



# Institute of Nutrition, Metabolism and Diabetes ENVIRONMENTS, GENES AND CHRONIC DISEASE

## REPORT on the PARTNER FORUM

June 10 – 11, 2015  
Ottawa



CIHR IRSC



Canadian Institutes  
of Health Research    Instituts de recherche  
en santé du Canada

Canada



Canadian Institutes of Health Research  
160 Elgin Street, Room 10-501B  
Address Locator 4809A  
Ottawa, ON K1A 0W9

CIHR Institute of Nutrition, Metabolism and Diabetes  
Banting Building, Room 207L  
100 College St., Toronto, ON M5G 1L5

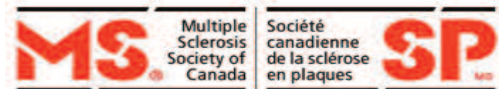
© Her Majesty the Queen in Right of Canada (2015)  
Cat. No.: MR4-43/2015E-PDF  
ISBN: 978-0-660-03294-8

# Table of Contents

<b>Report Overview .....</b>	<b>1</b>
<b>Part I: Applicant Section.....</b>	<b>2</b>
<b>A. Building on Success .....</b>	<b>2</b>
Welcome and Opening Remarks.....	2
Panel: Looking Back – Looking Forward.....	2
a. Insights on the Peer Review Process .....	2
b. Optimizing the Benefits of Publicly-funded Research: Sharing Knowledge and Considering Ethics .....	3
b. Integrating Aspects of Aging into Environment X Gene Research .....	4
c. Integrating Aspects of Sex and Gender into Environment X Gene Research .....	4
<b>B. Environments and Measures .....</b>	<b>5</b>
Environmental Measures / Toxicology .....	5
Plenary discussion.....	5
<b>Part II: Networking Session .....</b>	<b>6</b>
Partnerships at CIHR .....	6
Building Interdisciplinary Partnerships – Foundation for Success.....	7
CIHR Environments & Health Roadmap Signature Initiative .....	7
<b>A. Innovation in Knowledge Translation .....</b>	<b>8</b>
Keynote Presentation: The PCSK9 Revolution – Experience Gained from its Discovery to Bedside Clinical Applications.....	8
<b>B. Developing Partnership Opportunities .....</b>	<b>9</b>
Thematic Concurrent Sessions.....	9
<b>C. Maintaining Partnerships that Work.....</b>	<b>11</b>
Panel and Discussion.....	11
Closing Remarks .....	13
<b>Appendix 1: Final Forum Agenda .....</b>	<b>14</b>
<b>Appendix 2: Forum Speakers.....</b>	<b>17</b>
<b>Appendix 3: Partners .....</b>	<b>18</b>
<b>Appendix 4: CIHR Staff .....</b>	<b>20</b>
<b>Appendix 5: Reference.....</b>	<b>21</b>

## Thank you to our Partners

---



## Report Overview

The Institute of Nutrition, Metabolism and Diabetes (INMD) convened the Environments, Genes and Chronic Disease (EGCD) Partner Forum June 10–11, 2015 in Ottawa. This interactive event brought together 60 participants, including applicants successful at the Letter of Intent (LOI) stage of the CIHR EGCD Programmatic Grants competition, potential partners from government, health charities and the private sector, and CIHR representatives. The goal of EGCD Programmatic Grants is to advance understanding of how environment-gene interactions and environment-microbiome-gene interactions effect the development of chronic non-communicable disease, disease patterns, and human health across the life course.

The forum created a focused and collaborative environment where applicants, partners, CIHR, and other stakeholders could work and learn together. The Partner Forum objectives were to:

- o Develop co-funding and in-kind partnerships which have the capacity to generate exciting new knowledge, as well as to leverage CIHR, applicant and partners investments in EGCD research;
- o Provide opportunities for applicants and potential partners to:
  - Share perspectives on parts of the EGCD LOIs and explore ways to strengthen full applications
  - Learn from the experience and insights of expert speakers and others involved in EGCD research and partnership development.

As part of the agenda, applicants presented and interacted with other applicants and partners about their proposed Programs of Research. Twenty concurrent presentations briefly detailed the current composition of research groups, the background and rationale for their chosen program of research, research goals and objectives, and anticipated outcomes – all of which enabled a greater understanding of each application, potential areas of convergence and collaboration, and comments of a more technical nature.

Through the two days, central themes of knowledge generation to knowledge translation, and the potential of partnerships to assist with further shaping and strengthening of applications were discussed. Senior scientists shared findings from cutting-edge research and implications arising for population health risk assessment and translational research, while illustrating innovative approaches to partnerships and knowledge translation. Throughout, creative partnership development and engagement strategies were shared that reinforced the importance of early and consistent engagement for the effective implementation of innovative results.

