Summary Report 2014 Food for Health Workshop

Principles and Philosophies for Development of Ongoing Partnerships to Support Food-Health Research

Thursday, June 5, 2014

Co-Sponsored by



Canadian Nutrition Society Société canadienne de nutrition

and



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Summary Report

2014 Food for Health Workshop

Canadian Nutrition Society and ILSI North America Food for Health Workshop Thursday, June 5, 2014

Principles and Philosophies for Development of Ongoing Partnerships to Support Food-Health Research

PURPOSE

This report provides a summary of the workshop presentations and discussion on the principles and philosophies for the development of partnerships to support food-health research. It also incorporates key findings from a survey of Canadian Nutrition Society (CNS) members conducted in advance of the workshop.

BACKGROUND

Brief history/objectives of the Food for Health Workshops and CNS Involvement

In her presentation, Dr. Leah Gramlich highlighted the role of the CNS as an advocate for the use of nutrition to improve the health of Canadians, and to prevent and treat diseases through better nutrition. Beginning in 2011, CNS was motivated to develop a series of workshops borne out of concern for the lack of meaningful progress in advancing health using a food-based strategy. The objectives for the workshops are to:

- chart a go-forward course for the use for food-based strategies to advance health;
- facilitate partnerships and collaborative action; and
- be a catalyst to accelerate change.

The 2014 workshop builds on the foundation set forth in previous programs. Topics addressed in the previous programs are identified below.

- 2011 Food for Health Connection: Building a Deeper Collaboration
- 2012 Moving the Food for Health Agenda Forward: Tackling the Barriers of Regulation and Conflict of Interest
- 2013 Communication and Food Messaging: The Consumer Disconnect

From previous workshops, CNS has learned:

- There is a Knowledge Translation and Transfer Gap hindering progress on Food for Health strategies.
- A piecemeal approach to food-health initiatives is one of the major reasons for the KT gap as well as slow progress on consumer acceptance.

- There is a leadership gap in food for health which is impeding progress on the health agenda.
- There are multiple stakeholders with differing priorities which poses challenges to partnership and collaboration.
- Research and evidence supporting the role of food in disease modification or amelioration needs to be scientifically valid and credible.
- The healthcare community at large currently is not engaged and empowered to use foodhealth strategies to reduce the burden of chronic disease through modifiable risk factors.
- There is a need to focus on practical solutions that connect better with consumers if gains are to be made in maintaining and improving the health status of Canadians.

Looking ahead, there is realization that basic, applied and community research has evolved towards increased industry and academic collaborations which are increasingly being promoted by governments. This shift makes competing interests unavoidable. If forward progress is to be made, there must be a move to a reasonable weighing of both benefits & risks and a focus on scientific integrity.

Sponsors of the 2014 Workshop

The CNS and ILSI North America, a public nonprofit foundation, were the co-sponsors of the 2014 workshop.

Objective for the 2014 Workshop

The 2014 workshop explored the theme of **public-private research partnerships** to advance health through food-based strategies in Canada and provided a forum for attendees to exchange ideas on how multi-stakeholder collaborations based on food and nutrition can benefit the health of Canadians.

Speakers were asked to review their organization's experiences with collaborations as examples of potential areas for developing public-private partnerships. The audience was asked to share and exchange knowledge; think about what success might look like after this meeting; contribute to breakout discussion; and think practically and "outside the box."

Results of Pre-Workshop Survey

In advance of the workshop, a pre-workshop survey was sent to Canadian Nutrition Society members and previous workshop attendees to obtain information about the level of awareness of topics to be discussed as part of the 2014 workshop program. Dr David Ma presented the highlights from the survey responses and they are summarized below.

Survey Respondents (respondents could identify more than one sector)

- 56% Academia
- 19% Industry
- 6% Government
- 4% Non-governmental Organization (NGO)
- 21% Medical/Health Community
- 5% Other (student, research institute, healthcare researchers, retired, etc.)

What are <u>top opportunities</u> for industry, academia and govt collaborating financially on food-health research? Top responses:

- Strengthen evidence for action, credibility, nutrition literacy
- Improved knowledge exchange
- Improve awareness of each other
- Developing better nutritious foods
- Access to new funding sources Pooled resources

What are <u>top barriers</u> for industry, academia and government collaborating financially on food-health research? Top responses:

- Finding and developing a relationship with a potential partner
- Conflict of interest
- Poor alignment of interests/goals amongst partners
- Stereotypes (academics are slow; govt is bureaucratic; industry is profit oriented)

Rate <u>Your Knowledge of PPP</u> related to the Agencies shown below:

	Poor	Good	Excellent
AAFC	80%	12%	8%
CIHR	48%	45%	7%
NSERC	66%	32%	3%
Other *	45%	27%	27%

84% Responded that these programs were of interest to their industry/organization A key reason given for lack of knowledge: Poor awareness, information not reaching them in academia and industry.

