



ABOUT PFSNRA

History

The **Program in Food Safety, Nutrition and Regulatory Affairs (PFSNRA)** is an exciting component of the Department of Nutritional Sciences, Faculty of Medicine, at the University of Toronto. PFSNRA was established in 1992 with support from the Natural Sciences and Engineering Research Council of Canada (NSERC) through a peer-reviewed initiative, the University of Toronto and representative of Canada's food industry.

Mission and Objectives

Since 1992, the mission of PFSNRA has been to assist food industry by **providing scientific expertise** needed to address current food safety, nutrition and regulatory issues affecting Canadian consumers. It continues to accomplish this by serving as a **conduit for collaboration** between scientists and health professionals from universities, food industry, government and non-governmental organizations, with the common goal of **achieving a healthier Canadian population**.

Through its science-driven program activities, PFSNRA is able to meet its specific objectives including:

- **Enhancing research and development partnerships** in academic settings to provide answers to current and future safety and nutrition concerns regarding food industry products;
- **Examining the scientific basis** for regulatory positions, public health statements and related issues identified by PFSNRA committee; and,
- Serving as a **scientific information resource** on food, nutrition and health.





PROGRAM FRAMEWORK

The University-Industry Affiliates Program Office

Opened in 1992, the **University-Industry Affiliates Program Office** facilitates communication among industry donors, academic scientists, government representatives, consumers and health professionals on key food safety, nutrition and regulatory issues. The University-Industry Affiliates Program Office is PFSNRA's **link with media and health professionals**, providing access to accurate information on the safety of our food supply and the role of nutrition in health.

The Scientific-Technical Committee (STC)

PFSNRA activities are guided by its **Scientific-Technical Committee (STC)** comprised of its Director, Co-Director, Department of Nutritional Sciences Chair and faculty, representatives from food companies, University of Guelph, Ryerson University and Program Office Manager.

The STC meets monthly to proactively identify and address nutrition, food safety and regulatory issues. PFSNRA industry donors are also informed about the Department's research activities and initiatives, and are encouraged to form research partnerships with interested faculty members.



The STC is currently under the guidance of Director, [Dr. G. Harvey Anderson](#), Professor, Departments of Nutritional Sciences and Physiology, University of Toronto.





PROGRAM BENEFITS

Relevance for Canadians

Canadian consumers are becoming increasingly nutrition and health-conscious and want to be able to take full advantage of the latest research findings linking food and food components to improved health outcomes and disease prevention. Such consumer needs directly impact Canada's food industry, together with the evolving scientific understanding of how food and food components affect health. However, translation of academic research findings to commercial product applications and consumer communication by the Canadian food and nutrition industry is required to address these needs.

For Canada's food industry to remain competitive on an international scale, a concerted effort is required uniting the scientific expertise and resources within Canada's academic community, food industry and government bodies. PFSNRA plays a crucial part in building these partnerships by promoting scientific academic-industry collaboration amongst its donors and associates. A selection of key program accomplishments is listed on p6-10.

Benefits of Donating

As donors of PFSNRA, industry partners are represented on the **Scientific-Technical Committee (STC)**, which gathers at monthly meetings to identify and debate current issues and help define the direction of program activities managed by the University-Industry Affiliates Program Office. Through these meetings, donors are also kept informed on recent developments, of interest to them, within the scientific community.

Additional benefits for PFSNRA's multinational food industry and academic members include:

- **A focused, science-based mission.** PFSNRA is a peer-reviewed program in the Department of Nutritional Sciences, Faculty of Medicine at the University of Toronto. The University of Toronto is Canada's largest and leading research university with strong research and teaching programs in nutritional sciences.



Program in Food Safety, Nutrition and Regulatory Affairs (PFSNRA)



Nutritional Sciences
UNIVERSITY OF TORONTO

The [Department of Nutritional Sciences](#) has unique resources available for the purposes of the program. No other Canadian institution provides a program specifically designed to focus on the science-based issues that Canada's food industry must address if it is to remain a vital and successful sector.

