



Canadian Nutrition Society  
Société canadienne de nutrition

## FOOD for HEALTH CONNECTION: Building a Deeper Collaboration

June 2<sup>nd</sup> , 2011  
University of Guelph

### Workshop Report



ONTARIO PORK

GRAIN GROWERS  
OF CANADA



LES PRODUCTEURS  
DE GRAINS DU CANADA



Pulse Canada 

Ultima Foods





Canadian Nutrition Society  
*Soci t  canadienne de nutrition*

## **FOOD for HEALTH CONNECTION: Building a Deeper Collaboration** *June 2<sup>nd</sup> Workshop Report*

### **Executive Summary**

On June 2<sup>nd</sup>, the Canadian Nutrition Society (CNS) hosted a unique dialogue workshop at the University of Guelph with 100 senior opinion leaders from across the food –health continuum to discuss how to better use food and nutrition to maintain and improve the health status of Canadians and how to build deeper collaboration. Particular focus was on research partnerships and engagement of the health care community.

The CNS is an advocate for the use of nutrition to improve the health of Canadians, and to prevent and treat diseases through better nutrition. CNS was motivated to develop the workshop out of concern for the lack of meaningful progress in advancing health using a food-based strategy, and a desire to act as a catalyst to accelerate change.

The imperative for the workshop comes from growing evidence of an emerging population health crisis - rising obesity rates, increasing and earlier incidence of chronic disease – and the need for stronger prevention strategies. Food for health is rapidly becoming one of the most important policy concerns on the national health care agenda.

What emerged was a greater appreciation of the complexity of the food-health continuum and a strategic perspective on some of the fundamental and practical changes that will need to occur if Canada is to successfully use food as a tool to maintain the health status of Canadians and mitigate the impact of chronic illness on the health care system.

### **Key Messages that Emerged from the Workshop**

#### **1. There is a Knowledge Translation and Transfer Gap hindering progress on Food for Health.**

While a new paradigm is emerging across the food –health spectrum on the importance of food and nutrition to maintain and improve the health status of Canadians, there is a serious disconnect with Canadians who have not “bought in”.

**2. A piecemeal approach to food-health initiatives is one of the major reasons for the KTT gap and slow progress on consumer acceptance.** The food for health agenda is dominated by a policy and market environment in which connectivity is the exception, not the rule. An approach

focused primarily on healthier food and nutrient enrichment remains disconnected from specified population health goals, and strategies that support knowledge translation to consumers thereby weakening consumer acceptance and an ability to deliver health dividends.

**3. There is a leadership gap in food for health which is impeding progress on the health agenda.** One of the consequences is the fragmentation in food-health initiatives. The agricultural sector and the food industry have been working hard to fill this gap. The healthcare community and government have remained relatively silent.

**4. There are multiple stakeholders with differing priorities which poses challenges to partnership and collaboration.** The continuum encompasses a broad range of stakeholders from farmers to physicians, who tend to operate in silos. Each stakeholder is governed by different priorities related to profit, timelines, goals, etc. which can pose challenges to collaboration.

**5. Research and evidence supporting the role of food in disease modification or amelioration needs to be scientifically valid and credible.** There is recognition that industry collaboration can provide much needed support and funding for peer reviewed and non-peer-reviewed research, produce speedier results, and result in research more attuned to the marketplace facilitating more effective KTT to the consumer. The potential for bias – real or perceived- must be considered as part of the broader strategy to support a food-health agenda.

**6. The healthcare community at large currently is not engaged and empowered to use food-health strategies to reduce the burden of chronic disease through modifiable risk factors.**

**7. Health Canada and Agriculture Canada could work more collaboratively to move a food-health agenda forward.** Government has an important policy role to play in aligning agriculture and food policy and in enabling coordination across the entire food –health continuum. As demonstrated by the effectiveness of the OMAFRA agri-food cluster operating in Ontario, government can provide important leadership and be an effective unifying force and facilitator. Agriculture and health within government need to provide coordinated policy leadership.

**8. 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.** There was a call for a change in approach to food-health research to improve KTT. Better knowledge translation will come from a focus on consumers and practical, usable applications that make it easier to integrate the healthy food or diet into the busy lifestyles of Canadians.

### **Suggestions for Go Forward Action**

**1. Define a framework for knowledge translation and transfer that has a consumer focus.** On the “output side”, the focus needs to include both the consumer and healthcare professionals using information to counsel patients. On the “input side”, it must consider the nature and validity of the evidence supporting (or refuting) a given food-health strategy.

**2. Start to develop effective partnerships that recognize differing stakeholder priorities.** There is a need to work better together and build better understanding of the priorities, capacities and capabilities of each stakeholder in the food-health continuum. The continuum encompasses a broad range of stakeholders from farmers to physicians who tend to operate in silos. More

mechanisms and forums to draw stakeholders together should be a priority. Through more dialogue, better understanding and partnerships will emerge.

**3. Develop partnerships to support Food-health Research and consistently address potential for perceived bias.** Barriers to perceived bias need to be broken down, especially the negative view of industry-funded research in order to achieve common goals.

**4. Development of a strategy to engage the health-care community at large to embrace a food-health approach** Physicians need to play a key role as they are at the patient-food interface. This strategy needs to recognize and support the role of the registered dietitian, but must seek to empower other healthcare professionals. In addition, healthcare professionals, as a group, may play a role in aligning agriculture with health policy and helping to enable frameworks for collective action.

**5. Health Canada and Agriculture Canada could work more collaboratively to move a FOOD-Health agenda forward.** Health Canada must assume a leadership role on food for health and work closely with Agriculture Canada to develop a joint policy framework. This has to begin, however, with recognition that food like drugs can have a beneficial effect on health.

*This summary reflects the proceedings of the workshop and the pre-workshop survey and does not necessarily reflect the position of the Canadian Nutrition Society.*

Organization/Company	Attendee	Title
Abbott Nutrition Canada	Anne Dumas	Senior Manager, Health Communication
Abbott Nutrition Canada	Martine Castonguay	Senior Brand Manager
AFMNET	Rickey Yada	Scientific Director, AFMNet,
Agri-Food Canada (AAFC)	Kate Barlow	Markets and Trade Officer
Agri-Food Canada (AAFC)	Anne Kennedy	Assistant Director, Food Regulatory Issues Division
Agri-Food for Healthy Aging	Jessica Bowes	Program Manager
Alberta Health Services	Dr. Janet Stadnyk	RD, Program Leader of Primary Care, Nutrition and Food Service at Capital Health
ALMA	Brad Fournier	Strategic Initiatives Director
American Society Nutrition	John Courtney	Executive Officer
Beef Information Centre	Karine Gale	Nutrition Program Manager Beef Information Centre
Burnbrae Farms	Margaret Hudson	President
Canada Bread/Maple Leaf	Carolyn O'Brien	Director of Regulatory Affairs
Canadian Cancer Society	Bryony Sinclair	Scientist, Scientific & Regulatory Consultant
Canadian Foundation for Dietetic Research	Isla Horvath	Executive Director
Canadian Institute of Food Science and Technology	Steve Cui	Director, Research Scientist
Canadian Pork Council	Mary Ann Binnie	Mgr Nutrition & Food Industry Relations

