Ottawa</td>
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<td>8:30 – 9:00 AM</td>
<td>Lost in Knowledge Translation – CIHR’s Map</td>
<td>Chair: Cy Frank, University of Calgary&lt;br&gt;Ian Graham, Vice President, Knowledge Translation</td>
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<td>9:00 – 10:15 AM</td>
<td>Implementation</td>
<td>Chair: Ian Graham, Vice President, Knowledge Translation</td>
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<td>What funding opportunities/other mechanisms are required to foster the translation of research findings more successfully to patients, populations and policy makers (i.e. leading more Canadian researchers to be strong candidates for KT Award)?</td>
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<td><strong>What do we need to change to have a significant increase in translating research findings to patients, populations and policy makers in the next five years?</strong></td>
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<td>• What CIHR programs and policies need to be in place to have more CIHR KT success stories?</td>
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<td>• Need for refinement of existing funding opportunities?</td>
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<td>• If we were to design a new KT funding opportunity to address identified gaps, what would it look like?</td>
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<td><strong>What is the necessary KT infrastructure?</strong></td>
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<td>• Should CIHR fund infrastructure?</td>
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<td><strong>Other issues:</strong></td>
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<td>• How should grants in a stronger Knowledge to Action Program be reviewed? i.e., what should the composition of the panel be?</td>
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<td>• What partnerships might be available to co-fund a stronger Knowledge to Action Program?</td>
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<td>10:15 – 10:30 AM</td>
<td>Health Break</td>
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<td>10:30 – 12:00 PM</td>
<td>Group Reports</td>
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<td><strong>What have we concluded?</strong></td>
<td>Chair: Rod McInnes, Scientific Director, Institute of Genetics</td>
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<td><strong>Next Steps</strong></td>
<td>Chair: Ian Graham, Vice President, Knowledge Translation</td>
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A. Knowledge Translation Funding Opportunities

End-of-Grant Knowledge Translation Supplement
An important part of CIHR's mandate is to translate knowledge into improved health for Canadians. Knowledge translation (KT) is the exchange, synthesis and ethically-sound application of knowledge - within a complex system of interactions among researchers and users - to accelerate the capture of the benefits of research for Canadians through improved health, more effective services and products, and a strengthened health care system. The KT branch will provide supplemental funding for KT activities at the end of a CIHR grant when it is appropriate to disseminate the results of the research beyond the traditional scientific community and using methods supplementary to and in addition to publication in peer reviewed journals.

Fellowship - Priority Announcement: Knowledge Translation
Part of CIHR's mandate is to promote research that addresses the creation of new knowledge and its translation into improved health for Canadians, more effective health services and products and a strengthened Canadian health care system. The purpose of this funding opportunity is to further strengthen knowledge translation (synthesis, exchange and ethically sound application of knowledge) by supporting knowledge translation researchers early in their career. It is expected that this targeted investment will lead to a better understanding of concepts and theories that underlie effective KT. The specific objectives of this funding opportunity are:

- To further strengthen knowledge translation by supporting knowledge translation researchers early in their career
- To lead to a better understanding of concepts, theories and practices that underlie effective KT.
- To move research in practice

New Investigator - Priority Announcement: Knowledge Translation
It is expected that this targeted investment will lead to a better understanding of concepts and theories that underlie effective Knowledge Translation. Knowledge translation is the exchange, synthesis and ethically-sound application of knowledge - within a complex system of interactions among researchers and users - to accelerate the capture of the benefits of research for Canadians through improved health, more effective services and products, and a strengthened health care system.

The purpose of the New Investigator Salary Award program is to provide New Investigators the opportunity to develop and demonstrate their independence in initiating and conducting health research through provision of a contribution to their salary. A New Investigator is defined as a researcher who has held a full time research appointment for a period of 0 to 60 months as of the September competition deadline.

Relevant Research Areas: Research programs in knowledge translation science (implementation science)

Operating Grant: Knowledge to Action
Part of CIHR's mandate is to promote research that addresses both the generation and application of new knowledge. The purpose of this funding opportunity is to build and strengthen teams engaged in knowledge translation (KT) at the community, regional, provincial or federal level by funding KT and implementation activities of researchers and decision makers/knowledge users. Applications will be reviewed by a merit review committee (comprised of both researchers and decision makers). This investment is expected to position recipients to accelerate the translation of knowledge to strengthen Canada’s health care system and/or improve the health of Canadians. Knowledge to Action Grants will support knowledge translation and implementation projects of up to 2 years duration.
Operating Grants - Priority Announcement: Knowledge Translation
The CIHR Knowledge Translation Branch will provide funding for applications that are determined to be relevant to the research priority areas described below. More information on the research priorities of the Knowledge Translation Branch can be found on their website.

