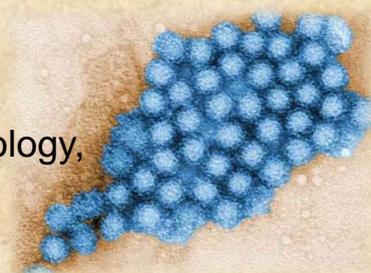


Noroviruses – who are they and control strategies in foods

By Dr. Alvin Lee

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Date: 14th January 2015, Wednesday

Time: 12:00 pm to 1:00 pm

Venue: Seminar Room, S14-06-19

Host: Dr. Yuk Hyun Gyun

Abstract

According to the United States Centers for Disease Control and Prevention, human enteric viruses are estimated to cause two-thirds of the foodborne illness in the U.S. each year, with the majority attributed to norovirus (NoV). Enteric viruses including NoV, hepatitis A and E viruses can enter the food supply through contaminated environmental factors or by contamination during handling and processing, resulting in outbreaks ranging from small isolated ones to epidemic. A number of innovative food processing technologies have been used to mitigate the risk viruses pose to our food supply. The effects of food processing technologies such as high pressure processing can result in more than 3.5-log₁₀ TCID₅₀ ml⁻¹ reduction of hepatitis A virus and feline calicivirus for shellfish application while pulsed light can inactivate 4.5-log₁₀ PFU ml⁻¹ of MNV-1 within 10 s. The presentation will focus on inactivation strategies currently examined by NoroCORE, a USDA-NIFA Food Virology Collaborative funded by USDA, include high pressure processing, high power ultrasound and pulsed light applications. Such strategies could be incorporated into a quantitative risk assessment model which may be used to determine the risk management strategies that will determine appropriate process criteria on reducing the contamination of foods such as shellfish, fresh produce and RTE foods.

About the speaker



Dr. Alvin Lee is a microbiologist and virologist with more than 15 years research experience with a PhD from RMIT University. Dr. Lee currently leads IFSH Center for Processing Innovation and co-leads the joint IFSH/FDA Microbiology Research Platform on food safety and defense related projects. He is a member of the Executive Board of NoroCORE, a USDA-NIFA Food Virology Collaborative based at North Carolina State University, and leads the Prevention and Control CORE. Current research support includes funding from USDA, US FDA, National Center for Food Protection and Defense (NCFPD), Department of Homeland Security (DHS) and various industry contracts.

Dr. Lee is an instructor for food microbiology in the IIT's Masters of Science program and has mentored more than 25 graduate students and post-doctoral fellows. He is currently an active member of the International Association for Food Protection – serving on the IAFP Scientific Program Committee, American Society for Microbiology and Institute of Food Technologists – serving on the Annual Scientific Meeting Program Advisory Panel.

All are welcome !