Cantox	Lina Paulionis	Scientific and Regulatory Consultant
CAPI	David McInnes	President and CEO
Casco Inc	Michael Sills	Consultant
Centrum / Pfizer	Dr. Walid Aldoori	Consumer Healthcare, Medical Director
CIHR	Mary-Jo Makarchuk	MHSc, Assistant Director, Institute of Nutrition, Metabolism and Diabetes CIHR
CIHR	Keeley Rose	INMD Assistant Director (Ottawa)
CIHR	Donna Lillie	INMD Advisory Board, Cdn Diabetes Assoc
CIHR	Viktoria Shihab	MHSc candidate (U of T)
CIHR	Dr. Stephanie Atkinson	Chair, Institute of Nutrition, Metabolism and Diabetes, Institute Advisory Board
CNS	Dr. Johane Allard	MD, Professor Department Medicine UofT, Director, Nutritional Support UHN
CNS	Cyril Kendall	UofT, Sr. Scientist, Clinical Investigation & Human Physiology
CNS	Dr. Benoît Lamarche	Professor, Chair, The Institute for Nutraceuticals and Functional Food, Laval University, Quebec City
CNS	Dr. Claude Roy	MD, Pediatric Gastroenterology and Nutrition
CNS	Young-In Kim	MD Professor, Departments of Medicine & Nutritional Sciences UofT
CNS Advisory Board, University of Guelph	Dr. Terry Graham	Chair - Department of Human Health and Nutritional Sciences
CNS Advisory Board, University of Manitoba	Dr. Jim House	Chair, Department of Human Nutrition
CNS Advisory Board, University of Toronto	Dr. Mary L'Abbe	Professor and Chair, Department of Nutritional Sciences
CNS Conference Co-Chair, University of Guelph,	Dr. Janis Randall Simpson	Conference Co-Chair, Professor, Family Relations and Applied Nutrition
CNS, President Elect	Dr. Katherine Gray-Donald	Associate Professor, President Elect CNS
CNS, University of Guelph	Dr. Alison Duncan	Associate Director, Human Nutraceutical Research Unit
CNS, VP Research	Dr. Robert Bertollo	Associate Professor, Memorial University
CNS, Workshop Co-Chair	Dr. Leah Gramlich	President CNS, Workshop Co-Chair
CNS, Workshop Co-Chair and Conference Co-Chair	Dr. David Ma	Associate Professor, University of Guelph
College of Family Physicians Canada	Dr. Marcia Rundell	Family Physician
Compass Group Canada	Donna Bottrell	Director of Nutrition
Dairy Farmers of Canada	Maria Kalergis	Program Manager, Health Professional Communications at Dairy Farmers of Canada
Danone	Peter Jones	RCCFN Director
Dieticians of Canada	Janice Macdonald	Director of Communications
Food & Consumer Products of Canada	Ms. Phyllis Tanaka, MSc., RD	VP Scientific & Reg Affairs-Food Policy

Freelance nutrition writer	Jane Dummer	Nutritionist
GayLea	David Jennison	VP Research & Product Development
Government of Alberta	Patricia Martz	
Grain Growers of Canada	Meghan Burke	Communications Coordinator
Guelph Food Technology Centre	Karen McPhee	Manager, Product Development
Health Canada	Maya Villeneuve	Associate Director in the Bureau of Nutritional Sciences
Health Canada	Dr. William Yan	Director, Bureau of Nutritional Sciences
Health Canada	Iwona Kuszczak	
Health Canada	Sarah Hatt	
Heart and Stroke	Katie Jessop	Business Development Manager, Foodservice
Heinz	Dr. Idamarie Laquatra	Director Global Nutrition
Kellogg's	Dr. Yanni Papanikolaou	Associate Dir Nutrition Science & Reg Affairs
Laval University	Dr. Angelo Tremblay	Professor, Département de médecine sociale et préventive
Local Organizing Chair - Vanoucvver, CNS 2012	Dr. Tim Green	Associate Professor, Human Nutrition, UBC
McMaster University	David Armstrong	Associate Professor, MD
Nestle	Dr. Andrea Papamandjaris	Head, Medical and Scientific Unit
NSERC	Lynda Wood	Portfolio Manager
NSERC	Lynda Wood	Portfolio Manager
Nutrasource	William Rowe	External University Accounts - University of Guelph
Nutrasource	Krista Coventry	Director of Nutrition and Nutraceutical Unit
OMAFRA	Tammy Tondevold	Senior Policy Advisor - Business Development Policy
OMAFRA	Jeff O'Donnell	Team Lead, Healthy Eating - Domestic Marketing
OMAFRA	Barb Dillingham	Research Analyst -Innovation & Knowledge Management
OMAFRA	Anna Ilnyckyj	Manager, Business Development Policy
OMAFRA	Michael Toombs	Director, Research and Innovation Branch
OMAFRA	George Borovilos	Director Champion, Food for Health Research Theme
OMAFRA	Stacy Favrin	Manager Research and Innovation Branch
OMAFRA	Denise Zaborowski	Manager, Business Development Branch
OMAFRA	Ken Hough	Director, Research Facilities Management
OMAFRA	Ron Lackey	
OMAFRA	Wendy Beaunom	
OMAFRA	Helen Prinold	
Ontario Agri-Food Technologies	Gord Surgeoner	President

Ontario Federation of Agriculture	Don McCabe	Vice President
Ontario Ministry of Education	Jennifer Munro	
Ontario Ministry of Health Promotion and Sport	Deanne Montesano	
Ontario Ministry of Health Promotion and Sport	Judith Wong	
Ontario Ministry of Health Promotion and Sport	Katia De Pinho	
Ontario Pork	Andrea Villneff	Nutritionist
Organic Council of Ontario	Jodi Koberinski	General Manager
Parmalat	Christina Lee / Anand Singh	Research Scientist and Laboratory Supervisor
Public Health Ontario	Melody Roberts	
Pulse Canada	Julianne Curran	Dir Nutrition, Scientific & Reg Affairs
Queens University	Dr. John Drover	School of Medicine, General Surgery, Fac. of Health Sciences
The College of Family Physicians	Dr. Margaret Rundle	MD, Senior Representative CFPC
Ultima	Stephanie Potvin	Nutritionist
University of Alberta	Dr. Cathy Chan	Professor Department of Physiology; Department of Agricultural, Food & Nutritional Science
University of Alberta	Dr. Jennifer Lambert	Nutrition and Metabolism
University of Guelph	Dr. Sylvain Charlebois	Assoc Dean, College of Mgmt & Economics
University of Guelph	Dr. Amanda Wright	Director, Human Nutraceutical and Research Unit
University of Guelph	Sue Bennett	Director, University and Community Relations
University of Guelph	Dr. Heather Keller	Professor Department Family Relations and Applied Nutrition, UofG
University of Guelph	Dr. Arthur Hill	Chair of Department of Food Science
University of Guelph	Dr. Alejandro Marangoni	Tier 1 CRC in Food, health and Aging
University of Guelph	Lee Kapuscinski	Student
University of Guelph	Veronika Silva	Graduate student
University of Guelph, College of Biological Science	Dean – Dr. Michael Emes	Dean, College of Biological Science
University of Toronto	Dr. Harvey Anderson	Director Program Safety, Nutrition & Regulatory Affairs, Dept Nutritional Sciences UofT
University of Toronto	Dr. David Jenkins	Director Clinical Nutrition Risk Facto & Modification Centre, St, Michael's Hospital
University of Toronto	Dr. Kush Jeejeebhoy	Department of Medicine, Department of Nutritional Sciences, Department of Physiology
University of Waterloo	Samantha Goodman	Graduate Student



