## IAFP 2024 PROGRAM BOOK





Advancing Food Safety Worldwide®

foodprotection.org



# Simplify Allergen Testing with the AgraVision™ Pro Reader

- Eliminate the subjectivity in strip result reading
- Reduce the chance of human error with an automated workflow
- Seamlessly collect, document, and manage data





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## WELCOME FROM THE EXECUTIVE BOARD



TIM JACKSON, Ph.D. President FDA-CFSAN



MARK W. CARTER
President-Elect
MC Squared



MANPREET SINGH, Ph.D.
Vice President
The University of Georgia



MANAN SHARMA, Ph.D. Secretary USDA/ARS

Since first serving as IAFP President in 2019, this is my second time to extend, on behalf of the Executive Board, an enthusiastic welcome to IAFP 2024 and to Long Beach, California...I can practically see it from my backyard! Thousands of colleagues and friends from around the globe are here to experience the leading food safety conference and to help fulfill the Association's mission: To provide food safety professionals worldwide with a forum to exchange information on protecting the food supply.

Much has changed in the world throughout the five years since my first term as President. However, food safety remains a top priority in today's interconnected world. Our meeting will continue to help you stay in touch with current and emerging issues, the latest science, and solutions to new and ongoing problems. Of equal or greater importance is the opportunity to network with colleagues and developing scientists. Often, the most valuable information one can gather is an impromptu conversation in the hallway – perhaps even while refilling your IAFP 2024 water bottle! Our morning and afternoon breaks and extended lunch periods provide additional opportunities to connect with your fellow attendees. Thank you for joining us to be part of the solution for tomorrow's food safety challenges.

The Executive Board offers a special thank you to Francisco Diez, Program Committee Chair, and the entire Program Committee for organizing another exceptional lineup of symposia, roundtables, technical presentations, posters, special presentations, and interactive sessions. The only thing in short supply will be the time needed to attend the more than 1,100 presentations. Your greatest challenge will be to determine where best to spend your time, so review the program on the always-updated IAFP 2024 App carefully and plan your time accordingly.

We extend our sincere gratitude to our valued exhibitors, sponsors, and long-time attendees for making each IAFP Annual Meeting highly successful every year. This meeting would not be the same without your continued and dedicated support.

Whether you're a new Member, long-time Member, student Member, or even a prospective Member, the Board eagerly welcomes you and encourages you to actively participate in this year's meeting. And if you see me, or any of our Board members, please come up and say hello. We would love to meet you.

Tim Jackson President



MICHELLE D. DANYLUK, Ph.D.
Past President
University of Florida



FABIANA GUGLIELMONE Affiliate Council Chairperson Unilever



LISA K. GARCIA, CAE Executive Director International Association for Food Protection



CATHERINE N. CUTTER, Ph.D. Scientific Editor Pennsylvania State University

## LOCAL ARRANGEMENTS WELCOME

#### **Dear Colleagues and Guests,**

On behalf of the Local Arrangements Committee and the California Association for Food Protection (CALFP), it is my great pleasure to welcome you to IAFP 2024 in Long Beach. We are excited to host this prestigious event and hope that you will enjoy the rich culture and cuisine, beautiful beaches, and multiple fun family-oriented and kid-friendly activities offered by the City of Long Beach as well as the greater Los Angeles area. Long Beach is approximately 20 miles south of downtown Los Angeles.

During your visit, we hope you can take some time and enjoy the activities Long Beach and the greater Los Angeles area offer:

- 1. Walk to the beach and travel back in time on the Queen Mary, a nearly century old ocean liner that has been transformed into a top attraction;
- Spend some time at the Museum of Latin American Art and the Long Beach Museum of Art to embrace cross-cultural dialogue with artists from different backgrounds;
- 3. Visit the Aquarium of the Pacific located in Long Beach's Rainbow Harbor and engage in more than 100 exhibits including a variety of habitats, theaters, and animal shows; and
- 4. Check out the greater Los Angeles area with your family or friends, visiting the Santa Monica area, Hollywood, and the Universal Studios and Disneyland®.

IAFP's Annual Meeting is building up to be an engaging and memorable event. This year's program is packed with informative sessions, engaging presentations, and networking opportunities. We are excited to host this event during which professionals, scientists, and subject-matter experts come from around the world to discuss and advance the safety of the world's food supply.

Our committee has worked hard to support the meeting by recruiting volunteers and securing suppliers for dairy and juice products during breaks. We want to express our sincere gratitude to all our sponsors and our group of dedicated volunteers. While walking around, please take a moment to say hello to and thank our volunteers who are wearing green CALFP T-shirts with tie dye aprons. They are here to guide you through the Convention Center, answer questions, and contribute to a positive experience at the event.

Thanks to the IAFP leadership and staff for their guidance and support throughout the planning process.

We look forward to seeing you in Long Beach, California and wish you a productive and enjoyable experience during IAFP 2024.

Sincerely,

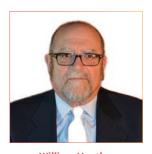
Luxin Wang, CALFP President Chair, Local Arrangements Committee IAFP 2024

William Huntley, Co-Chair, Local Arrangements Committee

CALFP Officers:
Sherman Mah, Treasurer
Michael Fang, Secretary
Tom Sidebottom, Past President
Myrna Maria Cadena Diaz, Student Liaison & Social Media



**Luxin Wang** 



**William Huntley** 



**Sherman Mah** 



Michael Fang



**Tom Sidebottom** 



Myrna Maria Cadena Diaz

## **GENERAL INFORMATION**

#### **CELL PHONE POLICY**

As a courtesy to our presenters, we request that you turn off or silence cell phones while attending sessions.

#### **RECORDING POLICY**

Unauthorized video or audio recording will not be allowed without prior approval. By attending the IAFP Annual Meeting, you authorize IAFP to take your picture to be used in our publications.

All sessions, with speaker approval, will be audio recorded by IAFP and posted on the IAFP website for attendees' access.

#### **LUGGAGE CHECK AREA**

The Luggage Check Area is available the following hours:

Tuesday, July 16 8:00 a.m. – 6:30 p.m. Wednesday, July 17 8:00 a.m. – 9:00 p.m.

#### **SPEAKER-READY ROOM**

The Speaker-Ready Room is located in Room 103A and is available for speakers Sunday through Wednesday.

#### **WELCOME DESK**

Talk to IAFP Members about how to navigate the meeting and get involved with IAFP.

#### MEETING CODE OF CONDUCT

IAFP is committed to providing a safe, productive, and welcoming environment for all meeting participants and IAFP staff. All are expected to abide by the Meeting Code of Conduct that all attendees agreed to at the time of registration.

IAFP has zero-tolerance for any form of discrimination or harassment. If you experience harassment or hear of incidents of unacceptable behavior, IAFP asks that you contact an IAFP staff member so that appropriate action is initiated.

#### **DIVERSITY, EQUITY, AND INCLUSION**

IAFP embraces diversity in the food safety community and is committed to fostering and maintaining an inclusive and equitable environment for the benefit of Members and meeting attendees.

#### **ON-SITE ACCOMMODATIONS**

- Quiet Room for Sensory and Lactation Needs: The Quiet Room, located near 104A, is a small lockable room that provides a comfortable space for nursing and lactation and a calming environment for those overstimulated at the conference. Use of the room is first-come, first-served.
- The all-gender restroom is located near 104.

#### **PROGRAM COMMITTEE**

Francisco Diez, University of Georgia, Committee Chair Maria Hoffmann, U.S. FDA, Committee Vice Chair Andrew Clarke, Loblaw Companies Limited Faith Critzer, University of Georgia Vikrant Dutta, bioMérieux Inc. Lauren Jackson, FDA/IFSH John Jarosh, USDA Food Safety Inspection Service Lone Jespersen, Cultivate Bobby Krishna, Dubai Municipality Benjamin Miller, The Acheson Group Abani Pradhan, University of Maryland Anderson Sant'Ana, University of Campinas Don Stoeckel, Produce Safety Alliance Thomas Taylor, Texas A&M University Xiangin Yang, Agriculture and Agri-Food Canada For all volunteers opportunities with IAFP visit:

www.foodprotection.org/get-involved/volunteer-opportunities/



## **CONNECT WITH IAFP**

## **CONNECT AT IAFP 2024**



#### WIFI

Complimentary wifi is available throughout the Convention Center.

#### TO ACCESS:

Network: IAFP 2024 Password: iafp2024



#### **MEETING APP**

Download the IAFP 2024 App for the most up-to-date information.







## **SCHEDULE**

#### FRIDAY, JULY 12

**IAFP Workshops** 

8:00 a.m. - 5:00 p.m.

#### **SATURDAY, JULY 13**

**IAFP Workshops** 

8:00 a.m. - 5:00 p.m.

**Committee and PDG Chair & Vice Chair Meeting** 

3:00 p.m. - 5:00 p.m.

**Welcome Reception** 

5:00 p.m. - 6:30 p.m.

#### **SUNDAY, JULY 14**

**Affiliate Council Meeting** 

7:30 a.m. - 9:00 a.m.

**Committee and PDG Meetings** 

8:00 a.m. - 5:00 p.m.

**Student Lunch** (ticket required)

12:00 p.m. - 1:30 p.m.

**Editorial Board Reception** (by invitation)

4:30 p.m. - 5:30 p.m.

**Opening Session and Ivan Parkin Lecture** 

6:00 p.m. - 7:30 p.m.

**Cheese and Wine Reception** 

7:30 p.m. - 9:30 p.m.

**Exhibit Hours** 

7:30 p.m. - 9:30 p.m.

#### **MONDAY, JULY 15**

Symposia, Roundtable & Technical Sessions

8:30 a.m. - 5:15 p.m.

**Poster Session** 

8:30 a.m. - 6:15 p.m.

**Exhibit Hours** 

10:00 a.m. - 6:15 p.m.

**Exhibit Hall Lunch** 

11:45 a.m. - 1:30 p.m.

**Exhibit Hall Reception** 

5:15 p.m. - 6:15 p.m.

#### **TUESDAY, JULY 16**

**Committee and PDG Chairperson Breakfast** (by invitation)

7:30 a.m. - 9:00 a.m.

Symposia, Roundtable & Technical Sessions

8:30 a.m. - 5:15 p.m.

**Poster Session** 

8:30 a.m. - 6:15 p.m.

**Exhibit Hours** 

10:00 a.m. - 6:15 p.m.

**Exhibit Hall Lunch** 

11:45 a.m. - 1:30 p.m.

**Business Meeting** 

12:30 p.m. - 1:15 p.m.

**Exhibit Hall Reception** 

5:15 p.m. - 6:15 p.m.

**President's Reception** (by invitation)

6:30 p.m. - 7:30 p.m.

**Student Mixer** 

7:00 p.m. - 9:00 p.m.

Past Presidents' Dinner (by invitation)

7:30 p.m. - 9:00 p.m.

#### **WEDNESDAY, JULY 17**

Symposia, Roundtable & Technical Sessions

8:30 a.m. - 3:30 p.m.

**Poster Session** 

8:30 a.m. - 3:30 p.m.

**Networking Lunch** 

11:45 a.m. - 1:30 p.m.

John H. Silliker Lecture

4:00 p.m. - 4:45 p.m.

**Awards Reception and Banquet** 

6:00 p.m. - 10:00 p.m.

All events held at the **Long Beach Convention Center** unless noted.

## **COMMITTEE AND PDG MEETINGS**

Committee/PDG Chairs & Vice Chairs Meeting	203BC
Affiliate Council	104AB
Committee on Control of Foodborne Illness	102A
3-A Committee on Sanitary Procedures	201B
Dairy Quality and Safety PDG	104C
Food Fraud PDG	101A
Food Safety Assessment, Audit and Inspection PDG	203BC
Food Safety Culture PDG	103BC
Food Safety Education PDG	202BC
Modeling and Risk Analysis PDG	102BC
Pre-Harvest Food Safety PDG	204
Sanitary Equipment and Facility Design PDG	101B
Seafood Safety and Quality PDG	201A
Applied Laboratory Methods PDG	103BC
Constitution and Bylaws Committee	201A
Developing Food Safety Professionals PDG	102BC
	101A
	104C
	101B
Retail and Foodservice PDG	204
Water Safety and Quality PDG	202BC
Webinar Committee	201B
Student PDG	203BC
	103BC
	204
-	203BC
	102BC
	101B
	201B
-	104C
, ,	201A
	102A
	202BC
	202BC
	203BC
	101A
	104C
	204
	201B
·	102BC
	103BC 201A
	Committee on Control of Foodborne Illness  3-A Committee on Sanitary Procedures  Dairy Quality and Safety PDG  Food Fraud PDG  Food Safety Assessment, Audit and Inspection PDG  Food Safety Culture PDG  Food Safety Education PDG  Modeling and Risk Analysis PDG  Pre-Harvest Food Safety PDG  Sanitary Equipment and Facility Design PDG  Seafood Safety and Quality PDG  Applied Laboratory Methods PDG  Constitution and Bylaws Committee  Developing Food Safety Professionals PDG  Diversity, Equity and Inclusion Council  Food Hygiene and Sanitation PDG  Plant-Based Alternative Products Quality and Food Safety PDG  Retail and Foodservice PDG  Water Safety and Quality PDG

## **SCHEDULE-AT-A-GLANCE**

	Grand Ballroom	104A	104B	104C	102BC	103BC	202BC
			SUN	IDAY, JULY 14			
Sunday	Opening Session – Ivan Parkin Lecture – Grand Ballroom						
6:00 p.m. – 7:30 p.m.	33						
			NOM	NDAY, JULY 15			I
Monday 8:30 a.m. – 12:15 p.m. S1 – Outbre	S1 – Outbreak Symposium	S2—Enhancing Food Safety through Genomic Insights: Advancements in Quantitative Microbial Risk Assessments	RT1 – The inclusion of Foreign Material inspection and Foreign Material Forensics in Food Safety Programs and Management	S3 – Follow Your Bacteria; A Data-Based Systems Approach for Safe Meat	RT2 – Detection of Enteric Viruses, Methodological Considerations and Interpretation of Results: Scientific Findings of an Expert Panel	S4 – Safer with Pressure: State of the High Pressure Processing Industry and Emerging Applications	RT3 – Unraveling the Secrets of Sanitation Programs: How to be a Sanitation Change Agent for Decontamination in Retail Food Establishments
		S7 – Agricultural Water Treatment: Deploying Conventional and Emerging Solutions to Improve Water Quality for Fresh Produce	RT4 – Beyond Root Cause: Targeting Pathogen-Food Pairings and Tailoring Strategies to Prevent Future Foodborne Illnesses	S8 – Learnings and Products of Public and Private Organizations Developing and Implementing Food Safety Foresight Systems and Approaches	RT5 – Understanding the Risks of Foodborne Viruses in Foods and Water	59 – Cultivating a Culture of Food Safety: Key Learnings Toward Food Safety Improvement	RT6 – Ingredient Safety: Current Perspectives from Food Toxicologists
Monday 12:30 p.m. – 1:30 p.m.		Jim Jones, U.S. Food an		ory Update on Food Safety – Gr oring, Maryland; and Emilio Este		ulture, Washington, D.C.	
		S12 – Global Recommendations on Prevention and Control of Microbiological Hazards in Fresh Fruits and Vegetables from the Joint FAO/WHO Expert Meeting	RT7 — Establishing Clean Breaks — Hyglenic Separation of Production in Low-Water Activity Foods	S13 – Back to Basics: Essential Elements of an Allergen Control Program	RT8 – Laboratory and Regulatory Challenges of Probiotics in Food Products	S14 – Advancements in Sample Preparation for Enteric Virus Detection from Diverse Matrices	RT9 – Don't Let It Happen Again! Avoiding Another GIANT Recall in Aseptically Packaged Foods and Beverages
Monday 1:30 p.m. – 5:15 p.m.	\$17 – Global Recommendations on Food Allergens from the Joint FAO/WHO Expert Meeting	S18 – Understanding Consumer Reactions during Foodborne Illness Outbreaks and Food Recalls: Research from CDC, USDA, and FDA	RT10 – Think Like a Criminal – The Dark World of Food Fraud	S19 — Grounding the Discussion on Toxic Elements in Food: Updates from Production to Regulation	RT11 – <i>Cronobacter</i> spp. Control: Bridging Knowledge Gaps and Taking Action	S20 – Sample Pooling: Luring or Solution?	RT12 – Code Club: Leveraging Statistical Programming to Get the Most from Your Data
			TUE	SDAY, JULY 16			
Tuesday 8:30 a.m. – 12:15 p.m.	S23 – New Estimates for the Global Burden of Foodborne Disease – Where are We and	Late Breaking Session – Responding to an Outbreak of Highly Pathogenic Avian Influenza (HPAI)	RT13 – Can Food Manufacturers Afford Not to Use Whole Genome Sequencing?	S24 – Emerging Foodborne Pathogens in Water- Associated Outbreaks: How Technology Can Assist Outbreak Investigations	RT14 – Importance of Outreach to Spanish-Speaking Growers and Farmworkers to Ensure Food Safety for U.S. Consumers	S25 – Achilles Heel in the Food Safety Programs of Food Manufacturing Plants – Evaluating Recontamination Risks	S26 – Food Safety within the Traditional and Modern Horticultural Sector in Africa
	Where are We Going?	S30 – Fresh Produce Food Safety Culture Perspectives from the U.S. and Central America (The Food Industry, Government, Consumers and Schools)	RT15 – How Did FDA Define Strong Evidence for Food Traceability List (FTL) Foods and What are Its Implications for the Future?	S31 – Climate Change: Is It Affecting the Prevalence of Foodborne Pathogens in the Environment?	RT16 – Advancing Food Safety Regulation: A Globally Applicable Maturity Model	S32 – Modeling Everywhere: How Models Can Aid Decision Making in Food Safety and Shelf-Life Extension	S33 – Dry Cleaning and Sanitation in Dry, Low- Moisture Environments
Tuesday 12:30 p.m. – 1:15 p.m.		·		IAFP Business Meeting – 2018			
Tuesday	RT17 – Transitioning from Grad School to Professionals: Insights from Recent Graduates S37 – Novel Pathogen Detection and Enumeration Approaches for Meat and Targets? Healthy People 2030 and the National Effort to Drive Down Foodborne Illness in the United States		S38 – Global Guidance on the Use of Risk Categorization for Risk-Based Inspection Programming: Sharing FAO's Experience in Africa	S39 – Controlling Persistent  Listeria in Food Retail:  Honing Data Analytics for Root Cause Analysis and  Intervention	RT18 – Transitioning from Auditor to Coach: Reimagining Retail Audits to Build Collaborative Relationships and Dissolve the "Us vs. Them" Mentality	S40 – Root Cause Analysis for Non-Cultivable Foodborne Pathogens: Needs, Challenges, and Opportunities	RT19 – Sweet and Saucy! The Role of Sugar and Other Important Considerations in the Classification and FDA Filing of Acidified Foods
1:30 p.m. – 5:15 p.m.			S44 – Food Safety Risk Assessment in Latin America: Successful Stories from Countries Transforming Industry Standards and Food Safety Policy	S45 – Impact of Effective and Timely Communication of Relevant and Complex Scientific Data to Influence Human Behavior	RT21 – Strengthening the Frontline of Food Safety: Meeting the Growing Demand for Competent Auditors, Inspectors, and Assessors	S46 – Bringing the Environment into the Lab: Preventing the Next Outbreak by Using Controlled Environments to Understand What Caused the Last One!	RT22 – Leveraging GS1 Standards and Advanced Data Carriers to Support FSMA 204 Traceability Requirements
			WEDN	IESDAY, JULY 17			
Wednesday 8:30 a.m. – 12:15 p.m.		Serotyping with Data-Enriched	otection: Proactive Salmonella I Insights and Unified Efforts in y, and Biotech	S51 – Analytical Challenges in Developing Successful Risk Management and Control Monitoring Strategies	SS2 – Listeria monocytogenes in Ice Cream Products – Review of Outbreaks and Prevention Activities	RT23 – Current and Novel Approaches to Food Source Attribution	S53 – The Past, Present, and Future of Surrogates for Validating Food Safety Controls
о.эи ө.m. – 12:15 р.m.		U.S. Department of Agricult	illness: The Science Supporting ture's Proposed <i>Salmonella</i> ework	SS8 – From Label to Table: Understanding the USDA's Bioengineering Labeling Rule	S59 – From Cart to Kitchen: Data-Driven Insights on E- Commerce Food Safety for Delivery	RT24 – The Required Evolution of Best Practices Based on Science for Fresh- Cut Produce	S60 – Rapid Microbiological Test Methods – Are They Still an Important Part of a Food Processor's Food Safety Program?
Wednesday 1:30 p.m. – 3:15 p.m.			– A Perspective Focus on Food ,, and Experiences	S65 – Empowering the Detection and Characterization of Foodborne Pathogens Using Artificial Intelligence and Advanced Analytical Techniques	S66 – Training Low-Literacy Groups across Cultures: Balancing Universal Principles and Custom Approaches	S67 – Unraveling Pathogen Dynamics: Insights from a Multi-Year Collaborative Longitudinal Study in the Southwest	568 – New Quantitative Risk Assessment Models for Listeria monocytogenes: Insights and Applications
Wednesday 4:00 p.m. – 4:45 p.m.		The Future of Food S	Safety: Future Shock? – Robert	John H. Silliker Lecture – 104 Brackett, IEH Academy and IEH	Laboratory and Consulting Gro	oup, Herdon, Virginia	