*<u>Other organizations identified</u>: University specific institutions, Dairy Farmers of Canada, Alberta Canola Producers, Alberta Innovates Biosolutions, Dietitians of Canada, food industry, Ontario Ministry of Agriculture and Food, Public Health Agency of Canada

Creating Solutions and Opportunities

- Make it easy
- Facilitate interaction
- Better communication
- Break down silo's & stereotypes

Survey Conclusions

- There is appetite and interest for Public-Private Partnerships
- Recognition of need to make Public-Private Partnerships work
- Not sure how it works and whether "I" fit
- Recognition of potential benefits for consumers/knowledge translation and knowledge generation/innovation

WORKSHOP PROGRAM

Thursday, June 5, 2014 9:00 AM – 4:00 PM, Ft. William Salon B

9:00 AM	Welcome Robert Bertolo, PhD, CNS-SCN President and Assoc. Professor, Memorial University of Newfoundland		
9:10 AM	Introduction and Background Leah Gramlich, MD, FRCPC, CNS-SCN Advocacy Committee Chair and Professor of Medicine, Adjunct Prof in Agriculture Life and Environmental Sciences, University of Alberta David Ma, PhD, CNS-SCN Advocacy Committee Executive and Assoc. Professor, University of Guelph		
9:30 AM	Keynote Presentation: Review of Principles for Successful Public-Private Partnerships Andrea Baruchin, PhD, Senior Advisor to the President, Foundation for the National Institutes of Health (NIH)		
10:00 AM	Coffee Break		
10:15 AM	Case Studies: Potential Areas for Developing Public-Private Partnerships Eric Hentges, PhD, Executive Director, ILSI North America. A Public-Private Partnership: Branded Food Products Database for Public Health Maria Kalergis, PhD, RD, CDE, National Program Manager, Nutrition Scientific Affairs, Dairy Farmers of Canada. Investments in Dairy Research: Building Partnerships for Innovation		
11:00 AM	Panel Discussion		
12:00 PM	Lunch		
1:00 PM	Presentation: Focus on Partnerships Philip Sherman, MD, FRCPC, Scientific Director, Canadian Institutes of Health Research (CIHR) – Institute of Nutrition, Metabolism and Diabetes (INMD)		
1:20 PM	Presentation: Partnerships for delivering Agriculture and Agri-Food Canada's food and health research priorities; past, present and future Dan Ramdath, PhD, <i>Research Scientist, Agriculture and Agri-Food Canada</i>		
1:40 PM	Presentation: Strategy for Partnerships and Innovation Involving NSERC Richard Isnor, PhD, Manager, Atlantic Regional Office, Natural Sciences and Engineering Research Council of Canada (NSERC)		
2:00 PM	Presentation: Supporting Industry Relevant Research in Newfoundland and Labrador Paula Clarke , Director of Program Delivery with the Research & Development Corporation of Newfoundland and Labrador (RDC).		
2:15 PM	Breakout Session: Opportunities and Barriers to Establishing Public/Private Partnerships and Potential Areas that Lend Themselves to Public/Private Partnerships		

3:00 PM Report Back

3:50 PM Concluding Remarks Leah Gramlich, MD, FRCPC, CNS-SCN Advocacy Committee Chair and Associate Professor, Agriculture, Food & Nutritional Science, University of Alberta David Ma, PhD, CNS-SCN Advocacy Committee Executive and Associate Professor, University of Guelph

Speaker slide presentations and videos are available through the CNS and ILSI North America websites: <u>www.cns-scn.ca</u> www.ilsi.org/NorthAmerica/Pages/HomePage.aspx

SPEAKER PRESENTATION HIGHLIGHTS (See Appendix A for Speaker Bios)

<u>Keynote Presentation</u>: Review of Principles for Successful Public-Private Partnerships Andrea Baruchin, PhD, Senior Advisor to the President, Foundation for the National Institutes of Health (NIH)

Dr. Baruchin described the Foundation for the National Institutes of Health (FNIH) and the central role played by public-private partnerships in conducting its programs. The Foundation was founded in 1996 by an act of the United States Congress as a not-for-profit public charity that can raise private funds in support of the NIH mission. In addition to raising funds the FNIH has excelled at creating innovative cross-sector partnerships in a neutral, pre-competitive environment to tackle large biomedical challenges with great urgency and efficiency. Public-private partnerships—in many different forms—are the hallmark of the FNIH's work; they blend priorities and mission by employing innovation and flexibility. These partnerships offer a new way of generating the discoveries that improve health and change people's lives for the better. The partnerships combine the expertise and resources of NIH with those of industry, the public and philanthropic communities, to spark research that is innovative, collaborative, complex, and efficient.

Even though elements of public-private partnerships may be tailored to fit the needs of individual projects, Dr. Baruchin identified the key characteristics partnerships must have to be successful:

- A matrix that is greater than the sum of its parts;
- Well defined objectives, budgets, milestones and deliverables;
- Common governance, rules and legal framework;
- Realistic funding goals, expectations and timelines;
- Projects aligned with donor interest;
- Appreciation of the value of gifts;
- Recognition that collaboration adds complexity: *must "play nice with others!";*
- Be nimble, transparent and accountable.