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## **FOOD for HEALTH CONNECTION: Building a Deeper Collaboration** ***June 2<sup>nd</sup> Workshop Report***

On June 2<sup>nd</sup>, the Canadian Nutrition Society (CNS) hosted a unique dialogue workshop at the University of Guelph with 100 senior opinion leaders from across the food –health continuum.

The workshop provided a forum to share ideas on how to better use food and nutrition to maintain and improve the health status of Canadians (what’s working; what is not), discuss enablers and barriers to accelerated knowledge transfer, and explore in practical terms what needs to be done to build connectivity and deeper collaboration across the entire continuum. Particular focus of the workshop was on research partnerships and engagement of the health care community.

The imperative for the workshop comes from growing evidence of an emerging population health crisis - rising obesity rates, increasing and earlier incidence of chronic disease – and the need for stronger prevention strategies. Food for health is rapidly becoming one of the most important policy concerns on the national health care agenda.

The Canadian Nutrition Society (CNS) was motivated to undertake this workshop out of concern for the slow progress on the food for health agenda and a desire to be a catalyst to accelerate change.

The CNS is an advocate for the use of nutrition to improve the health of Canadians, and to prevent and treat diseases through better nutrition. Its members are many of the leading experts in Canada in nutrition science, policy and practice – scientists, researchers, clinicians (dietitians and physicians), and educators who work across the entire food-health continuum. Their primary focus is on enabling more effective knowledge translation from field to plate in order to facilitate real change in the dietary patterns of Canadians.

Critical partners in development of the workshop were OMAFRA (the Ontario Ministry of Agriculture, Food and Rural Affairs) and CIHR (the Canadian Institutes of Health Research – Institute of Nutrition, Metabolism, and Diabetes) who provided important funding and strategic direction in shaping the agenda. CNS is also most appreciative of the funding support from NSERC (the Natural Sciences and Engineering Research Council of Canada) and Pulse Canada which co-authored the successful grant request for NSERC.

Underscoring the broad base of concern across the entire food-health spectrum, CNS was fortunate to receive sponsorship funding from the Food and Consumer Products of Canada, Gay Lea Foods, Ultima Foods, Ontario Pork, the Grain Growers of Canada and the Grain Farmers of Ontario. We would also like to acknowledge the participation of the College of Family Physicians of Canada, which represents Canada’s 22,000 frontline family practitioners.



## Key Messages and Suggestions for Go Forward Action

### **1. There is a Knowledge Translation and Transfer Gap regarding FOOD-Health.**

While a new paradigm is emerging across the food –health spectrum of the importance of food and nutrition to maintain and improve the health status of Canadians, there is a serious disconnect with Canadians who have not “bought in”.

There clearly is a KTT gap that needs to be addressed. The hundreds of initiatives and thousands of dollars being expended on research and innovation across the entire spectrum are not translating into Canadians eating more appropriately to improve their health status.

**2. Fragmentation of FOOD-Health initiatives:** One of the main reasons for the KTT gap is the fragmented and piecemeal nature of the initiatives in a policy and market environment in which connectivity is the exception, not the rule. A piecemeal approach focused primarily on healthier food and nutrient enrichment remains disconnected from specified population health goals, nor is it gaining enough consumer acceptance to deliver health dividends because common goals have not been defined.

**3. Leadership Gap.** There is a leadership gap in Canada on food for health which is hindering the health agenda. Industry has been trying to fill this leadership gap. Canada, unlike other countries in the world, does not have an integrated and unifying food –health strategy. The result is an active environment of disjointed projects, little coordination, collaboration, or policy focus to achieve common health goals.

**4. Need for coordination of FOOD-Health policy.** Government has an important policy role to play aligning agriculture with health policy and helping to enable frameworks for collective action, coordination and collaboration across the entire food –health continuum. As demonstrated by the effectiveness of the OMAFRA agri-food cluster operating in Ontario, government can provide important leadership and be an effective unifying force and facilitator. Agriculture and health within government need to start to work together and provide coordinated policy leadership.

**5. Need for effective partnership that recognizes differing stakeholder priorities.** There is a need to work better together and build better understanding of the priorities, capacities and capabilities of each stakeholder in the food-health continuum. The continuum encompasses a broad range of stakeholders from farmers at one end of the spectrum to physicians at the other, who tend to operate in silos.

Each stakeholder is governed by different priorities related to profit, timelines, goals, etc. which can pose challenges to collaboration, but are not insurmountable. For example, research often takes longer than the time required by industry to get products to market in an increasingly competitive international food marketplace.

Effective partnerships must recognize these different priorities. Better communication leads to better understanding. Attendees would like to see more informal forums and ways of communicating to draw stakeholders together.

**6. Research support strategies need to address potential for perceived bias.** If the goal is to achieve common goals, barriers to perceived bias need to be broken down, especially the negative view of industry-funded research. While the academic community expressed concern about the credibility of industry-funded research, they also recognized that industry collaboration can provide much needed funding, produce speedier results, and lead to research more attuned to the marketplace ultimately facilitating more effective KTT. Such collaborations can also help align product development with population health goals.

**7. There was a call for a more practical, consumer-focus to food-health research to improve KTT.** Better knowledge translation will come from a focus on consumers and practical, usable applications that make it easier to integrate the healthy food or diet into the busy lifestyles of Canadians. The focus of research needs to be on the tools consumers need to facilitate healthy eating practices. Solutions must be relevant to consumers and move to a more balanced, consumer-friendly full diet and whole food approaches. The more food-focused we become versus nutrient-focused, the more successful we will be winning consumer acceptance and health dividends.