This report provides an overview of the structure and flow of the Partner Forum, and the main discussion themes.



## Part I: Applicant Section

### A. Building on Success

#### Welcome and Opening Remarks

Philip Sherman, Scientific Director, CIHR Institute of Nutrition, Metabolism and Diabetes



Dr. Sherman welcomed applicants, who were successful at the Letter of Intent stage of the CIHR Environments, Genes and Chronic Disease (EGCD) Programmatic Grants competition, potential partners, and CIHR representatives to the partner forum. Referencing Health Research Roadmap II, CIHR's Strategic Plan (2014-15 to 2018-19), he described the importance of multidisciplinary collaboration and partnership as central to advancing the boundaries of health knowledge and as an essential component of the Programmatic Grants in EGCD.

Launched in November 2014, the Programmatic Grants in EGCD funding opportunity will fund up to seven grants worth \$2 million/year each over five years. Along with the Institute of Nutrition, Metabolism and Diabetes, three other CIHR Institutes – Institute of Aging, Institute of Infection and Immunity and Institute of Human Development, Child and Youth Health - are involved in the competition, along with a long list of partners who have the potential to provide support while enriching overall research endeavors. In the spirit of collaboration and optimizing partnerships, Dr. Sherman positioned the forum as an opportunity for a 'meeting of the minds' that could contribute to shaping and making grant applications stronger and (while there is no specific expectation) that might also enable exploration of new and creative partnerships among those present.

Facilitator Dorothy Strachan (Strachan-Tomlinson) provided insights into the planned workshop flow and process, urging participants to fully optimize networking opportunities by sharing perspectives, ideas, questions, and concerns. She pointed to diverse definitions of partner and partnership, inviting creative thinking about collaboration across boundaries not yet considered.

#### Panel: Looking Back – Looking Forward

##### a. Insights on the Peer Review Process

Allison Jackson, Deputy Director, Program Delivery, CIHR

Ms. Jackson suggested strategies and key considerations to support applicants as they proceed with this funding opportunity, as well as providing guidance related to the EGCD application process. She urged applicants to review the requirements carefully, making it clear which question or issue the proposal is addressing, and clearly linking the proposed topic to the eligible research area. The importance of addressing feedback provided in response to the LOIs, responding to all required elements, and of providing well-written applications that reviewers can easily understand was emphasized. Given that this funding opportunity provides the

weighted evaluation criteria, she advised applicants to ensure that they address these criteria in their applications. Ms. Jackson also noted that the budget description provides useful insights into expected activities and that budgets should include funds to attend a mid-term workshop, as indicated in the request for applications, which is available on [ResearchNet](#).

Participants followed this presentation with questions of clarification. Ms. Jackson confirmed that a second round of relevance reviews would be held, as applications may have changed after applicants receive comments from potential partners. She also confirmed that if more funding partners come on board and commit additional funding, there would be an opportunity to fund more applications.

#### **b. Optimizing the Benefits of Publicly-funded Research: Sharing Knowledge and Considering Ethics**

Jane Aubin, Chief Scientific Officer and VP Research, Knowledge Translation and Ethics, CIHR



Dr. Aubin spoke of three key dimensions integral to achieving the CIHR dual mandate of creating knowledge and translating knowledge: i) knowledge translation (KT), ii) data management and accessibility, and iii) ethics of knowledge creation and knowledge translation. She made reference to the dynamic, complex, and iterative nature of KT, which involves synthesis, dissemination, exchange, and ethically sound application of knowledge among researchers and knowledge users. This KT is integral to achieving outcomes that are responsive to needs of Canadians while influencing policy and practice.

A detailed overview of the Tri-Agency Open Access Policy on Publications (<http://www.cihr-irsc.gc.ca/e/32005.html>) reinforced the need for dissemination of publications arising from Programmatic Grants in EGCD. According to that Policy, all research papers generated from CIHR funded projects must be freely accessible through the Publisher's website or an on-line repository within 12 months of publication. CIHR-funded researchers are encouraged to deposit all peer-reviewed articles in PubMed Central Canada; it is permissible to use grant funds to pay for submission to open access repositories requiring payment. Frequently asked questions relating to the Tri-Agency Open Access Policy on Publications can be accessed at <http://www.science.gc.ca/default.asp?lang=En&n=A30EBB24-1>.

With regard to improving data management and accessibility to maximize the utility of publicly-funded research, Dr. Aubin referenced the *Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans* as a guide on these matters:

([www.pre.ethics.gc.ca/pdf/eng/tcps2/TCPS\\_2\\_FINAL\\_Web.pdf](http://www.pre.ethics.gc.ca/pdf/eng/tcps2/TCPS_2_FINAL_Web.pdf)), as well as the 2015 report on "Accessing Health and Health-related Data in Canada", commissioned by CIHR and developed by a Council of Canadian Academies expert panel: (<http://www.scienceadvice.ca/en/assessments/completed/health-data.aspx>).