<u>Case Studies</u>: Potential Areas for Developing Public-Private Partnerships

Case Study 1

A Public-Private Partnership: Branded Food Products Database for Public Health Eric Hentges, PhD, Executive Director, ILSI North America.

Assessing the nutritional health of the U.S. population depends on accurate and comprehensive data regarding the nutrient composition of commonly consumed foods. The U.S. Department of Agriculture (USDA) maintains a National Nutrient Database of the composition of such foods, and although the food industry has compositional data for their own products, very little of that data is publicly available through the database. Accordingly, the USDA/Agricultural Research Service (ARS), the International Life Sciences Institute (ILSI) North America and the ATIP (Agricultural Technology Innovation Partnership) Foundation have formed a Public-Private Partnership to enhance public health by augmenting the USDA National Nutrient Database with "nutrient composition of branded foods and private label" data provided by the food industry. This partnership will ensure this information will be made available to those who utilize such data including the government, the scientific community, proprietary end users, and the food industry.

Dr. Hentges indicated that ILSI North America's involvement in the Partnership stemmed from its work to identify 12 key principles (published in 2013) for the establishment and operations of research public-private partnerships:

- 1. Have a clearly defined and doable goal to improve the health of the public
- 2. Ensure that objectives will meet stakeholder partners' needs, with a clearly defined baseline to monitor progress and measure success
- 3. Select objective scientific measurements capable of providing common ground for both public- and private-sector research goals
- 4. Articulate a clear statement of work, rules, and partner roles, responsibilities, and accountability, to build in trust, transparency, and mutual respect as core operating principles
- 5. Considering the importance of balance, ensure that all members possess appropriate levels of bargaining power
- 6. Minimize conflict of interest by recruiting a sufficient number of partners to mitigate influence by any single member and to broaden private-sector perspectives and expertise
- 7. Adopt research questions and methodologies established by partners with no vested financial interest in them, ideally in the precompetitive space
- 8. Engage partners who agree upon specific and fundable research question(s) to be addressed by the partnership
- 9. Enlist partners who are committed to the long term as well as the sharing of funding and research data
- 10. Along with government and the private sector, include academics and other members of civil society as partners
- 11. Be flexible and ensure ongoing transparent communications
- 12. Consider a third-party convener to ensure equality at the table, clarify rules, establish operational guidelines, and specify funding arrangements

Dr. Hentges concluded by indicating that the public-private partnership provides the framework to convene the expertise to compile nutrient data on branded and private label products, secure the private sector engagement in providing this information, as well as the broad-based constituent funding necessary to maximize content and provide timely information for nutrition, agricultural and diet-related health policy on the nutrient composition of the U.S. food supply.

<u>Case Study 2</u> Investments in Dairy Research: Building Partnerships for Innovation Maria Kalergis, PhD, RD, CDE, National Program Manager, Nutrition Scientific Affairs, Dairy Farmers of Canada.

Dairy Farmers of Canada (DFC) is the national policy, lobbying and promotional organization representing Canada's farmers. DFC strives to create stable conditions for the Canadian dairy industry, today and in the future and works to maintain policies that foster the viability of Canadian dairy farmers and promote dairy products and their health benefits. Since the 1980's, the organization has invested in research to support these initiatives.

In 2010, a unique opportunity was presented via the Canadian *Agri-Science Clusters Initiative*, a program under the Growing Forward policy framework of Agriculture and Agri-Food Canada (AAFC). The goal of this program was to enable key industry-led agricultural organizations to mobilize a critical mass of scientific and technical resources to support innovation strategies for enhanced profitability and competitiveness. Initial support was for 3 years with possibility of renewal, starting in 2010 until March 31, 2013 with Government: Industry funding on a 3:1 ratio basis. This program specifically addressed research priorities and projects that were established in partnership with an independent scientific committee and involved several Canadian academic institutions.

Dr. Kalergis highlighted the opportunities of such partnerships: access to a large pool of funds, capacity building among many scientists and universities across Canada, and the training of a large number of highly qualified personnel. Some of the challenges include: large administrative burden and lack of co-ordination regarding knowledge transfer and translation. However, the experience of Dairy Famers of Canada with respect to private-public partnerships has been a long-standing one. Dr. Kalergis concluded by indicating that private-public partnerships are not only *possible*, but that they are also *ideal* by virtue of their ability to create a win-win situation for all parties involved.

<u>Presentation</u>: Focus on Partnerships: The CIHR Perspective Philip Sherman, MD, FRCPC, Scientific Director, Canadian Institutes of Health Research (CIHR) – Institute of Nutrition, Metabolism and Diabetes (INMD)

Dr. Sherman indicated that the Canadian Institutes of Health Research (CIHR) strongly values and supports the concept of collaboration. As stated in its strategic plan, "CIHR cannot fulfil its mandate without the collaboration and support of domestic and international partners." As such, CIHR seeks partnerships with organizations from the public, private and voluntary health sectors, as well as with international research funders. Partnerships at CIHR vary in scale and scope, ranging from in-kind support for workshops that bring together researchers and knowledge users, to financial support for multi-

million dollar research networks. This variability gives partners flexibility, as they can engage in large and small research funding initiatives.