**8. Healthcare community at large needs to be engaged and supportive of and empowered to use Food-health strategies to reduce the burden of chronic disease through modifiable risk factors.** The lack of engagement of the health care community including the medical community needs to be addressed using multiple strategies. Physicians could play a critical role in nutrition counselling, public education and prevention; however, structural changes to physician remuneration, time constraints, clinical practice guidelines, and physician education are needed. Food and nutrition are not a priority in undergraduate training nor are there continuing medical education programs to build expertise. Registered dietitians, who have the nutrition expertise, continue to be underutilized in primary care.

**9. Evidence supporting the role of Food in disease modification or amelioration needs to be scientifically valid.** There is a recognition that metrics need to be developed to demonstrate the effectiveness of food in the prevention of disease in order to lay the groundwork for tailored diet plans; what type of people best respond to certain therapies.

To do so, the issue of evidence-based research tied to positive health outcomes needs to be addressed before nutrition can become part of medical advice and care across the country. New approaches to health outcome evidence building, however, seem to be emerging based on human intervention studies that measure the biological effectiveness of functional foods and prescribed diets on chronic disease end points, but require medical community buy-in.

**10. Health Canada and Agriculture Canada need to work collaboratively to move a FOOD-Health agenda forward.** Attendees believe strongly that Health Canada must assume a leadership role on food for health and work closely with Agriculture Canada to develop a joint policy framework. This has to begin, however, with the recognition that food like drugs can have a beneficial effect on health.

A new collaborative partnership with Health Canada needs to be cultivated and outdated regulations that put major limitations on health claims and product innovation need to be changed. Health Canada cannot continue to be a regulatory roadblock to product innovation. In recognition, Health Canada understands and has already stepped up to the plate to start to

address some of the issues related to the time consuming approval process. Industry needs to see Health Canada as a partner and come to them as early as possible in the product development process for advice and guidance. Health Canada is also working on a guidance document on how companies can use international systemic reviews to fast track some of the approval review process.

## **Introduction**

This report provides a brief summary of the day's dialogue including highlights from keynote speaker presentations, case studies, panel discussions, and the breakout sessions. The report also integrates some of the key findings from the on-line survey conducted with attendees prior to and after the workshop into its conclusions. The survey, along with copies of some of the presentations and workshop participant biographies, is available **on the CNS website at <http://www.cns-scn.ca/default.asp>**.

What emerged from the workshop discussion was a greater appreciation of the complexity of the food-health continuum on and a strategic perspective on some of the fundamental and practical changes that will need to occur if Canada is to successfully use food as a tool to maintain the health status of Canadians and mitigate the impact of chronic illness on the health care system.

It became clear as the discussion progressed on how to use food strategy to improve health, that the pathway to successful research investment, product development, market integration and consumer adoption is long, complex, and disconnected. Attendees described a continuum from farm to fork that, in spite of the efforts by growers, producers, processors, retailers, researchers, and government, is fragmented, disorganized, leaderless and ultimately disconnected from Canadians who are not being persuaded to adopt healthier foods or change their eating habits.

Yet in spite of the complexity and range of challenges that emerged, there was a common consensus, that if we – government, agriculture, academia, industry, government, and the healthcare community -- can open the lines of communication and learn to work better together, there are solutions to move the food for health agenda forward to impact the health of Canadians. Those solutions begin with ongoing communication and informal dialogue among stakeholders across the continuum in order to remove barriers, build connectivity and stronger awareness of others' priorities.

## **The Agenda**

**11:00-11:15 a.m.**

**Canadian Nutrition Society – Welcome**

**Dr. Leah Gramlich, CNS President, Director, Nutrition Support, Department of Medicine, University of Alberta.**

Dr. Gramlich will topline some of the social, health, and economic impacts of improper/inadequate nutrition in Canada, the critical role that food can play in addressing chronic disease, and the need to build a stronger connection between food and health.

What are the obstacles to a coordinated program that helps Canadians eat healthy for healthier lives? How do we build on the work of the agri-food sector and engage all health care professionals in this vital undertaking? How do we reach and motivate Canadians to make healthy food choices and regain control of their health through diet?

**11:15-11:30 a.m.**

**Dr. Sylvain Charlebois, Associate Dean, Research and Graduate Studies at the College of Management and Economics, University of Guelph**

Dr. Charlebois will provide context and background from the perspective of the agri-food sector on what is currently happening to move the food–health agenda forward in Canada including practical initiatives, research and emerging directions.

What is Canada doing right, and what it is doing wrong in attempting to improve the nutrition of Canadians? Just how is the food for health agenda progressing? What gains have been made over the past year and what to expect in the coming year?

**11:30-11:45 a.m.**

**Stephanie Atkinson, Chair, Institute Advisory Board, Canadian Institutes of Health Research – Institute of Nutrition, Metabolism, and Diabetes (INMD)**

Dr. Atkinson will present INMD's research priorities that emerged from the workshop, *Advancing Food and Health Research Priorities in Canada* convened in November 2010. This workshop sought stakeholder input on a Canadian research agenda for Food and Health. The workshop explored strengths, gaps and opportunities in research capacity, and opportunities for partnership among potential research funders.

**11:45 a.m. – 1 p.m.**

**Foodland Ontario lunch service – working lunch**

**11:45 a.m. – 11:55 p.m.**

**Case Study on Practical Solutions and Collaboration**

**Dr. Cathy Chan – The Alberta Diet, PANDA Research Project**

Dr. Chan is a full professor in the Faculty of Medicine and Dentistry and the Faculty of Agricultural, Life and Environmental Sciences at the University of Alberta. She is the principal investigator on the Physical Activity and Nutrition for Diabetes in Alberta; full project title is "Practical behavioural modifications for type 2 diabetes treatment: Physical Activity and Nutrition for Diabetes in Alberta."

**11:55 p.m. – 12:05 p.m.**

**Case Study: a soybean functional food to link agriculture and health**

**Dr. Alison Duncan - Associate Professor in the Department of Human Health and Nutritional Sciences at the University of Guelph.**

Dr. Duncan has assembled a team of researchers to bring soy's health benefits beyond soy foods, by incorporating isoflavones into everyday staple foods. Everyday foods such as bread could soon be enriched with health-promoting components of soy starting with isoflavone-enriched bread.

**12:05 p.m. – 12:25 p.m.**

**Michael Toombs, Director, Research and Innovation Branch, Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA)**

The Director will present on OMAFRA's Food for Health research program and priorities.

**12:25- 12: 45 p.m.**

**Question panel with all speakers**

Dr. Gramlich of CNS, Dr. Charbois of University of Guelph, Dr. Atkinson of CIHR, Michael Toombs of OMAFRA, Dr. Chan of the University of Alberta and Dr. Duncan of the University of Guelph will take questions from the audience.

**12:45 p.m. – 1:00 p.m. Bio break**

**1:00 p.m. – 2:10 p.m.**

**Panel: Building Capacity for Collaboration between the Food-Health Sectors – Redefining the food-health paradigm. Reaching out to Canadians. Issues and Opportunities.**

What should be our nutrition related priorities going forward? What are the opportunities; the barriers? How do we get buy-in and commitment to the food-health imperative in the health care community? What should be the role of medical practitioners in knowledge translation to encourage Canadians to adopt healthier diets? How can we all work collaboratively to advance the health of Canadians?