## **SCHEDULE-AT-A-GLANCE**

	203BC	101A	101B	201A	201B	204	Exhibit Hall
			SUN	IDAY, JULY 14			
				Parkin Lecture – Grand Ballroo			
L	igesting Truth: Navigating Foo	d Safety Education in the Age o		NDAY, JULY 15	i & Canadian Research Institute	for Food Safety, Gueiph, Onta	rio, Canada
				DAI, JOEL 13			
Monday 8:30 a.m. – 12:15 p.m.	S5 – Bridging Data Gaps in Microbial Pathogens Along the Aquaculture Value Chain for Fish in Informal Markets: Advancing Science-Based Analysis for Enhanced Food Safety in Low- and Middle- Income Countries	S6 – Food Safety of Cheese Brines: Management and Prevention Strategies	Technical Session 1 – General Microbiology, Meat, Poultry, and Eggs, and Microbial Food Spoilage	Technical Session 2 – Food Chemical Hazards and Sanitation and Hyglene	Technical Session 3 – Food Allergens, Retail and Food Service Safety, Seafood and Viruses and Parasites		Poster Session 1 – Communication Outreach and Education, Food Defense, Food Fraud, Food Law and Regulation, Food Processing
	S10 – Beyond Pathogens: "GRAS" Microbes as Silent Carriers of Antimicrobial Resistance (AMR) Genes: Posing a Challenge to Food Safety	S11 – New Insights into Sampling and Testing Ready- to-Eat Foods: Lot-by-Lot vs. across Food Supply, Practical Considerations, and Risk Assessment					
	Jim Jones, U.S. Foo	U.S. Regi d and Drug Administration, Silv	ulatory Update on Food Safety er Spring, Maryland; and Emilio		Agriculture, Washington, D.C.		Technologies, Food Safety Systems, Laboratory and
	S15 – Generating Practical Data Insights into Foodborne Illness and Disease Exposure Disparities Using Epidemiological and Related Data	S16 – Rapid Listeria Detection in Post Lethality Environment of RTE Meat Processing Plants: Developments, Applications and Challenges		Technical Session 5 – Laboratory and Detection			Detection Methods, Retail and Food Service Safety, Sanitation and Hyglene, Seafood, and Viruses and Parasites
Monday 1:30 p.m. – 5:15 p.m.	S21 – Public Health Consequences of <i>Listeria</i> monocytogenes, and Possible Future Regulatory Approaches That Reflect a Risk-Based Approach	S22 – Food Packaging Should Protect, Not Hurt: Assessing and Mitigating Physical Hazards in Packaging Materials	Technical Session 4 – Developing Scientist Finalists	Methods and Molecular Methods and Molecular Analytics, Genomics and Microbiome			
			TUE	SDAY, JULY 16			
Tuesday 8:30 a.m. – 12:15 p.m.	S27 – Complexity in Baking Process – Food Safety Challenges, Risk Management, and Validation	S28 – From Kimchi to Kombucha: Exploring the Diversity of Fermented Foods, Understanding Preventive Control and Navigating the Regulatory Ambiguities	S29 – Predicting the Unpredictable: How Translatable are Available Microbial Models to Risk Assessment of Plant-Based Foods?	Technical Session 6 – Data Management and Analytics and Modeling and Risk	Technical Session 7 – Produce and Water		
22.25 p.m.	S34 – Persister: A Dormancy State of Pathogenic Bacteria in the Agro-Ecosystem and Food Supply Chain	S35 – One Health Approach to Address Zoonotic Foodborne Parasites	S36 – Risk vs. Hazard: The Consumer Impact of Diverging Global Assessments for Safety	Assessment	aliu watei		Poster Session 2 – Antimicrobials, Beverages and Acid/Acidified Foods, Epidemiology, Food Toxicology, General
			IAFP Business Meeting – 2	201B			Microbiology, Meat, Poultry and Eggs, Modeling and Risk
Tuesday	S41 – "Cure" What Ails You: Nitrite Alternatives in Meat Systems	S42 – Under the Influence: Impact of Plant Metabolites on Survival and Persistence of Foodborne Pathogens	S43 – Integrated Modeling Approaches to Support Firm-Level Decision Making in Produce Safety	Technical Session 8 – Food Fraud, Food Processing Technologies, Food		Marketplace	and Eggs, Modeling and Risk Assessment, Molecular Analytics, Genomics and Microbiome, and Plant-Based Alternative Products
1:30 p.m. – 5:15 p.m.	S47 – Low Calorie Sweeteners: An Update on the State of the Science	S48 – From Pathogen Transcriptomics to Prevention Strategies	S49 – Foodborne Pathogen Biofilms, Environmental Microbial Community, and Food Safety	Toxicology, Low-Water Activity Foods, and Physical Hazards and Foreign Material		Third Get-Connected Market: Connecting More IAFP Professionals on Food Safety in Africa!	
			WEDN	ESDAY, JULY 17			
Wednesday 8:30 a.m. – 12:15 p.m.	S54 – Can a One Health Approach be a Roadmap to Reduce Salmonellosis?	S55 – Improving Food Safety in Traditional Food Markets: The EatSafe Approach	S56 – A Summary of Recent Consumer Food Safety Behavior Research: Takeaways, Challenges, and Next Steps	Technical Session 9 – Communication Outreach and Education and Food Safety	Technical Session 10 – Beverages and Acid/Acidified Foods, Epidemiology, and		Poster Session 3 – Animal and Pet Food Safety, Dairy, Data Management and Analytics, Food Allergens, Food Chemical Hazards, Low-water Activity Foods, Microbial Food Spollage, Packaging, Pre- harvest Food Safety, Produce,
and polls	S61 – Wax On Wax Off: Foodborne Pathogen Contamination from Wax Application and Wax Applicators	S62– Food Safety and Regulatory Considerations for Raw Pet Foods: Challenges and Opportunities	S63 – Flour: Fostering Food Safety – Industry and Regulatory Collaboration to Minimize Health Risks in Raw Flour Products	Systems	Plant-Based Alternative Products		
Wednesday 1:30 p.m. – 3:15 p.m.	S69 – From Process to Product: Bio-Mapping and Potential Solutions for Ensuring Poultry Product Safety and Sustainability	S70 – Metagenomic Tools for Identifying Eukaryotes and Associated Microbiota in Complex Samples: Challenges and Strategies	\$71— Microplastics and Nanoplastics: Are They Really Long-Overlooked Food Safety Threats?	Technical Session 11 – Dairy and Pre-Harvest Food Safety	Technical Session 12 – Antimicrobials		and Water
		The Future of Food Safety: Futu		Iliker Lecture – 104 EH Academy and IEH Laboraton	y and Consulting Group, Herdor	n. Virginia	

## **GENERAL SESSIONS**



IVAN PARKIN LECTURE LAWRENCE GOODRIDGE

Sunday, July 14 • 6:00 p.m. - 7:30 p.m.

Leung Family Professorship in Food Safety
University of Guelph and Canadian Research Institute
for Food Safety (CRIFS), Guelph, Ontario, Canada

"Digesting Truth: Navigating Food Safety Education in the Age of Misinformation"



JOHN H. SILLIKER LECTURE
ROBERT BRACKETT

Wednesday, July 17 • 4:00 p.m. – 4:45 p.m.

Senior Vice President and Dean, IEH Academy IEH Laboratories & Consulting Group, Herndon, VA

"The Future of Food Safety: Future Shock?"

## **U.S. REGULATORY UPDATE SESSION**

Monday, July 15 • 12:30 p.m.-1:30 p.m.



JOSE EMILIO ESTEBAN
Under Secretary for Food Safety
U.S. Department of Agriculture
Washington, D.C.



JIM JONES

Deputy Commissioner for Human Foods

U.S. Food and Drug Administration
Silver Spring, MD

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## STUDENT ACTIVITIES

#### STUDENT PDG MEETING

#### **SUNDAY, JULY 14**

11:00 a.m.-12:00 p.m. 203 BC

#### **STUDENT LUNCHEON**

#### **SUNDAY, JULY 14**

**12:00 p.m.-1:30 p.m.**104

## Purchase a T-shirt to support the students! \$25



Visit the IAFP Student PDG in the Exhibit Hall, Booth 1028.

#### **JOB FAIR**

## ATTENTION JOB SEEKERS AND EMPLOYERS!

Job announcements will be posted at the Student PDG booth.

#### **STUDENT MIXER**

#### **TUESDAY, JULY 16**

7:00 p.m.-9:00 p.m.

The Cove at the Long Beach Convention Center





## **EXHIBIT HALL EVENTS**

	EXHIBIT HALL HOURS	
<b>SUNDAY, JULY 14</b>	<b>MONDAY, JULY 15</b>	<b>TUESDAY, JULY 16</b>
7:30 p.m. – 9:30 p.m.	10:00 a.m. – 6:15 p.m.	10:00 a.m. – 6:15 p.m.

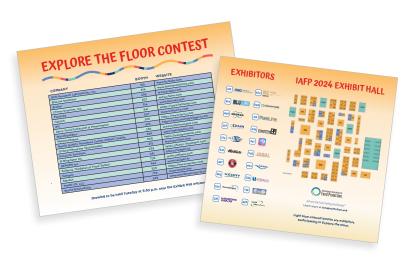
	<b>EXHIBIT HALL EVENTS</b>	
SUNDAY, JULY 14	MONDAY, JULY 15	TUESDAY, JULY 16
Opening Session	Coffee Break 10:00 a.m. – 10:45 a.m.  Sponsored by  DELBEL LABORATORIES	Coffee Break 10:00 a.m. − 10:45 a.m.  Sponsored by  ∧ L ⊃ = N
7:30 p.m. – 9:30 p.m.  Sponsored by  MERCK  Animal Health  Cheese provided by  LAND CLAKES INC.  ROOTED IN TOMORROW	Lunch 11:45 a.m. − 1:30 p.m.  Sponsored by  BCN Research Laboratories NC	Lunch 11:45 a.m. – 1:30 p.m.  Sponsored by  NOMAD'X
	<b>Coffee Break</b> 3:00 p.m 3:45 p.m.	<b>Coffee Break</b> 3:00 p.m 3:45 p.m.
	Exhibit Hall Reception 5:15 p.m. – 6:15 p.m.	Exhibit Hall Reception 5:15 p.m. – 6:15 p.m.

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## Pick up your Explore the Floor form at the Registration Desk!

As you explore the floor, have participating exhibitors stamp your passport. Once you have 15 or more stamps, complete the form and drop it into the box located near the Exhibit Hall entrance.

Drawing to be held **Tuesday at 5:30 p.m.** near the Exhibit Hall entrance.



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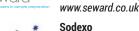
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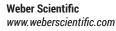
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**FEBRUARY 11, 2025** Award Nominations

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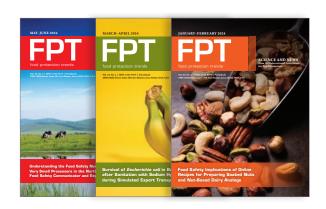
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# Congratulations to the Recipients of the 2024 Food Protection Trends Publication Awards

## Most Cited Research Publication Award

#### The Missing Ingredient: Food Safety Messages on Popular Recipe Blogs

Emily Morrison and Ian Young
Published in January 2019

The award is based upon the number of citations of a work by others for research articles published five years prior to the year of the IAFP Annual Meeting.

#### Most Viewed General Interest Publication Award

#### Evaluating Microbiological Method Equivalence – A Decision Guide

J. David Legan, Laurie Post, Christina Barnes, Amanda Brookhouser-Sisney, W. Evan Chaney, Nisha Corrigan, Kristen A. Hunt, Ryan D. Maus, Sophie Pierre, Patricia Rule, Nikki Taylor, and Julie Weller

Published in May 2023

The award is based upon the number of times a publication that was published over the last two calendar years was viewed.

## **Most Viewed Peer-Reviewed Research Publication Award**

## Fresh Produce Harvesting Equipment - A Review of Cleaning and Sanitizing Practices and Related Science

Susan M. Leaman, Justin Kerr, Sonia Salas, Afreen Malik, Trevor V. Suslow, Martin Wiedmann, and De Ann Davis

Published in March 2023

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## **2024 Food Protection Trends Exceptional Reviewer Award**

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## **JFP PUBLICATION AWARDS**



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#### **John N. Sofos Most Cited Research Publication Award**

#### **1ST PLACE**

Antibacterial Effects of Phytic Acid against Foodborne Pathogens and Investigation of Its Mode of Action

Qi Zhou, Yu Zhao, Hui Dang, Yuanyue Tang, and Baoshan Zhang Volume 82, Issue 5, 1 May 2019

#### **2ND PLACE**

Overview of Leafy Greens-Related Food Safety Incidents with a California Link: 1996 to 2016

Kali Turner, Chee Nou Moua, Maha Hajmeer, Amber Barnes, and Michael Needham

Volume 82, Issue 3, 1 March 2019

#### **3RD PLACE**

Relationship of Sanitizers, Disinfectants, and Cleaning Agents with Antimicrobial Resistance

John Anthony Donaghy, Balamurugan Jagadeesan, Kaarin Goodburn, Ludger Grunwald, Ove Niels Jensen, Ad Jespers, Kanagasooriyam Kanagachandran, Hervé Lafforgue, Walburga Seefelder, and Marie-Claude Quentin

Volume 82, Issue 5, 1 May 2019

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Inhibitory Effect of Lactic Acid Bacteria on Foodborne Pathogens: A Review

Zhenhong Gao, Eric Banan-Mwine Daliri, Jun Wang, Donghong Liu, Shiguo Chen, Xinggian Ye, and Tian Ding

> Volume 82, Issue 3, 1 March 2019

#### 2024 Journal of Food Protection Most Downloaded Publication Award

Climate Change and Emerging Food Safety Issues: A Review

Ramona A. Duchenne-Moutien and Hudaa Neetoo

Volume 84, Issue 11, 1 November 2021

This award recognizes the JFP publication that was most-downloaded in 2023 and published within the last 10 years.

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Contact: Muhteber Ersin

Email: muhteber.ersin@ggd.org.tr

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Treasurer: Adam Brock Email: houck@cdr.wisc.edu

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1920 — Ernest Kelly
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<b>2009</b> – J. Stan Bailey
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<b>2011</b> – Lee-Ann Jaykus
2012 — Isabel Walls
2013 – Katherine M.J. Swansor
2014 – Donald W. Schaffner
<b>2015</b> – Donald L. Zink
<b>2016</b> — Alejandro S. Mazzotta
<b>2017</b> – Linda J. Harris
2018 – Mickey E. Parish
2019 - Timothy C. Jackson
2020 – Kalmia E. Kniel
<b>2021</b> – Roger L. Cook
2022 – Ruth L. Petran
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## IVAN PARKIN LECTURE



OPENING SESSION SUNDAY, JULY 14 6:00 P.M. – 7:30 P.M.

#### LAWRENCE GOODRIDGE

Leung Family Professorship in Food Safety University of Guelph & Canadian Research Institute for Food Safety (CRIFS) Guelph, Ontario, Canada

Lawrence D. Goodridge, Ph.D., is a Full Professor and a Canada Research Chair in Foodborne Pathogen Dynamics in the Department of Food Science at the University of Guelph in Ontario, Canada. He is also the Director of Guelph's Canadian Research Institute for Food Safety.

Dr. Goodridge applies genomics to study foodborne bacterial pathogens and antibiotic resistance within a One Health context. Dr. Goodridge's expertise in food safety and public health has led to many academic, government and industrial collaborations in the Caribbean, Europe, Asia, and Africa. In addition to these partnerships, he has also worked internationally with the Food and Agriculture Organization of the United Nations and the World Bank on food safety related initiatives.

Dr. Goodridge joined the International Association for Food Protection (IAFP) in 2003. He has convened many sessions over the years at IAFP Annual Meetings. Dr. Goodridge is a member of the DEI Council and served as the Vice Chair and Chair of the Membership Committee. He received the Elmer Marth Educator Award in 2022, and is a past member of the Journal of Food Protection (JFP) Editorial Board.

In addition to his scientific achievements, Dr. Goodridge is an active advocate for diversity and inclusion in academia. He was awarded a North American Colleges and Teachers of Agriculture Charles N. Shepardson Meritorious Teaching Award in 2012. He is the President-Elect of the Canadian Black Scientists Network. His insights regarding the importance of representation and mentorship are invaluable.

## Digesting Truth: Navigating Food Safety Education in the Age of Misinformation

In the era of instant information and widespread social media, the landscape of food safety education faces unprecedented challenges. For example, misinformation, or false information shared without harmful intent, and disinformation, deliberately spread to deceive, both erode the foundation of evidence-based decision-making. In the realm of science, where complexity and uncertainty are inherent, these practices exploit gaps in public knowledge and understanding, leading to skewed perceptions of risk, the adoption of pseudoscientific beliefs, and resistance to scientific consensus on critical issues like climate change, vaccination, and public health guidelines.

The rapid proliferation of such information through social media and digital platforms magnifies these challenges, allowing falsehoods to spread at unprecedented speed and scale. Combatting these forces requires concerted efforts not only to improve scientific literacy and critical thinking skills among the general public but also to develop more effective communication strategies that can bridge the gap between complex scientific information and accessible, actionable knowledge for the broader population.

This presentation will commence with an exploration of the current state of food safety misinformation, identifying several pervasive myths and the mechanisms by which they spread across digital platforms. By examining case studies, we will shed light on the impact of these falsehoods on consumer behavior and public health. Central to the discussion will be innovative strategies for food safety professionals to effectively communicate scientific truths. This includes leveraging new technologies and social media platforms to disseminate accurate information, as well as engaging with online communities to foster a culture of critical thinking and informed decision-making. Furthermore, the lecture will emphasize the importance of interdisciplinary collaboration among academics, government, and industry professionals in combating misinformation and disinformation. By uniting experts in food science, psychology, technology, and communication, we can develop more effective methods for educating the public and advocating for evidence-based practices.

The lecture will conclude with a call to action for food safety professionals, educators, and communicators to take a proactive stance against misinformation and disinformation. Through collective efforts, we can enhance the public's ability to "digest truth," ensuring a safer and more informed society on the topic of food safety and science in general.

#### **IVAN PARKIN**

Dr. Ivan Parkin was a Dairy Extension Specialist at Pennsylvania State University. Dr. Parkin served as the IAFP President in 1955 and received the IAFP Honorary Life Membership Award in 1965.