CIHR strives to ensure that the partnership provides mutual benefit. A number of partnership models have developed over the years: CIHR has partnered directly with the private sector (traditionally with the pharmaceutical sector) to support workshops, enhance research capacity, promote career development and launch research funding opportunities. CIHR also creates funding opportunities that encourage or require applicants to seek matching funding from partners, which provides the opportunity for private sector organizations to work directly with applicants on projects supported by CIHR. In addition, CIHR partners directly with professional associations and health charities that also provide the opportunity for CIHR to partner indirectly with the private sector. In such cases, financial support from the private sector is leveraged by the professional association or health charity that can be matched by CIHR. In his conclusion, Dr. Sherman emphasized that there are a variety of opportunities to partner with CIHR to support future strategic funding research opportunities.

<u>Presentation</u>: Partnerships for Delivering Agriculture and Agri-Food Canada's Food and Health Research Priorities: Past, Present and Future Dan Ramdath, PhD, Research Scientist, Agriculture and Agri-Food Canada

Agriculture and Agri-Food Canada (AAFC) is the government agency with a range of responsibilities related to agriculture production, including research and development. Dr. Ramdath pointed out that at the top of AAFC's list of research priorities are two that relate to CNS's goals in sponsoring the series of Food for Health Workshops: 1) Enhancing human health and wellness through food and nutrition, and innovative products; and 2) Enhancing the quality of food and the safety of the food system.

As issues facing the agriculture and agri-food sector grow in complexity, collaboration has become the preferred model to maximize resources, tap into specialized expertise, and increase science, research and innovation capacity in Canada. Dr. Ramdath provided examples of collaborative projects focused on AAFC food and health research priorities:

Past Collaborations: The Story of Oats & Food Grade Soy Beans

<u>Recent Past and Present Collaborations</u>: Agricultural Regulatory Action Plan (ARAP) for Health Claims, Novel Foods; and Ingredients Partnering for Health Claim Substantiation

<u>Present & Future</u>: Substantiation of Health Claims, Novel Foods and Ingredients; Informing regulatory and policy decisions; Producing far-from-adoption applied science with broad stakeholder application; and Supporting innovation to improve economic prosperity

Dr. Ramdath highlighted some of the AAFC programs designed to leverage investment in research through collaboration; examples include: Growing Canadian Agri-Innovations Program and Agricultural Bioproducts Innovation Program.

<u>Presentation</u>: Strategy for Partnerships and Innovation Involving NSERC Richard Isnor, PhD, Manager, Atlantic Regional Office, Natural Sciences and Engineering Research Council of Canada (NSERC)

Dr. Isnor began his presentation by indicating that health-related science is a priority for federal research and development (R&D) investment. In 2012-13, the Natural Sciences and Engineering Research Council (NSERC), invested close to \$175 million in health and life-sciences related research conducted by Canada's post-secondary institutions. This is in addition to the direct and in-direct federal investments made in health and food-related R&D conducted by the business community, investments by regional economic development agencies and provincial governments, and research funded by other federal agencies such as the Canadian Institutes of Health Research (CIHR) and research conducted by federal departments and agencies such as the National Research Council (NRC). Its mandate is to promote and assist research, and its partnership programs help to foster collaborations between university researchers, colleges and other sectors – including government and industry. NSERC partnerships have typically been focused on: industry-driven research collaborations, strategic research projects & networks, commercialization, student training in industry, and college & community innovation.

Funding mechanisms for research in Canada have evolved considerably in the past decade to favour highly collaborative approaches. Numerous studies have shown that collaboration is the lifeblood of innovation, necessitating strong linkages between industry, academia and government. Canada must continue to embrace and pursue collaborative research arrangements, particularly between our post-secondary institutions and industry, in order to advance innovation and healthy outcomes in our food, nutrition and health sectors. Such efforts will facilitate better health for Canadian consumers, as well as new economic opportunities for the food sector. This presentation provided an overview of NSERC-funded research activities in Canada, drawing significantly on examples of collaborative food-for health related research underway in areas such as animal health and veterinary sciences, biomedical devices and imaging technology, informatics, cell biology (not disease treatment stage), and nutraceuticals. Dr. Isnor also outlined opportunities for further collaborative research arrangements involving industry and post-secondary institutions. An underlying philosophy is that making connections across sectors leads to collaborations that enable all parties to prosper.

<u>Presentation</u>: Supporting Industry Relevant Research in Newfoundland and Labrador Paula Clarke, Director of Program Delivery with the Research & Development Corporation of Newfoundland and Labrador (RDC).