**Moderator – Dr. Harvey Anderson, Professor, Nutritional Sciences and Physiology  
Director, Program in Food Safety, Nutrition and Regulatory Affairs, Department of Nutritional Sciences, Faculty of Medicine, University of Toronto**

Panelists

Dr. Kush Jeejeebhoy, Department of Medicine, Department of Nutritional Sciences, Department of Physiology, University of Toronto

Dr. David Jenkins, Director, Clinical Nutrition and Risk Factor Modification Centre, St. Michael's Hospital

Dr. Molly Rundle, M.D., CCFP, FCFP Malvern Medical Centre Scarborough Ontario representing the College of Family Physicians of Canada

Dr. David Armstrong, Associate Professor, Division of Gastroenterology, McMaster University Medical Centre

David McInnes, President and CEO, Canadian Agri-Food Policy Institute (CAPI)

**2:10 p.m. – 3:20 p.m.**

**Panel: Partnership models to leverage food and health research opportunities**

This panel will look at models of industry-supported research. Specifically, the panel will be to provide examples of diverse models of research support and partnership that have been successful in health and/or food. The objective is knowledge transfer and to inspire new collaborations for research success.

**Moderator: Dr. Rickey Yada, Canada Research Chair in Food Protein Structure, Scientific Director Advanced Foods and Materials Network (AFMNet), Department of Food Science University of Guelph**

Campbell Company of Canada – Phil Donne, President, will discuss the commitment of Campbell's to research and innovation.

Heinz Canada – Dr. Idamarie Laquatra, will discuss Heinz approach to research.

Burnbrae Farms – Margaret Hudson, President, will discuss the success of OMEGA 3 eggs from farm and research to fork - an example of adding value to a commodity, the market and financial benefits.

Pulse Canada – Dr. Julianne Curran, Director of Nutrition, Scientific & Regulatory Affairs, will share Pulse industry experiences with food and health research: key partnerships and lessons learned.

**3:20 p.m. – 4:15 p.m.**

**Break-out sessions** – on topics requested by attendees

**4:15 p.m. – 4:20 p.m.**

**Concluding remarks**

## **Speaker Highlights**

### **Canadian Nutrition Society**

Dr. Leah Gramlich, CNS President, Director, Nutrition Support, Department of Medicine, University of Alberta

### **The Knowledge Translation and the “Disconnect” with Canadians**

- Dr. Gramlich provided a perspective on some of the social, health and economic costs of improper nutrition on Canadians, the imperative to build a stronger connection between food and health, and posed some questions for attendees to consider on how we can use food strategy in practical ways to improve health.

- The most critical questions related to the apparent “disconnect” between diet and health with Canadians.
- While a new paradigm focused on prevention and wellness, food and nutrition is emerging across the food-health continuum, the vast majority of Canadians have not bought in.
- This is very concerning in light of the strong commitment and hard work by growers, producers, researchers, processors, and retailers on multiple healthy food innovations, research initiatives, and money being invested to take healthier foods to market.
- Hundreds of initiatives have not translated into more Canadians eating more appropriately to maintain their health status. According to the most recent Community Health Survey, over 25% of Canadians 31 to 50 get more than 35% of their total calories from fat; the threshold beyond which health risks increase.
- There is strong evidence that knowledge transfer seems to be a core problem. So what needs to be done to bridge this gap and facilitate more effective KTT?
- Dr. Gramlich posited that one of the reasons for the KTT disconnect with consumers is the fragmented nature of initiatives in a policy and market environment in which connectivity is the exception, not the rule. A piecemeal approach does not encourage stakeholders to collaborate, identify synergies, leverage resources, capitalize on expertise, define common goals, and is clearly not translating into changes in the dietary patterns of Canadians.
- The way forward is to build greater connectivity through better understanding among stakeholders. This will promote trust and cooperation across the entire food-health continuum -- among researchers, growers/producers, industry, retailers and the health care community - and lead to more effective partnerships and joint ventures that will connect with Canadians.

### **University of Guelph**

Dr. Sylvain Charlebois, Associate Dean, Research and Graduate Studies at the College of Management and Economics, University of Guelph

### **The Leadership Gap on Food for Health**

- Dr. Charlebois presented an environmental scan of what has been happening over the past year to move the food for health agenda forward in Canada -practical initiatives, research and partnerships.
- There has been an acceleration in research activity over the past year as evidenced by hundreds of research projects in food-health research, policy and managerial research, agriculture, and consumer research related to food.
- He described a very active environment of disjointed projects, little coordination and people not talking to each other. Because Canada, unlike other countries in the world, does not have a food for health strategy, there is a leadership gap which industry is trying to fill. The result has been that the health agenda has suffered.
- Dr. Charlebois spoke about limitations on innovation and action posed by the differing priorities of the many different stakeholders across the spectrum. These differences can be impediments to go forward action and partnership. For example, a lot of initiatives are driven by universities, but it can take as long as 5 to 10 years to get data of any value to use for the market. This is inconsistent with the time horizons and financial pressures imposed by the marketplace on industry.

- Many initiatives in Canada are driven by policy and funded by government which is important because it drives the frameworks under which we operate. Of concern is the gap between policy and managerial research that the environmental scan demonstrates; leading to issues with KTT. Managerial research deals with developing sustainable, economic models for the food industry to provide healthy products to Canadians over the long term. It is not just about food innovation, but commercialization and selling it to Canadians.
- Dr. Charlebois also talked about the pressures agriculture and the food industry in Canada are under to embrace a food for health agenda. Profit margins are dwindling; cost inputs are increasing; the rise in the Canadian dollar is making our goods more expensive; and international competition is intense. And on the distribution side, retailers are convinced that consumers are not willing to pay more for health and safety.
- On the plus side, however, there is an appetite and increasing interest in better coordination connectivity in the agri-food sector. One of the biggest motivators comes from food safety crises which have hit the sector hard over the past number of years such as the 2003 Mad Cow Disease outbreak and the 2008 Maple Leaf Listeriosis crisis. Food traceability is becoming an imperative across the sector.