Ethical issues inherent to knowledge creation and knowledge translation were illustrated, with emphasis on the importance of considering their implications throughout the research process. CIHR has developed an Ethics Education Module to assist researchers in thinking through these issues across all phases of research, accessible at: <http://www.cihr-irsc.gc.ca/e/48635.html>.

## **b. Integrating Aspects of Aging into Environment X Gene Research**

Sharon Nadeau, Assistant Director, Institute of Aging, CIHR

In her opening, Ms. Nadeau provided an overview of current statistics on aging and demographic changes, and noted that although the CIHR [Institute of Aging](#) (IA) is a collaborator on the Programmatic Grants in EGCD research funding opportunity, the LOIs did not include any aging relevant components. IA focuses on the advancement of knowledge in the field of aging with the strategic directions of optimizing population health and wellness over the trajectory of aging, and addressing the complex challenges of older adults. The Programmatic Grants in EGCD funding opportunity aligns with the first strategic research priority of the IA: life course trajectory as a determinant of active and satisfying aging.

IA has committed \$1 million to fund applications focusing on preventive approaches and lifestyle interventions to optimize health and wellness in any of the four funding pools. She noted that seniors do not need to be included as research subjects; however, reference to the late stages of life must be present in longitudinal studies. She also noted that studies on neurons, proteins, DNA, RNA, cellular biology, telomeres, imaging studies, and molecular drug targets all can relate to the trajectory of aging.

In discussion with participants, 65 years of age was confirmed as the standard used for ‘older adults’. Applications will be reviewed with an interest in ensuring a link with optimizing population health and wellness over the trajectory of aging, whether longitudinal in nature, or focused on a younger cohort with clear relevance to population health and wellness over the trajectory of aging. A relevance review will be done on all grants to determine what is relevant for IA. Accordingly, it will be key to elaborate relevance to aging with reference to optimizing population health and wellness over the trajectory of aging.

## **c. Integrating Aspects of Sex and Gender into Environment X Gene Research**

Anita Liu, Assistant Director, Institute of Gender and Health, CIHR

In her overview of the Institute of Gender and Health, Ms. Liu explained concepts central to sex and gender and the integration of sex and gender considerations into health research. With illustrations of how sex and gender influences health research, she suggested exploring the relevance of sex and gender in full applications both during the literature review, and throughout analysis and knowledge translation.

Ms. Liu proposed that research questions be developed with an eye on sex and gender differences, mechanisms underlying sex and gender differences, and their relevance in risk factors, conditions, and outcomes. In closing, she invited applicants to access the resources and expertise on sex and gender available at the Institute of Gender and Health web site: <http://www.cihr-irsc.gc.ca/e/8673.html>.



## B. Environments and Measures

### Environmental Measures / Toxicology

Daniel Krewski, Professor, Dept. of Epidemiology and Community Medicine, University of Ottawa, NSERC / SSHRC / McLaughlin Chair in Population Health Risk Assessment



Dr. Krewski provided an overview of his work in population health risk assessment, describing health risk science as multi-disciplinary, and aiming to identify and characterize health risks to populations and sub-populations. He introduced an integrated framework for risk management and population health, which now informs global health risk assessment practice (Krewski, Westphal, Andersen et al., 2014). Building on dimensions from the fields of population health and risk assessment and management, the framework provides a way to identify important health risks, enabling comprehensive analyses applied to risk management strategies, guiding health risk policy analysis and planning.

Partnership engagement has been central to Dr. Krewski's research program, involving many scientists and institutions to advance the field of health risk assessment. Reference was made to taking advantage of big data sets available in Canada and the United States. Participants discussed the challenges of pulling together data for a national study, as provincial/territorial data sets are not integrated. Another participant inquired about exposomes with an interest in availability of common tools. Dr. Krewski explained the concept as linked with exposure science and environmental exposure data, indicating there is no clear formula for measuring or modeling exposomes.

### Plenary discussion

Questions about the collection of patient samples led to a discussion about ensuring their availability for open access. The point was made that applicants need to clearly describe the rationale for, and value-add related to, including the development of new cohorts in their full applications, rather than linking into existing cohorts.

Participants asked whether partners listed in the program had already committed funding. CIHR explained that this was not necessarily so. Their intent was to engage partners early in the process to enhance early insights into the range of inquiry, and to learn more about the range of opportunities available for their potential contributions.