- KT Research Excellence - Advancing research in the use of health-related knowledge across the various levels of decision-making in the health system
- Building KT Networks - Developing and sustaining a broad range of researchers and individuals involved in the exchange and use of health-related knowledge
- Support Excellence in KT - Developing and sustaining innovative environments that enable and catalyze the effective use of health knowledge

Prize: Knowledge Translation
The CIHR Knowledge Translation Award honours and supports individuals, teams or organizations that make an outstanding contribution to the health of Canadians or to the health system through exemplary knowledge translation. Nominated individuals, teams or organizations will be assessed on innovative and significant achievements in knowledge translation activities relevant to any area of health research (e.g., biomedical, clinical, health services and policy, and population and public health). The achievements of the individual(s), team(s) or organization(s) that are recipients of the CIHR Knowledge Translation Award will be celebrated at the annual CIHR Awards Ceremony held in Ottawa each fall.

Synthesis Grant: Knowledge Translation
Part of CIHR’s mandate is to promote research that addresses the creation of new knowledge and its translation into improved health for Canadians, more effective health products and services and a strengthened health care system. The purpose of this Request for Applications is to further strengthen knowledge translation by funding research syntheses across CIHR’s four themes: biomedical, clinical, health systems and services and the health of populations, societal and cultural dimensions of health and environmental influences on health, in order to support evidence-informed decision-making. It is expected that this targeted investment will lead to more research syntheses in selected, high priority, eligible thematic research areas related to health and health care.

Training Award: Health Research Communications
CIHR’s mandate is to create new knowledge and to translate that knowledge into improved health for Canadians, more effective health services and products and a strengthened Canadian health care system. The purpose of this Request for Applications is to build capacity in science journalism and biomedical communications. By increasing the number of Canadians engaged in communicating the results of health research, in a variety of formats, CIHR hopes to raise the level of understanding of health research across a variety of audiences. It is expected that this targeted investment will lead to more effective communication of health research in Canada.

B. Commercialization Funding Opportunities

Collaborative Health Research Projects (NSERC Partnered)
The Collaborative Health Research Projects (CHRP) program supports focused collaborative research projects involving any field of the natural sciences and engineering and the health sciences. If successful, the projects will lead to health benefits for Canadians, more effective health services, or economic development in health-related areas. The proposed project may range from fundamental knowledge creation to research on knowledge application relevant to industry or public policy. Typically, support will be for up to three years for defined projects with milestones, a beginning, an end, and clear decision points. In the context of improved health for Canadians, the objectives of the Collaborative Health Research Projects (CHRP) program are to:

- translate research results to end users/stakeholders; (the mechanism for translation must be clearly described)
• encourage the NSERC and CIHR communities to **collaborate** and integrate their expertise and research activities

• advance **interdisciplinary research** leading to knowledge and technologies useful for improving the health of Canadians

• **train highly qualified people** in collaborative and interdisciplinary research of relevance to health

**Operating Grant: Proof of Principle**
CIHR's Commercialization and Innovation Strategy provides a coherent framework for transforming health research into action, improving the quality of life and stimulating economic development through discovery and innovation. To address the challenges and take best advantage of Canada's strengths, CIHR's Commercialization and Innovation Strategy has developed four complementary and synergistic themes: Research, Talent, Capital and Linkages. The Capital theme is focused on facilitating the growth of high-risk small business through development of better integrated, cohesive and knowledgeable capital.

Proof of Principle Phase I (POP-I) Grants will fund proof of principle research projects of up to 12 months duration designed to advance discoveries/inventions towards commercializable technologies, with a view to attract new investment and create new science-based businesses.

Proof of Principle Phase II (POP-II) Grants will fund proof of principle research projects up to 12 months duration at the co-investment stage undertaking follow-on proof of principle activities in partnership with a non-academic investor. This funding opportunity is aimed at providing a platform to better enable the academic institution/researcher to move the discovery/invention further down the innovation pipeline.

**Science to Business**
The Talent theme of CIHR's Commercialization and Innovation strategy is focused on developing the very best Canadian expertise in research, technology transfer, venture capital and business expertise. CIHR's Science to Business (S2B) program is a partnership with Canadian business schools to encourage qualified PhDs in health research to pursue health and biotechnology stream MBAs. It is anticipated that graduates of S2B supported MBAs will pursue careers in research, management, regulatory affairs, public policy, patent law, and other specialties required to improve capacity and performance of commercialization and innovation. The long-term goal of this program is to strengthen the Canadian health research translational landscape by developing a cadre of entrepreneurs and venture capitalists knowledgeable in health research and business management and by fostering an entrepreneurial culture within the research community.