- ➔ **International linkages.** The Program has linkages with both the **International Life Sciences Institute (ILSI) North America** and the **International Food Information Council (IFIC)** thus facilitating exchange of information and access to scientific expertise from a broad international base.

ILSI North America:

The PFSNRA and ILSI North America held a joint meeting on December 4, 2012 at the University of Toronto to strategize feasible ways for ILSI North America to enhance its focus on current nutrition and food safety issues within Canada and strengthen its tripartite relationship with Canadian government agencies, academic institutions and industry donors. Attendees included PFSNRA donors, Health Canada representatives, and academics from across Canada. Initial activities for this interaction would include exchange of scientific information, research results, collaborative input into new research programs, and education outreach opportunities among Canadian professional scientific organizations, food industry scientists, and government scientists on issues of nutrition, food safety and risk assessment.

Following ILSI North America's annual board meeting in January 2013, executive board members approved the establishment of an Advisory Committee comprised of select academic and government scientists from Canadian institutions, including Dr. Harvey Anderson, and representatives from the ILSI North America Board of Trustees to oversee specific goals and suggest operational and structure solutions to accomplish the goals. In July 2013, ILSI North America entered into an agreement with the PFSNRA to support a part-time Research Coordinator position based at the PFSNRA office in the Department of Nutritional Sciences. University oversight is provided by Dr. Harvey Anderson. For ILSI North America activities, the Associate reports to Dr. Eric Hentges, Executive Director. ILSI North America will contract with the Department of Nutritional Sciences to support a



Program in Food Safety, Nutrition and Regulatory Affairs (PFSNRA)



Nutritional Sciences
UNIVERSITY OF TORONTO

maximum of \$15,000 per year part-time research and collaboration through a Research Coordinator for a period of one year from the start of the agreement and is renewable based on development of subsequent annual plans of work. The Research Coordinator shall possess at least a M.Sc. degree related to food and nutrition, and must possess excellent communication, writing and presentation skills.

This position shares several objective and accountabilities with the current PFSNRA research trainee including:

- Identifying opportunities for public/private research partnerships;
- Facilitating networking opportunities between government, industry and academic scientists on current nutrition, food safety and risk assessment issues within Canada;
- Facilitating outreach and communication opportunities within Canadian scientific forums for research results from both ILSI North America and potential partnership programs;
- Ensuring a Canadian focus is considered in the development of new project initiatives and/or project designs within ILSI North America committees;
- Aiding in the identification of Canadian scientific expertise for research projects, workshops, professional meeting sessions, advisory groups, and other activities.

⇒ **Media proactive.** Through the University-Industry Affiliates Program Office, media and health professionals have access to accurate information on issues of concern to the public with respect to the role of nutrition in health and the safety of the food supply.



Program in Food Safety, Nutrition and Regulatory Affairs (PFSNRA)



Nutritional Sciences
UNIVERSITY OF TORONTO

Current Donors (2017-2018)

Industry Donors

Abbott Nutrition Canada
Campbell Company of Canada
Canada Bread Co.
Canadian Sugar Institute
Cargill Inc.
Coca-Cola Ltd.
Dairy Farmers of Canada
Danone Inc.
Dare Foods Ltd.
General Mills Canada Corporation
Ingredion Canada Inc.
Intertek Scientific & Regulatory Consultancy
Mead Johnson Nutritionals
Nestlé Canada Inc.
PepsiCo Canada
Pulse Canada
Unilever Canada

Collaborators (depending on topic)

Agriculture and Agri-Food Canada (AAFC)
Canadian Nutrition Society (CNS-SCN)
CANTOX Health Sciences International
Dietitians of Canada (DC)
Food and Consumer Products of Canada (FCPC)
International Life Sciences Institute (ILSI) North America
Ryerson University, Toronto
University of Guelph