In response to a question regarding the distribution of LOIs across different funding pools listed in the RFA, participants were informed that for the full applications, the top applications in each funding pool will be funded, then all remaining applications will be pooled and funded in rank order, with a minimum of seven full applications being funded.

## Part II: Networking Session

The second part of this Partner Forum brought the successful applicants together with partners and speakers to focus on how to build effective partnerships as a fundamental to achieving proposed research outcomes.

### Partnerships at CIHR

Jane Aubin, Chief Scientific Officer and VP Research, Knowledge Translation and Ethics, CIHR

In her introduction, Dr. Aubin stated that interest in establishing new partnerships is central to CIHR Health Research Roadmap II: *Capturing Innovation to Produce Better Health and Health Care for Canadians* (<http://www.cihr.ca/e/48964.html#a2>). Grounded in three strategic priorities and four health research priority areas, Roadmap II responds to the challenges and opportunities facing the Canadian research enterprise, including the need to reduce the time between discovery and application of knowledge, the convergence of disparate fields, and the evolving health needs of Canadians. She expressed the importance of ensuring that CIHR and the researchers it funds are positioned to excel within a continuously changing context, noting the essential contributions of creative partnerships in achieving this strategy.

Dr. Aubin spoke of the CIHR role in partnerships as one that extends beyond the funding relationship to one of leveraging contributions and expertise that can serve to build research programs, beginning with early stages of articulating the problem and developing research questions. She emphasized CIHR's interest in bringing applicants together with partners at the front end of project development, and is looking forward to seeing the outcomes in relation to the EGCD research funding initiative.



## Building Interdisciplinary Partnerships – Foundation for Success

Bernhard van Lengerich, Former Chief Science Officer and Vice-President Technology Strategy, General Mills



Speaking about the relevance of partnerships to the food industry, Dr. van Lengerich referenced the complexity of the environment within which the food industry operates. Global population growth, urban expansion, the evolving scarcity of water and land, commodity price volatility, and variable and divergent demographics all call on collaborative partnerships to support effectiveness. He noted that traditional 'R & D' is outdated, as new and innovative approaches and trusted interdisciplinary arrangements are now *de riguer* when addressing complex problems.

Based on his experience, Dr. van Lengerich commented that effective partnerships require willingness to commit, strong competencies, and infrastructure and resource capacity. Beginning a partnership requires meeting early, sharing vision and passion, and being transparent in seeking alignment on the big picture. He spoke of ecosystem partnerships; in essence, multidisciplinary inputs to achieve needed innovations. Dr. van Lengerich provided the example of a global partnership in food solutions to address food security in Africa where over 7,000 employees currently volunteer to solve food production issues.

## CIHR Environments & Health Roadmap Signature Initiative

Marc Ouellette, Scientific Director, Institute of Infection and Immunity, CIHR



Dr. Ouellette began his presentation with a global perspective, mentioning WHO estimates suggesting 24% of the global burden of disease and 23% of all deaths are attributable to environmental factors. On this understanding, CIHR undertook a four-year, comprehensive consultative process in developing a Environments and Health Roadmap Signature Initiative. Funding priorities are expected to be launched in mid-2015 with a focus on three nexus areas (agri-food, resource development and urban form) addressed by three overarching goals. The aim is transformative knowledge creation and knowledge translation to:

- i. Leverage and enhance data platforms for etiologic, measurement and intersectoral prevention research that have the greatest relevance to the priority nexus areas;
- ii. Advance understanding of how environment-gene-microbiome interactions affect disease patterns and human health across the life course; and
- iii. Advance understanding of how to prevent and mitigate environmental threats and promote healthful environments within Canada and globally.

Dr. Ouellette also spoke of the role of CIHR in the Future Earth initiative, an international hub formed to facilitate international engagement and work towards an integrated research model supportive of global approaches to environmental change research. The Initiative is guided by three themes: dynamic planet, global sustainable development, and transformations toward sustainability. The Secretariat, based in Montreal, will coordinate global hubs situated in the United States, Sweden, Japan, and France with the intent that they will function as a single entity.

In discussion, Dr. Ouellette indicated that the “one health” approach, [www.onehealthglobal.net/what-is-one-health/](http://www.onehealthglobal.net/what-is-one-health/) involving collaborations among health professionals and other scientific health and environmentally-related disciplines, focuses on human health and animal health, and that it is embedded within the Environments and Health Roadmap Signature Initiative.

Dr. Ouellette closed by noting that there are many different scenarios guiding international partnerships. Where funding for approved international activities is concerned, the onus is on the Nominated Principal Applicant (NPA) overseeing grant administration to transfer money globally.