# **MONDAY, JULY 15**

ALL DAY			AFTERNOON		
8:30 a.m. – 6:15 p.m. Exhibit Hall	Poster Se	ssion 1 – Communication Outreach and Education,	12:30 p.m. – 1:30 p.m.		W0.D. I. W.I. 5 10.C.
EXHIBIT Hall		ense, Food Fraud, Food Law and Regulation, Food	Grand Ballroom		U.S. Regulatory Update on Food Safety
		g Technologies, Food Safety Systems, Laboratory and	1:30 p.m. – 5:15 p.m.		
		Methods, Retail and Food Service Safety, Sanitation ene, Seafood, and Viruses and Parasites	101B 201A	T4 T5	Technical Session 4 – Developing Scientist Finalists
	P1-01 thro	nugh P1-185 – Authors present 10:00 a.m. – 11:30 a.m. nm. – 6:15 p.m.	201A	10	Technical Session 5 – Laboratory and Detection Methods and Molecular Analytics, Genomics and Microbiome
		rough P1-306 – Authors present 2:15 p.m. – 3:45 p.m.	1:30 p.m 3:00 p.m.		
MODNING	and 5:15 p	.m. – 6:15 p.m.	104A	S12	Global Recommendations on Prevention and
MORNING 8:30 a.m 12:15 p.m.					Control of Microbiological Hazards in Fresh Fruits and Vegetables from the Joint FAO/WHO Expert
Grand Ballroom	S1	Annual Outbreak Symposium	104C	S13	Meeting Back to Basics: Essential Elements of an Allergen
101B	T1	Technical Session 1 — General Microbiology, Meat, Poultry, and Eggs and Microbial Food Spoilage			Control Program
201A	T2	Technical Session 2 – Food Chemical Hazards and Sanitation and Hygiene	103BC	S14	Advancements in Sample Preparation for Enteric Virus Detection from Diverse Matrices
201B	Т3	Technical Session 3 – Food Allergens, Retail and Food Service Safety, Seafood and Viruses	203BC	S15	Generating Practical Data Insights into Foodborne Illness and Disease Exposure Disparities Using Epidemiological and Related Data
		and Parasites	101A	S16	Rapid <i>Listeria</i> Detection in Post Lethality
8:30 a.m. – 10:00 a.m. 104A	S2	Enhancing Food Safety through Genomic Insights:			Environment of RTE Meat Processing Plants: Developments, Applications and Challenges
		Advancements in Quantitative Microbial Risk Assessments	104B	RT7	Establishing Clean Breaks – Hygienic Separation of Production in Low-Water Activity Foods
104C	S3	Follow Your Bacteria; A Data-Based Systems Approach for Safe Meat	102BC	RT8	Laboratory and Regulatory Challenges of Probiotics in Food Products
103BC	S4	Safer with Pressure: State of the High-Pressure Processing Industry and Emerging Applications	202BC	RT9	Don't Let It Happen Again! Avoiding Another GIANT Recall in Aseptically Packaged Foods and Beverages
203BC	S5	Bridging Data Gaps in Microbial Pathogens Along the Aquaculture Value Chain for Fish in Informal	3:00 p.m. – 3:45 p.m.		Break – Refreshments available in the Exhibit Hall
		Markets: Advancing Science-Based Analysis for	3:45 p.m 5:15 p.m.		
		Enhanced Food Safety in Low- and Middle-Income Countries	Grand Ballroom	S17	Global Recommendations on Food Allergens from the Joint FAO/WHO Expert Meeting
101A	S6	Food Safety of Cheese Brines: Management and Prevention Strategies	104A	S18	Understanding Consumer Reactions during Foodborne Illness OutBreaks and Food Recalls:
104B	RT1	The Inclusion of Foreign Material Inspection and Foreign Material Forensics in Food Safety			Research from CDC, USDA, and FDA
10000	DTO	Programs and Management	104C	S19	Grounding the Discussion on Toxic Elements in Food: Updates from Production to Regulation
102BC	RT2	Detection of Enteric Viruses, Methodological Considerations and Interpretation of Results:	103BC	S20	Sample Pooling: Luring or Solution?
202BC	RT3	Scientific Findings of an Expert Panel Unraveling the Secrets of Sanitation Programs:	203BC	S21	Public Health Consequences of <i>Listeria</i> monocytogenes, and Possible Future Regulatory Approaches That Reflect a Risk-Based Approach
		How to be a Sanitation Change Agent for Decontamination in Retail Food Establishments	101A	S22	Food Packaging Should Protect, Not Hurt:
10:00 a.m. – 10:45 a.m.		Break – Refreshments available in the Exhibit Hall	7077	OLL	Assessing and Mitigating Physical Hazards in Packaging Materials
		sponsored by DEIBEL LABORATORIES	104B	RT10	Think Like a Criminal – The Dark World of Food Fraud
10:45 a.m 12:15 p.m.			102BC	RT11	Cronobacter spp. Control: Bridging Knowledge
104A	S7	Agricultural Water Treatment: Deploying Conventional and Emerging Solutions to Improve Water Quality for Fresh Produce	202BC	RT12	Gaps and Taking Action  Code Club: Leveraging Statistical Programming to  Get the Most from Your Data
104C	S8	Learnings and Products of Public and Private	<b>EVENING EVENTS</b>		oct the most from roar bata
		Organizations Developing and Implementing Food Safety Foresight Systems and Approaches	5:15 p.m. = 6:15 p.m.		Monday Exhibit Hall Reception
103BC	S9	Cultivating a Culture of Food Safety: Key Learnings Toward Food Safety Improvement	5:30 p.m. – 6:30 p.m.		Object Association for Food Protection and Objects
203BC	S10	Beyond Pathogens: "GRAS" Microbes as Silent Carriers of Antimicrobial Resistance (AMR) Genes: Posing a Challenge to Food Safety	101A		China Association for Food Protection and Chinese Association for Food Protection in North America Meeting
101A	S11	New Insights into Sampling and Testing Ready- to-Eat Foods: Lot-by-Lot vs. across Food Supply,	101B		African Continental Association for Food Protection Meeting
		Practical Considerations, and Risk Assessment	103BC		Korea Association for Food Protection Meeting
104B	RT4	Beyond Root Cause: Targeting Pathogen-Food Pairings and Tailoring Strategies to Prevent Future Foodborne Illnesses	5:30 p.m. – 7:00 p.m. <i>102BC</i>		Indian Association for Food Protection in North America Meeting
102BC	RT5	Understanding the Risks of Foodborne Viruses in Foods and Water			America meeting
202BC	RT6	Ingredient Safety: Current Perspectives from Food Toxicologists			
11:45 a.m. = 1:30 p.m.		Lunch available in the Exhibit Hall			

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MONDAY MORNING	/, JULY 15	9:30	A Case Study of Predictive Modeling Using Bio-Mapping and Intervention Data to Understand its Effect on Food Safety Risk
	ll be on display 8:30 a.m. – 6:15 p.m. (see details beginning on page 66)		JOYJIT SAHA, Kerry, Beloit, WI, USA
<b>S1</b>	Annual Outbreak Symposium Grand Ballroom Organizers: Laura Gieraltowski, Ewen Todd, Kari Irvin Convenor: Laura Gieraltowski Epidemiology International Food Protection Issues	S4	Safer with Pressure: State of the High-Pressure Processing Industry and Emerging Applications 103BC Organizers: Alvin Lee, Ann Charles Vegdahl Convenors: Alvin Lee, Mary-Grace Danao, Ann Charles Vegdahl Animal and Pet Food Safety Plant-Based Alternative Products
8:30	Mushroom Safety: A Look into Illnesses Linked to Morel Mushroom Exposure in Montana ANGELA FIELDS, U.S. Food and Drug Administration, College Park, MD, USA and BRIA GRAHAM-GLOVER, U.S. Food and Drug	8:30	Beverages and Acid/Acidified Foods  The Continuing Path of HPP Innovation and Consumer Education MARY-GRACE DANAO, University of Nebraska-Lincoln, Lincoln, NE, USA
	Administration, College Park, MD, USA	9:00	Responsible Raw Pet Food: A Science-Based Approach BOBBY HARRIS, Instinct, St. Louis, MO, USA
9:00	Salmonella in Raw Cookie Dough: Another Outbreak Influenced by Consumption Trends MATTHEW WISE, U.S. Centers for Disease Control and Prevention, Atlanta, GA, USA	9:30	Plant-Based Meat Alternatives and HPP SAMPATHKUMAR BALAMURUGAN, Agriculture and Agri-Food Canada, Guelph, ON, Canada
9:30	International Outbreak Overview MELANIE FIRESTONE, University of Minnesota, School of Public Health, Minneapolis, MN, USA	<b>S5</b>	Bridging Data Gaps in Microbial Pathogens Along the Aquaculture Value Chain for Fish in Informal Markets: Advancing Science-Based Analysis for Enhanced Food Safety in Low- and Middle-Income Countries
<b>S2</b>	Enhancing Food Safety through Genomic Insights: Advancements in Quantitative Microbial Risk Assessments		203BC Organizers and Convenors: Mohammad Islam, Salina Parveen Sponsored by the IAFP Foundation
	104A Organizers: John David, Peggy Cook Convenors: Robert Donofrio, Peggy Cook		Seafood Safety and Quality Microbial Modelling and Risk Analysis International Food Protection Issues
	Microbial Modelling and Risk Analysis HACCP Utilization and Food Safety Systems	8:30	Identifying Major Sources of Foodborne Pathogens in Bangladeshi Aquaculture Value Chains Using a Farm-to-Consumer Approach
8:30	Data-Driven, Science-Based Approaches Remain the Best Strategy for Enhancing Public Health BARBARA MASTERS, Tyson Foods, Washington, D.C., USA	9:00	MOHAMMAD ISLAM, Washington State University, Pullman, WA, USA Improving Biosecurity: A Science-Based Approach to Manage Fish
9:00	Yes, Genomics and Risk Analytics Can be Used Today to Create Safer Food Systems FRANCISCO ZAGMUTT, EpiX Analytics, Fort Collins, CO, USA	3.00	Disease Risks and Increase the Socioeconomic Contribution of the Nigerian Catfish and Tilapia Industries SELIM ALARAPE, University of Ibadan, Ibadan, Nigeria
9:30	Big Data, Big Decisions – Identifying Salmonella of Greatest Public Health Significance to Enhance Food Safety in Poultry Supply Chains JANELL KAUSE, USDA/FSIS, Manassas, VA, USA	9:30	Modelling Efforts Leveraging Foodborne Pathogen and Socio- Economic Data to Inform Risk Management Decisions CLARE NARROD, JIFSAN; U of Maryland, College Park, MD, USA and ELISABETTA LAMBERTINI, Global Alliance for Improved Nutrition (GAIN), Washington, D.C., USA
<b>S3</b>	Follow Your Bacteria; A Data-Based Systems Approach for Safe Meat 104C Organizers: Rigo Soler, Joyjit Saha Convenors: Saurabh Kumar, Marcos Sanchez Sponsored by Kerry	<b>S6</b>	Food Safety of Cheese Brines: Management and Prevention Strategies 101A Organizer: Timothy Stubbs
	Data Management and Analytics Advanced Molecular Analytics Meat and Poultry Safety and Quality		Convenors: Kathleen Glass, Chad Galer Dairy Quality and Safety Food Hygiene and Sanitation
8:30	Farm to Process; Changes in Microbial Load in Beef Production MINDY BRASHEARS, International Center for Food Industry	8:30	Overview of Brining Systems and Current Monitoring/Cleaning Practices CARRIE JONES, Prairie Farms, Monona, IA, USA
9:00	Excellence, Texas Tech University, Lubbock, TX, USA  Salmonella in Beef and Pork Pre- and Post-Harvest Environments, Including Market Hag Lymph Nodes and Toppile Collected at the Abattair	9:00	Use of Hydrogen Peroxide as a Continuous <i>Listeria</i> Controls Intervention KATHLEEN GLASS, Food Research Institute, University of Wisconsin, Madison, WI, USA
	Including Market Hog Lymph Nodes and Tonsils Collected at the Abattoir JOHN SCHMIDT, U.S. Meat Animal Research Center, USDA-ARS, Clay Center, NE, USA and SARA GRAGG, Kansas State University, Manhattan, KS, USA	9:30	Review of Existing and Emerging Technologies for Brine Pathogen Controls with Case Studies JULIE AUDY, Agropur Cooperative, Beloeil, QC, Canada

KII	Forensics in Food Safety Programs and Management  104B  Organizer: Kurt Westmoreland	9:00	Turkey Meat Products SUBASH SHRESTHA, Shelly Riemann, Ted Brown, Vijay Juneja, Cargill, Inc., Wichita, KS, USA
8:30	Convenors: Stephanie Wilkins, Kurt Westmoreland Physical Hazards and Foreign Material Retail and Foodservice Food Safety Culture GALE BEARD, Grande Cheese, Fond Du Lac, WI, USA	9:15	T1-04 Comparative Genomic Analysis of a Bacteriophage Preparation Targeting <i>Listeria monocytogenes</i> and Its Efficacy on Italian-Style Ham AMIT VIKRAM, Mary Theresa Callahan, Joelle Woolston, Alexander Sulakvelidze, Intralytix, Inc., Columbia, MD, USA
	APRIL BISHOP, TreeHouse Foods, Oak Brook, IL, USA NICOLETTE BROWN, Hills Pet Nutrition, Kansas City, MO, USA ROBIN FORGEY, Costco Wholesale, Issaquah, WA, USA JOSEPH HOLT, OSI Group, Aurora, IL, USA DANIELLE RICHARDSON, ConAgra, Omaha, NE, USA	9:30	T1-05 Effect of Nisin on the Growth of <i>Bacillus cereus</i> from Spores in Pasteurized Liquid Whole Eggs BINITA GOSHALI, Harsimran Kaur Kapoor, Sneha Chhabra, Abhinav Mishra, Govindraj Kumar, Subash Shrestha, University of Georgia, Athens, GA, USA
RT2	Detection of Enteric Viruses, Methodological Considerations and Interpretation of Results: Scientific Findings of an Expert Panel 102BC Organizer: Sanjay Gummalla Convenors: Jennifer McEntire, Sanjay Gummalla	9:45	<b>T1-06</b> Exploring Genomic Differences between Strong Biofilm-Forming Salmonella Enteritidis Strains and Strains in the Public Database JIAYI ZHANG, Celine Nadon, Tim McAllister, Claudia Narvaez Bravo, University of Manitoba, Winnipeg, MB, Canada
	Sponsored by the IAFP Foundation Viral and Parasitic Foodborne Disease Fruit and Vegetable Safety and Quality	T2	Technical Session 2 – Food Chemical Hazards and Sanitation and Hygiene 201A Convenors: Louis Nkansah, Sarita Raengpradub
8:30	ALBERT BOSCH, University of Barcelona, Barcelona, Spain LEE-ANN JAYKUS, North Carolina State University, Raleigh, NC, USA NEDA NASHERI, Health Canada, Ottawa, ON, Canada BRANKO VELEBIT, Institute of Meat Hygiene and Technology, Belgrade, Serbia JAN VINJÉ, Centers for Disease Control and Prevention, Atlanta, GA, USA	8:30	<b>T2-01</b> Assessing <i>Enterococcus faecium</i> NRRL B-2354 as a Surrogate for <i>Listeria monocytogenes</i> during Sanitizer Interventions in Simulated Apple Dump Tank Water YUAN SU, Xiaoye Shen, Andrew Liu, Meijun Zhu, Washington State University, Pullman, WA, USA
RT3	Unraveling the Secrets of Sanitation Programs: How to be a Sanitation Change Agent for Decontamination in Retail Food Establishments 202BC Organizers: Juan Goncalves, Kara Mikkelson, Joel Cook, David Buckley	8:45	<b>T2-02</b> Comparison of Two Disinfectant Spraying Application Methods to Assess <i>S. aureus</i> Cross-Contamination Risk on Food Contact Surfaces GERALDINE TEMBO, Daniel Fajardo, Kelly Rainey, Leslie Lanfranco Santos, Siddharth Kumar, Peter Teska, Haley Oliver, Purdue University, West Lafayette, IN, USA
8:30	Convenor: Kara Mikkelson Food Hygiene and Sanitation Retail and Foodservice Sanitary Equipment and Facility Design EMILY CRISPELL, Chick-fil-A, Inc., Dunwoody, GA, USA	9:00	T2-03 Effectiveness of Chlorine and Peroxyacetic Acid in Controlling Listeria Cross-Contamination during Pilot-Scale Dump Tank Apple Processing YUAN SU, Xiaoye Shen, Mengqian Hang, Jeanene M. Deavila, Meijun Zhu, Washington State University, Pullman, WA, USA
T1	ANGELA FRASER, Clemson University, Clemson, SC, USA GLENDA LEWIS, U.S. Food and Drug Administration, Washington, D.C., USA DUSTIN METZGER, Kwik Trip Inc., LaCrosse, WI, USA CHARLES PETTIGREW, Arxada, Morristown, NJ, USA Technical Session 1 – General Microbiology, Meat, Poultry, and	9:15	<b>T2-04</b> Evaluation of Cloth-in-Bucket and Pre-Wet Cleaning and Sanitizing Methods on <i>S. aureus</i> Cross-Contamination on Food Contact Surfaces GERALDINE TEMBO, Daniel Fajardo, Kelly Rainey, Leslie Lanfranco Santos, Siddharth Kumar, Peter Teska, Haley Oliver, Purdue
	Eggs and Microbial Food Spoilage 101B Convenors: Byron Chaves, Bruna Bertoldi	9:30	University, West Lafayette, IN, USA  T2-05 Factors Affecting the Adhesion of Flour Particles to Stainless Steel Surfaces and Vacuum Dry-Cleaning IAN KLUG, Bradley Marks, Teresa Bergholz, Sanghyup Jeong,
8:30	T1-01 Strain-Level Persistence and Multi-Species Biofilm Formation of Microbes in a Meat Processing Facility SHAELYN Z. XU, Xianqin Yang, Michael G. Gaenzle, University of	9:45	Michigan State University, East Lansing, MI, USA  T2-06 Formation and Control of Listeria monocytogenes Biofilms on Various Food Processing Surfaces
8:45	Alberta, Edmonton, AB, Canada  T1-02 Salmonella Surveillance in Broiler Breeder Flocks with Rodent Control  AMY SICELOFF, Sean Nolan, Nikki Shariat, University of Georgia, Dept. of Population Health, Athens, GA, USA		AYSU DENIZ, Faith Critzer, Dan Boyle, Valentina Trinetta, Food Science Institute, Kansas State University, Manhattan, KS, USA

Т3	Technical Session 3 – Food Allergens, Retail and Food Service Safety, Seafood and Viruses and Parasites 2018	10:45	Comparative Evaluation of Commonly Used Agriculture Water Chemical Treatments CHANNAH ROCK, University of Arizona, Maricopa, AZ, USA	
8:30	Convenors: Erin Mertz, Sara Mortimore  T3-01 Benzalkonium Chloride Disinfectant Residues Stimulate	11:15	Emerging Water Treatment Technologies FAITH CRITZER, University of Georgia, Athens, GA, USA	
	Biofilm Formation and Increase Survival of <i>Vibrio</i> Bacterial Pathogens Julia Mougin, Graziella Midelet, Sophie Leterme, Giles Best, Timothy Ells, Alyssa Joyce, Harriet Whiley, THOMAS BRAUGE, ANSES, Laboratory for Food Safety, Bacteriology and Parasitology	11:45	Pre-Harvest Water Treatment: Practical Applications and the Industry's Evolving Needs JAY SUGHROUE, BioSafe Systems, La Quinta, CA, USA	
8:45	of Fishery and Aquaculture Products Unit, Boulogne-sur-Mer, France  T3-02 Consumer-Focused Allergen Management: Going Above and Beyond to Protect Consumers  ANA V LEGORRETA SIANEZ, Simon Flanagan, Mondelez International, Toronto, ON, Canada	S8	Learnings and Products of Public and Private Organizations Developing and Implementing Food Safety Foresight Systems and Approaches 104C Organizers: Leon Gorris, Janell Kause, Nicola King	
9:00 9:15	T3-03 Detection of <i>Cyclospora cayetanensis</i> via Shotgun Metagenomics CAMERON PARSONS, Victoria Bengston, Angela Nguyen, Sarita Raengpradub, Mérieux NutriSciences, Crete, IL, USA T3-04 Disinfection Profiles of Common Disinfectants against Human		Convenors: Leon Gorris, Janell Kause Sponsored by the IAFP Foundation International Food Protection Issues Microbial Modelling and Risk Analysis	
9.10	Norovirus Using a Human Intestinal Enteroids Cultivation System GEUN WOO PARK, Kimberly Huynh, Verónica Costantini, Jan Vinjé, Centers for Disease Control and Prevention, Atlanta, GA, USA	10:45	Epidemiology  Risk Foresight and the Promise of AI in Food Safety and Security  MICHAEL FERRARI, Climate Alpha, New York, NY, USA	
9:30	<b>T3-05</b> Fate of Common Foodborne Pathogens in Dark Green Leafy Vegetable Juice	11:15	Can Predictive Analytics Help Make Our Food Supply Safer? JULIE PIERCE, U.K. Food Standards Agency, Bristol, UK	
	CHENXI GUO, Yucen Xie, Xiran Li, Luxin Wang, University of California-Davis, Davis, CA, USA	11:45	Challenges and Benefits to Food Safety Horizon Scanning Intelligence and Emerging Food Safety Risk Prediction at a Global	
9:45	T3-06 Food Safety Adherence and Bacterial Traits Linked to the Size of Food Establishments in Food Desert Regions of Central Virginia CHYER KIM, Eunice Ndegwa, Ramesh Dhakal, Theresa Nartea,		Manufacturer's Level JOHN DONAGHY, Nestec Ltd., Vevey, Switzerland	
	Sakinah Albukhaytan, Brian Goodwyn, Duwoon Kim, Virginia State University, Petersburg, VA, USA	S9	Cultivating a Culture of Food Safety: Key Learnings Toward Food Safety Improvement 103BC	
10:00	Break - Refreshments available in the Exhibit Hall		Organizers: Shingai P Nyarugwe, Lone Jespersen Convenor: Carol Wallace	
<b>S1</b>	Annual Outbreak Symposium (continued) Grand Ballroom Organizers: Laura Gieraltowski, Ewen Todd, Kari Irvin		Food Safety Culture Developing Food Safety Professionals Data Management and Analytics	
	Convenor: Laura Gieraltowski  Epidemiology International Food Protection Issues	10:45	STOP Food Safety Culture Toolkit VANESSA COFFMAN, STOP Foodborne Illness, Chicago, IL, USA	
10:45	Salmonella Outbreak in Imported Cantaloupe LAURA GIERALTOWSKI, CDC, Atlanta, GA, USA; JOYCE CHENG, Public Health Agency of Canada, Guelph, ON, Canada	11:15	Maturity Model/Culture Improvement Journeys: Findings from Five Case Studies LONE JESPERSEN, Cultivate, Hauterive, Switzerland	
11:15	Salmonella in Charcuterie Meats: Outbreak and Policy Implications ANDREA COTE, U.S. Department of Agriculture – Food Safety	11:45	The Importance of Company Specific Approach and Change Plan JEFF MILLER, Mars, California, CA, USA	
	Inspection Service, Atlanta, GA, USA; Aaron Beczkiewicz, U.S. Department of Agriculture-FSIS, Washington, D.C., USA	S10	Beyond Pathogens: "GRAS" Microbes as Silent Carriers of Antimicrobial Resistance (AMR) Genes: Posing a Challenge to Food Safety 203BC	
11:45	Lead and Chromium Poisoning Outbreak Linked to Cinnamon Applesauce Pouches MARGARET KIRCHNER, U.S. Food and Drug Administration, Laurel, MD, USA; PERRI RUCKART, CDC, Atlanta, GA, USA		Organizers: Neetu Taneja, Vijay Juneja, Surabhi Wason Convenors: Neetu Taneja, Surabhi Wason, Vijay Juneja Sponsored by the IAFP Foundation	
<b>S7</b>	Agricultural Water Treatment: Deploying Conventional and Emerging Solutions to Improve Water Quality for Fresh Produce	10:45	Advanced Molecular Analytics International Food Protection Issues Emerging Antimicrobial Resistance (AMR) in Lactic Acid Bacteria	
	104A Organizers: Alan Gutierrez, Manan Sharma, Zirui Ray Xiong Convenors: Zirui Ray Xiong, Alan Gutierrez		from Traditional Indian Fermented Foods: Implications for Safety and Transmission in the Food Environment NEETU TANEJA, National Institute of Food Technology	
	Water Safety and Quality Fruit and Vegetable Safety and Quality		Entrepreneurship and Management, Kundli, India	