PFSNRA IN ACTION

Activities

- ⇒ Symposia and workshops
- ⇒ Critical appraisals of scientific literature
- ⇒ Responses to government proposals
- ⇒ Research
- ⇒ Publications
- ⇒ Graduate course in food regulatory affairs (NFS1212H); also available to food industry professionals

Interests

- ⇒ Food regulation
- ⇒ Functional foods
- ⇒ Micronutrient safety
- ⇒ Natural health products
- ⇒ Health claims
- ⇒ Trans fatty acids
- ⇒ Standards of evidence for health claims
- ⇒ Obesity
- ⇒ Food fortification
- ⇒ School-aged children's health
- ⇒ Novel foods and novel fibers
- ⇒ Nutrition labelling
- ⇒ Canada's dietary guidelines

Accomplishments and Key Publications

The PFSNRA has achieved great success in assisting the STC and other stakeholders on scientific food and nutrition issues through its program activities including:

- ⇒ Symposia and workshops
- ⇒ Publications/documents
 - Critical appraisals of scientific literature and reports to government
 - Background documents and workshop proceedings
- ⇒ Graduate course



Program in Food Safety, Nutrition and Regulatory Affairs (PFSNRA)



Nutritional Sciences
UNIVERSITY OF TORONTO

A selection of recent activities (**2007-present**) is outlined below by topic; a complete list of activities and topics is available upon request.

Symposia and workshops

These program activities are designed to educate, increase awareness of topical issues, assist in the preparation of responses to government proposals and produce publications. Symposia are attended by university and government scientists, public health nutritionists, dietitians and other health professionals, graduate students and nutrition scientists from the food industry - in Canada, the USA, Europe and other countries.

Health Claims on Foods in Canada

- (i) "Health Claims in Canada: An Update". Afternoon symposium co-chaired by Dr. Dan Ramdeth and Dr. G. Harvey Anderson at the 2011 CNS-SCN Annual Meeting. This session brought together academia, regulators and industry to discuss current issues pertaining to health claims in Canada including current opportunities, the process involved and potential benefits of health claims. **June 3, 2011.**
- (ii) "Health Claims Related to the Control of Post-Prandial Glycemia". Morning symposium co-chaired by Dr. Alfred Aziz and Dr. G. Harvey Anderson at the 2012 CNS-SCN Annual Meeting. The purpose of this symposium was to present and discuss the different approaches to this type of health claim that were adopted or are being considered by regulatory jurisdictions, including Health Canada.

Oats and Psyllium Fibre

- (i) "Oats and Psyllium Fibre Workshop". Closed workshop to (a) receive expert feedback on PFSNRA's systematic approach to retrieving and evaluating scientific literature on oats/psyllium and blood cholesterol/risk for coronary heart disease; (b) receive expert feedback on the internal and external validity of the relationship between oats/psyllium and blood cholesterol levels/risk for coronary heart disease; and (c) provide a forum for information exchange, learning, and discussion between scientists, academicians, regulators, and health professionals on the topic of oats/psyllium and blood cholesterol/risk for coronary heart disease. **March 14, 2007.**





Plant Sterols

- (i) "Does the Consumption of Plant Sterols Lower Plasma Cholesterol Concentrations?" Closed workshop to (a) receive additional expert feedback on PFSNRA's systematic approach to retrieving and evaluating scientific literature on a food/health relationship; (b) receive expert feedback on the internal and external validity of the relationship between plant sterols and blood cholesterol levels/risk for CHD; and (c) provide a forum for information exchange, learning, and discussion between scientists, academicians, regulators, and health professionals on the topic of plant sterols and blood cholesterol/risk for CHD. **June 27, 2008.**

