



Science Atlantic
Nutrition and Foods
Conference

Science Atlantique
Conférence sur la
Nutrition et alimentation



Fifth Annual Science Atlantic Nutrition and Foods Conference Program

Programme de la Cinquième Conférence
Annuelle Science Atlantique Nutrition et
Alimentation

April 28- 29, 2023



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Jennifer Taylor, UPEI

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University of Prince Edward Island

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University of Prince Edward Island

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Carole C. Tranchant

Université de Moncton

Sarah Finch

University of Prince Edward Island

Jennifer Taylor

University of Prince Edward Island

**2023 Science Atlantic Nutrition and Foods
UPEI Conference Planning Committee**

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Sarah Finch (Co-chair)	University of Prince Edward Island
Megan Vanderkloet (Student Chair)	University of Prince Edward Island
Humphrey Muthoni (Student member)	University of Prince Edward Island
Nelisha Narayan (Student member)	University of Prince Edward Island
Camryn Ramsay (Student member)	University of Prince Edward Island

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Mia Léger	Université de Moncton

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NOTICE OF EVENT RECORDING

This event will be videotaped and will be distributed to those registered for the conference but who are unable to attend.

Photos, audio and video captured may be used in external news stories or in stories featured by UPEI (e.g. on the university's website, social media channels).

General Information

All sessions will be held on Zoom. Links are included in the schedule that follows.

Help Desk/Registration

You can access technical help and have questions answered about registration at the following “Gather town” link:

<https://app.gather.town/events/AHWcKhDTTcO0ca8yg9u2>

Registration times:

Friday April 28 4:00 pm-6:00 pm

Saturday April 29 7:30 am-8:00 am

Conference Evaluation Survey & Certificate of Attendance

Certificates of attendance will be sent to participants after the conference.

Conference evaluation questionnaires will be sent via email after the conference. Please take the time to fill out the questionnaire as it will help improve future Science Atlantic Nutrition and Foods conferences!

Science Atlantic Nutrition and Foods 2023 Schedule:

Friday, April 28, 2023

4:00- 6:00 PM	Help Desk- Registration Link: Gather Platform https://app.gather.town/events/AHWcKhDTTcO0ca8yg9u2
4:30- 6:00 PM	Pre-Conference Workshop: Professor Margaret Augustine, UPEI Indigenous Food Across Turtle Island: Room 1 https://upei.zoom.us/j/66671484007?pwd=ck15czIzN1FhYWhEeFFvRktLSGRDUT09&from=addon Meeting ID: 666 7148 4007 Passcode: 017634
6:30 - 7:00 PM	Opening Ceremony - Orientation and Welcome Room 2 https://upei.zoom.us/j/69650557905?pwd=MURqajU3cVQwcjRxMTBjNDIVbFhZdz09&from=addon Meeting ID: 696 5055 7905 Passcode: 367577
7:00 - 8:00 PM	Keynote Presentation: Dr. Cathy Mah, Dalhousie University Room 2 <i>Consumer Food Environments, Healthy Diets and a Healthier Society: An Introduction to Food Environments Research From a Social Perspective</i>
8:00 - 8:30 PM	Meet and Mingle: Gather Platform https://app.gather.town/events/AHWcKhDTTcO0ca8yg9u2

Saturday, April 29, 2023

8:00-8:30 AM	Help Desk- Registration Link: Gather Platform https://app.gather.town/events/AHWcKhDTTcO0ca8yg9u2
8:30-8:40 AM	Opening Remarks Room 3 https://upei.zoom.us/j/61850567397?pwd=NDZwOTU4bDZqVTRsczRacStpa1c0OT09&from=addon Meeting ID: 618 5056 7397 Passcode: 158375
8:45-9:30 AM	Speaker: Dr. Sukhinder Kaur Cheema Room 3 <i>Maternal Nutrition and Future Generational Health.</i>
9:30 - 10:30 AM	<u>Session A: Oral Presentations</u> Room 4 https://upei.zoom.us/j/67224057703?pwd=WUWpZnBjO0hyclFkVWVWdEppMmJhZz09&from=addon Meeting ID: 672 2405 7703 Passcode: 168880
10:30-10:45 AM	Break
10:45-12:00 PM	Speaker: Dr. Ruth Harvie Room 3 (see link above) Using the gastrointestinal microbiome to personalize nutrition advice: Are we there yet?
12:00-12:45 PM	Lunch break
1:00-2:30 PM	<u>Session B: Oral Presentations</u> Room 4 (see link above)
2:30- 3:45 PM	Enhanced Poster Presentations Room 3 (see link above)
3:45-4:00	Break
4:00- 5:00 PM	Closing Awards Ceremony Room 2 (see link above)