11.13	Missing Pieces and How Do We Track Them? CHERYL ARMSTRONG, USDA, Agricultural Research Service, Eastern Regional Research Center, Wyndmoor, PA, USA	10.43	State University, Raleigh, NC, USA JULIE JEAN, Institut sur la nutrition et les aliments fonctionnels, Université Laval, Québec, QC, Canada
11:45	Innovative Approaches to Ensure Food Safety: Future Directions in Combating AMR with GRAS Microorganisms SADHANA RAVISHANKAR, University of Arizona, Tucson, AZ, USA		KALMIA KNIEL, University of Delaware, Delaware, DE, USA JEFFREY LEJEUNE, FAO, Rome, Italy MARCIANE MAGNANI, Federal University of Paraiba, João Pessoa, Paraiba, Brazil JACQUELINA WOODS, U.S. Food and Drug Administration –
S11	New Insights into Sampling and Testing Ready-to-Eat Foods: Lot-by-Lot vs. across Food Supply, Practical Considerations, and Risk Assessment		Gulf Coast Seafood Laboratory, Dauphin İsland, AL, USA
	101A	RT6	Ingredient Safety: Current Perspectives from Food Toxicologists 202BC
	Organizers: Yuhuan Chen, Alvin Lee, Jennifer McEntire Convenor: Jennifer McEntire Sponsored by the IAFP Foundation		Organizer: Paul Hanlon Convenor: Kevin Boyd
	Microbial Modelling and Risk Analysis HACCP Utilization and Food Safety Systems Applied Laboratory Methods		Food Chemical Hazards and Food Allergy Food Law Food Safety Education
10:45	Sampling Plans: Various Types, Statistics, Assumptions, Performance, and Interpretation MARCEL ZWIETERING, Wageningen University & Research, Wageningen, The Netherlands	10:45	ELISABETH ANDERSON, Michigan State University, Lansing, MI, USA RANDOLPH DUVERNA, United States Department of Agriculture, Food Safety and Inspection Service, Washington, D.C., USA PAUL HANLON, Abbott Nutrition, Columbus, OH, USA KRISTI MULDOON JACOBS, U.S. Food and Drug Administration,
11:15	Sampling and Testing in Verification Studies – A Reality Check ALVIN LEE, Institute for Food Safety and Health, Illinois Institute of Technology, Bedford Park, IL, USA		Rockville, MD, USA ERIC SCHWARTZ, Food Chemicals Codex, Rockville, MD, USA RENE VINAS, UPSIDE Foods, Atlanta, GA, USA
11:45	Impact of between and within Lot Variability in Pathogen Levels on Risk: Case Studies with Sampling and Testing <i>L. monocytogenes</i> and <i>Cronobacter</i> spp. in Selected Ready-to-Eat Foods YUHUAN CHEN, U.S. Food and Drug Administration, Center for Food	ΤΊ	Technical Session 1 – General Microbiology, Meat, Poultry, and Eggs and Microbial Food Spoilage (continued)  101B  Convenors: Byron Chaves, Bruna Bertoldi
RT4	Safety and Applied Nutrition, College Park, MD, USA; Régis Pouillot, U.S. Food and Drug Administration - CFSAN, College Park, MD, USA; Jane Van Doren, U.S. Food and Drug Administration – CFSAN, College Park, MD, USA  Beyond Root Cause: Targeting Pathogen-Food Pairings and	10:45	<b>T1-07</b> Metabolomics Profiling to Investigate the Resuscitation of Viable-But-Nonculturable <i>Campylobacter jejuni</i> in Embryonated Chicken Eggs KAIDI WANG, Arusha Fleming, Yaxi Hu, Xiaonan Lu, McGill University, Sainte-Anne-de-Bellevue, QC, Canada
	Tailoring Strategies to Prevent Future Foodborne Illnesses 104B Organizers: Carrie Rigdon, Steven Mandernach Convenor: Steven Mandernach Sponsored by Association of Food and Drug Officials	11:00	T1-08 Prevalence and Antimicrobial Resistance of Salmonella and Campylobacter Isolated from Retail Chickens in Saudi Arabia SULAIMAN ALJASIR, Sahar Allam, Qassim University, Buraydah, Qassim, Saudi Arabia
10:45	Food Safety Education Communication, Outreach and Education  DE ANN DAVIS, Western Growers Association, Pacific Grove, CA, USA	11:15	T1-09 The Detection and Molecular Characterization of <i>mcr-1</i> -Positive <i>Escherichia coli</i> Isolated from Poultry Meat JOUMAN HASSAN, Nivin Nasser, Marwan Osman, Anahita Ghorbani Tajani, Bledar Bisha, Issmat I. Kassem, University of Georgia, Center
	DONNA GARREN, American Frozen Food Institute, Woodbridge, VA, USA KRISTINE GASPERIC, Indiana Department of Health, Indianapolis, IN, USA MICHELLE KUSNIER, Michigan Department of Agriculture and Rural Development, Flint, MI, USA MARK MOORMAN, U.S. Food and Drug Administration, Washington, D.C., USA STEPHANIE SMITH, Washington State University, Pullman, WA, USA	11:30	For Food Safety, Griffin, GA, USA  T1-10 Ultra-Fine Ozone Bubbles: An Effective Chill Tank Treatment to Reduce Salmonella Enteritidis Cross-Contamination in Poultry Carcasses without Affecting Product Color TRUSHENKUMAR SHAH, Chetna Shah, Chen Zhu, Chaoyu Zhai, Abhinav Upadhyay, University of Connecticut, Storrs, CT, USA
RT5	Understanding the Risks of Foodborne Viruses in Foods and Water 102BC Organizers: Anderson Sant'Ana, Donald W. Schaffner, Marciane Magnani Convenor: Anderson Sant'Ana Sponsored by the IAFP Foundation	11:45	T1-11 Food Spoilage Troubleshooting: From PCR Development to Process Adaptation, A Success Story of Spoilage Yeast Management in Food Production Facility NICOLAS NGUYEN VAN LONG, Hugo Habert, Véronique Huchet, ADRIA, Quimper, France
	International Food Protection Issues Viral and Parasitic Foodborne Disease Microbial Modelling and Risk Analysis	12:00	<b>T1-12</b> Unlocking the Role of the Novel RacRS Regulatory System in the Pathogenesis of <i>Campylobacter jejuni</i> JENNIFER BOSQUEZ, Kerry Cooper, The University of Arizona, Tucson, AZ, USA

T2	Technical Session 2 – Food Chemical Hazards and Sanitation and Hygiene (continued) 201A	11:30	<b>T3-10</b> Quantitation of Barley and Rye Gluten in Select Fermented Dairy Products by a Multiplex-Competitive ELISA RAKHI PANDA, FDA, College Park, MD, USA
10:45	Convenors: Louis Nkansah, Sarita Raengpradub  T2-07 Biofilm Matrix of Salmonella Enteritidis Phage Type 30 Grown Using the CDC Biofilm Reactor: Desiccation, Rehydration, and Sensitivity to Antimicrobial Oils	11:45	T3-11 Ready-to-Eat Foods as Human Exposure Matrix for Pathogenic <i>Vibrio</i> Species: A Retrospective Observational Study TEMITOPE CYRUS EKUNDAYO, Oluwatosin A. Ijabadeniyi, Durban University of Technology, Durban, KZN, South Africa
	SHIHYU CHUANG, Lynne McLandsborough, University of Massachusetts-Amherst, Amherst, MA, USA	12:00	T3-12 Utilizing Zebrafish Embryos for Replication of Tulane Virus – A Human Norovirus Surrogate
11:00	<b>T2-08</b> Insights into the FDA Food Facility Inspectional Violation Trends on Equipment and Environmental Sanitation: Key Learnings and Recommendations		SAHAANA CHANDRAN, Kristen Gibson, University of Arkansas, Fayetteville, AR, USA
	AMIT KHERADIA, Remco: A Vikan Company, Zionsville, IN, USA		AFTERNOON
11:15	T2-09 Rechargeable and Durable N-Halamine Surface Coating, Avantguard 247™, Treated with Chlorine-Based Sanitizer, Significantly Reduces Bacterial Load Long after Treatment to Enhance Food Safety Outcomes SIMAN LIU, Joshua Tung, Shiyu Xu, Vikram Kanmukhla, Carine		12:30 PM U.S. Regulatory Update on Food Safety Grand Ballroom Convenors: Tim Jackson, Mark Carter
11:30	Nkemngong, AvantGuard, Inc., Ithaca, NY, USA  T2-10 Safeguarding Herb and Spices Consumers in Europe: A Comprehensive Assessment of Chemical Hazard Identification MARIA CARPENA, Paula Barciela, Ana Perez-Vazquez, Kinga Noras, Joanna Trafiałek, Monika Trzaskowska, Miguel A. Prieto, Universidade de Vigo, Nutrition and Bromatology Group, Instituto de Agroecoloxía e Alimentación (IAA), Vigo, Spain		
11:45	<b>T2-11</b> The Most Appropriate Method of Verifying Absence of Sanitizer Contamination in Fluid Milk Depends on the Type of Sanitizer		Jose Emilio Esteban Jim Jones
12:00	LEONIE KEMMERLING, Aljosa Trmcic, Martin Wiedmann, Nicole Martin, Cornell University, Ithaca, NY, USA  T2-12 UV-C Dry Sanitation of Visibly-Cleaned Salmonella-Inoculated	12:30	Update from U.S. Department of Agriculture JOSE EMILIO ESTEBAN, U.S. Department of Agriculture,
12.00	Stainless Steel Surfaces	10.50	Food Safety & Inspection Service, Washington, D.C., USA
	KASEY NELSON, Ian Klug, Michael James, Teresa M. Bergholz, Bradley Marks, Sanghyup Jeong, Michigan State University, East Lansing, MI, USA	12:50	Update from U.S. Food and Drug Administration JIM JONES, U.S. Food and Drug Administration, Silver Spring, MD, USA
		1:10	Audience Questions & Answers
Т3	Technical Session 3 – Food Allergens, Retail and Food Service Safety, Seafood and Viruses and Parasites (continued) 201B Convenors: Erin Mertz, Sara Mortimore	\$12	Global Recommendations on Prevention and Control of Microbiological Hazards in Fresh Fruits and Vegetables from the Joint FAO/WHO Expert Meeting 104A
10:45	T3-07 Linear and Non-Linear Inactivation Indices Associated with High-Pressure Processing and Thermally-Assisted High-Pressure		Organizers and Convenors: Elizabeth Bihn, Kang Zhou Sponsored by the IAFP Foundation
	Processing against <i>Listeria monocytogenes</i> RANJU KAFLE, Shahid Chowdhury, Aliyar Cyrus Fouladkhah, Public Health Microbiology Laboratory, Tennessee State University, Nashville, TN, USA		Fruit and Vegetable Safety and Quality International Food Protection Issues Water Safety and Quality
11:00	<b>T3-08</b> Photodynamic Inactivation of SARS-CoV-2 Surrogate Bacteriophage φ6 in Tomatoes Cross-Contaminated by Gloves	1:30	Overview of Prevention and Control of Microbiological Hazards in Fresh Fruits and Vegetables from the Joint FAO/WHO Expert Meeting ELIZABETH BIHN, Cornell University, Ithaca, NY, USA
	Ruthchelly Tavares, Alyson José dos Santos Franco, Geany Targino de Souza Pedrosa, Atila Lima, Donald W. Schaffner, MARCIANE MAGNANI, Federal University of Paraiba, João Pessoa, Paraiba, Brazil	2:00	Prevention and Control of Microbiological Hazards in Sprouts TONG-JEN FU, U.S. Food and Drug Administration, Division of Food Processing Science and Technology, Bedford Park, IL, USA
11:15	T3-09 Prevalence and Carbapenem-Resistant <i>Escherichia coli</i> Pathovars from Fresh-Cut Fruits at Retail Outlets in Accra, Ghana ANGELA PARRY-HANSON KUNADU, Agnes Nketia, Joycelyn Quansah, University of Ghana, Department of Nutrition and Food Science, Accra, Greater Accra, Ghana	2:30	Prevention and Control of Microbiological Hazards in Leafy Vegetable and Herbs, Berries and Tropical Fruits, Melon and Tree Fruits, Seeded and Root Vegetables ANA ALLENDE, CEBAS-CSIC, Murcia, Spain

\$13	Back to Basics: Essential Elements of an Allergen Control Program  104C  Organizer: Sally Klinect Convenor: Lili He  Food Chemical Hazards and Food Allergy	S16	Rapid <i>Listeria</i> Detection in Post Lethality Environment of RTE Meat Processing Plants: Developments, Applications and Challenges 101A Organizers: Subash Shrestha, Vijay Juneja, Melody Thompson Convenor: Subash Shrestha
1:30	Food Hygiene and Sanitation Allergen Label Controls		Meat and Poultry Safety and Quality Applied Laboratory Methods
2:00	KEVIN BOYD, The Hershey Company, Hershey, PA, USA Cleaning Methods (Wet vs. Dry) for Allergen Management	1:30	Creative Approaches to Managing <i>Listeria</i> Risk by Utilizing a Combination of ATP, Quantification, and Data Analytics
0.00	NATHAN MIRDAMADI, Commercial Food Sanitation, Joplin, MO, USA	2:00	JULIE WELLER, Hygiena, New Castle, DE, USA  Accelerating Environmental Decision-Making with Same Shift
2:30	Allergen Cleaning Validations MONICA KHOURY, Nestlé USA, Solon, OH, USA		Listeria PCR MIKE CLARK, Bio-Rad Laboratories, Hercules, CA, USA
S14	Advancements in Sample Preparation for Enteric Virus Detection from Diverse Matrices 103BC	2:30	Because 'Rapid' Can Make the Difference: New Approaches to Listeria Environmental Monitoring GABRIELA LOPEZ VELASCO, 3M Food Safety, St. Paul, MN, USA
	Organizers: Dan Li, Kristen Gibson Convenors: Malak Esseili, Kristen Gibson Sponsored by the IAFP Foundation	RT7	Establishing Clean Breaks – Hygienic Separation of Production in Low-Water Activity Foods
	Viral and Parasitic Foodborne Disease Applied Laboratory Methods		104B Organizers: Kristen Hunt, Timothy Stubbs, Polly Courtney, Caitlin Karolenko
1:30	Sample Preparation for Enteric Virus Detection: New Understanding and New Requirement DAN LI, National University of Singapore, Singapore		Convenors: Kristen Hunt, Timothy Stubbs  Sponsored by Institute for the Advancement of Food and Nutritional Sciences
2:00	Human Intestinal Enteroids Platform to Assess Enteric Virus Infectivity in Food and Water Samples		Food Hygiene and Sanitation Sanitary Equipment and Facility Design
	WALTER RANDAZZO, Institute of Agrochemistry and Food Technology (IATA), Valencia, Spain; MALAK ESSEILI, University of Georgia, Center For Food Safety, Griffin, GA, USA	1:30	DANIEL BELINA, Land O'Lakes, St. Paul, MN, USA DAVID CLIFFORD, Nestlé USA, Inc., Solon, OH, USA JOHN HOLAH, Kersia Group, Bury, UK
2:30	Impact of Virus Extraction Methods from Environmental Samples on Assay Methods CHARLES GERBA, University of Arizona, Tucson, AZ, USA		JEREMY TRAVIS, Hilmar Cheese & Ingredients, Hilmar, CA, USA BENJAMIN WARREN, U.S. Food and Drug Administration—CFSAN, College Park, MD, USA MISTELLE SIGNOR, Mennel Milling, Fostoria, OH, USA
S15	Generating Practical Data Insights into Foodborne Illness and Disease Exposure Disparities Using Epidemiological and Related Data 203BC	RT8	Laboratory and Regulatory Challenges of Probiotics in Food Products
	Organizers: Michael Batz, Ian Young, Barbara Kowalcyk, Sarah I. Murphy Convenors: Ian Young, Chris Jordan		Organizer: Anru Shen Convenors: Anru Shen, J. David Legan Sponsored by the IAFP Foundation
	Epidemiology Data Management and Analytics		Applied Laboratory Methods Animal and Pet Food Safety
1:30	Identifying Inequities in Exposure to Foodborne Disease in Franklin County, Ohio Using Retail Food Service Inspection Data ALLISON HOWELL, The Ohio State University, Columbus, OH, USA	1:30	Food Packaging  MARIE-EVE BOYTE, NPCS International, Greater Montreal, QC, Canada DANA BUCKMAN, Bioform Solutions, San Diego, CA, USA
2:00	Disparities in Salmonellosis Incidence for U.S. Counties with Different Social Determinants of Health Profiles are Also Mediated by Extreme Weather: A Counterfactual Analysis of Laboratory Enteric Disease Surveillance (LEDS) Data from 1997–2019 DANIEL WELLER, Centers for Disease Control and Prevention, Atlanta, GA, USA		MICHELE SAYLES, Diamond Pet Food, Topeka, KS, USA JEAN SCHOENI, Eurofins Microbiology Laboratories, Inc., Madison, WI, USA MARK SKASKO, U.S. Food and Drug Administration, Division of Animal Food Ingredients, Rockville, MD, USA
2:30	Characterizing Foodborne Disease Disparities and Their Potential Sources Using Linked Data LAUREN GRANT, University of Guelph, Guelph, ON, Canada		