Probiotics, prebiotics and symbiotics

- (i) "Symposium on the Health Benefits of Probiotics, Prebiotics and Symbiotics". Closed workshop to obtain an overview of (a) the current state of the science relating probiotics, prebiotics and symbiotics to health benefits; and (b) the regulations impacting health claims for these food components. **October 15, 2008.**

Protein Quality Assessment Methods

- (i) "Exploring Research Gaps for Determining Protein Quality in Food". Tri-partite Workshop in collaboration with the University of Manitoba and Health Canada, funded by an NSERC Connect Grant Level 3. Objectives to (a) Review current and new protein quality assessment methods and discuss harmonization, (b) Develop a research agenda designed to support evidence-based policy for protein content claims, and (c) Address the pros and cons associated with current protein quality assessment methods. **November 15, 2016.**

Pulses

- (i) "Is there sufficient evidence to support a health claim for pulse consumption and lowering coronary heart disease risk?" Closed symposium to (a) receive expert feedback on their confidence in the causality (internal validity) and generalizability (external validity) of the relationship between pulse consumption and blood cholesterol levels/risk for CHD; (b) identify research gaps; and (c) provide a forum for information exchange, learning, and discussion between scientists, academics, regulators, and health professionals on the topic of pulse consumption and blood cholesterol/risk for CHD. **June 9, 2010.**





Sodium

- (i) "Sodium Reduction: The Why's and How's". Afternoon symposium co-chaired by Ms. Nora Lee and Dr. Bernadene Magnuson at the 2008 CNCN-CSNS Annual Scientific Meeting. This symposium aimed to look at the science behind Health Canada's salt reduction initiative and some new and exciting alternatives for salt substitution currently under development. **May 31, 2008.**

Publications/Documents

- Wong CL, Anderson GH. Does the Consumption of Plant Sterols Lower Plasma Cholesterol Concentrations? A Summary of Workshop Proceedings and Expert Reviews. PFSNRA, **Sept 2008.**
- Wong CL. A Critical Analysis of the Science on Plant Sterols and Cholesterol Lowering. PFSNRA, **Sept 2008** [Submitted to Health Canada].
- Wong CL, Comelli E, Anderson GH. Background Document: Probiotics, Prebiotics and Synbiotics. PFSNRA, **Oct 2008.**
- Wong CL. Health Benefits and Regulation of Probiotics, Prebiotics and Synbiotics A Summary of Symposium Proceedings. PFSNRA, **Nov 2008.**
- Paulionis L, Wong CL. Health Claim Substantiation in Canada: Possibilities for Expediting the Process. Prepared for Agriculture and Agri-Food Canada, **March 2010.**
- Wong CL, Anderson GH. Is there sufficient evidence to support a health claim for pulse consumption and lowering coronary heart disease risk? A Summary of Workshop Proceedings and Expert Reviews. Prepared for Agriculture and Agri-Food Canada, **June 2010.**
- Wong CL, Anderson GH. Background Document: Pulses and Cardiovascular Disease. PFSNRA, **June 2010.**
- Cuda C, Wolever TMS and Anderson GH. Comments on Health Canada's Proposed Policy: Definition and Energy Value for Dietary Fibre. Submitted to Health Canada, **March 2011.**
- Cuda C, Anderson GH. Tackling Obesity Together: Collaborative Approaches to Food & Health. Prepared for the Public Health Agency of Canada's "Our Health Our Future" initiative, **June 2011.** <http://ourhealthourfuture.gc.ca/2011/07/01/tackling-obesity-together-collaborative-approaches-to-food-health/>
- Nunez MF, Comelli E & Magnuson B. Comments on Health Canada's Draft Guidance Document on the Use of the Term "Prebiotic(s)" on Food Labels and in Advertising. Submitted to Health Canada, **June 2012.**



Program in Food Safety, Nutrition and Regulatory Affairs (PFSNRA)



