

Food Forum for Industry and Government in Southwestern Ontario Food Safety – An Ever-Changing Landscape – 29th Annual Workshop

September 27, 2023
8:30am –3:15pm

Elm Hurst Inn & Spa
415 Harris Street, P. O. Box 123
Ingersoll, Ontario, N5C 3K1

Gas phase hydroxyl process for enhancing food safety and shelf-life of foods: from the lab to commercial reality

Presenters: – Dr. Keith Warriner, University of Guelph & Paul Moyer, Clēan Works

Mr. Paul Moyer is a 7th generation fruit farmer from the Niagara region and established Moyers Apples in 2013 after appearing on the CBC Dragons Den. Mr. Moyer is innovating and developed the Clean Flow process in 2015 that subsequently was commercialized with the establishment of Clean Works Corp in collaboration with Court Holdings.

Since its establishment in 2017, Clean Works has expanded with their novel decontamination treatment branded Clean Batch and Clean Flow.

The company have operating units with North and South America, Europe and Japan. Mr. Moyer has heavily invested in research & development and holds numerous awards for innovation.

In addition, Mr. Moyer contributes to the local community and voted the top 10 influential people within the Lincoln region. Mr. Moyer is an established member of the St Lawrence market organization committee which he has served for over 20 years.

Professor Keith Warriner obtained his BSc(Hons) in Food Science at the University of Nottingham and PhD in Microbial Physiology at the University College of Wales, Aberystwyth. He went onto positions within the Institute of Food Research, University of Manchester and University of Nottingham before becoming part of the faculty of the Department of Food Science, University of Guelph in 2002.

His research team is focused on enhancing food safety through undertaking risk assessment, along with developing diagnostics and intervention controls.

Professor Warriner teaches food microbiology, industrial microbiology and food safety management along with advising undergraduate and graduate students.

He is frequently contacted by media to comment on food safety matters and undertakes outreach activities to government & industry. Professor Warriner is a member of the editorial boards on several journals and Editor-in-Chief for Food Microbiology.

He is currently the Director of HQP scholarship program of the OMAFRA Alliance, Chair of the biosafety committee and FSQA course development committee. He was awarded the President award of the OFPA, IAFP Food Safety Innovation award, University of Guelph innovation of the year and IAFP Ewan Todd Award for innovations in pathogen control. He is also part of the expert group of Joint FAO/WHO Expert Meetings on Microbiological Risk Assessment.

Overview of presentation:

The generation of hydroxyl-radicals from hydrogen peroxide was first described by Henry Fenton in 1862. Since this time, the oxidative power of hydroxyl-radical has been used as a reagent, for treating wastewater and more recently, in the gas phase for decontaminating food and non-food surfaces. The presentation will provide an overview how baseline studies using a laboratory constructed unit was taken forward to commercial reality. The challenges in commercialization will be discussed along with the benefits of expanding markets by providing an additional level of food safety assurance. There will be an update on more recent advances in hydroxyl-radical based process (Clean Flow) with applications on the farm as an alternative to pesticides and hatchery for disinfection of eggs. In addition, treatments for decontaminating fresh and frozen fruit & vegetables, mushrooms, microgreens and raw meat will be described. Applications for decontaminating reusable plastic crates, conveyors through to reusable shopping bags. Future applications of the hydroxyl-radical process will be described.

Feeling eel? Fish, fish products and food safety

Presenter: Dr. Alex Reid (OMAFRA)

Alexandra Reid was born and raised in Vancouver BC and is nehiyaw from maskêko-sâkahikan (Muskeg Lake Cree Nation). Living on the ocean inspired a love of aquatic animals and she completed a BSc in Animal Biology at the University of British Columbia (2003) before attending the Western College of Veterinary Medicine (2007) in Saskatoon, SK. Exposure to a wider range of veterinary medicine and working for the Canadian Wildlife Health Cooperative sparked an interest in pathology, and she moved to Ontario Veterinary College to pursue a PhD in Comparative Pathology (2012) emphasizing viral hemorrhagic septicemia virus infection of walleye. She started working for the Ontario Ministry of Agriculture, Food and Rural Affairs later that year, and was initially the Veterinary Scientist in the meat inspection program before moving to her current role as a Lead Veterinarian in the Animal Health and Welfare Branch. Her current portfolio includes domestic animal-wildlife interface issues, cervid and rabbit diseases and all things related to aquatic animal health.