## A: Innovation in Knowledge Translation

### Keynote Presentation: The PCSK9 Revolution – Experience Gained from its Discovery to Bedside Clinical Applications

Nabil G. Seidah, Director, Laboratory of Biochemical Neuroendocrinology, Clinical Research Institute of Montreal (IRCM), Quebec; Professor, Department of Medicine, University of Montreal; Canada Research Chair in Precursor Proteolysis



Dr. Seidah spoke of his 30-year scientific journey leading to the discovery of PCSK9. PCSK9 is an enzyme involved in the regulation of low-density lipoprotein cholesterol (LDL-C) in the bloodstream, which is an important factor in the development of cardiovascular disease (CVD). The discovery of PCSK9 ultimately led to the development of several potential drugs to treat hypercholesterolemia and prevent CVD. Approval of the first of a new class of therapeutics (PCSK9 inhibitors) is expected in mid-2015.

As an illustration of the scientific collaboration and engagement since its discovery, Dr. Seidah noted that more than 1,300 papers have been published on the PCSK family of enzymes, enabling active dissemination and uptake of discoveries. He noted that clinical trials were conducted on patients already on statins and patients resistant to statins with highly favourable results. While the estimated cost of treatment is likely to be high, he suggested the level of interest and anticipated industry response will heighten competition and eventually lower costs.

In closing, Dr. Seidah commented on the importance of the dynamic collaboration he experienced with many individuals, groups and organizations throughout his career in leading to this exciting discovery.

## B. Developing Partnership Opportunities

### Thematic Concurrent Sessions

During concurrent sessions, the 20 invited applicants described their proposed projects with a focus on research goals and objectives, anticipated outcomes, and potential challenges. Following each presentation, participants engaged speakers in discussion and questions related to their projects. These sessions served as an opportunity for scientific inputs and exchange, while providing partners with information and insights into various areas of proposed investigation. **Table 1** provides the names of successful NPA and projects at the LOI stage of the CIHR EGCD Programmatic Grants competition.

**Table 1. Nominated Principal Applicants and Proposal Titles**

NPA / Institution	Proposal Title
Philip Awadalla Hôpital Sainte-Justine (University of Montréal)	Determining the genetic and environmental factors associated with metabolic phenotypes across Canada
Chris Carlsten University of British Columbia	Genomics, asthma and airborne exposures: From vulnerability to prevention
Susanne Clee University of British Columbia	Molecular mechanism of a gene-stress-sex interaction on obesity
Vernon Dolinsky University of Manitoba	The developmental origins of pediatric obesity and obesity-related complications
Mark Goldberg Research Institute of the McGill University Health Centre	The effects of very small particles on developing cardiovascular and respiratory diseases
Jennifer Gommerman University of Toronto	Elucidating the gene-environment Interactions that drive autoimmune disease among South Asian Canadians – The GEMINI Project
Paul Goodyer Research Institute, McGill University Health Centre	Interactions between host and viral genes in the pathogenesis of nephrotic syndrome
Marie Hudson Jewish General Hospital (McGill University)	Meta-Epigenomic Research in Autoimmune Diseases – The M-Eriad Program
Suzanne King Douglas Hospital Research Centre (McGill University)	The SPIRAL prenatal maternal stress program: Leveraging genetic and environmental data from three natural disaster studies
Robert Levitan Centre for Addiction and Mental Health (University of Toronto)	Early post-natal gene by environment effects on chronic obesity
Giamal Luheshi Douglas Hospital Research Centre (McGill University)	Interaction between neuroinflammation and genetic vulnerability in early childhood development and behavioral effects



**Table 1. (continued)**

NPA / Institution	Proposal Title
Patrick MacDonald University of Alberta	Environment-gene Interactions in human insulin production and diabetes
Alberto Martin University of Toronto	The impact of the gut microbiome and environment on the development of colorectal cancer
Maya Saleh McGill University	A Canada-Japan integrative meta-omics approach to define diet-microbiome derived metabolites that promote inflammatory bowel disease in genetically susceptible individuals
Gregory Steinberg McMaster University	Gene Environment Team on Brown/beige Adipose Tissue: GET_BAT
Alain Stintzi University of Ottawa	The diet-microbiota-gut axis in pediatric inflammatory bowel disease
Padmaja Subbarao Hospital for Sick Children (University of Toronto)	Gene by environment interactions in the development of non-communicable diseases: Asthma
Jacquetta Trasler Research Institute, McGill University Health Centre	Assisted reproductive technologies and folic acid supplementation: Gene-environment interactions and neurodevelopmental and metabolic outcomes in children
Stuart Turvey University of British Columbia	Genes by environment interactions in the development of non-communicable chronic respiratory diseases, asthma and chronic obstructive pulmonary disease
Ann Yeh Hospital for Sick Children (University of Toronto)	Environmental and genetic contributions of vitamin D to pediatric multiple sclerosis

## C. Maintaining Partnerships that Work

### Panel and Discussion

#### i. Malcolm King, Scientific Director, Institute of Aboriginal Peoples' Health, CIHR

Dr. King spoke of the importance of viewing engagement of First Nations, Inuit and Métis (FNIM) populations in research endeavors not only as subjects but as partners. He noted there are about 800 Aboriginal communities across Canada. Dr. King raised the importance of ensuring that respect, relevance, reciprocity, and relationships are integral in partnerships.