### **Canadian Institutes of Health Research (CIHR) - Institute of Nutrition, Metabolism, and Diabetes (INMD)**

Stephanie Atkinson, Chair, Institute Advisory Board, CIHR – Institute of Nutrition, Metabolism, and Diabetes (INMD)

#### **CIHR Research Priorities and New Partnership Model**

- Dr. Atkinson provided an overview and explanation of the intent of CIHR-INMD's new research priorities for food for health research in Canada which have been developed over the past year.
- Dr. Atkinson started her remarks by responding to the observations by Dr. Charlebois about the leadership gap at the government level which is undermining efforts to move the food for health agenda forward. It is hoped that CIHR-INMD, as an arm of the federal government, will help to bridge that gap with their forward thinking research agenda.
- The aims of CIHR-INMD are attuned with this objective. CIHR hopes to: 1. Develop a stronger evidence base to inform future nutritional practice and food policy. 2. Foster research on total diet and specific nutrients that enhance health and reduce the risk of chronic disease. 3. Support emerging innovations in food engineering which is an important first step in improving the food supply and its health qualities. 4. Advance evaluation of biomarkers of nutritional adequacy. 5. Address ethical issues especially for people from diverse segments of the population and people with vulnerabilities.
- Key research gaps have been identified and will be addressed by the new CIHR-INMD research agenda including: nutrient requirements; varying responses to nutrient interventions by population; a comprehensive, multi-centre human intervention trial platform; development of national collaborative programs; disease prevention research; assessment of public health implications; interdisciplinary research; and ethical issues around genetic tests for personalized nutrition.



- Dr. Atkinson also spoke to the CIHR-INMD vision for a new, more collaborative partnership approach to research funding for the CIHR research agenda. It involves engaging multiple partners in the private sector and non-governmental agencies to leverage money to achieve common goals.
- Dr. Atkinson’s full presentation is available on the CNS website at <http://www.cns-scn.ca/default.asp>.

## **Practical Case Study Examples – “Bridging the Disconnect with Canadians”**

- During lunch, two practical food-for-health case studies were presented by researchers at the University of Alberta and the University of Guelph. They are new collaborative models designed to bridge the “disconnect” with Canadians.
- Both are innovative field to fork collaborative models and are representative examples of practical efforts to encourage consumer adoption by making it easy to integrate the food choices into busy life styles. One is a whole diet targeted to a chronic illness population and the other is an enriched staple food designed to fill nutrition gaps in the daily diet of Canadians.
- What is particularly interesting about the models is the effort to start to build a health evidence base with the inclusion of human intervention studies which will measure biological and metabolic impacts. New approaches to evidence building that might be deemed acceptable to medical practice are starting to emerge.
- Summaries of the case studies are attached in an appendix and the presentations are available on the CNS website.

## **Luncheon Keynote Speaker**

### **The Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA)**

Michael Toombs, Director, Research and Innovation Branch, Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA)

### **OMAFRA Research Priorities**

- The luncheon key note speaker, Mr. Toombs presented OMAFRA’s Food for Health Research Program; one of seven ministry research themes. The Ministry believes strongly in the significant potential to improve health through food.
- Guelph is home to one of the largest agri-food clusters in Canada and has a strong reputation for excellence and innovation in agri-food research. More than \$12.5 billion in R&D takes place each year.
- OMAFRA has had a long-term research agreement with the University of Guelph. The agreement has had a \$1 Billion economic impact; a 20 to 1 return on investment.
- On a global scale, there is growing demand for functional food or food for health. The market potential is estimated to be worth more than \$60 billion. The growth area in which Ontario can excel is in the development of value-added foods and beverages like probiotics, soluble fibre, omega-3 eggs, DHA-enhanced milk.
- Current research priorities for OMAFRA are: agriculture and food for health; bioactives, functional foods, and new healthy food products; consumers and healthy choices;

understanding linkages between food and health; and policy, regulations, investment and the economy.

- Since May 1999, OMAFRA has funded 111 projects under the Food for Health theme; with 41 currently active – 33 under the OMAFRA-Uof G Partnership; 4 under the New Directions research program; and 4 under the Agri-Food and Rural Link KTT Funding Program.
- The Ministry focuses heavily on KTT with demand-driven research and diffusion of knowledge and technology as criteria in its selection of research projects.

## Luncheon Panel Discussion with Morning Speakers/Presenters

**Panel: Dr. Gramlich of CNS, Dr. Charlebois of University of Guelph, Dr. Atkinson of CIHR, Michael Toombs of OMAFRA, Dr. Chan of the University of Alberta and Dr. Duncan of the University of Guelph**

- Over lunch, a question and answer session was offered to attendees related to the information and presentations shared during the morning portion of the workshop. The questions were very specific related to collaboration, research directions, KTT, and the issue of health outcome evidence to prove effectiveness of nutrition interventions. A few highlights follow.

### Highlights of the Discussion

- **On collaboration:** CIHR-INMD was asked as a leader in research if they were learning anything new at this session. **Response:** ‘We do need to understand the capacities and capabilities of everyone across the continuum to begin to work together. Better communication leads to better understanding. This workshop is an example. Based on the presentations today, we have a better understanding of what exactly OMAFRA does in food-health research. Also the discussion around developing foods with functional components that can modify health is an important discussion to have because CIHR believes that there is much more we can do in this area.’
- **On the linkage between food and health:** A question was asked of Dr. Charlebois who is involved with the three-year Conference Board of Canada Centre for Food in Canada study, if the Conference Board is going to include health as one of its parameters, consult with the grassroots and frontline practitioners, or only going take an academic approach. **Response:** ‘The Conference Board initiative is limited and there are gaps in its approach. So far, there is nothing of value on the health front. The study is driven by processing distribution; when you look at primary production and consumers, there are gaps that need to be addressed. They want to promote the industry; agriculture is very misunderstood by the wider public and consumers believe that food just magically appears on grocery store shelves.’
- **On integration of health and agriculture policy:** OMAFRA was asked about the kind of dialogue that is happening with the Ministry of Health given that health care has started to focus on prevention and less on tertiary care. **Response:** ‘OMAFRA works with the Ministry of Health Promotion, not so much with the Ministry of Health. They are focusing jointly on prevention, not the hospital (institutional settings) and are working, for example, on getting Ontario fresh produce into Ontario institutions.’

- **On Leadership:** CIHR was asked if it is realistic to expect CIHR, as a government body, to facilitate the food-health agenda from a health perspective. **Response:** ‘CIHR responded that SPOR (Strategic Patient Oriented Research), when it is rolled out it, will help to build partnerships at the provincial level and between provincial Ministries of Health and Ministries of industry.’
- **On different approaches to healthy food innovation:** A question to the panel was why some in the agriculture sector have been slow to move to a more balanced full diet approach from a single commodity approach. **Response:** Two responses were given by the participants from the University of Guelph. The first response spoke to the small size of the Canadian market which puts pressure on the economics and can act as a natural barrier to participation. The second response related to research direction – multiple foods versus one food. ‘The concept of dietary patterns has a lot of merit in nutrition because it is more immediately relevant to consumers. But focusing on one food versus a reductionist approach that focuses on one constituent of a food is also progress - a step up. We need to understand the pharmacokinetics of different bioactives in different food forms and how these bioactives perform in the human body.’
- **On evidence to prove positive health outcomes of foods or nutrients:** The panel was asked what evidence there is that any food has any health benefit and that any diet has a positive impact on health. **Response:** ‘The University of Alberta responded that this question was the basis for their decision to look at one small population of those with Type II Diabetes which could be defined medically and more precisely. This is a new approach to evidence building. This is a very specific and defined population that can be followed and measured looking for specific metabolic and biological outcomes similar to looking at one food or one bioactive. Just because you get an ingredient into a food, does not mean that it is going to have the right biological action so we need to look at the whole diet together.’