Overview of presentation: As fish are the largest and most evolutionarily diverse group of vertebrates on the planet, it can be daunting when they are involved in a food safety issue. A brief overview of where fish in the food system come from and different risks will be discussed, along with common pathogens and other food issues. Some resources and potential approaches for resolving issues will be given.

Aconite poisoning in York Region: Successes and Lessons Learned

Presenters: Dr. JoAnne Fernandes, Associate Medical Officer of Health for The Regional Municipality of York & Dorianna Simone, Manager, York Region Health

Dr. JoAnne Fernandes is an Associate Medical Officer of health at York Region Public Health, where she supports the Infectious Disease and Control Division. She completed her training in the Public Health and Preventive Medicine residency program at University of Toronto and holds a Masters in Public Health, in Epidemiology from University of Toronto. She is also a trained family physician and continues to practice clinically.

Dorianna Simone is the Manager of the food safety program with the Regional Municipality of York, Health Protection Division. As a certified Public Health Inspector, she started her career over 20 years ago at York Region, and has loved it ever since. She completed her Masters in Education at Brock University, using her passion for continuing education to develop the Divisional orientation framework, integrating adult learning

principles into the onboarding process. She was also co-lead of the Customer Experience working group in our Journey Towards Gold accreditation through Excellence Canada, developing a public health customer experience plan for the branch. She has a passion for food, culture, history and how they interconnect.

Overview of presentation: Background: In August 2022, 11 York Region residents presented to local emergency departments with severe illness after consuming a meal prepared at a restaurant in Markham, Ontario. Several individuals required resuscitation and 6 were admitted to intensive care.

Methods: York Region Public Health (YRPH) responded to investigate, identify, trace and contain the source of the illness. Partners at the local, provincial and federal levels were engaged to facilitate and coordinate aspects of the investigation.

Results: The specific toxidrome suggested, and later laboratory testing of human and food specimens confirmed that the illnesses were caused by aconite contamination of a commonly used East Asian spice, Galanga Powder. The collaborative investigation led to a national food recall and a new toxin being added to Public Health Ontario's list of toxins tested for food poisonings.

Conclusion: The investigation, identification of the contaminated product, its removal and recall prevented additional potentially deadly exposures to a toxic contaminant. Unique features of the response to this exposure included the involvement of many partner organizations, the intense media interest and need for rapid communication, and successful engagement with the local community. YRPH will share our experience with this case and focus on successes, challenges and lessons learned.

Salmonella outbreaks associated with tofu and tahini- foods of growing popularity

Presenter: Christina Lee, Public Health Ontario

Christina has 20 years of experience in public health. In her current role as a Senior Program Specialist with Public Health Ontario's (PHO) Enteric, Zoonotic, Vector-borne Diseases unit, she collaborates with municipal, provincial and federal partners to identify, investigate and manage foodborne illness clusters and outbreaks. Prior to joining PHO, she worked as health promotion consultant and as a public health inspector at local health units.

Overview of presentation: As the saying goes, nothing is constant. The same applies to food trends. In recent years, tahini and tofu have increased in popularity in Ontario. With new foods comes new risks. Christina will highlight the risk attributed to these products and share the lessons learned from different Salmonellosis outbreak investigations associated with consumption of tahini and tofu based products.

Listeria monocytogenes and challenges in Direct-to-Consumer Food Establishments

Presenters: Naghmeh Parto, Public Health Ontario and Kelly Briscoe, Public Health Ontario

Naghmeh is a Senior Program Specialist on the Environmental and Occupational Health team at Public Health Ontario. Prior to joining PHO, Naghmeh has worked in Ministry of Health and Long-term Care as a Senior Program Consultant and at local health units as a public health inspector in both environmental health and communicable disease program. Naghmeh has MSc. In "food science, food safety and quality assurance" from University of Guelph.