He noted that the Assembly of First Nations collects data on Aboriginal populations in Canada, with the best health database held by the First Nations' Governance Council. He urged applicants to think of Aboriginal communities as a form of intellectual capacity that needs to be recognized and integrated within research programs. FNIM communities have knowledge to contribute and will help investigators on areas of interest to First Peoples. He also made reference to a number of access points to support Aboriginal health research, including funding available through the CIHR Roadmap Signature Initiative, Pathways to Health Equity for Indigenous Peoples (<http://www.cihr-irsc.gc.ca/e/43630.html>), National Association of Friendship Centers (<http://nafc.ca>), and the Native Women's Association of Canada (<http://www.nwac.ca>).

#### ii. Marie-Josée Hébert, Professor of Medicine, University of Montreal, Co-Director of the Canadian National Transplant Research Program

Dr. Hébert provided information on the Canadian National Transplant Research Program (CNTRP), launched in 2013. The CNTRP unites three major areas: solid organ transplantation, donation and critical care, and hematopoietic cell transplant. In so doing, these distinct areas are increasingly sharing a common language, supporting joint and individual synergies. The genesis of CNTRP was in response to a 2012 CIHR request for proposals with a requirement for collaborative and integrative research. Now active in 22 sites spanning nine provinces, six projects have become foundational to the CNTRP.

CNTRP's early orientation was focused on, collectively and through consultation, exploring where a difference could be made. To this end, harmonized scientific objectives were adopted and committees established to advance the objectives and form strategic partnerships. CNTRP has further developed research efforts, as well as launching patient and public engagement strategies. Dr. Hébert commented that the CNTRP structure has made a tremendous difference to collaboration, by advancing strategies in a meaningful way that would have been challenging without this supportive national entity.

#### iii. Stephen Robbins, Scientific Director, Institute of Cancer Research, CIHR

Dr. Robbins provided examples of partnerships formed by the Canadian Cancer Research Alliance (CCRA), as a means of building coherence across the sector as well as for raising funds. In the first example, he spoke of a partnership model developed by CCRA in collaboration with 34 agencies funding and working on cancer. The partnership framework enables collaboration on

an overall mandate through a shared leadership model. The partnership forum meets quarterly to identify and respond quickly to issues. He commented on the time taken to build trust, which has resulted in the partnership retaining all but one member since formation.

As a second example, Stand Up to Cancer (SU2C) Canada is a partnership involving US counterparts and the American film industry to raise funds for cancer research. Dr. Robbins shared their experience leveraging up to \$20 million from a \$1.5 million base. Efforts are underway to promote this partnership model as credible for leveraging additional investments in Canada, including one focused on cancer prevention.

In both examples, Dr. Robbins spoke about the importance of investing time and commitment, and that while trust is often spoken about, generosity is also needed, especially in relation to sharing credit. Dr. Hébert echoed Dr. Robbins' point about generosity saying that scientists need to be ready to do research differently; in essence, moving beyond territoriality to shared strategies that involve give and take.

In summary, the panel provided their top-line advice regarding maintaining partnerships that work. These included:

- Invest time in communications that includes broad outreach.
- Focus on partnerships and projects where you know that you can make a difference.
- Think about the governance body as a truly multidisciplinary group, bearing in mind that people have to work with one another.
- Get patients and caregivers involved early. Not only are their inputs important, but patient involvement can tone down technical vocabularies which in turn enables better understanding and knowledge exchange, while keeping people actively informed.
- Share and build a vision from the start.



## Closing Remarks

Philip Sherman, Scientific Director, CIHR Institute of Nutrition, Metabolism and Diabetes

In his closing remarks, Dr. Sherman expressed gratitude for the varied contributions of participants, stakeholders and staff, remarking on the significance of varying levels of experience and seniority in the room, particularly given the importance of developing the future generations of investigators in the field. He also expressed excitement about the breadth of partners interested in engagement and support of EGCD scientific endeavors.

Dr. Sherman again congratulated the successful LOI applicants, commenting on the event's success in generating opportunities for engagement between scientists and potential partners, while acknowledging the importance of future opportunities to promote exchange, collaboration, and partnerships.