## Afternoon Panel Discussions

Two different types of panels were held in the afternoon of the workshop. The first panel on health care was a dialogue forum on collaboration and health intervention. The second panel focused on information sharing of successful industry-partnership research models and key lessons learned and was followed by a short panel discussion with attendees.

### Panel Discussion – Focus on the Health Care Community

**Building Capacity for Collaboration between the Food-Health Sectors** – Redefining the food-health paradigm. How do we get buy-in and commitment to the food-health imperative in the health care community? What should be the role of medical practitioners in knowledge translation to encourage Canadians to adopt healthier diets?

**Moderator** – Dr. Harvey Anderson

**Panelists:** Dr. Kush Jeejeebhoy, Dr. David Jenkins, Dr. Molly Rundle, Dr. David Armstrong, David McInnes

- The first panel in the afternoon was a unique dialogue session on engaging the health care community and building capacity for collaboration between the agri-food and health sectors in order to facilitate better outreach to Canadians with a food for health agenda.
- Each panellist was asked to make a statement providing their perspective on barriers, possible solutions, the use of food in prevention and treatment; and what needs to be done to help Canadians adopt healthier diets. Discussion of these statements ensued.
- There was a strong contingent of medical professionals on the panel including for the first time, a family physician from the College of Family Physicians who represented the voice of those in frontline practice. Two other panellists provided other spectrum perspectives – from agriculture and the retail sector – which added an interesting dynamic to the discussion.

### **Highlights of the Health Panel Discussion**

- The panel explored the lack of connectivity of the health care sector with agri-food and industry. It was acknowledged that the agriculture sector has shown real leadership on the food for health agenda, but the health/medical community has been largely absent due to a variety of factors related to the role of family physicians, training, distrust of the profit motive, and an absence of policy leadership.
- Participants attempted to identify go forward nutrition priorities and explore the possible role for medical practitioners.
- Panelists agreed that change is essential. Food and nutrition must be seen as policy and health care priorities. There was a call to raise the status of the nutrition industry by engaging Health Canada to recognize that foods like drugs have a beneficial effect.
- Getting health claims accepted by Health Canada is like “pulling teeth”; because of an outdated regulatory framework; particular reference was plant sterols and cybiscus fibre. The Health Act regulations have not been changed since 1950. The health claims we have now would not exist if Agriculture Canada had not provided funding to Health Canada.
- Another significant problem is that there needs to be a payoff for industry which is being asked to make a large investment, but there is little payoff because, as things stand now, the Health Act does not permit industry to make many health claims.
- There was also a call for the political level of government to develop a common shared vision of food for health which includes Agriculture and Health ministries working together. Collaboration must start from the top.
- The role of physicians in frontline practice was discussed at length with a focus on practical recommendations to increase the interface with patients and move to a preventative approach. Remuneration issues, time constraints, and the need for clinical practice guidelines were identified as needing attention. It was acknowledged that changing family practice models allow more flexibility for physicians to work with patients or to refer to other experts in the field of nutrition and diet on the health care team such as Registered Dietitians.
- While it was acknowledged that most medical interventions are pharmacological, panellists put forward a number of recommendations on how to integrate a preventative strategy focused on food, nutrition and diet into frontline practice. These recommendations were later echoed in the attendee survey and breakout sessions. Solutions put forward included physician education in medical schools and continuing

- medical education to significantly improve their knowledge base, raising awareness of the importance of nutrition to health as an alternative to pharmacological remedies in the policy arena, and the critical need for a body of evidence to prove health outcome.
- There was consensus that the issue of evidence of positive health outcome needs to be addressed before nutrition can become part of medical advice and care across the country. Physicians are expected to practice evidence-based medicine, but there is enormous difficulty producing population-based evidence because of the huge number of variables that can change. A way forward to develop the evidence base could be to work with individual patients and prove that an intervention fixed to an individual patient has an immediate effect. Over time aggregate this data into a body of evidence that forms a larger scale model which then can be translated to a systems level.
  - The panel expressed concern about the lack of policy focus on prevention and gave as an example, the 2003 Canada Health Accord, which is about to be renegotiated by the federal government with the provinces. The 2003 First Ministers' Accord on Health Care Renewal reaffirmed their commitment to the principles of the Canada Health Act and the need to refocus the system on prevention.
  - The 2003 Accord, while supposedly committed to prevention, only makes passing nod to prevention and ignores the role of food, nutrition, and diet as key connection points in prevention. The panellists want to see major changes in the new accord between the federal government and the provinces recognizing food for health. Change to the Canada Health Accord to link it with the Agri-food Act would build in an institutional approach at the highest level for food for health and the development of food-related health prevention tools.
  - The agri-food participant cautioned about relying on government for solutions. The solution rests with us to develop a common agenda across the entire spectrum and then take that to government. This was positioned as a responsible course of action to show leadership.

## **Panel Discussion: Focus on Research**

### **Presentation of Industry-supported research partnership models to leverage food and health research opportunities.**

**Moderator:** Dr. Rickey Yada

**Panelists:** Campbell Company of Canada, Heinz Canada (Dr. Idamarie Laquatra), Burnbrae Farms (Margaret Hudson), Pulse Canada (Dr. Julianne Curran)

- The objective of this industry panel was knowledge transfer and to inspire new collaborations of research success. The panel provided successful models of industry-supported research collaborations research to bring healthier foods to market and achieve strong consumer acceptance. Presentations by the panellists are available **on the CNS website at <http://www.cns-scn.ca/default.asp>.**
- Common themes emerged: All models presented were focused on providing healthier, nutritionally enriched foods.
- Key to success was that each stakeholder needs to agree upfront at the beginning of the project on an endpoint for the collaboration and then build the partnerships to get there.

- Partnerships were based on full transparency and respect. Health Canada was engaged as early as possible to determine what was possible on the regulatory front. However, there was considerable frustration expressed about nutrition health claims and the time it takes for approvals.