Pre-Conference Workshop: Friday, April 28, 4:30-6:00 PM

Room 1

<https://upei.zoom.us/j/66671484007?pwd=ck15czIzN1FhYWVhEeFFvRktLSGRDUT09&from=addon>

Meeting ID: 666 7148 4007 Passcode: 017634

Title: Indigenous Foodways of Turtle Island

Speaker: Margaret Augustine, Assistant Professor, UPEI Faculty of Indigenous Knowledge, Education, Research and Applied Studies

Learning Objectives:

Participants will:

- gain an understanding and awareness on the relationship that the Mi'kmaq have with Mother Earth and food;
- learn about efforts to reclaim traditional Indigenous foodways and resist the impact of colonization;
- learn about traditional Mi'kmaq foods and the stories behind particular recipes.



Keynote Presentation: Friday, April 28, 7:00-8:00 PM

Room 2:

<https://upei.zoom.us/j/69650557905?pwd=MURqajU3cVQwcjRxMTBjNDIVbFhZdz09&from=addon>

Meeting ID: 696 5055 7905 Passcode: 367577

Title: Consumer Food Environments, Healthy Diets, and a Healthier Society: An Introduction to Food Environments Research From a Social Perspective

Speaker: Dr. Catherine L. Mah, Canada Research Chair in Promoting Healthy Populations, Dalhousie University

Dr. Catherine L. Mah MD FRCPC PhD is an internationally recognized scholar in nutrition and food policy and is appointed to Health Canada's Nutrition Science Advisory Committee. She has published widely in health and social science, including critical and empirical studies on the consumer food environment and its role in social equity in population diet, food access, and food affordability. In 2022, Dr. Mah was the recipient of a Queen Elizabeth II Platinum Jubilee Medal from Nova Scotia for her service as an educator.



Affiliations:

Canada Research Chair in Promoting Healthy Populations

Associate Professor in the School of Health Administration at Dalhousie University

Affiliate Scientist (Research), Nutrition & Food Services, Nova Scotia Health

Associate Professor, Dalla Lana School of Public Health, University of Toronto

Adjunct Professor, Saint Mary's University

Abstract: The consumer food environment has a critical role in shaping food access, food affordability, and social equity. It is also a sociocultural determinant of population diet and individual dietary behaviour. Assessing consumer food environments can show us patterns of who holds power, how resources are distributed, and the scale and path of the challenge to achieve justice, because most of the policy levers to enact lasting change for healthier diets, healthier populations, and inclusive societies lie well outside of food.

Learning objectives

Following this presentation, participants will:

1. Define the food environment and the consumer food environment
2. Identify concepts from social theories as a framework for assessing and critically analyzing the social world and how it relates to population nutrition and diet
3. Apply concepts from social analysis to expand our understanding of population nutrition and dietary determinants, particularly food affordability

Speaker: Saturday, April 29, 8:45-9:30 AM

Room 3: <https://upezi.zoom.us/j/61850567397?pwd=NDZwQTU4bDZqVTRsczRacStpa1c0QT09&from=addon>

Meeting ID: 618 5056 7397 Passcode: 158375

Title: Maternal Nutrition and Future Generational Health.

Speaker: Dr. Sukhinder Kaur Cheema, professor of Biochemistry at Memorial University of Newfoundland & Labrador (MUN).