The Research & Development Corporation of Newfoundland and Labrador (RDC) was created in 2009 to strengthen the focus on research and development (R&D) in the province. It recognizes that R&D is an important catalyst for innovation and, ultimately, for long-term economic benefit. The organization plays a leadership role in working with industry, academia, and government to strengthen R&D capabilities. While acting locally, the RDC thinks globally when investing in R&D capabilities. The RDC provides funding to those who undertake R&D and plays a role in the stewardship of its investment – in people, equipment, and facilities that support collaborative R&D. The RDC invests in two types of R&D projects: <u>Academic-led projects</u> that enhance R&D capacity & collaboration with business: Applicants must demonstrate project alignment with industry needs or development opportunities. Proposed R&D projects must demonstrate industry relevance and have significant potential for economic impact in Newfoundland and Labrador. The RDC helps support the development of highlyqualified researchers and works with academia to focus R&D activities on business needs.

<u>Business-led projects</u> that overcome technical risk and enhance company capabilities: A key element is the "R&D Proof of Concept" which helps reduce the technical and financial risk of pre-commercial research and development (R&D) projects for businesses where R&D is required to realize the commercial potential of innovative products, processes or services. Eligible activities include applied R&D, prototyping, performance testing against pre-determined criteria, field trials and small-scale demonstration projects. There can be additional partners in the project, but it is not necessarily required.

Ms. Clarke described a "good project" as one that depends on: the industry need and appropriate risk sharing (leverage); the stage of the R&D in terms of technical risk; project scope; and potential outcomes.

Key Conclusions from the Breakout Session Discussions

Breakout Groups were assigned to respond to the questions shown below; there were a total of 6 breakout groups with a mix of attendees from the academic, industry, and government sectors. The questions were posed to potentially advance a "go-forward action plan" to create a frame work to make partnerships more effective in Canada. Questions 1 and 2 were each assigned to one breakout group; questions 3 and 4 were each assigned to two breakout groups. Following group discussion, one participant from each breakout group reported on their group's discussion to the audience as a whole. Key points made in response to each question are shown below. (*Note: Participant Breakout Session assignments can be found in Appendix C.*)

1. After listening to the morning and afternoon speakers, reflect upon what you believe are the key barriers to address in making PPP activities successful. Consider the perspective of academia, government and industry.

Bringing the private sector into Public Private Partnerships:

- Perceived as getting harder
- A lot of social media is targeted against the private sector; leading to image issues
- Barriers
 - Cultural norms, education
 - Food industry is equated with poor public health
 - Lack of trust in the food industry
 - Perception that everyone has their own agenda that will not match up with the agendas of the other sectors
 - Projects that may appear to be anit-business
 - o Matching timelines for projects; getting all partners "on the same page"
 - Finding students, equipment, paperwork
 - o Lack of alignment of interests among potential partners
 - Pace at which industry works faster than the other sectors

- Need for transparency
- NSERC is pulling away from health related program
- Tricouncil funding needs to have greater dialogue
- Tricouncil put their funding mandates out to industry
- Not knowing what funding opportunities exist
- o Making the "business case" to make a project appealing to industry
- o Academics not used to "selling" their science to industry & media
- Conflicts of interest real or perceived

2. After listening to the morning and afternoon speakers, reflect upon a creative solution or model(s) that would enable PPP to operate successfully. Consider the perspective of academia, government and industry.

- Having a project that is appropriate with a clear definition of the problem agreed upon by all partners.
- The partners must come to know each other early in partnerships. This could be accomplished by "listening" sessions, all partners having a "seat at the table," same size chair, roles, responsibility, motivation.
- Attitude adjustment between the academic, industry, and government sectors
- It must be a <u>partnership</u>, but there should be "tension" to achieve the creative solutions
- Industry matching is important in Canada
- Establish "master" agreement with an individual university, agreement develops and paves the way to make interactions easier
- 3. The survey results suggest that some type of tool is needed to bring people and organizations together to interact more effectively. One such tool could be a match-matching web-portal. If a "Match.com" web portal was created, what features and policies do you think are needed to make this successful? Consider the perspective of academia, government and industry. Who should lead the development of such a "Match.com" web portal? Where would resources come from (tri-council, federal, provincial, participant fees)?

Key features or policies of a tool to assist those groups wishing to partner with help to find groups that ae open and interested in partnering with others:

- Open, transparent, accessible, web-based
- User friendly
- Scientifically credible
 - government and/or third party such as an NGO or foundation viewed as a "plus" to prevent bias with industry and lend credibility
- Links to other grants available
- Must include opportunities as well as benefits
- Updated regularly
- Establish a core group comprised of all sectors (Academia/Industry/Government) to work on development of tool; use combined knowledge to determine requirements that are best for all sectors
- Unbiased, third party moderator
- Requires an integrated view
- Build in procedures to reduce bias

4. Partnerships have the ability to leverage support for activities that would not be otherwise possible on an individual basis, especially to tackle large ideas (i.e. Pre-market or fundamental questions such as the human genome project).