## Appendix 1: Final Forum Agenda

<b>Part I: Applicant Session</b>	
Wednesday June 10, 2015 MAN/BC room	
2:00pm	<b>Registration</b>
<b>A. Building on Success</b>	
3:00pm	Welcome and Opening Remarks: Philip Sherman, Scientific Director, CIHR Institute of Nutrition, Metabolism and Diabetes
3:15pm	Meeting process: Dorothy Strachan, Facilitator Agenda, objectives, introductions, assumptions, guidelines
3:45pm	<b>Panel: Looking Back – Looking Forward</b> a. “Insights on the Peer Review Process”: Allison Jackson, Deputy Director, Program Delivery, CIHR b. “Optimizing the impact of your research: Data sharing, Knowledge Translation and Ethics”: Jane Aubin, CIHR Chief Scientific Officer and VP Research, Knowledge Translation and Ethics c. “Integrating Aspects of Aging into Environment X Gene Research”- Sharon Nadeau, CIHR Assistant Director, Institute of Aging d. “Integrating Aspects of Sex and Gender into Environment X Gene Research”- Anita Liu CIHR Assistant Director, Institute of Gender and Health
4:30pm	Plenary Q and A
<b>B. Environments and Measures</b>	
4:45pm	<b>Presentation:</b> “Environmental Measures/Toxicology”: Daniel Krewski, Professor, Dept. of Epidemiology and Community Medicine, University of Ottawa, NSERC/SSHRC/McLaughlin Chair in Population Health Risk Assessment
5:25pm	Plenary Q and A
5:45pm	Wrap-up on the Session: Dr. Philip Sherman and Scientific Directors

<b>Part II: Networking Session</b>	
Wednesday June 10, 2015	
5:45pm	Registration- Saskatchewan Room Refreshments and finger foods
6:00pm	Welcome to Networking Session: Philip Sherman
7:00pm	Group Dinner- Les Saisons Room
7:10pm	<b>Partnerships at CIHR and Introduction of Guest Keynote Speaker:</b> Jane Aubin, CIHR Chief Scientific Officer and VP Research, Knowledge Translation and Ethics



## Part II: Networking Session cont'd

Wednesday June 10, 2015

8:00pm	<b>Guest Keynote Speaker:</b> “Building Interdisciplinary Partnerships - Foundation for Success ” Bernhard van Lengerich, Former Chief Science Officer and Vice-President Technology Strategy, General Mills
8:20pm	Plenary Q and A
8:45pm	Closing: Philip Sherman

## Part II cont'd

Thursday June 11, 2015

MAN/BC Room

7:30am	BREAKFAST – MAN/BC Room
8:15am	Agenda Review/Preview – Dorothy Strachan <ul style="list-style-type: none"> <li>• Agenda, objectives, introductions, assumptions, guidelines</li> </ul>
<b>A. Innovation in Knowledge Translation</b>	
8:40am	“CIHR Environments & Health Signature Initiative”: Marc Ouellette, Scientific Director, CIHR Institute of Infection and Immunity
9:00am	<b>Keynote Presentation</b> <ul style="list-style-type: none"> <li>• Speaker Introduction: Philip Sherman</li> <li>• “The PCSK9 Revolution – Experience Gained from its Discovery to Bedside Clinical Applications”: Nabil G. Seidah, Director, Laboratory of Biochemical Neuroendocrinology, Clinical Research Institute of Montreal (IRCM); Professor, Department of Medicine, University of Montreal; Canada Research Chair in Precursor Proteolysis</li> </ul>
9:25am	Plenary Q and A
<b>B. Developing Partnership Opportunities</b>	
9:40am	<b>Thematic Concurrent Sessions:</b> <ul style="list-style-type: none"> <li>• Applicants present brief highlights of their successful Letters of Intent. Potential partners briefly present key interest areas for collaborating with applicants and other potential partners.</li> <li>• Discussions focus on collaborative approaches to maximizing success in the next phase of the EGCD Programmatic Grants competition – the full applications.</li> </ul>
10:45am	BREAK Rooms available for one-on-one Business to Business meetings
11:15am	Thematic Concurrent Sessions cont'd
12:15pm	LUNCH Oak Room Rooms available for Business to Business meetings
1:15pm	Thematic Concurrent Sessions cont'd

**Part II cont'd**  
Thursday June 11, 2015  
MAN/BC Room

<b>C. Maintaining Partnerships that Work</b>	
2:30pm	<b>Panel: Productive and Enjoyable Partnerships – What Works</b> <ul style="list-style-type: none"><li>• Stephen Robbins, Scientific Director, CIHR Institute of Cancer Research</li><li>• Malcolm King, Scientific Director, CIHR Institute of Aboriginal Peoples' Health</li><li>• Marie-Josée Hébert, Professor of Medicine, University of Montreal, Co-Director of the Canadian National Transplant Research Program</li></ul>
3:00pm	Plenary Q and A
3:15pm	Closing Remarks: Philip Sherman
3:30pm	Adjournment
Continued Networking	
Rooms available for Business to Business Meetings	