Don't Let It Happen Again! Avoiding Another GIANT Recall in Aseptically Packaged Foods and Beverages 202BC Organizers: Yuqian Lou, Wilfredo Ocasio	1:45	<b>T5-02</b> Comparative Analysis of Culture and Non-Culture Methods for the Detection of <i>Salmonella</i> in Pecan Orchard Soil SULAV INDRA PAUL, Roshan Paswan, Guodong Zhang, Li Maria Ma, Oklahoma State University, Stillwater, OK, USA		
Convenor: Wilfredo Ocasio  Beverages and Acid/Acidified Foods  Low-Water Activity Foods  Food Safety Assessment, Audit and Inspection  NATHAN ANDERSON, U.S. Food and Drug Administration, Bedford  Park, IL, USA  ROBYN EIJLANDER, NIZO Food Research, Ede, The Netherlands  YUQIAN LOU, PepsiCo, Purchase, NY, USA	2:00	<b>T5-03</b> Development of an Electrochemical Genosensor for the <i>Dinophysis</i> spp.: Dinoflagellates Identification: A Breakthrough in Food Safety MARIA CARPENA, Eduarda Pereira, Aurora Silva, Patrizia R. Moreira,		
		Maria Fraga-Corral, Miguel A. Prieto, Jesus Simal-Gandara, Francisco Rodriguez, Nadia F. D. Silva, Marlene Santos, M. Fatima Barroso, Universidade de Vigo, Nutrition and Bromatology Group, Instituto de Agroecoloxía e Alimentación (IAA), Vigo, Spain		
ROBERT W. MANNING, Liquid Consulting, Sanford, FL, USA CORPUS PEREZ, Reckitt, Evansville, IL, USA ANDRÉ REHKOPF, Saputo, Sacramento, CA, USA	2:15	<b>T5-04</b> Genomic Characterization of a Reoccurring Strain of E. coli 0157:H7 Associated with Multiple Sources Reveals a Highly Conserved Mutation within a Secreted Virulence Factor		
Technical Session 4 – Developing Scientist Finalists 101B Convenors: Matthew Moore, Ernest Bonah		Joseph Wirth, Molly Leeper, Hattie Webb, Kaitlin Tagg, Lee S. Katz, Michael Vasser, Rebecca Lindsey, Eshaw Vidyaprakash, Peyton Smith, Heather Carleton, JESSICA CHEN, Centers for Disease Control and Prevention, Atlanta, GA, USA		
T4-01 Salmonella Prevalence and Serovar Populations in Surface Waters are Driven by Proximal Land Use JARED SMITH, Amy Siceloff, Sherwin Shirazi, Nikki Shariat, University of Georgia, Athens, GA, USA	2:30	<b>T5-05</b> Hollow Glass Microspheres Coated with Specific Antibodies Enable Rapid Isolation and Detection of <i>Salmonella</i> from Food RUTWIK JOSHI, Gizem Levent, Wei Li, Texas Tech University, Lubbock, TX, USA		
T4-02 Targeted Mass Spectrometry Method for Detection and Quantification of Total Egg Protein from Multiple Processed Food Matrices LIYUN ZHANG, Philip Johnson, Melanie Downs, Food Allergy Research and Resource Program, University of Nebraska-Lincoln, Lincoln, NE, USA	2:45	T5-06 A Fiber Optics SERS Sensor for Rapid Detection of Salmonella in Raw Poultry Products MAI ABUHELWA, Arshdeep Singh, Jiayu Liu, Mohammed Almalaysha, Amit Morey, Kate Trout, Tim Safranski, Haitao Li, Shuping Zhang, Lakshmikantha Channaiah, Mahmoud Almasri, University of Missouri, Columbia, MO, USA		
<b>T4-03</b> Investigation of Biofilms of <i>Salmonella</i> and <i>Listeria</i> Along with Dominant Genera of Retail Environments AMRIT PAL, Amy Mann, Angela Parra, Magdalena Olszewska,	3:00 \$17	Break - Refreshments available in the Exhibit Hall  Global Recommendations on Food Allergens from the Joint FAO/		
Griffin, GA, USA	011	WHO Expert Meeting  Grand Ballroom		
<b>T4-04</b> Effect of Organic and Conventional Fertilizers in the Survival and Biofilm Formation of <i>Salmonella</i> in Irrigation Distribution Systems RAWANE RAAD, Blanca Ruiz-Llacsahuanga, Justin Daniel,		Organizer: Kang Zhou Convenors: Kang Zhou, Stefano Luccioli Sponsored by the IAFP Foundation		
GA, USA		Food Chemical Hazards and Food Allergy International Food Protection Issues		
Nanoparticles for Enhanced Antimicrobial Action against Campylobacter jejuni DANIEL RIVERA, Beatriz Quiñones, Alejandro Huerta, Ernestina	3:45	Codex Request and FAO/WHO's Mandate on Rood Allergen; the Updated Global Priority Food Allergen List LAUREN JACKSON, U.S. Food and Drug Administration, Summit Argo, IL, USA		
<b>T4-06</b> Impacts of Relative Humidity on Inactivation of <i>Salmonella</i> enterica and <i>Enterococcus faecium</i> NRRL B-2354 on Dried Basil	4:15	Global Recommendations on the Threshold Levels for Food Allergens BEN REMINGTON, Remington Consulting Group B.V., Utrecht, NE, The Netherlands		
ARSHPREET KAUR KHATTRA, Surabhi Wason, Nanje Gowda, Jeyam Subbiah, Jennifer Acuff, Michigan State University, Lansing, MI, USA	4:45	Global Recommendations on Precautionary Labelling and Exemptions JOSEPH BAUMERT, University of Nebraska-Lincoln, Lincoln, NE, USA		
Technical Session 5 – Laboratory and Detection Methods and Molecular Analytics. Genomics and Microbiome	S18	Understanding Consumer Reactions during Foodborne Illness Outbreaks and Food Recalls: Research from CDC, USDA, and FDA 104A		
201A		Organizers: Fanfan Wu, Aaron Lavallee Convenor: William Hallman		
T5-01 Host Adaptation and Niche Specialization of Pathogenic Escherichia coli YUAN FANG, Huifeng Hu, Lynn McMullen, Timothy Schwinghamer,		Communication, Outreach and Education Food Safety Education		
	Aseptically Packaged Foods and Beverages 202BC Organizers: Yuqian Lou, Wilfredo Ocasio Convenor: Wilfredo Ocasio Beverages and Acid/Acidified Foods Low-Water Activity Foods Food Safety Assessment, Audit and Inspection NATHAN ANDERSON, U.S. Food and Drug Administration, Bedford Park, IL, USA ROBYN EIJLANDER, NIZO Food Research, Ede, The Netherlands YUQIAN LOU, Pepsico, Purchase, NY, USA ROBERT W. MANNING, Liquid Consulting, Sanford, FL, USA CORPUS PEREZ, Reckitt, Evansville, IL, USA ANDRÉ REHKOPF, Saputo, Sacramento, CA, USA  Technical Session 4 – Developing Scientist Finalists 101B Convenors: Matthew Moore, Ernest Bonah  T4-01 Salmonella Prevalence and Serovar Populations in Surface Waters are Driven by Proximal Land Use JARED SMITH, Amy Siceloff, Sherwin Shirazi, Nikki Shariat, University of Georgia, Athens, GA, USA  T4-02 Targeted Mass Spectrometry Method for Detection and Quantification of Total Egg Protein from Multiple Processed Food Matrices LYUN ZHANG, Philip Johnson, Melanie Downs, Food Allergy Research and Resource Program, University of Nebraska-Lincoln, Lincoln, NE, USA  T4-03 Investigation of Biofilms of Salmonella and Listeria Along with Dominant Genera of Retail Environments AMRIT PAL, Amy Mann, Angela Parra, Magdalena Olszewska, Henk C. den Bakker, Center for Food Safety, University of Georgia, Griffin, GA, USA  T4-05 Food Nano-Safety: Harnessing of Green-Synthesized Nanoparticles for Enhanced Antimicrobial Action against Campylobacter jejuni DANIEL RIVERA, Beatriz Quiñones, Alejandro Huerta, Ernestina Castro, CICESE, Ensenada, BJ, Mexico  T4-06 Impacts of Relative Humidity on Inactivation of Salmonella enterica and Enterococcus faecium NRRL B-2354 on Dried Basil Leaves by Gaseous Ozone ARSHPREET KAUR KHATTRA, Surabhi Wason, Nanje Gowda, Jeyam Subbiah, Jennifer Acuff, Michigan State University, Lansing, MI, USA	Aseptically Packaged Foods and Beverages 20280 Organizers: Yuqian Lou, Wilfredo Ocasio Convenor: Wilfredo Ocasio Beverages and Acid/Acidified Foods Low-Water Activity Foods Food Safety Assessment, Audit and Inspection NATHAN ANDERSON, U.S. Food and Drug Administration, Bedford Park, II., USA ROBYN EJLLANDER, NIZO Food Research, Ede, The Netherlands YUQIAN LOU, Pepsico, Purchase, NY, USA ROBERT W. MANNING, Liquid Consulting, Sanford, FL, USA CORPUS PEREZ, Reckitt, Evansville, IL, USA ANDRÉ REHKOPF, Saputo, Sacramento, CA, USA  Technical Session 4 – Developing Scientist Finalists 101B Convenors: Matthew Moore, Ernest Bonah  T4-01 Salmonella Prevalence and Serovar Populations in Surface Waters are Driven by Proximal Land Use JARED SMITH, Amy Siceloff, Sherwin Shirazi, Nikki Shariat, University of Georgia, Athens, GA, USA  T4-02 Targeted Mass Spectrometry Method for Detection and Quantification of Total Egg Protein from Multiple Processed Food Matrices LiYUN ZHANG, Philip Johnson, Melanie Downs, Food Allergy Research and Resource Program, University of Nebraska-Lincoln, Lincoln, NE, USA  T4-03 Investigation of Biofilms of Salmonella and Listeria Along with Dominant Genera of Retail Environments AMRIT PAL, Amy Mann, Angela Parra, Magdalena Olszewska, Henk C. den Bakker, Center for Food Safety, University of Georgia, Griffin, GA, USA  T4-04 Effect of Organic and Conventional Fertilizers in the Survival and Biofilm Formation of Salmonella in Irrigation Distribution Systems RAWANE RAAD, Blanca Ruiz-Llacsahuanga, Justin Daniel, Charles Bency Appolon, Faith Critzer, University of Georgia, Athens, GA, USA  T4-05 Food Nano-Safety: Harnessing of Green-Synthesized Nanoparticles for Enhanced Antimicrobial Action against Campylobacter jejuni DANIEL RIVERA, Beatriz Quiñones, Alejandro Huerta, Ernestina Castro, CICESE, Ensenada, BJ, Mexico  T4-06 Impacts of Relative Humidity on Inactivation of Salmonella enterica and Enterococcus faecium NRRL B-2354 on Dried Basil Leaves by Gaseous Ozone ANSHPREET KAUB KHAITRA, Surabhi Wason, Na		

AB, Canada

3:45	Improving CDC's Foodborne Outbreak Messaging Using Rapid Surveys during Ongoing Outbreaks KATHERINE MARSHALL, Center for Disease Control and Prevention	4:15	Risk-Based Approaches to Addressing <i>Listeria monocytogenes</i> in Foods That Do Not Support Growth (Low-Risk) DONALD W. SCHAFFNER, Rutgers University, New Brunswick, NJ, USA
4:15	(CDC), Fort Collins, CO, USA  Can You Hear Me Now? Consumer Responses to Outbreak and Recall Communications  AARON LAVALLEE, U.S. Department of Agriculture, Food Safety and Inspection Service, Washington, D.C., USA	4:45	Public Health Consequences of a Risk-Based Regulatory Approach to Address <i>Listeria monocytogenes</i> in Low-Risk Foods, Particularly Vulnerable Populations CRAIG HEDBERG, University of Minnesota, School of Public Health, Minneapolis, MN, USA
4:45	Understanding Consumer Responses to Ongoing Foodborne Illness Outbreaks and Food Recalls – Findings from FDA Quick Turnaround Surveys FANFAN WU, U.S. Food and Drug Administration, College Park, MD, USA	<b>S22</b>	Food Packaging Should Protect, Not Hurt: Assessing and Mitigating Physical Hazards in Packaging Materials 101A Organizer: Sarah Smith-Simpson
S19	Grounding the Discussion on Toxic Elements in Food: Updates from Production to Regulation 104C		Convenor: Tony Jin Physical Hazards and Foreign Material Food Packaging
	Organizer: Neal Saab Convenor: Steve Zeng Sponsored by Institute for Advancement of Food and Nutrition Sciences	3:45	How Packaging Sustainability Efforts are Impacting Physical Safety Risks AMANDA JONES, Purina, St. Louis, MO, USA
3:45	Food Chemical Hazards and Food Allergy Fruit and Vegetable Safety and Quality  Regulatory Update on FDA Closer to Zero Initiative	4:15	Identifying, Measuring, Quantifying, and Mitigating Physical Risks Posed by Food Packaging KEITH RHOADES, Intertek, Arlington Heights, IL, USA
3:45	EILEEN ABT, U.S. Food and Drug Administration – CFSAN, College Park, MD, USA Mitigating Toxic Elements in Food Crops: Perspectives and Realities	4:45	Safety Communication on Food Packaging: What Consumers Actually Read, Comprehend, and Act on SARAH SMITH-SIMPSON, Nestlé Nutrition, Fremont, MI, USA
4:15	ANGELIA SEYFFERTH, University of Delaware, Newark, DE, USA Toxic Element Management through a Growers Lens EMILY MOYER, International Fresh Produce Association, Washington, D.C., USA	RT10	Think Like a Criminal – The Dark World of Food Fraud  104B  Organizer: Jonathan Basha
S20	Sample Pooling: Luring or Solution?		Convenors: Jonathan Basha, Wendy White Food Fraud Food Law
	Organizer: Daniele Sohier Convenors: Daniele Sohier, Purnendu Vasavada Applied Laboratory Methods Microbial Modelling and Risk Analysis	3:45	JESSICA BURKE, BRCGS, Milton, ON, Canada DELEO DE LEONARDIS, Purity-IQ, Guelph, ON, Canada ALLISON JORGENS, Loblaw, Toronto, ON, Canada CLARE WINKEL, Integrity Compliance Solutions, Brisbane, Australia
3:45	Developing Food Safety Professionals  Learn about the Current Sample Pooling Practices PAMELA WILGER, Post Consumer Brands, Lakeville, MN, USA	RT11	Cronobacter spp. Control: Bridging Knowledge Gaps and Taking Action 102BC Organizers: Kristin Butler, John Allan
4:15	The Practical Guide to Evaluating the Performance of Methods for Large Test Portions ERIN CROWLEY, Q Laboratories, Cincinnati, OH, USA		Convenors: Robert Brackett, Nathan Anderson  Low-Water Activity Foods  Dairy Quality and Safety
4:45	Key Benefits of Sample Pooling Strategies ALVIN LEE, Institute for Food Safety and Health, Illinois Institute of Technology, Bedford Park, IL, USA	3:45	DAVID CLIFFORD, Nestlé USA, Inc., Solon, OH, USA JEFFREY FARBER, JM Farber Global Food Safety Consulting, Thornhill, ON, Canada
S21	Public Health Consequences of <i>Listeria monocytogenes</i> , and Possible Future Regulatory Approaches That Reflect a Risk-Based Approach 203BC Organizers: Sanjay Gummalla, Arthur Liang <i>Epidemiology</i>		JOHN HANLIN, Ecolab, Inc., Eagan, MN, USA RANDY PORTER, Institute for Environmental Health, Summerville, SC, USA JACK VAN DER SANDEN, bioMérieux, Durham, NC, USA BENJAMIN WARREN, FDA-CFSAN, College Park, MD, USA
3:45	Microbial Modelling and Risk Analysis Understanding the Disease Burden of Listeria monocytogenes on		
	Ale II O Demolation		

(CDC), Atlanta, GA, USA

HILARY WHITHAM, Centers for Disease Control and Prevention

RT12 Code Club: Leveraging Statistical Programming to Get the Most from Your Data
202BC

Organizer: Rigo Soler Convenor: Surabhi Wason Data Management and Analytics Food Safety Culture

- 3:45 KAITLYN CASULLI, University of Georgia, Athens, GA, USA PRAMEY KABRA, Purdue University, West Lafayette, IN, USA ABHINAV MISHRA, University of Georgia, Athens, GA, USA RIGO SOLER, Texas Tech University, Lubbock, TX, USA
- T4 Technical Session 4 Developing Scientist Finalists (continued)

Convenors: Matthew Moore, Ernest Bonah

- 3:45 T4-07 Most of the Salmonellosis Risk in Raw Chicken Parts is
  Concentrated in Small Amounts of High Levels and High Levels of
  High-Virulent Serotypes of Salmonella
  MINHO KIM, Cecil Barnett-Neefs, Ruben Chavez, Erin Kealey,
  Martin Wiedmann, Matthew J. Stasiewicz, University of Illinois at
  Urbana-Champaign, Urbana, IL, USA
- 4:00 T4-08 Utilizing 16S Sequencing with Viability Differentiation to Identify Potential Sources of Spoilage Contamination During RTE Meat Manufacturing
  JESSICA BROWN, Steven Ricke, Meat Science and Animal Biologics Discovery Program, Dept. of Animal and Dairy Sciences, University of Wisconsin-Madison, Madison, WI, USA
- 4:15 **T4-09** Dynamics of Change in Physiological State of *Escherichia coli* 0157:H7 during Cold Storage of Romaine Lettuce DIMPLE SHARMA, Joshua Owade, Corrine Kamphuis, Avery Evans, Jade Mitchell, Teresa M. Bergholz, Michigan State University, East Lansing, MI, USA
- 4:30 T4-10 Mechanistic Insights into the Role of α/β-Type Small
  Acid Soluble Protein and Inner Membrane Proteins during Bacterial
  Spore Inactivation by Ohmic Heating
  SHYAM SINGH, Mohamed Ali, Peter Setlow, Sudhir Sastry,
  The Ohio State University, Columbus, OH, USA
- 4:45 **T4-11** Zero-Inflated Negative Binomial Modeling to Assess of Generic *E. coli* Presence in Soil Amended with Untreated Manure in Certified Organic Farms
  KEFANG NIE, Sejin Cheong, Jerome Nicholas Baron, Thais Ramos, Peiman Aminabadi, Michele Jay-Russell, Patricia Millner, Paulo Pagliari, Mark Hutchinson, Annette Kenney, Fawzy Hashem, Alda Pires, University of California-Davis, Davis, CA, USA
- 5:00 T4-12 Risk Ranking of Antibiotic-Resistance Genes on Human Health JABER GHORBANI, Yanbin Yin, Xu Li, Jennifer Clarke, Adina Howe, Michelle Soupir, Amy Schmidt, Shannon Bartelt-Hunt, Bing Wang, University of Nebraska-Lincoln, Lincoln, NE, USA
- T5 Technical Session 5 Laboratory and Detection Methods and Molecular Analytics, Genomics and Microbiome (continued) 201A

Convenors: Preetha Biswas, Kerry Cooper

3:45 T5-07 Leafy Green Microbiome Diversity on Urban Farms Reflects Site-Specific Conditions
QINGYUE ZENG, Mairui Gao, Kevin Lam, Autumn Salcedo,
Magaly Toro, Ryan Blaustein, University of Maryland, College Park,
MD, USA

- 4:00 T5-08 Long-Term Genomic Surveillance Shows Agricultural Surface Waters are an Increasingly Important Reservoir of Multi-Drug-Resistant, Non-Typhoidal Salmonella in Central Mexico Enrique Jesus Delgado Suarez, Francisco Alejandro Ruiz Lopez, MARIA SALUD RUBIO LOZANO, Orbelin Soberanis Ramos, Zhao Chen, Xinyang Huang, Rebecca Bell, Elizabeth Reed, Maria Balkey, Brett Albee, Sandra Tallent, Eric Brown, Marc Allard, Magaly Toro, Jianghong Meng, National Autonomous University of Mexico, Mexico City, DF, Mexico
- 4:15 T5-09 Novel CRISPR-RNase-Based Method for Detection of Potentially Infectious Viruses in Produce AXEL OSSIO, Jose Angel Merino-Mascorro, Santos Garcia, Juan S. Leon, Norma Heredia, Universidad Autonoma de Nuevo Leon, San Nicolas, NL, Mexico
- 4:30 T5-10 Species Identification and Strain Discrimination of Fermentation Yeasts Using Raman Spectroscopy Combined with Convolutional Neural Networks
  KAIDI WANG, Vivien Measday, Xiaonan Lu, McGill University, Sainte-Anne-de-Bellevue, QC, Canada
- 4:45 T5-11 The Phylogeny of the Top 100 Most Prevalent Salmonella Serovars on NCBI Pathogen Detection
  LINGHUAN YANG, Hilal Samut, Leonie Kemmerling, Ruixi Chen, Martin Wiedmann, Renato H. Orsi, Cristina Resendiz-Moctezuma, Cornell University, Ithaca, NY, USA
- 5:00 T5-12 Understanding the Microbiome and Exploring Early Detection of Pathogens in Microgreens Grown from Seeds Contaminated with Escherichia coli 0157:H7, Salmonella enterica, and Listeria monocytogenes Serovars Using Shotgun Metagenomics AISHWARYA RAO, Padmini Ramachandran, Jitendra Patel, Abani Pradhan, University of Maryland, College Park, MD, USA

#### **EVENING EVENTS**

5:15 p.m. - 6:15 p.m.

Monday Exhibit Hall Reception

5:30 p.m. - 6:30 p.m., 101B

**African Continental Association for Food Protection Meeting** 

5:30 p.m. - 6:30 p.m., 101A

China Association for Food Protection and Chinese Association for Food Protection in North America Meeting

5:30 p.m. - 7:00 p.m., 102BC

Indian Association for Food Protection in North America Meeting

5:30 p.m. - 6:30 p.m., 103BC

Korea Association for Food Protection Meeting

# **TUESDAY, JULY 16**

ALL DAY			AFTERNOON		
8:30 a.m. – 6:15 p.m. Exhibit Hall		ssion 2 – Antimicrobials, Beverages and Acid/Acidified	12:30 p.m. – 1:15 p.m. 201B		IAFP Business Meeting
		idemiology, Food Toxicology, General Microbiology, Itry and Eggs, Modeling and Risk Assessment,	1:30 p.m 5:15 p.m.		
	Molecular	Analytics, Genomics and Microbiome, and Plant- ernative Products	104A	S37	Novel Pathogen Detection and Enumeration Approaches for Meat and Poultry
		ugh P2-146 – Authors present 10:00 a.m. – 11:30 a.m. .m. – 6:15 p.m.	201A	T8	Technical Session 8 – Food Fraud, Food Processing Technologies, Food Toxicology, Low-
		ough P2-288 – Authors present 2:15 p.m. – 3:45 p.m. .m. – 6:15 p.m.			Water Activity Foods, and Physical Hazards and Foreign Material
MORNING			1:30 p.m 3:00 p.m.		
8:30 a.m 12:15 p.m.			104B	S38	Global Guidance on the Use of Risk Categorization
Grand Ballroom	S23	New Estimates for the Global Burden of Foodborne Disease – Where are We and Where are We Going?			for Risk-Based Inspection Programming: Sharing FAO's Experience in Africa
201A	T6	Technical Session 6 – Data Management and Analytics and Modeling and Risk Assessment	104C	S39	Controlling Persistent <i>Listeria</i> in Food Retail: Honing Data Analytics for Root Cause Analysis and Intervention
201B	T7	Technical Session 7 – Produce and Water	103BC	S40	Root Cause Analysis for Non-Cultivable Foodborne Pathogens: Needs, Challenges, and Opportunities
8:30 a.m 10:00 a.m.			203BC	S41	"Cure" What Ails You: Nitrite Alternatives in Meat Systems
104C	S24	Emerging Foodborne Pathogens in Water- Associated Outbreaks: How Technology Can	101A	S42	Under the Influence: Impact of Plant Metabolites on Survival and Persistence of Foodborne Pathogens
103BC	S25	Assist OutBreak Investigations Achilles Heel in the Food Safety Programs of Food	101B	S43	Integrated Modeling Approaches to Support Firm- Level Decision Making in Produce Safety
		Manufacturing Plants – Evaluating Recontamination Risks	Grand Ballroom	RT17	Transitioning from Grad School to Professionals: Insights from Recent Graduates
202BC	S26	Food Safety within the Traditional and Modern Horticultural Sector in Africa	102BC	RT18	Transitioning from Auditor to Coach: Reimagining Retail Audits to Build Collaborative Relationships
203BC	S27	Complexity in Baking Process – Food Safety Challenges, Risk Management, and Validation	202BC	RT19	and Dissolve the "Us vs. Them" Mentality Sweet and Saucy! The Role of Sugar and Other
101A	S28	From Kimchi to Kombucha: Exploring the Diversity of Fermented Foods, Understanding Preventive	20200	11113	Important Considerations in the Classification and FDA Filing of Acidified Foods
1010	000	Control and Navigating the Regulatory Ambiguities	204	MP	Marketplace
101B	S29	Predicting the Unpredictable: How Translatable are Available Microbial Models to Risk Assessment of	3:00 p.m. – 3:45 p.m.		Break - Refreshments available in the Exhibit Hall
104A	Late	Plant-Based Foods?	3:45 p.m. – 5:15 p.m.		
104A	RT13	Responding to an Outbreak of Highly Pathogenic Avian Influenza (HPAI) Can Food Manufacturers Afford Not to Use Whole	104B	S44	Food Safety Risk Assessment in Latin America: Successful Stories from Countries Transforming Industry Standards and Food Safety Policy
		Genome Sequencing?	104C	S45	Impact of Effective and Timely Communication of
102BC	RT14	Importance of Outreach to Spanish-Speaking Growers and Farmworkers to Ensure Food Safety			Relevant and Complex Scientific Data to Influence Human Behavior
		for U.S. Consumers	103BC	S46	Bringing the Environment into the Lab: Preventing
10:00 a.m. – 10:45 a.m.		Break − Refreshments available in the Exhibit Hall sponsored by ∧ L ⊃ ≡ N	20202	0.47	the Next Outbreak by Using Controlled Environments to Understand What Caused the Last One!
10:45 a.m 12:15 p.m.			203BC	S47	Low Calorie Sweeteners: An Update on the State of the Science
104A	S30	Fresh Produce Food Safety Culture Perspectives from the U.S. and Central America (The Food	101A	S48	From Pathogen Transcriptomics to Prevention Strategies
		Industry, Government, Consumers and Schools)	101B	S49	Foodborne Pathogen Biofilms, Environmental Microbial Community, and Food Safety
104C	S31	Climate Change: Is It Affecting the Prevalence of Foodborne Pathogens in the Environment?	Grand Ballroom	RT20	Are We Meeting Our Targets? Healthy People 2030 and the National Effort to Drive Down Foodborne
103BC	S32	Modeling Everywhere: How Models Can Aid Decision Making in Food Safety and Shelf-Life	102BC	RT21	Illness in the United States Strengthening the Frontline of Food Safety:
202BC	S33	Extension Dry Cleaning and Sanitation in Dry, Low-Moisture	10200	11121	Meeting the Growing Demand for Competent Auditors, Inspectors, and Assessors
203BC	S34	Environments Persister: A Dormancy State of Pathogenic Bacteria	202BC	RT22	Leveraging GS1 Standards and Advanced Data Carriers to Support FSMA 204 Traceability Requirements
101A	S35	in the Agro-Ecosystem and Food Supply Chain One Health Approach to Address Zoonotic	204	SS1	Third Get-Connected Market: Connecting More IAFP Professionals on Food Safety in Africa!
101B	S36	Foodborne Parasites Risk vs. Hazard: The Consumer Impact of Diverging	EVENING EVENTS		•
104B	RT15	Global Assessments for Safety  How Did FDA Define Strong Evidence for Food	5:15 p.m. – 6:15 p.m.		Tuesday Exhibit Hall Reception
1012	11110	Traceability List (FTL) Foods and What are Its Implications for the Future?	5:30 p.m. – 6:30 p.m. <i>101A</i>		Latin America Group Meeting
102BC	RT16	Advancing Food Safety Regulation: A Globally Applicable Maturity Model	101B 102BC		Southeast Asia Association for Food Protection Meeting Bangladesh Association for Food Protection in
11:45 a.m 1:30 p.m.		Lunch available in the Exhibit Hall			North America
•		sponsored by NOMAD'X	6:30 p.m 7:30 p.m. Hyatt - Beacon Ballroom		President's Reception sponsored by <b>Carqill</b>
			7:00 p.m. – 9:00 p.m.		ouigill
			The Cove		Student Mixer sponsored by  MERCI Animal Health