Dr. Cheema held the CIHR New Investigator Award (2001-2006) and has received several other awards for her research. She has served on the Advisory Board for the CIHR Institute of Nutrition, Metabolism and Diabetes. She is currently the Vice-President (Research), and President-Elect, Canadian Nutrition Society. Her research focuses on how maternal diet influences pregnancy outcomes, the regulation of metabolic pathways associated with metabolic disorders, and the brain health of offspring. Her research incorporates both basic science and clinical research; she collaborates with clinicians on the importance of maternal nutrition, breast milk composition, and the future health of the newborn. She has received funding from SSHRC, CIHR, NSERC, CFI, the Heart & Stroke Foundation of Canada, hospital foundations, and industry for her research. She has served on CIHR, NSERC, and HSFC grant review panels, and is on the editorial board of international peer-reviewed journals. She has played a key role to establish collaborations between MUN and several universities in India, where she is promoting nutrition research and community outreach programs on healthy eating in order to improve outcomes of impoverished and vulnerable communities. As a scientist who is a racialized woman, she is dedicated to highlighting the barriers faced by historically excluded or marginalized groups working both within the field, and most impacted by nutrition-based discrimination.



Affiliations:

1. Professor, Department of Biochemistry, Memorial University of Newfoundland & Labrador, St. John's, NL, Canada
2. Adjunct professor, Department of Applied Human Nutrition, Mount St. Vincent University, Halifax, Nova Scotia, Canada
3. Cross-appointed, Basic BioMedical Sciences, Faculty of Medicine, Memorial University of Newfoundland & Labrador, St. John's, NL, Canada

Abstract: The concept of “Developmental Origins of Health and Disease (DOHaD)” suggests that environmental exposures during early life, especially during the “in-utero” period, have permanent effects on the health outcomes of the offspring. This presentation will focus on the importance of maternal omega-3 polyunsaturated fatty acids intake on pregnancy outcomes, brain development/function, and metabolic regulation of the offspring. The translational aspects in relation to human breast milk composition and its association with the health outcomes of the newborn will also be presented.

Learning objectives:

1. To understand the concept of “Developmental Origins of Health and Disease”, and why to focus on dietary fats.
2. To learn the importance of maternal omega-3 polyunsaturated fatty acids intake and its influence on pregnancy outcome, brain development, and offspring metabolic regulation.
3. To learn about the translational aspects of this work in relation to human studies.

Speaker: Saturday, April 29, 10:45-12:00 PM

Room 3:

<https://upei.zoom.us/j/61850567397?pwd=NDZwOTU4bDZqVTRsczRacStpa1c0QT09&from=addon> Meeting ID: 618 5056 7397 Passcode: 158375

Title: Using the gastrointestinal microbiome to personalize nutrition advice: are we there yet?

Speaker: Dr. Ruth Harvie, faculty member in the Department of Human Nutrition at St Francis Xavier University in Nova Scotia.

Dr. Harvie has practiced as a clinical dietitian in her native New Zealand for ten years before commencing her PhD. Her master's research examined the clinical effectiveness of a low FODMAP diet in irritable bowel syndrome (IBS). Her PhD, which was also completed through the University of Otago, extended this further by looking at IBS, dietary intake and the microbiome. She spent time at the Canadian Centre for the Human Microbiome and Probiotics in London, Ontario under the mentorship of Jeremy Burton and Gregor Reid. She recently received a Research Nova Scotia New Health Investigator Award to evaluate the impact of including virtual dietary education within an electronic irritable bowel syndrome pathway. She researches in the dietary management of IBS and IBD and is interested in foodservice solutions for clinical nutrition problems.



Affiliations:

Assistant professor, Human Nutrition, St Francis Xavier University

Abstract: This presentation will introduce the gastrointestinal microbiome as a highly individual ecosystem which can modulate the effect of food via metabolizing fibre and other food components. While currently we are unable to personalize dietary interventions based upon knowledge of the gastrointestinal microbiome, this is a potential application. Dietitians can prepare themselves for working in this area by having a detailed knowledge of food, and especially of fibre containing foods and understanding biochemical pathways. Clinical areas where this could be incorporated include inflammatory bowel diseases and non-alcoholic fatty liver disease.

Learning objectives:

1. Describe the gastrointestinal microbiome as an ecosystem.
2. Explain that it is more valuable to understand the function of microbes within the microbiome than their names.
3. Discuss why it is important to have a diverse range of fibre sources.
4. Describe how knowledge of the gastrointestinal microbiome might lead to personalized nutrition recommendations.