Kelly is a Senior Program Specialist on the Environmental and Occupational Health Team at Public Health Ontario. She has a Master of Science degree in Food Safety and Quality Assurance, a Bachelor of Science in Public Health and Safety and a Bachelor of Arts in Community Health Sciences. She is a certified Public

Health Inspector (PHI) with over 15 years of experience in the communicable disease and environmental health field.

Overview of presentation: In Canada, listeriosis is the leading pathogen-associated cause of death for food-borne illness each year. In the past 10 years, Ontario has seen a number of listeriosis outbreaks, however identifying the root cause of these outbreaks is challenging.

Public Health Ontario (PHO) performed an evidence search on best practices for outbreak management, specifically for identifying *Listeria* harborage or colonization sites, developing strategies for sampling, remediation and preventative measures, to provide assistance for investigation and identification of root causes. This presentation will provide a summary of the results.

What is Food Safety Culture and Why is it Important?

Presenter: Jennifer McCreary, NSF

Jennifer McCreary has over 35 years of experience in food manufacturing, food safety training and auditing. Jennifer is currently Technical Manager, Food Training Services for NSF in Guelph, Canada. Jennifer is an experienced trainer on all aspects of food safety and quality. She is an FSPCA lead instructor for PCQI for Human Food and FSVP, a registered trainer with SQFI for the Implementing SQF Systems and SQF Quality courses and a lead instructor for HACCP courses with the International HACCP Alliance. She is a BRC Approved Training Provider for BRC Food Safety Management courses. As Technical Manager, Food Training Services at NSF, Jennifer tailors and delivers courses in Employee Hygiene and Food Safety, Prerequisite Programs, Allergen Management, HACCP Training, Food Safety Culture, Quality Assurance, Food Defense, and Food Safety Training for Managers and Supervisors. Jennifer joined NSF after working in the baking and dairy industries.

Overview of presentation: Unquestionably, ensuring food safety is a primary focus for food manufacturers and others involved in the food industry. However, despite these efforts, we continue to see high rates of food safety incidents and recalls because we did not account for the risk factor of human behaviour or food safety culture. GFSI defines food safety culture as “Shared values, beliefs and norms that affect mindset and behaviour toward food safety in, across and throughout an organization.” Very simply, food safety culture is when team members do the right things even if no one is watching.

This presentation will focus on providing an understanding of food safety culture best practices, the key elements that contribute to a robust food safety culture and how to begin the process of culture change for sustained food safety success.

Addressing Food Fraud – Practical Approaches for Brands and Manufacturers

Presenters: Renata McGuire, NSF

Renata McGuire is a highly experienced food safety consultant and trainer based in Guelph, Ontario. With over 20 years of experience in the food industry, Renata has become a trusted advisor to clients in both the public and private sectors.

Renata's knowledge of food safety regulations and standards, combined with her practical experience in implementing food safety management systems, has made her an invaluable resource to her clients. She

has a proven track record of developing and implementing food safety programs that not only meet regulatory requirements but also exceed industry standards.

In addition to her technical expertise, Renata is known for her exceptional communication and training skills. She has a passion for educating clients on the importance of food safety and empowering them to take ownership of their own food safety programs.

Renata holds a Bachelor of Science degree in Toxicology from the University of Guelph, and is a lead instructor for FSPCA Preventive Controls for Human Food.

Overview of presentation: Food Fraud is a concern in the food industry, and can have significant consequences for consumers, businesses and the economy. This presentation will provide an overview of practical approach to addressing food fraud, which will include understanding and assessing the risk, prevention, detection and response.

Managing food fraud requires a proactive and holistic approach that involves all stakeholders in the food supply chain. By implementing practical approaches to managing food fraud, businesses can reduce the risk of incidents, protect consumers, and safeguard their reputation and bottom line.