Nutritional Sciences
UNIVERSITY OF TORONTO

- ➔ Nunez MF, Anderson GH. Comments on Health Canada's Draft Guidance Document on the Use of Satiety Health Claims on Food. Submitted to Health Canada, **November 2012**.
- ➔ Nunez MF, Darling P & Comelli E. Comments on Health Canada's Draft Statement "Nutrition for Healthy Term Infants: Recommendations from Six to 24 Months". Submitted to Health Canada, **July 2013**.
- ➔ PFSNRA. Nomination for New Dietary Reference Intakes Review of n-3 long-chain PUFAs (EPA and DHA). Submitted to Health Canada, **July 2013**.
- ➔ PFSNRA. Comments on Health Canada's Draft Guidance Document on Food Health Claims Related to the Reduction in Post-prandial Glycaemic Response. Submitted to Health Canada, **September 2013**.
- ➔ Wiggins AK, Anderson GH. Comments on Health Canada's Category Specific Guidance for Temporary Marketing Authorization: Beverages, Beverage Mixes and Concentrates, Powders, Bars and Confectionaries. Submitted to Health Canada, **August 2014**.
- ➔ Wiggins AK, Anderson GH. Comments on Health Canada's Technical Consultations on Nutrition Labelling. Submitted to Health Canada, **September 2014**.
- ➔ Wiggins AK, Anderson GH. Comments on Health Canada's Canada Gazette Part 1 amendments on Nutrition Labelling. Submitted to Health Canada, **August 2015**.
- ➔ Wiggins AK, Anderson GH. Comments on Health Canada's Front-of-Pack Labelling Consultation. Submitted to Health Canada. **January 2017**.
- ➔ Wiggins AK, Anderson GH, House JD. Exploring Research Gaps for Determining Protein Quality in Food: Dialogue and Recommendations from a Tripartite Workshop. Submitted to APNM. **January 2018**.

Graduate Course

PFSNRA offers a graduate course, "NFS1212H: Regulation of Food Safety and Composition", which aims to provide students with an understanding of how new food products and ingredients are regulated to ensure a safe food supply. It is offered through the Department of Nutritional Sciences to current graduate students and to non-UofT students through the School of Continuing Studies every year during the Fall semester.





Current and Future Activities

Ongoing Activities

- Examining the scientific basis of current regulations in the areas of food biotechnology, functional foods, health claims and nutrient fortification.
 - Current projects include modernization of Canada's Food Fortification framework, accessibility to Canadian Dietary Intake Survey data, updates to Canada's Food Guide, Front-of Package nutrition labeling, updating protein quality assessment methods used in Canada, and modernization of Divisions 24 and 25 of the Food and Drug Regulations
- Collaborative research projects between PFSNRA industry donors and faculty in the Department of Nutritional Sciences, University of Toronto.
- Public seminars by national and international food/nutrition scientists.

Looking Forward

As a science-based program supported by industry, PFSNRA has a solid foundation to build upon:

- Integrated in the Department of Nutritional Sciences at the University of Toronto where there is diverse ongoing research in both the basic and clinical sciences; good relations with the Dalla Lana School of Public Health.
- Recognized as being arms length and therefore is able to maintain a good working relationship with Health Canada.
- Recognizes the need to have agri-food integrated with health.
 - Importance of prevention over treatment; agri-food's potential to prevent chronic disease and reduce health care costs.
 - Have agri-food, medicine, public health working together instead of against each other to improve the health of Canadians.
- Nutrition and Food Policy should be expanded to play a more prominent role in PFSNRA and in the Department, which can be achieved by instating a Chair or Associate Professor.
 - University of Toronto is the only university with a program like PFSNRA, with expertise in nutritional science and policy.
 - PFSNRA can provide leadership in the analysis of the science behind policy to aid policy makers in the decision making process.



Program in Food Safety, Nutrition and Regulatory Affairs (PFSNRA)



Nutritional Sciences
UNIVERSITY OF TORONTO

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LINKS

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International Life Sciences Institute- North America: www.ilsina.org