Student Presentations

Oral Presentations: Saturday April 29, 2023

Room 4: <https://upei.zoom.us/j/67224057703?pwd=WUVpZnBjQ0hyclFkWVVWdEppMmJhZz09&from=addon>

Meeting ID: 672 2405 7703 Passcode: 16888

Oral Presentation Session A (9:30-10:30 AM):

Faculty Facilitator: Dr. Jennifer Taylor (UPEI)

Student Facilitator: Megan Vanderkloet (UPEI)

Presentation 1: Mealtime in Child Care Centres: Exploring Educators' Feeding Practices

Presenter: Joanne Severe, Undergraduate Student, University of Prince Edward Island

Funding: Canadian Institutes of Health Research Project Grant

Supervisor: Rossiter, Misty

Other authors: Taylor, Jennifer, McIsaac, Jessie-Lee

Presentation 2: Prevalence of precursor signs of an eating disorder among athletes that practice a weight-sensitive sport at the competitive level

Presenter: Mia Léger, Graduate Student, Université de Moncton

Funding: N/A

Supervisors: Tranchant, Carole C.; Ross Plourde, Mylène

Presentation 3: Exploring the Role of Compassion in 2S/LGBTQ+ Canadians' Eating Disorder Recovery Processes

Presenter: Megan White, Graduate Student, Mount Saint Vincent University

Funding: Social Sciences and Humanities Research Council (SSHRC)

Supervisor: Joy, Philip

Other authors: Aston, Megan; Joy, Philip

Presentation 4: Vitamin B₉ and B₁₂ deficiencies lead to sex-specific alterations in intestinal microbiota and morphology

Presenter: Khandkar Shaharina Hossain, Graduate Student, Memorial University of Newfoundland

Funding: MUN, NSERC

Supervisor: Mayengbam, Shyamchand

Oral Presentation Session B (1:00-2:00 PM):

Room 4: <https://upezi.zoom.us/j/67224057703?pwd=WUVpZnBjO0hyclFkWVYVWdEppMmJhZz09&from=addon>

Meeting ID: 672 2405 7703 Passcode: 16888

Faculty Facilitator: Dr. Ed Barre (CBU)

Student Facilitator: Kevin Connelly (UPEI)

Presentation 5: Assessing the impact of shift work on sleep, activity, energy balance and food choice in adults: The SWEAT Study.

Presenter: Varleen Kaur, Graduate Student, Memorial University of Newfoundland

Funding: Memorial University of Newfoundland

Supervisor: Harding, Scott

Presentation 6: The Antioxidant Capacity of Breast Milk and Plasma of Women with or Without Gestational Diabetes Mellitus

Presenter: Megan Churchill, Graduate Student

Funding: Canadian Foundation for Dietetic Research (CFDR), Canadian Institutes for Health Research (CIHR), Diabetes Canada, Natural Sciences and Engineering Research Council of Canada (NSERC), Ministry of Education in Saudi Arabia, Committee on Research and Publication Grant, Mount Saint Vincent University.

Supervisor: Grant, Shannan

Other authors: Zawawi, Halah; Elisia, Ingrid; Seider, Maxine; Noseworthy, Rebecca; Thompson, Alexandra; Glenn, Andrea J.; Ramdath, Dan; O'Connor, Deborah; Darling, Pauline; Wolever, Thomas; Barre, Douglas, E.; Denice S. Feig; Kitts, David; Grant, Shannan

Presentation 7: The influence of vitamin B6 deficiency on gut-mediated brain function and behavior in rats

Presenter: Sathya Amarasena, Memorial University of Newfoundland

Funding: NSERC and Memorial University of Newfoundland

Supervisor: Mayengbam, Shyamchand

Other authors: Yaun, Qi

Presentation 8: Sensory characterization of a commercial apple butter fruit spread, and various protein-enriched texture modified variations.

Presenter: Sarah MacIssac

Funding: National Research Council of Canada Industrial Research Assistance Program (NRC IRAP).

