Environmental Controls: Emerging Technologies and Predictive Analytics to Address Complex Sanitation Challenges

Synopsis:
Cleaning and sanitation are crucial components of a good food safety plan. Many outbreaks have occurred due to inappropriate sanitation protocols or ineffective planning of hygienic zones. A good sanitation plan involves careful planning and knowledge (and some would say an art) to identify harborage sites, appropriate sanitizers and their usage, and implementation of sampling and detection technologies that will yield meaningful results.

This workshop is an unique opportunity for participants to partake in platform presentations where they will gather from experts information on hygienic zoning principles, sanitation and decontamination strategies for processing of difficult food matrices determining potential harborage sites and strategies to eliminate them, technologies used in environmental sampling that are fit for purpose and how advances in molecular biology and predictive analytics can be used to enhance a sanitation plan. The participants will then engage in working groups to design sanitation protocols for various food matrices, and discuss challenges associated and how to enhance sanitation protocols.

Finally, the wrap-up session will feature panel speakers from regulatory agencies and the food industry using case studies to address the sanitation challenges and response to regulatory guidance and policies.

- **Platform presentations – Recorded and available for viewing by participants if they are unable to make the live session**

Day 1: Monday, September 27, 2021

TIME (CDT)	TOPIC
10:00 – 10:05	Introduction to the Symposium Dr. Leslie A. Smoot, Senior Advisor, Office of Food Safety, CFSAN, FDA
10:05 – 10:30	Hygienic Zoning – A Pre-Requisite Program to Pathogen Monitoring Duane Grassmann, Corporate Hygienist, Nestlé USA
10:30 – 10:55	Decontamination of Low Moisture Food Processing Facilities Richard Brouillette, Food Safety Director, Commercial Food Sanitation
10:55 – 11:10	**BREAK**
11:10 – 11:35	Managing Harborage Sites, Growth Niches, and Biofilms Sue Schwartz, Vice President Quality & Food Safety, Miniat Holdings
11:35 – 12:00	Practical Considerations and Novel Technologies in Environmental Sampling Diana Stewart, Research Microbiologist, FDA

Day 2: Tuesday, September 28, 2021

TIME (CDT)	TOPIC
10:00 – 10:05	Welcome to Day 2
10:05 – 10:30	Overview of Traditional and Novel Environmental Testing – Pros and Cons Dr. Scott Stillwell, President and CEO, Stillwell Consultative Services, LLC
10:30 – 10:55	Effect of Sanitation on Microbiome and Relevance of Foodborne Pathogens during Produce Production Dr. Ganyu Gu, Research Associate, USDA-ARS-EMFSL
10:55 – 11:10	**BREAK**
11:10 – 11:35	High-Throughput Sequencing to Support Precision Food Safety – Using New Tools to Manage Risk During Processing Nick Andrews, Head of Food Safety and Covid Defence, Dawn Farm Foods, Ireland
11:35 – 12:00	Putting EMP Data to Work: Analytics and Modeling Tools for Environmental Monitoring Dr. Claire Zoellner, Food Safety Scientist, iFoodDS
12:00 – 12:15	Explanation of Break Out Groups – Days 3 and 4

- **Exercise sessions will not be recorded or if recorded will not be available for public viewing. It will only be used to support the development of a publication on the outcome of the symposium by facilitators. The ratio of facilitator: participant is 1:8 and all breakout groups will be supported by a Production Manager who can assist moving people to breakout rooms, and other back-end tech support.**
  - **Facilitators will develop a** problem set for environmental testing
  - **Facilitators should develop answer** to share at the end with entire group and for publication in *Food Protection Trends*
  - Include microbe of concern, frequency of testing, number of samples, type of test, pass-fail criteria, trouble shooting for out of spec results, hurdles to implementation

Day 3: Wednesday, September 29, 2021

TIME (CDT)	TOPIC
9:00 – 12:00	Session 1 AM: Low Moisture Ingredients/Extruded Products Dr. Jeff Kornacki, Founder, Kornacki Microbiology Solution Dr. Elizabeth Grasso-Kelley, Chief, Food Technology Branch, FDA Kristin Schill, Associate Scientist, UW-Madison Dr. Nathan M. Anderson, Acting Director, Division of Food Processing Science and Technology, FDA
12:30 – 3:30	Session 2 PM: Frozen Foods (Vegetable) Dr. Lory O. Reveil, Director of Scientific and Regulatory Affairs, AFFI Dr. Stephen Grove, Manager for Food Safety and HACCP, Nestlé Malavika Sinha, Lamb Weston
3:30 – 4:00	Breakout Session Summary (open to all registrants)

Day 4: Thursday, September 30, 2021

TIME (CDT)	TOPIC
9:00 – 12:00	Session 3 AM: Short Shelf-life Foods (Assembled Sandwiches) Kara Baldus, Food Safety Program Manager, Hydrite Kristy Herlitzka, Production Operations Quality Assurance Manager, Kwik Trip, Inc. Annette Stich, Sr. Manager FSQA Prepared Foods, Contract Manufacturing, Tyson Foods, LLC
12:30 – 3:30	Session 4 PM: Plant-based Proteins Cindy Austin, Researcher, UW-Madison Erin Headley, Research Microbiologist, Schreiber Foods Adam C. Borger, Outreach Program Manager, UW-Madison
3:30 – 3:50	Breakout Session Summary (open to all registrants)
3:50 – 4:35	Event Wrap Up and Panel Discussion (Open to All Registrants) *Regulatory Perspective* Dr. Leslie A. Smoot, Senior Advisor, Office of Food Safety, CFSAN, FDA *Liability, Legal Perspective* Shawn Stevens, Founder, Food Industry Counsel LLC *Pros/Cons/Philosophy for Aggressive Pathogen Testing/Food Safety Culture* Dr. John Butts, Founder, FoodSafetyByDesign *Cost, Time for Results vs. Shelf-life of Foods, Clean Breaks* Lori Ledenbach, Group Lead, Kraft Heinz Company *Responding to Disastrous Findings (e.g. 483 Salmonella)* Joe Meyer, Global Microbiology Lead, Kerry

Output from meeting: Publish meeting proceedings and example of working group recommendations