<u>What are fundamental questions or pre-market questions that can benefit from PPP to advance nutritional sciences</u>? Such projects, big and small may be from any part of the continuum from generating knowledge to dissemination and knowledge translation.

- When do you need informed participation of private sector?
 - Linking private sector with public health to benefit public health and economy
- Health claim substantiation
 - Once claim approved, anyone can use it
 - Company funding research \rightarrow head start
 - Big PPP may not work? How to get multiple companies together to fund project? Everyone get advantage of health claim at once?
 - Takes longer if you don't get companies coming together to fund this research
- Always adding things to our food but we are never taking away
 - Behavior \rightarrow outcomes in dietary patterns
 - Taking sodium out, but not necessarily shifting patterns
 - But demand for transfat free products consumer wants it, it will happen

What are examples of projects that have to be done using Public-private Partnerships?

- Health Claims substantiation; Health Check
- Finding healthy affordable products (white vs whole grain pasta); food security and affordability
 - Supply management
 - How to make healthy food affordable (for consumers & producers)
- Addressing nutrition literacy
- Human Genome project
- Role of media in creating awareness of nutrition
- Development of geographic maps about obesity; mapping practice of obesity
- Collaboration of food & nutrition with other sectors such as medicine

NEXT STEPS / SUGGESTIONS for GO FORWARD ACTION

The workshop participants displayed a strong interest in Public-Private Partnerships but they need "tools" to make the partnership approach a workable reality. The most often talked about need was to have available a "match-making" web-portal that would assist those wishing to partner with those who would be open to partnerships.

APPENDICES

Speaker Biosketches List of Attendees Breakout Group Assignments

Robert Bertolo, PhD CNS-SCN President and Associate Professor, Department of Biochemistry Memorial University of Newfoundland

Dr. Robert Bertolo has been with the Department of Biochemistry at Memorial University of Newfoundland since 2002. He trained at the Universities of Guelph and Alberta studying nutrition and metabolism during development with a focus on amino acid and protein nutrition. As an Associate Professor of Nutrition and Metabolism and Canada Research Chair in Human Nutrition, his current research involves the neonatal use of amino acids for growth and non-growth requirements.

Recently, he has developed the miniature pig as a model for the early origins of adult disease and was the recipient of the International Life Sciences Institute (North America) Future Leader Award for work in this area. In particular, he is interested in how neonatal nutrition and methyl metabolism affect programming of gene expression that can eventually lead to higher risk for developing obesity and hypertension. From a nutritional perspective, he is interested in how much methionine is needed to maintain growth and methylation demands and which pathways take priority when nutrition is inadequate. Dr. Bertolo also has research programs on amino acid requirements during intestinal stress such as in parenteral feeding. He has received funding from CIHR, NSERC, CFI, hospital foundations and industry to support this research and has served on several grants review panels in Canada and USA. Dr. Bertolo is also actively engaged in nutrition outreach and student development and is currently the President of the Canadian Nutrition Society.

Leah Gramlich, MD, FRCPC CNS-SCN Advocacy Committee Chair and Professor of Medicine University of Alberta

Dr. Leah Gramlich is a physician nutritionist specialist and Gastroenterologist. She is a Professor in the Faculty of Medicine and department of Medicine at the University of Alberta with a cross appointment in Agriculture Life and Environmental Science. She is also Provincial Medical Advisor for Nutrition services in Alberta Health Services.

Dr. Gramlich is dedicated to patient care and has an evolving interest in food for health and in empowering health practitioners with the tools to meet patient needs relative to food and activity for health. Her other research interests include nutrition and cancer, nutrition in critical illness, Nutrition therapy in the home and nutrition education. She is past president and founding president of the Canadian Nutrition Society. She sits on several committees in the Canadian Nutrition Society, the American Society for Parenteral and Enteral Nutrition and the European Society for Nutrition and Metabolism.

David Ma, PhD CNS-SCN Advocacy Committee Executive and Associate Professor University of Guelph

Dr. David Ma obtained his PhD in Medical Sciences in 2001 at the University of Alberta conducting research on the anticancer properties of ruminant fats, specifically, conjugated linoleic acids in breast cancer. He did postdoctoral research at Texas A&M University investigating the role of omega-3 fatty acids and folate in colon cancer. Returning to Canada in 2004, he joined the Department of Nutritional Sciences at the University of Toronto as an Assistant Professor, before moving on to the Department of Human Health and Nutritional Sciences at the University of Guelph in 2007 where he is currently an Associate Professor.