Supervisor: English, Marcia, Harvie, Ruth

Other authors: Mackay, Brigid; Neuffer, Madeleine; Ralph, Tylor; MacDonald, Kalli; Vianna, Lauren; Harvie, Ruth

Enhanced Poster Presentations: Saturday, April 29 2:30-3:45 PM

Room 3 <https://upei.zoom.us/j/61850567397?pwd=NDZwOTU4bDZqVTRsczRacStpa1c0QT09&from=addon>

Meeting ID: 618 5056 7397 Passcode: 158375

Faculty Facilitator: Dr. Jennifer Taylor (UPEI)

Student Facilitator: Camryn Ramsay (UPEI)

Enhanced Poster 1: Exploring the Meaning of Acculturation Experiences Among International Students Through a Canadian University Food-Based Society with Digital Storytelling

Presenter: Yue Li, Graduate Student, Mount Saint Vincent University

Funding: Social Sciences and Humanities Research Council (SSHRC)

Supervisor: Lordly, Daphne

Enhanced Poster 2: Don't Be Salty: An analysis of consumers' salt reduction strategies

Presenter: Tanvi Dabas, Undergraduate student, Acadia University

Funding: Centre for the Sensory Research of Food

Supervisor: McSweeney, Matthew

Other authors: Le Blanc, Jeanne

Enhanced Poster 3: In vitro and in vivo evaluation of wheat and lentil flours of similar particle size

Presenter: Gowshigga Thamocharampillai, Graduate Student, Mount Saint Vincent University

Funding: Mount Saint Vincent University and NSERC CRD grant in partnership with Manitoba Pulse Growers, Best Cooking Pulses and Classic Fine Foods.

Supervisor: Luhovyy, Bohdan

Other authors: Kathirvel, Priya; Whitfield, Kyly; Kaviani, Mojtaba

Enhanced Poster 4: A mixed lipid emulsion supplemented with antioxidants in PN feeding: preliminary findings

Presenter: Ilumbavidanalge Dona Thilini Priyabashika Kumarasinghe, Graduate Student, Memorial University of Newfoundland

Funding: Ocean Frontier Institute Vitamin Research Fund

Supervisor: Brunton, Janet

Other authors: Wilkins, Simone; Wilkins, Spencer; Bertolo, Robert

Enhanced Poster 5: Dietary vitamin B6 and the pathophysiology of Non-alcoholic fatty liver disease (NAFLD)

Presenter: Ava Rasouli, Graduate student, Memorial University of Newfoundland

Funding: Memorial University of Newfoundland, NSERC

Supervisor: Mayengbam, Shyamchand

Enhanced Poster 6: The uptake of guanidinoacetic acid in the small intestine of neonatal piglets is improved by increasing dietary creatine.

Presenter: Mahesha Asiriwardhana, Graduate Student, Memorial University of Newfoundland

Funding: NSERC

Supervisor: Bertolo, Robert

Other authors: Clancy, Zack; Brunton, Janet; Bertolo, Robert

Awards

1) General Undergraduate Awards

These awards are presented to undergraduate students who have demonstrated outstanding research and presentation skills. The research must significantly advance the discipline of food science or nutrition. The contribution may be applied or fundamental in nature, and must advance science or improve the human condition. The awards consist of a cash prize (\$200, \$125, and \$75) and a letter of commendation. Both oral and poster presentations are eligible.

2) General Graduate Awards

These awards are presented to graduate students who have demonstrated outstanding research and presentation skills. The research must significantly advance the discipline of food science or nutrition. The contribution may be applied or fundamental in nature, and must advance science or improve the human condition. The awards consist of a cash prize (\$200, \$125, and \$75) and a letter of commendation. Both oral and poster presentations are eligible.

3) Science Communication Award

The Science Atlantic Science Communication Award is offered at each of the annual Science Atlantic sponsored student conferences. The prize is awarded to the student who is best able to communicate a science topic to his or her peers. The award consists of a cash prize (\$200), a letter of commendation and an opportunity to work collaboratively with the Atlantic Student Research Journal team to write and publish an article about their research.

Sponsors

Science Atlantic Nutrition and Foods 2023 Planning Committee would like to thank our generous sponsors for making this conference possible!





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