TUESD.	AY, JULY 16 NG	9:00	Operational Considerations – People, Production Scheduling/ Run Time, Maintenance and Sanitation JOSEPH MEYER, Kerry, Waunakee, WI, USA
Posters v	vill be on display 8:30 a.m. – 6:15 p.m. (see details beginning on page XX)  New Estimates for the Global Burden of Foodborne Disease –	9:30	Testing and Utilization of Data to Enhance Outcome of Correction Actions
523	Where are We and Where are We Going?  Grand Ballroom		ANETT WINKLER, Cargill, Inc., Unterschleißheim, Germany
	Organizers: Arie Havelaar, Michael Batz Convenors: Shannon Majowicz, Elaine J. Scallan Walter Sponsored by the IAFP Foundation	S26	Food Safety within the Traditional and Modern Horticultural Sector in Africa 202BC
	International Food Protection Issues Epidemiology Missabiol Modelling and Diels Analysis		Organizer: Obadina Adewale Convenor: Leon Gorris Fruit and Vegetable Safety and Quality
8:30	Microbial Modelling and Risk Analysis  Strategy to Update WHO Estimates of the Global Burden of		Water Safety and Quality
0.00	Foodborne Disease YUKI MINATO, World Health Organization (WHO), Geneva, Switzerland	8:30	Affordable Technologies in Improving the Consumption of Safe Fruits and Vegetables in Africa
9:00	Global Burden of Diarrheal Illness and Attribution to Pathogens MARGARET KOSEK, University of Virginia, Charlottsville, VA, USA		ADEWALE OLUSEGUN OBADINA, Federal University of Agriculture, Abeokuta, Abeokuta, Ogun State, Nigeria
9:30	Global Burden of Disease by Aflatoxin B1 and M1 in the Context of Climate Change and Adaptive Standards	9:00	Food Safety Challenges and Interventions in the Horticultural Sector in Ghana GLORIA LADJEH ESSILFIE, University of Ghana, Legon, Ghana
	FELICIA WU, Michigan State University, East Lansing, MI, USA	9:30	The Role of Traditional Market in Horticultural Sector Food Safety
LB	LATE BREAKING SESSION – Responding to an Outbreak of Highly Pathogenic Avian Influenza (HPAI)	3.30	in Ethiopia GENET GEBREMEDHIN, GAIN, Addis, Ethiopia
	104A See online program and app for details	<b>S27</b>	Complexity in Baking Process – Food Safety Challenges, Risk Management, and Validation
S24	Emerging Foodborne Pathogens in Water-Associated Outbreaks: How Technology Can Assist Outbreak Investigations 104C		203BC Organizer: Lakshmikantha Channaiah Convenor: Rico Suhalim
	Organizers: Mauricio Durigan, Rachel Rodriguez Convenors: Mauricio Durigan, Rachel Rodriguez, Brooke Schwartz		Low-Water Activity Foods Microbial Modelling and Risk Analysis
	Sponsored by the IAFP Foundation Water Safety and Quality Viral and Parasitic Foodborne Disease Seafood Safety and Quality	8:30	Baking Validation Research: Current Status and Future Research Directions LAKSHMIKANTHA CHANNAIAH, University of Missouri, Columbia, MO, USA
8:30	Technology Advances and Challenges in Virus Detection in Environmental Water CHRISTINE YU, U.S. Food and Drug Administration, Laurel, MD, USA	9:00	Considerations for Maintaining a Validation Program for Low-Water Activity Baked Goods REID IVY, Ferrero North America, Chicago, IL, USA
9:00	Environmental Detection of <i>Cyclospora cayetanensis</i> from Contaminated Water Samples GERARDO LOPEZ, University of Arizona, Tucson, AZ, USA	9:30	Validation of Preventive Controls – Equipment Challenges ANDREW ROSENTHAL, Reading Thermal, Sinking Spring, PA, USA
9:30	New Approaches to <i>Vibrio</i> Detection in Water-Associated Outbreaks VICTORIA PRUENTE, U.S. Food and Drug Administration, Dauphin Island, AL, USA	S28	From Kimchi to Kombucha: Exploring the Diversity of Fermented Foods, Understanding Preventive Control and Navigating the Regulatory Ambiguities 101A
S25	Achilles Heel in the Food Safety Programs of Food Manufacturing Plants – Evaluating Recontamination Risks 103BC		Organizer: Ann Charles Vegdahl Convenor: Julia Fukuba Sponsored by the IAFP Foundation
	Organizer: Rocelle Grabarek Convenors: Rocelle Grabarek, Kathy Knutson		Beverages and Acid/Acidified Foods Dairy Quality and Safety
	HACCP Utilization and Food Safety Systems Food Safety Assessment, Audit and Inspection Food Hygiene and Sanitation	8:30	Using Buffer Models to Estimate pH and Fermentation Safety and Fermented Carbonated Yogurt Drink, the Process and Challenge FRED BREIDT, U.S. Department of Agriculture – ARS, Raleigh, NC,
8:30	Considerations for Infrastructure, Ancillary Systems, and Interior of Equipment JOHN HOLAH. Kersia Group. Bury. UK		USA; HAMED ZAHEDI, Giraffe Foods (A Symrise Company), Mississauga, ON, Canada

9:00	Safe Practices of Kombucha – Where is Science? Investigating Optimal Food Safety Parameters for Lacto-Fermented Sauerkraut JENNIFER PERRY, University of Maine, Orono, ME, USA; and JULIA FUKUBA, University of Massachusetts Amherst, Amherst, MA, USA	T6	Technical Session 6 – Data Management and Analytics and Modeling and Risk Assessment 201A Convenors: Leslie Thompson-Strehlow, Getahun Agga
9:30 <b>S29</b>	Safety of Kimchi HAE WOONG PARK, World Institute of Kimchi (Wikim), Gwangju, South Korea  Predicting the Unpredictable: How Translatable are Available	8:30	<b>T6-01</b> Modeling the Effect of Pre-Inoculation Temperature History on Growth Kinetics of <i>Listeria monocytogenes</i> HARSIMRAN KAUR KAPOOR, Binita Goshali, Sneha Chhabra, Govindraj Kumar, Abhinav Mishra, University of Georgia, Athens, GA, USA
	Microbial Models to Risk Assessment of Plant-Based Foods?  101B  Organizer: Robyn Eijlander  Convenor: Heidy Den Besten  Sponsored by the IAFP Foundation  Microbial Modelling and Risk Analysis  Plant-Based Alternative Products  Low-Water Activity Foods	8:45 9:00	T6-02 A Comparison of Machine Learning Methods in Predicting Salmonella Foodborne Pathogen Positive Rates in FSIS-Inspected Raw Pork Products and Variable Association with Establishment Process Control Measures DAVI LABARRE, U.S. Department of Agriculture – FSIS, Washington, D.C., USA T6-03 Comprehensive Analysis of Listeria monocytogenes Growth
8:30 9:00	Spore Heat Resistance and Cardinal Growth Values of Microbial Contaminants from Plant-Based Ingredients KARIN BEEKMANN, NIZO Food Research, Ede, The Netherlands Application of Predictive Microbiology Models in Plant-Based Foods	5.00	in Ready-to-Eat Fish and Meat Products: Understanding Variability to Assess Public Health Risks FEDERICO TOMASELLO, Federica Savini, Valentina Indio, Aricia Possas, Andrea Serraino, Alessandra De Cesare, Antonio Valero, Department of Veterinary Medical Sciences,
3.00	during Processing AIXIA XU, ADM, Denver, CO, USA	9:15	University of Bologna, Ozzano dell'Emilia, Italy  T6-04 Continuous Improvement of the Canadian Food Inspection
9:30	Unleashing the Power of Predictive Microbiology Models Applied to Plant-Based Foods: Exploring the Boundaries of Generic Models CHRYSANTHI CHAMPIDOU, Nestle, Lausanne, Switzerland		Agency's Data-Driven Food Safety Risk Assessment Tool for Hatcheries: A New Approach for the Source Attribution of Salmonella Illnesses GENEVIEVE COMEAU, Manon Racicot, Alexandre Leroux,
RT13	Can Food Manufacturers Afford Not to Use Whole Genome Sequencing? 104B Organizer: Benjamin Warren		Sylvain Quessy, Daniel Venne, Jean-Pierre Vaillancourt, Rachel Ouckama, Darko Mitevski, Michele T. Guerin, Agnes Agunos, Pablo Romero-Barrios, Marie-Lou Gaucher, Canadian Food Inspection Agency, St-Hyacinthe, QC, Canada
	Convenor: Marc Allard  Advanced Molecular Analytics Food Law Food Safety Culture	9:30	<b>T6-05</b> Overview of the Food Safety and Inspection Service's Salmonella Framework Initiative and Risk Assessments Drew Posny, JOANNA ZABLOTSKY KUFEL, USDA, Food Safety and Inspection Service, Washington, D.C., USA
8:30	DEANN AKINS-LEWENTHAL, Mondelez, Omaha, NE, USA BRAD BROWN, U.S. Food and Drug Administration, College Park, MD, USA LESLIE HINTZ, U.S. Food and Drug Administration, College Park, MD, USA	9:45	<b>T6-06</b> Identifying <i>Salmonella</i> Serotypes of Concern to Target for Control to Reduce the Risk of Salmonellosis TATUM KATZ, Dayna Harhay, John Schmidt, Tommy Wheeler, U.S. Meat Animal Research Center, USDA ARS, Palo Alto, CA, USA
	BILL MARLER, Marler Clark, The Food Safety Law Firm, Seattle, WA, USA		Technical Session 7 – Produce and Water 201B
	DOUGLAS MARSHALL, Eurofins, Fort Collins, CO, USA		Convenors: Cameron A. Bardsley, Julie Kase
RT14	SHAWN STEVENS, Food Industry Counsel, LLC, Milwaukee, WI, USA  Importance of Outreach to Spanish-Speaking Growers and Farmworkers to Ensure Food Safety for U.S. Consumers  102BC	8:30	T7-01 Salmonella's Transfer Potential Between Intact and Damaged Tomatoes and New and Used Harvest Bin Materials during Harvesting MARI SCHROEDER, Michelle Danyluk, University of Florida CREC, Lake Alfred, FL, USA
0.00	Organizers and Convenors: Yulie Meneses, Mariana Villarreal-Silva Food Safety Education Fruit and Vegetable Safety and Quality International Food Protection Issues	8:45	T7-02 Accelerating Pathogen Die-Off on Leafy Greens through LED Grow Light Spectral Modulation in Controlled Environment Agriculture Zi Teng, Bin Zhou, Ganyu Gu, Yishan Yang, Madison Oehler, Xiangwu Nou, YAGUANG LUO, U.S. Department of Agriculture – ARS, EMFSL, Beltsville, MD, USA
8:30	DAVIS BLASINI, Produce Safety Alliance, Geneva, NY, USA MARY JO DUDLEY, Cornell Farmworker Program, Ithaca, NY, USA OSCAR GALAGARZA, Purdue University Main Campus, West Lafayette, IN, USA TERESSA LOPEZ, Arizona LGMA, Phoenix, AZ, USA JASON SHARRETT, California Strawberry Commission, Watsonville, CA, USA	9:00	T7-03 Adaptation of Shiga Toxin-Producing <i>Escherichia coli</i> to Fresh Produce Environment; Sprouts as an Example MOSTAFA G. ALI, Ahmed G. Abdelhamid, Ahmed E. Yousef, The Ohio State University, Columbus, OH, USA

9:15	T7-04 Change in Microbial Population in Farm Ponds and Irrigation Distribution Systems throughout the 2023 Crop Production Season in Georgia Coastal Plains Area RAWANE RAAD, Jia Yan Hiew, Blanca Ruiz-Llacsahuanga, Brenda Kroft, Halle Greenbaum, Charles Bency Appolon, Manpreet Singh, Faith Critzer, University of Georgia, Athens, GA, USA	S31	Climate Change: Is It Affecting the Prevalence of Foodborne Pathogens in the Environment?  104C  Organizers: Ynes Ortega, Humberto Maldonado Convenors: Humberto Maldonado, Ynes Ortega  Pre-Harvest Food Safety
9:30	T7-05 Comparison of Modified Washing Machines (Speed Queen & Whirlpool) with Commercial Green Spinners Used for Drying Leafy Greens PAVANA HARATHY CHENNUPATI, Pragathi Kamarasu, Matthew D. Moore, Amanda Kinchla, UMASS, Amherst, MA, USA	10:45	Microbial Modelling and Risk Analysis  The Biogeography of the Soil Resistome under Global Change — Bacterial Antibiotic Resistance MICHAEL STRICKLAND, University of Idaho, Moscow, ID, USA
9:45	T7-06 Evaluation of Surface Water Treatment Efficacy Protocol Using Calcium Hypochlorite and PAA against STEC in Open Florida Waters	11:15	Our Wild Life and Wildlife – One Health Aspects and Prevalence of Wildlife-borne Human Pathogens MARTIN RICHTER, German Federal Institute for Risk Assessment, Berlin, Germany
10:00	LATAUNYA TILLMAN, Michelle Danyluk, University of Florida CREC, Lake Alfred, FL, USA  Break - Refreshments available in the Exhibit Hall	11:45	Climate Change, Regenerative Agriculture and Risk of Infectious Diseases ROBERT GILMAN, Johns Hopkins University, Baltimore, MD, USA;
S23	New Estimates for the Global Burden of Foodborne Disease – Where are We and Where are We Going? (continued) Grand Ballroom Organizers: Arie Havelaar, Michael Batz Convenors: Shannon Majowicz, Elaine J. Scallan Walter Sponsored by the IAFP Foundation International Food Protection Issues	S32	Ynes Ortega, University of Georgia, Griffin, GA, USA  Modeling Everywhere: How Models Can Aid Decision Making in Food Safety and Shelf-Life Extension 103BC  Organizers: Nanje Gowda N Appanna, Surabhi Wason Convenor: Surabhi Wason Sponsored by the IAFP Foundation
	Epidemiology Microbial Modelling and Risk Analysis		Microbial Modelling and Risk Analysis Data Management and Analytics Food Safety Education
10:45 11:15	Source Attribution of Foodborne Diseases Using Structured Expert Judgment TINE HALD, Technical University of Denmark, Lyngby, Denmark Using WHO Estimates to Inform Risk Prioritization of Foodborne	10:45	Predictive Models: Bridging the Gap Between Broth-Based Data and Food Matrix for Decision Making NANJE GOWDA N APPANNA, University of Arkansas, Fayetteville, AR, USA; SURABHI WASON, Kerry Ingredients, Beloit, WI, USA
11:45	Diseases in Ethiopia BARBARA KOWALCYK, The Ohio State University, Columbus, OH, USA Using WHO Estimates to Inform Decision Making in the Food Industry JOHN BASSETT, Danone, Paris, Ile de France, France	11:15	Application of Predictive Models to Enhance Safety and Quality of Apples and Milk for K12 School Share Tables MATTHEW J. STASIEWICZ, University of Illinois at Urbana-Champaign, Urbana, IL, USA
S30	Fresh Produce Food Safety Culture Perspectives from the U.S. and Central America (The Food Industry, Government, Consumers and Schools)	11:45	Modeling Tools for Real World Decision Making: From Enterprise Risk Management to Al-Facilitated Risk Negotiation MARTIN WIEDMANN, Cornell University, Ithaca, NY, USA
	104A Organizers and Convenors: Joshua Gurtler, Xuetong Fan Sponsored by the IAFP Foundation Food Safety Culture Fruit and Vegetable Safety and Quality Food Safety Education	S33	Dry Cleaning and Sanitation in Dry, Low-Moisture Environments 202BC Organizers: Caitlin Karolenko, Mu Ye, Aaron Uesugi Convenors: Mu Ye, Aaron Uesugi Food Hygiene and Sanitation
10:45	Fresh Produce Food Safety Culture – A Core Element of the FDA New Era of Smarter Food Safety Blueprint SAMIR ASSAR, U.S. Food and Drug Administration, College Park, MD, USA	10:45	Low-Water Activity Foods  Development of Nonpolar Liquid Antimicrobial Delivery Systems for Dry Cleaning and Sanitation LYNNE MCLANDSBOROUGH, University of Massachusetts, Amherst,
11:15	Fresh Produce and the USDA Food Safe Schools: Creating a Culture of Food Safety Initiative KEVIN ROBERTS, Kansas State University, Manhattan, KS, USA	11:15	MA, USA  Survival and Repair of <i>Salmonella</i> during Sanitation Practices with Less or No Water in Dry Processing Environments ALEXIS M. HAMILTON, Virginia Tech, Blacksburg, VA, USA
11:45	Fresh Produce Food Safety Culture Perspectives from Central America ZOILA CHEVEZ, Auburn University, Auburn, AL, USA	11:45	Industry Perspective on Solutions to Achieve Effective Dry Cleaning and Sanitation Practices DEBRA SMITH, Vikan, Swindon, Wiltshire, UK