### Research Partnership Model Highlights

- **Campbell Company of Canada:** Due to a last minute conflict, Phil Donne, President of Campbell Company of Canada, could not be present to make his presentation. Dr. Yada, as moderator, was asked by Mr. Donne to present the Campbell story of technological innovation to naturally enrich one of their soups with Vitamin D using a simple UV light technology. Partners on the project were the University of Waterloo and Vineland Research and Innovation.
- **Pulse Canada:** Dr. Curran, Director of Nutrition, Science & Regulatory Affairs, outlined the Pulse Canada approach to research and partnership pointing out that Canada, in less than 20 years, has become one of the largest producers and exporters of peas and lentils. In 2005, Pulse Canada began to shift into human health and utilization research with initial funding from NSERC to research the health benefits of pulse crops specifically looking at cholesterol lowering, obesity, blood glucose and ribiotic effects.
- Pulse uses a collaborative partnership model to leverage research funding. Funding from governments is used to leverage additional funding and partner with food companies that do not have the resources to undertake research.
- Focus today is on pulse product innovation striving for food products with more pulse ingredients. For example, pasta can be reformulated to have 25% lentil flour mixed with wheat flour. This results in a 100% increase in fibre and a 25% increase in protein quality.
- Pulse Canada shared some key lessons learned from its collaborations. For success, partner buy-in in the development of the project and engagement is critical from the onset. Investigate with Health Canada what kinds of claims are allowed under regulation before you start. Consult regulatory bodies when designing clinical trials so the research data will be right for the claim.
- Pulse Canada calls for a change in mindset. Most research is post-farm gate and that must change so that we can bring value to our growers.
- **Burnbrae Farms:** Margaret Hudson, President of Canada's largest integrated egg company and the number one specialty egg marketer, related their experience with product innovation and market adoption challenges because of regulatory hurdles and roadblocks.
- The company takes a nutritional gaps approach to innovation adding functional ingredients to their egg products to create healthier eggs. Their focus is on consumer acceptance. The healthier foods must fit into the busy lifestyles of Canadians. The idea is to enrich products that people use everyday; adding a benefit to close the nutrition gap.
- Burnbrae, as a market leader and innovator, faced challenges because they cannot copy write an ingredient so others could copy their lead. Their biggest problem has been labelling as they could not make a source claim because of regulation.
- Key to success is retailer buy-in. Without retailer buy-in, you cannot get your product on shelf and make it available to consumers.

- **Heinz Canada:** Dr. Idamarie Laquatra, Director of Global Nutrition, shared Heinz' experience with successful partnerships with NGOs, governments, universities, academia, growers and manufacturers internationally. One of the examples explained was the Heinz Micronutrient Campaign which develops and distributes vitamin and mineral powder sachets to reduce iron deficiency anaemia in India, China, Africa, and Indonesia.
- Heinz offered advice on the Path to Successful Partnerships- 1. Develop trust. 2. Be transparent. 3. Define the mutual goal – it must be a win-win for everyone involved. 4. It has to translate into a consumer benefit. 5. Be open to learning. The corporate world and the health care community speak different languages so it needs to be translated so that there is clear understanding on both sides. 6. Identify who all the stakeholders are so that they can all be in the room to get buy-in and agree on mutual goals.

### **Highlights of the Research Panel Discussion**

- The panel of presenters fielded questions following their presentations. The issue of claims and the Health Canada Food Regulatory Advisory Process was the main focus of discussion.
- The approval process from the perspective of industry takes too long to allow innovation; as much as five years. It is very frustrating for companies trying to bring nutritious foods to market. While nutrition content claims are fine, industry wants to be able to make nutrient health claims so that they educate consumers on the benefits of nutrients to their health and encourage higher adoption rates.
- Health Canada, in attendance at the workshop, joined the discussion to respond to being seen as a regulatory roadblock. They acknowledged that they are working with old, out-of-date regulations, but felt that the reality is that regulations will never keep up with innovation. Health Canada stated a strong willingness to work closely with industry and called on corporations and product innovators to come to Health Canada as soon as possible at the beginning of the project to get advice and guidance on claims, approval processes, and research needed.
- Health Canada advised that they are working on a guidance document on how companies can use international systemic reviews which Health Canada will use to try to fast track some of the approval review process. However, Health Canada cautioned that every claim has to be science-based and communicated in a way that is not misleading to consumers.
- Health Canada agreed that there needs to be a lot of work done on collaboration with industry.

## APPENDIX

### CASE STUDIES

#### University of Alberta

#### Case Study on Practical Solutions and Collaboration

##### Dr. Cathy Chan – The Alberta Diet, PANDA Research Project

Dr. Chan is a full professor in the Faculty of Medicine and Dentistry and the Faculty of Agricultural, Life and Environmental Sciences at the University of Alberta. She is the principal investigator on the Physical Activity and Nutrition for Diabetes in Alberta; full project title is "Practical behavioural modifications for type 2 diabetes treatment: Physical Activity and Nutrition for Diabetes in Alberta."

##### The PANDA Alberta Diet Targeted to a Chronic Illness Population

- The PANDA Project presented by Dr. Chan is a strong collaborative model encompassing the entire food-health spectrum. It is a model for treating and managing chronic disease using food and diet by trying to change food intake patterns. Its goal is to create an Alberta Diet for defined chronic illness population; those with Type II Diabetes.
- Adherence to dietary change among diabetes is low at only 30%. The objective is to integrate the diet into the lifestyle of diabetics; to bring the food environment closer to the tipping point where people will change their behaviours and adopt the Alberta diet.
- The diet, based on local Alberta foods, is designed to be nutritionally adequate, culturally acceptable, available in stores, financially accessible to Albertans and profitable for industry.
- While a good example of cooperation among scientists, agriculture, Alberta Health, food producers, and processors, food retailers have yet to join the collaboration. Dr. Chan advised that this remains a critical next step.
- Importantly, the PANDA Project represents a new approach to health outcome evidence building. It is attempting to measure reliable biomarkers like blood lipids and blood sugars among a discreet chronic illness population in order to provide scientific evidence of effectiveness.

#### University of Guelph

#### Case Study: a soybean functional food to link agriculture and health

##### Dr. Alison Duncan - Associate Professor in the Department of Human Health and Nutritional Sciences at the University of Guelph.

Dr. Duncan has assembled a team of researchers to bring soy's health benefits beyond soy foods, by incorporating isoflavones into everyday staple foods. Everyday foods such as bread could soon be enriched with health-promoting components of soy starting with isoflavone-enriched bread.



### **Creating a Soybean Functional Food Linking Agriculture and Health**

- The work of Dr. Duncan at the University of Guelph follows an important theme in food for health research – enriching staple foods with additional micro-nutrients to offer consumers healthier food choices that are already a part of their daily diet.
- The research is looking at the biological effects of functional foods and nutraceuticals on chronic disease end points evaluated in human intervention studies. Specifically, the Soybean Project is researching how we can alter food quality to optimize health by going beyond nutritional ingredients to consider the use of bioactives that have human health value in staple foods.
- Innovating food products to become functional foods is being increasingly accepted by consumers. In this research project, the objective is to bring the health benefits of soybean directly to consumers by incorporating isoflavones into everyday staple foods like bread which soon could be enriched with health –promoting the health benefits of soy.
- The project is a strong collaborative model across the food-health continuum linking agriculture to food and food to human health. There are four phases. The first phase was in the field breeding to manipulate the soybean variety according to isoflavine content and determine if Ontario has suitable growing conditions. The second phase was processing - baking a functional bread; the third, human trials to measure isoflavines in blood and urine; the human biological impact. And the fourth phase relates to consumer issues and market place potential.