## Appendix 2: Forum Speakers

**Jane Aubin**

Chief Scientific Officer, CIHR Vice-President, Research, Knowledge Translation and Ethics Portfolio

**Marie-Josée Hébert**

University of Montreal  
Professor

**Allison Jackson**

Deputy Director, Program Delivery, Canadian Institutes of Health Research

**Christopher Kennedy**

Institute of Nutrition, Metabolism and Diabetes Institute Advisory Board Member

**Malcolm King**

Scientific Director, CIHR Institute of Aboriginal Peoples' Health

**Dan Krewski**

Professor, University of Ottawa

**Anita Liu**

Assistant Director, CIHR Institute of Gender and Health

**Marc Ouellette**

Scientific Director, CIHR Institute of Infection and Immunity

**Stephen Robbins**

Scientific Director, CIHR Institute of Cancer Research

**Nabil Seidah**

Director, Laboratory of Biochemical Neuroendocrinology, University of Montreal

**Philip Sherman**

Scientific Director, CIHR Institute of Nutrition, Metabolism and Diabetes

**Dorothy Strachan**

Partner, Strachan-Tomlinson and Associates

**Bernhard van Lengerich**

Former Chief Scientific Officer, VP Technology Strategy, General Mills Inc.

## Appendix 3: Partners

**Ágnes Baross**

Manager, Genome BC

**Diane Bouchard**

Director, Genome Quebec

**James (Jim) Brown**

Director, GlaxoSmithKline (GSK)

**Sean Caffrey**

Director, Alberta Epigenetics Network

**Karen Dewar**

Director of Genomics Programs, Genome Canada

**Dean Edwardson**

Member, Lambton Community Health Study Board

**Aida Fernandes**

Chief Science & Education Officer, Crohn's and Colitis Canada (CCC)

**Elisabeth Fowler**

National Director of Research, Kidney Foundation of Canada (KFOC)

**Mary-Ellen Harper**

Board Member, Canadian Obesity Network (CON)

**Hasan Hutchison**

Director General, Office of Nutrition Policy and Promotion,  
Health Canada

**Eric Leblond**

Territory Account Manager, Illumina Inc.

**Alison Mahon**

Vice-Chair, Board of Directors, Lambton Community Health Study

**Derek McKay**

President, Canadian Association of Gastroenterology (CAG)

**Crystal Palleschi**

Consultant, Lambton Community Health Study Board

**Esther Rhee**

National Program Director, Autism Speaks Canada

**Amyr Sayani**

Director, GlaxoSmithKline Canada

**Paul Sinclair**

Executive Director, Canadian Association of Gastroenterology (CAG)

**Michael Smith**

Sr. Sequencing Specialist, NorthEast, Illumina, Inc.

**William Yan**

Director, Bureau of Nutritional Sciences, Food Directorate,  
Health Canada



## Appendix 4: CIHR Staff

**Mary-Jo Makarchuk**

Assistant Director, Institute of Nutrition, Metabolism and Diabetes

**Kim Banks Hart**

Assistant Director, Institute of Nutrition, Metabolism and Diabetes

**Keeley Rose**

Project Manager, Institute of Nutrition, Metabolism and Diabetes

**Vera Ndaba**

Business Officer & Event Planner, Institute of Nutrition, Metabolism and Diabetes

**Erica Di Ruggiero**

Deputy Scientific Director, Institute of Population and Public Health

**Suzete Dos Santos**

Senior Advisor, Partnerships and Business Development

**Helen Loughry**

Executive-in-Residence, Business Development, Life Sciences Industry, Partnerships and Business Development

**Sharon Nadeau**

Assistant Director, Institute of Aging

**Jennifer Raven**

Assistant Director, Institute of Infection and Immunity

**Liz Stirling**

Assistant Director, Institute of Musculoskeletal Health and Arthritis

**Emily Torr**

Project Officer, Institute of Human Development, Child and Youth Health

**Caroline Wong**

Communications Project Manager, Institute of Circulatory and Respiratory Health

## Appendix 5: Reference

Krewski D, Westphal M, Andersen ME, Paoli GM, Chiu WA, Al-Zoughool M, Croteau MC, Burgoon LD, Cote I. 2014. A framework for the next generation of risk science. *Environ Health Perspect* 122:796–805; <http://dx.doi.org/10.1289/ehp.1307260>