\$34	Persister: A Dormancy State of Pathogenic Bacteria in the Agro-Ecosystem and Food Supply Chain 203BC Organizer: Jinsong Feng Convenor: Maria Brandl Sponsored by the IAFP Foundation Food Hygiene and Sanitation	RT15	How Did FDA Define Strong Evidence for Food Traceability List (FTL) Foods and What are Its Implications for the Future?  104B Organizer: Lisa Lupo Convenors: Lisa Lupo, Ruth Petran Microbial Modelling and Risk Analysis Data Management and Analytics
10:45 11:15	Food Safety Assessment, Audit and Inspection  Formation and Control of Listeria monocytogenes Persisters in Produce Processing Environment LUXIN WANG, University of California-Davis, Davis, CA, USA  Dormany in Enteric Pathogens: Persisters Modulated by	10:45	YUHUAN CHEN, U.S. Food and Drug Administration, Center for Food Safety and Applied Nutrition, College Park, MD, USA NATALIE DYENSON, IFPA, Washington, D.C., USA BENJAMIN MILLER, The Acheson Group, Northfield, MN, USA CHRIS WALDROP, FDA, College Park, MD, USA
	Agro-Ecosystem and Their Significance to Food Safety KEITH WARRINER, University of Guelph, Guelph, ON, Canada		LISA WEDDIG, National Fisheries Institute, Herndon, VA, USA MATTHEW WISE, U.S. Centers for Disease Control and Prevention, Atlanta, GA, USA
11:45	Campylobacter Persisters and Their Role in Poultry Microbiological Safety JINSONG FENG, Zhejiang University, Hangzhou, Zhejiang, China	RT16	Advancing Food Safety Regulation: A Globally Applicable Maturity Model 102BC
S35	One Health Approach to Address Zoonotic Foodborne Parasites 101A		Organizer and Convenor: Lone Jespersen Sponsored by the IAFP Foundation
	Organizers and Convenors: Sonia Almeria, Monica Santin Sponsored by the IAFP Foundation Viral and Parasitic Foodborne Disease		Food Safety Culture Food Safety Assessment, Audit and Inspection
	Food Safety Culture Animal and Pet Food Safety	10:45	CONRAD CHOINIERE, Office of Analytics and Outreach, Center for Food Safety and Applied Nutrition, U.S. Food and Drug Administration, College Park, MD, USA
10:45	Importance of One Health Approach to Control Food and Waterborne Zoonotic Pathogens MICHELE JAY-RUSSELL, Western Center for Food Safety, University of California-Davis, Davis, CA, USA		ROUNAQ NAYAK, Bournemouth University, Poole, UK CAMERON PRINCE, The Acheson Group, Ottawa, ON, Canada ANDREW WILSON, Gamayun Pty Ltd, Aspley, Queensland, Australia GERALD WOJTALA, International Food Protection Training Institute,
11:15	Public Health Relevance of the Enteric Parasites <i>Giardia duodenalis</i> and <i>Cryptosporidium</i> sp.  DAVID CARMENA, Spanish National Centre for Microbiology, Health Institute Carlos III, Madrid, Spain	Т6	Portage, MI, USA  Technical Session 6 – Data Management and Analytics and Modeling and Risk Assessment (continued)  2014
11:45	Toxoplasma gondii and Food Safety in One Health Context ROSA M. ANDRADE, Univ of California, Irvine (UCI), School of Medicine, Irvine, CA, USA	10:45	Convenors: Leslie Thompson-Strehlow, Getahun Agga T6-07 Leveraging Salmonella Surveillance Data to Optimize Plant
S36	Risk vs. Hazard: The Consumer Impact of Diverging Global Assessments for Safety		Level Controls: A Case for Moving from Hazards to Risks JANE POUZOU, Daniel Taylor, Huybert Groenendaal, Solenne Costard, Francisco Zagmutt, EpiX Analytics, Fort Collins, CO, USA
	101B Organizers: Anthony Flood, Sylvester Mosley Convenor: Anthony Flood Sponsored by the IAFP Foundation	11:00	T6-08 Machine Learning to Identify and Predict Salmonella Genetic Patterns Associated with Stages of Chicken Production and Processing Shradha Karanth, EDMUND O. BENEFO, Abani Pradhan, Department
	Food Chemical Hazards and Food Allergy Communication, Outreach and Education Food Law	11.15	of Nutrition and Food Science, University of Maryland, College Park, MD, USA
10:45	A Risk or Hazard Approach for Ingredient Safety: Why Food Additives are Safe or Banned KRISTI MULDOON JACOBS, U.S. Food and Drug Administration, Rockville, MD, USA	11:15	<b>T6-09</b> Systematic Review and Meta-Analysis of the Impact of High- Pressure Processing on Microbial Inactivation in Raw Chicken ILHAMI OKUR, Mary-Grace Danao, Gary Sullivan, Jayne Stratton, James Dickson, Bing Wang, University of Nebraska - Lincoln, Lincoln, NE, USA
11:15	Experiences with Ingredient and Chemical Safety in the Food Industry: The 3 Body Problem HENRY CHIN, Henry Chin & Associates, Moraga, CA, USA	11:30	<b>T6-10</b> FSIS <i>Salmonella</i> in Poultry Risk Assessments: Enforceable Final Product Standards IVA BILANOVIC, USDA, FSIS, Washington, D.C., USA
11:45	U.S./EU Divergent Assessments for Safety: Its Impact on Consumer Perceptions of Food Safety TIMOTHY SELLNOW, Clemson University, Clemson, SC, USA		

11:45	T6-11 Prediction and Selection of Genetic Biomarkers of Microbial Stress Response Using Whole Genome Sequencing Data and Network-Diffusion Approach PATRICK MURIGU KAMAU NJAGE, Matteo Bersanelli, Ettore Mosca, Pimlapas Leekitcharoenphon, Ana Rita Bastos Rebelo, Rene Hendriksen, Lisbeth Truelstrup Hansen, Tine Hald, University of Pretoria, Pretoria, Denmark	AFTERNO 12:30 p.m 201B \$37	OON n. – 1:15 p.m. IAFP Business Meeting  Novel Pathogen Detection and Enumeration Approaches for Meat and Poultry  104A
12:00	T6-12 The Signal Assessment Process within the Canadian Food Inspection Agency HEATHER HOLLAND, Canadian Food Inspection Agency, Ottawa, ON, Canada		Organizers: Kimberly Cook, Isabel Walls Convenors: Isabel Walls, Kimberly Cook Meat and Poultry Safety and Quality Applied Laboratory Methods
Т7	Technical Session 7 – Produce and Water (continued) 2018	1:30	USDA FSIS Laboratory Methods Needs WILLIAM SHAW, USDA Food Safety and Inspection Service, Washington, D.C., USA
10:45	Convenors: Cameron A. Bardsley, Julie Kase  T7-07 Genome-Wide Transcriptomic Responses of <i>Escherichia coli</i> 0157:H7 Inoculated to Live Romaine Lettuce Followed by Harvesting and Simulated Source or Forward Processing Conditions QIAO DING, Ganyu Gu, Yaguang Luo, Xiangwu Nou, Shirley Micallef,	2:00	Rapid Response and Early Detection of Foodborne Pathogens in Outbreak Situations and Ongoing Surveillance through Lab-on-a- Chip Technologies MARTIN DUPLESSIS, Health Canada, Ottawa, ON, Canada
11:00	University of Maryland, College Park, MD, USA  T7-08 Microbiome Analysis of Packaged Baby Spinach from Controlled Environmental Agriculture and Open Field Production Ganyu Gu, Bin Zhou, Xiangwu Nou, Yishan Yang, Boce Zhang,	2:30	Sampling for Pathogens: At Low Levels and Low Prevalences It is Even More Difficult than Finding a Needle in a Haystack MARCEL ZWIETERING, Wageningen University & Research, Wageningen, The Netherlands
11:15	Tingting Gu, YAGUANG LUO, U.S. Department of Agriculture – ARS, EMFSL, Beltsville, MD, USA  T7-09 Survival of Escherichia coli 0157:H7, Salmonella enterica and Listeria monocytogenes Serovars in Microgreens Grown from	S38	Global Guidance on the Use of Risk Categorization for Risk-Based Inspection Programming: Sharing FAO's Experience in Africa 104B Organizer: Catherine Bessy
	Contaminated Seeds AISHWARYA RAO, Abani Pradhan, Jitendra Patel, University of Maryland, College Park, MD, USA		Convenors: Catherine Bessy, Sylvain Quessy Sponsored by the IAFP Foundation International Food Protection Issues Food Safety Assessment, Audit and Inspection
11:30	T7-10 Survival of <i>L. monocytogenes</i> on Waxed Peaches GOVINDARAJ DEV KUMAR, Abhinav Mishra, Johana Lilian John Muthiah, University of Georgia, Center for Food Safety, Griffin, GA, USA	1:30	Overview of the FAO Guidance on the Use of Risk Categorization as a Basis for Risk-Based Inspection Programming
11:45	Listeria monocytogenes, Salmonella enterica, and Escherichia coli 0157:H7 during Fresh Produce Washing BRINDHALAKSHMI BALASUBRAMANIAN, Jodie Allen, Abhinav Upadhyay, Department of Animal Science, University of Connecticut, Storrs, CT, USA	2:00	CATHERINE BESSY, FAO, Rome, Italy  Elaboration of a Digital Tool to Support Multifactor Risk Categorization Processes SYLVAIN QUESSY, Université de Montréal, St-Hyacinthe, QC, Canada
12:00		2:30	Example of Application of a Food Safety Risk Categorization Framework in Malawi VICTORIA UCHIZI NDOLO, University of Malawi, Zomba, Zomba, Malawi
		<b>S39</b>	Controlling Persistent <i>Listeria</i> in Food Retail: Honing Data Analytics for Root Cause Analysis and Intervention 104C
11:45 a.m.	. Tuesday Exhibit Hall Lunch Long Beach Convention Center		Organizers: Jill Hollingsworth, David Buckley Convenor: Kathleen O'Donnell-Cahill Sponsored by Ecolab and Diversey
			Retail and Foodservice Food Hygiene and Sanitation Microbial Modelling and Risk Analysis
		1:30	Development and Application of Modelling Tools for Improved Control of <i>Listeria</i> in Retail MARTIN WIEDMANN, Cornell University, Ithaca, NY, USA
		2:00	A Practical Approach Using Data Analytics Tools for Root Cause Analysis and Intervention against <i>Listeria</i> in Food Retail AMANI BABEKIR, Ecolab, Greensboro, NC, USA





2:30	The Associations Between the Presence of <i>Listeria</i> and the Measurement of Microbial Diversity  JACK BURNETT, Diversey, Inc., Cincinnati, OH, USA	S43	Integrated Modeling Approaches to Support Firm-Level Decision  Making in Produce Safety  1018
S40	Root Cause Analysis for Non-Cultivable Foodborne Pathogens: Needs, Challenges, and Opportunities		Organizers: Arie Havelaar, Donald W. Schaffner, Rafael Muñoz-Carpen Convenors: Arie Havelaar, Eric Wilhelmsen Sponsored by the IAFP Foundation
	103BC Organizers and Convenors: Sanjay Gummalla, Lee-Ann Jaykus Viral and Parasitic Foodborne Disease		Microbial Modelling and Risk Analysis Pre-Harvest Food Safety Fruit and Vegetable Safety and Quality
1:30	Root Cause Analysis for Non-Cultivable Pathogens in the Produce Supply Chain: Challenges and Opportunities	1:30	HYPATH-F: A Site-Specific Mechanistic Model to Simulate Introduction, Survival and Dispersal of Pathogens on Leafy Greens KALINDHI LARIOS, University of Florida, Gainesville, FL, USA
2:00	OTTO SIMMONS, North Carolina State University, Raleigh, NC, USA Approaches and Potential for Root Cause Analysis for Hepatitis A Virus and Human Norovirus in the Produce Supply Chain	2:00	HYPATH-2F: A Monte Carlo Simulation Model to Predict Consumer Risks from Leafy Greens CLAUDIA GANSER, University of Florida, Gainesville, FL, USA
	KALMIA KNIEL, University of Delaware Department of Animal and Food Sciences, Newark, DE, USA	2:30	Making Complex Models Useful for Firm-Level Produce Safety Decision Making
2:30	Approaches and Potential for Root Cause Analysis for <i>Cyclospora</i> cayetanensis in the Produce Supply Chain MICHELLE DANYLUK, University of Florida CREC, Lake Alfred, FL, USA		MATTHEW J. STASIEWICZ, University of Illinois at Urbana- Champaign, Urbana, IL, USA
S41	"Cure" What Ails You: Nitrite Alternatives in Meat Systems	RT17	Transitioning from Grad School to Professionals: Insights from Recent Graduates  Grand Ballroom
	Organizers: Heather Hunt, Kathleen Glass, Joyjit Saha Convenors: Joyjit Saha, Heather Hunt		Organizer: Ivannova Lituma Convenor: Ellen Mendez Sponsored by the IAFP Foundation
	Meat and Poultry Safety and Quality Food Law		Developing Food Safety Professionals
1:30	Efficacy of Nitrite and Nitrite Alternatives to Inactivate or Inhibit the Growth of Bacteria KATHLEEN GLASS, Food Research Institute, University of Wisconsin, Madison, WI, USA	1:30	Communication, Outreach and Education  KAITLYN CASULLI, University of Georgia, Athens, GA, USA OLIVIA C. HALEY, Kansas State University, Department of Horticulture and Natural Resources, Olathe, KS, USA
2:00	Regulations and Use of Nitrite and Nitrite Alternatives in the U.S./EU AARON BECZKIEWICZ, USDA-FSIS, Washington, D.C., USA; Stefaan Desmet, Ghent University, Ghent, Flanders, Belgium		JASMINE KATARIA, Kerry, Beloit, WI, USA SONALI SHARMA, Agropur US, Le Sueur, MN, USA PRANAV VASHISHT, Idaho Milk Products, Jerome, ID, USA
2:30	Dynamics of Nitrite Replacement and Sourcing Nitrite Alternatives REBECCA FURBECK, Kerry, Beloit, WI, USA	RT18	Transitioning from Auditor to Coach: Reimagining Retail Audits to Build Collaborative Relationships and Dissolve the "Us vs. Them" Mentality
S42	Under the Influence: Impact of Plant Metabolites on Survival and Persistence of Foodborne Pathogens 101A Organizers: Govindaraj Dev Kumar, Abhinav Mishra	1:30	102BC Organizer: Carrie Rigdon Convenors: Sarah Kozak-Weaver, Kristen Saniga Sponsored by Association of Food and Drug Officials (AFDO)
	Convenor: Brenda Kroft Sponsored by the IAFP Foundation Pre-Harvest Food Safety		Food Safety Assessment, Audit and Inspection Retail and Foodservice Food Safety Culture
	Fruit and Vegetable Safety and Quality		KARLA ACOSTA, The Acheson Group, San Angelo, TX, USA
1:30	The Tip of the Iceberg — Iceberg Lettuce Metabolites Improve Microbial Survival GOVINDARAJ DEV KUMAR, University of Georgia, Griffin, GA, USA		BETSY CRAIG, MenuTrinfo, Ft. Collins, CO, USA VIRGINIA HAMILTON, Kentucky Department for Public Health, Frankfort, KY, USA
2:00	Tomato Metabolites and <i>Salmonella</i> Persistence SHIRLEY MICALLEF, University of Maryland, College Park, MD, USA		CHRIS JORDAN, Diversey, Inc., Minneapolis, MN, USA MEGHANN MCLEOD, Yum! Brands, Plano, TX, USA KRISTEN N. SANIGA, Hissho Sushi, Charlotte, NC, USA
2:30	Plant Pathology and Bacterial Persistence – An Intricate Interplay JERI BARAK, University of Wisconsin-Madison Food Research Institute, Madison, WI, USA		tand Let it. Shirtor, Hissino dustin, sharrotte, ito, our

RT19 Sweet and Saucy! The Role of Sugar and Other Important
Considerations in the Classification and FDA Filing of
Acidified Foods
202BC

Organizers: Fred Breidt, Wilfredo Ocasio Convenor: Wilfredo Ocasio

Beverages and Acid/Acidified Foods Food Law

Fruit and Vegetable Safety and Quality

- 1:30 FRED BREIDT, U.S. Department of Agriculture ARS, Raleigh, NC, USA DAVID BRESNAHAN, Bresnahan TPC, Inc, Kenmore, WA, USA DAN GEFFIN, FDA, Washington D.C., USA MARTHA KIMBER, Eurofins US, Fresno, CA, USA YUQIAN LOU, PepsiCo, Purchase, NY, USA
- T8 Technical Session 8 Food Fraud, Food Processing Technologies, Food Toxicology, Low-Water Activity Foods, and Physical Hazards and Foreign Material

Convenors: Anru Shen, Sarah Smith-Simpson

- 1:30 **T8-01** A Single Methodology for Honey Authentication SOPHIE DODD, Zoltan Kevei, Anastasios Koidis, Maria Anastasiadi, Cranfield University, Cranfield, UK
- 1:45 T8-02 An Investigation into the Impact of Brexit on Consumer Perception of Trust in the Food Industry BABATOPE OMONIYI, Fiona Lalor, Sinead Furey, University College Dublin, Belfield, Dublin, Ireland
- 2:00 T8-03 Certain Food Matrices May Bind Staphylococcal Toxins
  Leading to False Negative Laboratory Results
  DELE OGUNREMI, Ottawa Laboratory Fallowfield, Canadian Food
  Inspection Agency, Ottawa, ON, Canada
- 2:15 **T8-04** Detection of Low-Density Foreign Matters in Food Using Sub-Terahertz Wave Imaging System
  DAE HO LEE, Jaein Choe, Byeong Hyeon Na, Yu-Bin Jeon, Mi-Kyung
  Park, Kyungpook National University, Daegu, South Korea
- 2:30 **T8-05** Phage Biocontrol of Shiga-Toxigenic *Escherichia coli* on Leafy Greens MARY THERESA CALLAHAN, Samantha MacKenzie, Joelle Woolston, Alexander Sulakvelidze, Amit Vikram, Intralytix, Inc., Columbia, MD, USA
- 2:45 T8-06 Measuring the UV-C Inactivation Kinetics and Determining the Fluences Required for Incremental Inactivation of Alicyclobacillus acidoterrestris (AAT) Spores Associated with High-Acid Beverage Spoilage
  Quail Das, Laura Arvaj, Michael Sasges, Ankit Patras, Cezar Khursigara, S. BALAMURUGAN, Agriculture & Agri-Food Canada, Guelph, ON, Canada

Marketplace

204

Convenor: Lone Jespersen

1:30p.m. - 2:15 p.m.

MP-01 Produce TRAINer – University of Maryland College Park and the University of Maryland Eastern Shore SHAUNA HENLEY, Angela Ferelli Gruber, Stacey Alexis, Adrian Aguirre, John Chamberlain, Anastasia Hames, Amy Muise, Pamela Martinez, Nicole Cook, University of Maryland, Cockeysville, MD, USA MP-02 In-Home Freeze Drying: Principles, Equipment, and Best Practices for Food Safety

MRY-CRACE DAMAG Cindy Brison, Prachant Dahal University

MARY-GRACE DANAO, Cindy Brison, Prashant Dahal, University of Nebraska-Lincoln, Lincoln, NE, USA

MP-03 Parameters that Determine the Risk of Pathogen Growth and Survival in Natural Cheeses (>39 to 50%) Moisture Made from Pasteurized Milk: Literature Review and Analysis Wendy Bedale, Rob Shumaker, ERIN HEADLEY, Schreiber Foods, Inc., Green Bay, WI, USA

MP-04 A Website-Based Interactive Analysis Tool Enabling Exploratory Data, Statistical and Machine Learning-Based Analysis of Microbiota Datasets for Food Safety and Quality Applications Taha Zakariya, Richard Hunt, Chris Sha, Shaillay Kumar Dogra, BALA JAGADEESAN, Société des Produits Nestlé S.A, Nestlé Research, Lausanne, Vaud, Switzerland

MP-05 The USDA NAL Food Safety Research Information Office (FSRIO): A Key Information Product DAWANNA JAMES-HOLLY, PHD, USDA NAL Food Safety Research Information Office (FSRIO), Beltsville, MD, USA

MP-06 CDC Resources on Safer Food Choices to Avoid Food Poisoning KELSEY SCHWARZ, CDC, Atlanta, GA, USA

**MP-07** The National Center for Home Food Preservation Launches Kombucha Fermentation Toolkit to Meet Growing Demand for Home Food Preservation Education

CARLA L. SCHWAN, Mallika Mahida, Sitara Cullinan, Kris Ingmundson, Rebecca Hardeman, Jessica Parker, University of Georgia, Athens, GA, USA

MP-08 Determine Shelf Life and Food Safety of Meat with DMRI Predict 2.0

GRY DAWN TERRELL, Danish Meat Research Institute, Taastrup, Denmark

MP-09 Cheese Milk Thermization App KATHLEEN GLASS, Sarah Engstrom, Food Research Institute, University of Wisconsin, Madison, WI, USA

MP-10 Guides, Classes, and Tools for Processors, Extension, and Educators

TIMOTHY STUBBS, Innovation Center for U.S. Dairy, Rosemont, IL, USA

**MP-11** The Food Safety Resource Clearinghouse: Redesigning a Crowd-Sourced Food Safety Information Repository ANNIE FITZGERALD, University of Vermont, Burlington, VT, USA

MP-12 PAS 320 – A Free Resource for the Industry on Developing Your Food Safety Culture ALISON COUSINS, BSI, London, UK

MP-13 Eye on Food Safety with Dr. D TINA BRILLINGER, Global Food Safety Resource Centre Inc., Toronto, ON, Canada

MP-14 Food Safety on Subsistence Farms in Nepal and Uganda DAVID BLOMQUIST, DFB Consulting, Hastings, MN, USA