Dr. Ma's research encompasses investigations to better understand the role of fats in human health and disease. In particular, the role of bioactive fatty acids including, omega-3's, trans fats and CLA have been the focus of research investigations. Broadly, studies seek to enhance our understanding of the role of fats through the lifecycle from conception to later years in life and how various fats may impact on the maintenance, prevention, and treatment of chronic diseases. Studies also seek to understand the fundamental nature by which fats and other lipids 1) affect cellular biology, 2) have utility as disease markers, and 3) the how individual genetic differences involved in fat metabolism modify disease risk. Current studies are focused on: 1) How omega-3 fatty acids may play a role in breast cancer prevention; 2) Role of individual omega-3 fatty acids on metabolism and health; 3) Effect of genetic variation in genes involved in omega-3 and omega-6 fatty acid metabolism on health

Andrea Baruchin, Ph.D. Senior Advisor to the President Foundation for the National Institutes of Health

Dr. Baruchin is Senior Advisor to the President at the Foundation for the National Institutes of Health (FNIH). In this role she works with the President and Foundation staff to move the work of the FNIH forward. This includes interaction with NIH staff, FNIH Board of Directors and its committees, FNIH staff, and partners from industry, academia, philanthropy and foundations and associations about ongoing and developing projects and programs. Dr. Baruchin is also involved in FNIH planning and policy efforts and research and writing to present the work of the FNIH to a diverse set of audiences. Before joining the FNIH, Dr. Baruchin was Chief of Staff in the Office of Research at Vanderbilt University Medical Center. She also previously served as Associate Director of the Vanderbilt Brain Institute. Prior to working at Vanderbilt University, Dr. Baruchin was Chief of Science Policy at the National Institute on Drug Abuse, NIH, and she also served as Associate Director for Science Policy in the Office of Science Policy and Program Planning at the National Institute of Mental Health, NIH. She taught science at both the community college and college level, and worked as a research associate in enzymology, biochemical genetics, and cancer research laboratories. Dr. Baruchin received her B.S. in biology and her M.S. in natural sciences from the State University of New York at Buffalo, and her Ph.D. in molecular neurobiology from the University of Pittsburgh. She has authored papers on both science and science policy.

Eric Hentges, PhD Executive Director ILSI North America

Dr. Eric Hentges joined the North American Brach of the International Life Science Institute as the Executive Director in 2007. He works closely with ILSI North America members, trustees, science advisors, and staff to enhance the organization's programs and the impact of its scientific output. Dr. Hentges brought over 25 years of prior experience in nutrition research and education to ILSI North America. He has directed strategic research priority planning and administration of competitive research grant programs for several organizations. Additionally, he has directed the development and implementation of nutrition education programs and consumer market research programs.

Previously he served as the Executive Director of the U.S. Department of Agriculture's, Center for Nutrition Policy and Promotion. In this position he had oversight of the USDA's involvement in the development of the 2005 Dietary Guidelines for Americans and MyPyramid, Food Guidance System. Prior to this, Dr. Hentges served in key positions at the National Pork Board, the National Pork Producers Council, and the National Live Stock and Meat Board.

Dr. Hentges holds degrees from Iowa State University, Auburn University and Oklahoma State University. He is a member of the American Society for Nutrition and the Institute of Food Technologists.

Maria Kalergis, PhD, RD, CDE National Program Manager, Nutrition Scientific Affairs Dairy Farmers of Canada

Dr. Kalergis is aRegistered Dietitian and Certified Diabetes Educator with a BSc (Dietetics) from the University of British Columbia and MSc and PhD in Human Nutrition from McGill University. She is employed at Dairy Farmers of Canada (DFC) as National Program Manager in the Nutrition Department, responsible for Scientific Affairs. Job responsibilities include managing the nutrition research funding programs, including the Nutrition and Health theme of the *Dairy Research Cluster* program, part of the Canadian Agri- Science Clusters Initiative. In this capacity, involved in the establishment of research priorities, overseeing all aspects of the research application process, monitoring the progress of the studies and communicating with the Scientific Co-ordinator. Other job responsibilities include communications/initiatives targeting health professionals and providing scientific expertise related to nutrition policy efforts.

Prior to joining DFC in 2008, she worked as a research dietitian and clinical research co-ordinator, in the field of diabetes, at the Royal Victoria Hospital in Montreal, Quebec. She was involved in several industry and government-funded projects including the NIH-funded multicentre trial *ACCORD*. Professional interests include: evidence-based practice, research ethics and bias, knowledge transfer and translation, private-public partnerships with respect to nutrition research.

Philip M. Sherman, MD, FRCPC Scientific Director, Institute of Nutrition, Metabolism and Diabetes Canadian Institutes of Health Research

Dr. Sherman is Professor of Paediatrics, Microbiology, & Dentistry at the Hospital for Sick Children, University of Toronto where he has been on faculty since 1984. He completed medical school at the University of Calgary and training in pediatrics at the University of California, San Francisco. Training in gastroenterology and research was completed at the Hospital for Sick Children and the Walter Reed Army Institute of Research in Washington, DC.

He is a Past-President of the North American Society for Pediatric Gastroenterology, Hepatology and Nutrition and a Past-President of the Canadian Association of Gastroenterology. He is the recipient of a Canada Research Chair (tier 1) in Gastrointestinal Disease. Dr.Sherman's research program is funded by support currently provided by the Crohn's and Colitis Foundation of Canada and the Canadian Institutes of Health Research (CIHR). His research interests focus on epithelial cell signal transduction responses to pathogenic, commensal, and probiotic bacteria. In 2010, he was awarded the prestigious Shwachman Award from the North American Society for Pediatric Gastroenterology and Nutrition (NASPGHAN). The award recognizes significant and lifelong scientific or educational contributions to the field of pediatric gastroenterology, and awardees must also hold a record of advocacy for child digestive diseases and demonstrate exemplary service to the field. He assumed the position of Scientific Director of the Canadian Institutes of Health Research (CIHR) Institute of Nutrition, Metabolism and Diabetes in January, 2009.

Dan Ramdath, PhD Research Scientist Agriculture and Agri-Food Canada

Dr. Dan Ramdath is a Research Scientist in Human Nutrition at the Guelph Food Research Centre, Agriculture and Agri-Food Canada. He has a PhD in Human Nutrition with postdoctoral training in diagnostic Clinical Biochemistry. His research program supports an innovative and sustainable agriculture and agri-food sector by producing evidence to substantiate health claims.

Previously, Dr. Ramdath was Full Professor and Chairman, Department of Preclinical Sciences, University of the West Indies, Trinidad. There he established models of community based interventions to reduce NCD burden and contributed to standardization of the Glycemic Index methodology. His work on micronutrient metabolism has contributed significantly to current WHO clinical guidelines for management of malnourished children.

He has trained ~20 graduate students and has more than 90 peer review journal articles, book chapters and abstracts. Dr. Ramdath is involved in several initiatives that promote the use of credible evidence for health policy formulation. He is currently Scientific Advisor, Caribbean Public Health Agency; Adjunct Professor, University of Saskatchewan; Honorary Professor, University of the West Indies; and Associated Graduate Faculty, University of Guelph.

Richard Isnor, PhD Manager, Atlantic Regional Office Natural Sciences and Engineering Research Council of Canada

Dr. Isnor is Manager of the Atlantic Regional Office for the Natural Sciences and Engineering Research Council of Canada (NSERC-Atlantic), based in Moncton, NB. Previously, he was Director of Innovation Policy and Science at the International Development Research Centre in Ottawa and also worked for three years with the National Research Council of Canada managing the Genomics and Health Initiative. He holds a Ph.D. in Science and Technology Policy Studies from the University of Sussex, UK; a Master's in Environmental Studies from Dalhousie University, Canada; and a B. Sc. in Biochemistry from Mount Allison University, Canada. He has held science and technology policy and management positions in a variety of federal government organizations, including Environment Canada, Natural Resources Canada and the Privy Council Office.

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Paula Clarke Director of Program Delivery Research & Development Corporation of Newfoundland and Labrador

Paula Clarke is Director of Program Delivery with the Research & Development Corporation of Newfoundland and Labrador (RDC). She has a B.Sc. in Biochemistry and began her career as a clinical dietitian in a St. John's hospital. She later went on to earn a Master's in Business Administration from Memorial University in 2003. Since that time, Paula has worked in technology transfer, project management, and program delivery. She has been with RDC since 2010.

Food for Health Workshop Attendee List As of 30 May 2014

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APPENDIX B

Food for Health Workshop Attendee List As of 30 May 2014

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Principles and Philosophies for the Development of Ongoing Partnerships to Support Food-Health Research

June 5, 2014

Break-Out Table Assignments

Table 1 – Question 1	Table 4 – Question 4
Leah Gramlich (facilitator)	Robert Bertolo (facilitator)
Tasfia Ahmed	Andrea Dunn Davis
Ivo Notargiacomo	Maria Kalergis
Christine Lowry	Heather Wile
Maria Nunez	Harvey Anderson
Tristin Brisbois	Ravindra Chibbar
James House	William Yan
Yvonne Yuan	Katherine Gray-Donald
Sukhinder Cheema	Hina Javaid
Krista Power	P. Courtney Gaine
Table 2 – Question 2	Table 5 – Question 3
Sharon Weiss (facilitator)	Eric Hentges (facilitator)
Andrew Hamilton	Flora Wang
Mary Elizabeth Smith	Gail Lush
Mark Dekker	Fiona Wallace
Anna Kate Shoveller	Krista Coventry
Terry Graham	Mary L'Abbe
Richard Isnor	Janet Brunton
Sarah Robbins	Hasan Hutchinson
Dan Ramdath	Andrea Baruchin
Philip Sherman	Lisa Dooley
Table 3 – Question 3	Table 6 – Question 4
Christopher Marinangeli (facilitator)	David Ma (facilitator)
Garson Law	Sandra Marsden
Janice Macdonald	Dion Dakins
Alison McLean	Andrea Villneff
Marcella Garsetti	Michael McBurney
Alison Duncan	Catherine O'Brien
Olupathage Dinesh	Carole Doucet Love
Jill Parnell	Marie-Pier Bachand
Maya Villeneuve	Laurie Macgillivary