3:00 Break - Refreshments available in the Exhibit Hall

\$37	Novel Pathogen Detection and Enumeration Approaches for Meat and Poultry <i>(continued)</i> 104A Organizers: Kimberly Cook, Isabel Walls	4:45	Industry Examples Showing Impact of Effective and Timely Communication of Relevant and Complex Scientific Data to Influence Human Behavior CATHERINE DAVIDSON, Sabra, Richmond, VA, USA
	Convenors: Isabel Walls, Kimberly Cook Sponsored by the IAFP Foundation Meat and Poultry Safety and Quality Applied Laboratory Methods	5:15	Industry Examples of Impact of Effective and Timely Communication of Relevant and Complex Scientific Data to Influence Human Behavior CHERYL BURN, Kerry Group, Beloit, WI, USA
3:00	Broadening our Knowledge on Shiga-Toxin Producing <i>E. coli</i> (STEC) Detection in Food Production KAYE BURGESS, Teagasc Food Research Centre, Ashtown, Dublin, Ireland	S46	Bringing the Environment into the Lab: Preventing the Next Outbreak by Using Controlled Environments to Understand What Caused the Last One!
3:30	Identification of Meat and Poultry Processing Samples Exceeding a Threshold Level of <i>Salmonella</i> JOHN SCHMIDT, U.S. Meat Animal Research Center, USDA ARS, Clay Center, NE, USA		103BC Organizers: Mary Torrence, Marianne Solomotis, Socrates Trujillo, Stephen Hughes Convenor: Socrates Trujillo and Marianne Solomotis
4:00	Accelerating the Detection of Bacteria in Food Using Artificial Intelligence and Optical Imaging		Fruit and Vegetable Safety and Quality Pre Harvest Food Safety
S44	NITIN NITIN, University of California-Davis, Davis, CA, USA  Food Safety Risk Assessment in Latin America: Successful Stories	3:45	Controlled Environment Agricultural Research at CFSAN/OARSA LAUREL BURALL, U.S. Food and Drug Administration, Center for Food Safety and Applied Nutrition, Laurel, MD, USA
044	from Countries Transforming Industry Standards and Food Safety Policy 104B	4:15	Using Controlled Environments to Advance the Understanding of the Unculturables KALMIA KNIEL, University of Delaware Department of Animal and
	Organizer: Fernando Sampedro Convenors: Byron Chaves, Francisco Garcés-Vega Sponsored by the IAFP Foundation International Food Protection Issues Microbial Modelling and Risk Analysis		Food Sciences, Newark, DE, USA
		4:45	Interventions to Control Human Pathogen Bacteria in Controlled Environments SANJA ILIC, The Ohio State University, Columbus, OH, USA
3:45	"Would You Like a Nice Cup of Costa Rican Coffee? Let's Check What the Risk Assessment is Telling Us about the Occurrence of Chemical Contaminants (Mycotoxins and Acrylamide) in Coffee Produced in Costa Rica  DANIELA JAIKEL-VÍQUEZ, Tropical Disease Investigation Center	\$47	Low Calorie Sweeteners: An Update on the State of the Science 203BC
			Organizer and Convenor: Paul Hanlon Food Chemical Hazards and Food Allergy Food Law Beverages and Acid/Acidified Foods
	(CIET) and Mycology Laboratory, University of Costa Rica, San Jose, Costa Rica	3:45	Perspectives on the IARC and JECFA Assessments of Aspartame FELICIA WU, Michigan State University, East Lansing, MI, USA
4:15	Unveiling Salmonella: Assessing the Risk of Salmonella via Chicken Consumption in Mexico through QMRA ANGÉLICA GODÍNEZ-OVIEDO, Universidad Autónoma de Querétaro,	4:15	Industry Activity in Supporting Sweetener Safety MAIA JACK, American Beverage Association, Washington, D.C., USA
4:45	Querétaro, QA, Mexico  Risk Analysis in Uruguay from Theory to Reality: The Case of Arsenic in Rice	4:45	FDA Approach to the Evaluation of Sweeteners KRISTI MULDOON JACOBS, U.S. Food and Drug Administration, Rockville, MD, USA
	INES MARTINEZ, Technological Laboratory of Uruguay (LATU), Montevideo, Uruguay	\$48	From Pathogen Transcriptomics to Prevention Strategies
S45	Impact of Effective and Timely Communication of Relevant and Complex Scientific Data to Influence Human Behavior		Organizers and Convenors: Joelle K. Salazar, Laura Carroll Sponsored by the IAFP Foundation
	104C Organizer and Convenor: Vijay Krishna		Advanced Molecular Analytics Applied Laboratory Methods
	Data Management and Analytics Food Safety Culture Food Safety Education	3:45	Transcriptomic Response of <i>Listeria monocytogenes</i> to Stress and Application to Produce Washing Strategies XINYI ZHOU, Illinois Institute of Technology, Bedford Park, IL, USA
3:45	Impact of Effective and Timely Communication of Relevant and Complex Scientific Data to Influence Human Behavior JAMES DOYLE, Creme Global, Dublin, Ireland	4:15	From Transcriptomic Profiling of Pathogens in Response to Food Matrices to Prevention SULTANA SOLAIMAN, University of Maryland, College Park, MD, USA
4:15	Regulatory and Government Examples: Impact of Effective and Timely Communication of Relevant and Complex Scientific Data to Influence Human Behavior FRANK YIANNAS. Smarter FY Solutions. Bentonville. AR. USA	4:45	Transcriptomic Analysis of Pathogenic <i>Vibrio parahaemolyticus</i> in Seawater at Different Shellfish Harvesting Temperatures LUXIN WANG, University of California-Davis, Davis, CA, USA

**S49** Foodborne Pathogen Biofilms, Environmental Microbial Community, **RT22** Leveraging GS1 Standards and Advanced Data Carriers to Support **FSMA 204 Traceability Requirements** and Food Safety 202BC Organizers: Xianqin Yang, Rong Wang Organizer: Alyssa Stoop Convenor: Xiangwu Nou **Convenor: Norma Crockett** Meat and Poultry Safety and Quality Food Safety Assessment, Audit and Inspection Dairy Quality and Safety Food Safety Education Fruit and Vegetable Safety and Quality Dairy Quality and Safety The Role of Mixed-Species Biofilms in Dairy Spoilage DANIEL BROMBERG, QSCC/Wendy's, Columbus, OH, USA 3:45 3:45 LEI YUAN, Yangzhou University, Yangzhou, China ALEX HOANG, Chipotle Mexican Grill, Rancho Mission Viejo, CA, USA MARGARET MALKOSKI, National Fisheries Institute, McLean, VA, USA 4:15 Simulation of Dual and Multispecies Biofilm Formation in Fresh RENEE PERRY, Culinary Collaborations LLC, Rochester, NY, USA **Produce Processing Environment** XIANGWU NOU, U.S. Department of Agriculture-ARS-BARC, SS<sub>1</sub> Third Get-Connected Market: Connecting More IAFP Professionals Beltsville, MD, USA on Food Safety in Africa! Exploring the Core/Accessory Microbiome and Multi-Species Biofilm 4:45 204 Networks in Meat and Other Food Processing Facilities Organizers and Convenors: Leon Gorris, Marcel Zwietering XIANQIN YANG, Agriculture and Agri-Food Canada, Lacombe, AB, Sponsored by the IAFP Foundation Canada; Sapna Dass, Texas A&M University, College Station, TX, USA International Food Protection Issues Food Hygiene and Sanitation **RT20** Are We Meeting Our Targets? Healthy People 2030 and the National Communication, Outreach and Education **Effort to Drive Down Foodborne Illness in the United States** KEBEDE AMENU, College of Veterinary Medicine and Agriculture, 3:45 Grand Ballroom Addis Ababa, Ethiopia Organizers: Michael Batz, Priya Kadam, Randy J. Treadwell, CATHERINE BESSY, FAO, Rome, Italy Johanna Alfier TITILAYO FALADE, International Institute of Tropical Agriculture, Convenors: David Goldman, Kara Beckman Ibadan, Nigeria Sponsored by Association of Food and Drug Officials (AFDO) and ROBERT FERGUSON, Food Safety Magazine, State College, PA, USA the IAFP Foundation IZANNE SUSAN HUMAN, Cape Peninsula University of Technology, **Epidemiology** Cape Town, Western Cape, South Africa Communication, Outreach and Education SONJA JONES, USDA-FSIS Atlanta District, Locust Grove, GA, USA Data Management and Analytics ELISABETTA LAMBERTINI, Global Alliance for Improved Nutrition (GAIN), Washington, D.C., USA 3:45 DARIN DETWILER, Northeastern University, Boston, MA, USA DENISE EBLEN, USDA/FSIS/OPHS/OAA, Washington, D.C., USA HUNG NGUYEN-VIET, International Livestock Research Institute, PRIYA KADAM, FDA/CFSAN, College Park, MD, USA Nairobi, Kenya JENNIFER MCENTIRE, Food Safety Strategy, LLC, Frederick, MD, USA ADEWALE OLUSEGUN OBADINA, Federal University of Agriculture, MEGIN NICHOLS, Centers for Disease Control and Prevention, Abeokuta, Abeokuta, Ogun State, Nigeria AUGUSTINE OKORUWA, GAIN - Global Alliance for Improved Atlanta, GA, USA BRITANNY SAUNIER, Partnership for Food Safety Education, Nutrition, Abuja, Nigeria Arlington, VA, USA ROSE OMARI, Science and Technology Policy Research Institute, Council for Scientific and Industrial Research (CSIR-STEPRI), RT21 Strengthening the Frontline of Food Safety: Meeting the Growing Cantonments, Ghana **Demand for Competent Auditors, Inspectors, and Assessors** CAROLINE SMITH DEWAAL, Global Alliance for Improved Nutrition, Washington, D.C., USA Organizer: Clint Stevenson MATTHEW STASIEWICZ, University of Illinois, Urbana, IL, USA **Convenors: Janet Buffer, Nicole Arnold T8** Technical Session 8 - Food Fraud, Food Processing Technologies, Food Safety Assessment, Audit and Inspection Food Toxicology, Low-Water Activity Foods, and Physical Hazards Developing Food Safety Professionals and Foreign Material (continued) Communication, Outreach and Education 3:45 NATALIE ADAN, State of Georgia, Atlanta, GA, USA Convenors: Anru Shen, Sarah Smith-Simpson ALLISON JENNINGS, Albertsons Companies, Boise, ID, USA 3:45 T8-07 Effect of Growth Media on the Pressure Resistance of JESSICA JONES, Chick-fil-A, Inc., Atlanta, GA, USA Listeria monocytogenes on Beef and a Plant-Based Meat Alternative PATRICIA MCGEOUGH, Kerry, Beloit, WI, USA THEOCHARIA TSAGKAROPOULOU, Mario González-Angulo, Beatriz STAN OSUAGWU, Home Chef, Chicago, IL, USA Melero Gil, Miriam Ortega Heras, Nikolaos Giannoulis, PHILLIP PIERCE, NSF, Key West, FL, USA Kimon A. G. Karatzas, University of Reading, Reading, UK CLINT STEVENSON, North Carolina State University, Raleigh, NC, USA 4:00 T8-08 Efficacy of Zein-Based Nisin-Loaded Electrospun Nanofibers in Inhibiting Growth of Listeria monocytogenes on Peaches ROWAIDA R.K. KHALIL, Muhammed R. Sharaby, Ahmed E. ElLithy,

Alexandria University, Alexandria, Egypt

4:15 **T8-09** Elucidating the Protective Roles of Desiccation-Related Genes in Shiga-Toxin Producing *Escherichia coli* (STEC) 0121 during Storage in Bleached Flour IAN HINES, Tulsi Patel, Sultana Solaiman, Elizabeth Reed, Maria Hoffmann, Jie Zheng, U.S. Food and Drug Administration – Center for Food Safety and Applied Nutrition, College Park, MD, USA

4:30 **T8-10** Genomic Analysis of *Salmonella* on Wheat Kernels Treated with Lactic Acid over a Six-Month Storage Period DHARAMDEO SINGH, Opeyemi U. Lawal, Nicola Linton, Carlos Leon-Velarde, Lawrence Goodridge, Canadian Research Institute for Food Safety (CRIFS), University of Guelph, Guelph, ON. Canada

4:45

T8-11 Non-Thermal Plasma Technology as Mild Processing Technique: Evaluation of the Applicability for Pasteurization of Foods Utilizing Multi-Hollow Surface Dielectric Barrier Discharge (MSDBD) Plasma
KLAAS DE BAERDEMAEKER, Anton Nikiforov, Lore Castelein, Amber Van Reepingen, Angela Georgievska, Maya Onselaere, Bruno De Meulenaer, Nathalie De Geyter, Frank Devlieghere, Research Unit Food Microbiology and Food Preservation (FMFP), Ghent University, Ghent, Belgium

5:00 T8-12 Pesticide Residue Levels in Tomato Sold in Nairobi Metropolis JOSEPH NGUETTI HONORE, Eric Simon Mitema, Michael Okoth Wandayi, Joseph Wang'ombe, Grace Randolph Delia, University of Nairobi, Nairobi, Center Region, Kenya

#### **EVENING EVENTS**

5:15 p.m. – 6:15 p.m. Tuesday Exhibit Hall Reception

5:30 p.m. - 6:30 p.m., 102BC

**Bangladesh Association for Food Protection in North America** 

5:30 p.m. – 6:30 p.m., 101A Latin America Group Meeting

5:30 p.m. - 6:30 p.m., 101B

Southeast Asia Association for Food Protection Meeting

6:30 p.m. - 7:30 p.m.

President's Reception (by invitation)

Hyatt, Beacon Ballroom

7:00 p.m. – 9:00 p.m., The Cove

Student Mixer



# STUDENT MIXER

7:00 P.M. - 9:00 P.M. at The Cove

We encourage all students to join for snacks, games and networking!

Sponsored by:







# **WEDNESDAY, JULY 17**

ALL DAY			AFTERNOON		
8:30 a.m 3:00 p.m.			1:30 p.m. – 3:30 p.m.		
Hall A	Manageme	sion 3 – Animal and Pet Food Safety, Dairy, Data nt and Analytics, Food Allergens, Food Chemical	104AB	S64	Cultivating Meaty Cells – A Perspective Focus on Food Safety, Regulatory, and Experiences
	Packaging,	ow-Water Activity Foods, Microbial Food Spoilage, Physical Hazards and Foreign Materials, Pre-Harvest y, Produce, and Water	104C	S65	Empowering the Detection and Characterization of Foodborne Pathogens Using Artificial
		igh P3-116 – Authors present 10:00 a.m. – 11:00 a.m.			Intelligence and Advanced Analytical Techniques
		p.m. – 1:00 p.m.	102BC	S66	Training Low-Literacy Groups across Cultures: Balancing Universal Principles and Custom
	P3-117 thro	ough P3-243 – Authors present 11:00 a.m. – 1:00 p.m.			Approaches
MORNING			103BC	S67	Unraveling Pathogen Dynamics: Insights from a
8:30 a.m 12:15 p.m.					Multi-Year Collaborative Longitudinal Study in the Southwest
201A	Т9	Technical Session 9 – Communication Outreach and Education and Food Safety Systems	202BC	S68	New Quantitative Risk Assessment Models for Listeria monocytogenes: Insights and Applications
201B	T10	Technical Session 10 – Beverages and Acid/ Acidified Foods, Epidemiology, and Plant-Based Alternative Products	203BC	S69	From Process to Product: Bio-Mapping and Potential Solutions for Ensuring Poultry Product
8:30 a.m 10:00 a.m.			1014	070	Safety and Sustainability
104AB	S50	Enhancing Consumer Protection: Proactive	101A	S70	Metagenomic Tools for Identifying Eukaryotes and Associated Microbiota in Complex Samples:
		Salmonella Serotyping with Data-Enriched Insights			Challenges and Strategies
104C	S51	and Unified Efforts in Policy, Industry, and Biotech Analytical Challenges in Developing Successful	101B	S71	Microplastics and Nanoplastics: Are They Really Long-Overlooked Food Safety Threats?
1040	301	Risk Management and Control Monitoring Strategies	201A	T11	Technical Session 11 – Dairy and Pre-Harvest
102BC	S52	Listeria monocytogenes in Ice Cream Products -			Food Safety
202BC	S53	Review of OutBreaks and Prevention Activities The Past, Present, and Future of Surrogates for	201B	T12	Technical Session 12 – Antimicrobials
202BC	303	Validating Food Safety Controls	3:30 p.m. – 4:00 p.m.		Refreshments available in 104 Foyer
203BC	S54	Can a One Health Approach be a Roadmap to Reduce Salmonellosis?	4:00 p.m. – 4:45 p.m. 104AB		JOHN H. SILLIKER LECTURE -
101A	S55	Improving Food Safety in Traditional Food Markets: The EatSafe Approach	104AD		"The Future of Food Safety: Future Shock?" Robert Brackett
101B	S56	A Summary of Recent Consumer Food Safety Behavior Research: Takeaways, Challenges, and Next Steps			Vice President and Dean, IEH Academy IEH Laboratories & Consulting Group Herndon, VA, USA
103BC	RT23	Current and Novel Approaches to Food Source Attribution	EVENING EVENTS		
10:00 a.m 10:45 a.m.		Break - Refreshments available in the	6:00 p.m 7:00 p.m.		
		Poster Session Area	Grand Ballroom Foyer		Awards Banquet Reception
10:45 a.m 12:15 p.m.			7:00 p.m. – 10:00 p.m.		
104AB	S57	Focusing on Foodborne Illness: The Science Supporting U.S. Department of Agriculture's Proposed Salmonella Framework	Grand Ballroom		Awards Banquet
104C	S58	From Label to Table: Understanding the USDA's Bioengineering Labeling Rule			
102BC	S59	From Cart to Kitchen: Data-Driven Insights on E-Commerce Food Safety for Delivery			
202BC	S60	Rapid Microbiological Test Methods – Are They Still an Important Part of a Food Processor's Food Safety Program?			
203BC	S61	Wax On Wax Off: Foodborne Pathogen Contamination from Wax Application and Wax Applicators			
101A	S62	Food Safety and Regulatory Considerations for Raw Pet Foods: Challenges and Opportunities			
101B	S63	Flour: Fostering Food Safety – Industry and Regulatory Collaboration to Minimize Health Risks in Raw Flour Products			
103BC	RT24	The Required Evolution of Best Practices Based on Science for Fresh-Cut Produce			
11:45 a.m. – 1:30 p.m.		Lunch available in Hall A			

WEDNESDAY, JULY 17 MORNING		9:00	Prevention Strategies against <i>Listeria monocytogenes</i> in Ice Cream MATTHEW DOYLE, U.S. Food and Drug Administration, College Park,
Posters wi	ll be on display 8:30 a.m. – 6:15 p.m. (see details beginning on page XX)	9:30	MD, USA Resources and Outreach to Help Small Ice Cream Facilities Manage
S50	Enhancing Consumer Protection: Proactive Salmonella Serotyping with Data-Enriched Insights and Unified Efforts in Policy, Industry, and Biotech		Food Safety Risks TIMOTHY STUBBS, Innovation Center for U.S. Dairy, Rosemont, IL, USA
	104AB Organizer and Convenor: Peyman Fatemi Meat and Poultry Safety and Quality Microbial Modelling and Risk Analysis	\$53	The Past, Present, and Future of Surrogates for Validating Food Safety Controls 202BC Organizers: Michele Sayles, Ian Hildebrandt Convenors: Michele Sayles, Ariel Buehler
8:30	Advanced Molecular Analytics  Fostering Synergy Between Science and Policy: Enhancing Salmonella Control and Food Safety Regulations through Serotyping	0.20	Low-Water Activity Foods Food Hygiene and Sanitation
9:00	JOSE EMILIO ESTEBAN, U.S. Department of Agriculture, FSIS-OPHS- EALS, Athens, GA, USA  Translating Salmanalla Right Factors into Canaumar Protection	8:30	History Behind the Surrogate <i>Enterococcus faecium</i> : How the Almond Board of California Met the Challenge of Validating Preventive Controls before the Preventive Control Rules
9.00	Translating Salmonella Risk Factors into Consumer Protection Strategies: Lessons from E. coli SARAH SORSCHER, Center for Science in the Public Interest,	9:00	TIM BIRMINGHAM, Almond Board of California, Modesto, CA, USA Bridging the Gap between Research and Industry: Improving the Utilization of Surrogates for Validating Preventive Controls
9:30	Washington, D.C., USA  Advancement in Salmonella Serotyping Technologies Will Empower	9:30	IAN HILDEBRANDT, Michigan State University, East Lansing, MI, USA Beyond Surrogates for Kill Steps – What Matters in Selecting
	the Food Industry to Further Improve Food Safety RAMIN KHAKSAR, Clear Labs, San Carlos, CA, USA; LOLA CRESPO, Aviagen Inc., Huntsville, AL, USA	3.00	Surrogates for Dry Sanitation?  ABIGAIL B. SNYDER, Cornell University, Ithaca, NY, USA
S51	Analytical Challenges in Developing Successful Risk Management and Control Monitoring Strategies  104C Organizer: Daniele Sohier	\$54	Can a One Health Approach be a Roadmap to Reduce Salmonellosis? 203BC Organizers and Convenors: Kalmia Kniel, Manan Sharma Pre-Harvest Food Safety
	Convenors: Daniele Sohier, Panagiotis Skandamis  Advanced Molecular Analytics  Microbial Modelling and Risk Analysis	8:30	The Commensal vs. Control: Salmonella in Broilers RYAN ARSENAULT, USDA-ARS, Newark, DE, USA
8:30	Applied Laboratory Methods  The Challenges of Methods Uncertainties in Microbial Risk Assessment: A Case Study with Salmonella in Poultry Janell Kause, USDA/FSIS, Manassas, VA, USA; MICHELLE CATLIN,	9:00 9:30	Can Monitoring Salmonella Prevalence in Water Inform One Health Strategies? JONATHAN FRYE, USDA ARS Bacterial Epidemiology & Antimicrobial Resistance Research, Athens, GA, USA How One Health Approaches Reduce Salmonellosis across
9:00	U.S. Department of Agriculture – FSIS, Washington, D.C., USA Advantages and Limits of Analytical Confirmation in the Control Monitoring of Production Plants	3.00	International Borders SIDDHARTHA THAKUR, North Carolina State University, Raleigh, NC, USA
9:30	CATHARINE CARLIN, Mérieux NutriSciences, Chicago, IL, USA Fine Tune STEC Screening: What Could It Bring? RACHEL BINET, U.S. Food and Drug Administration, Center for Food Safety & Applied Nutrition, Office of Regulatory Science, Division of Microbiology, College Park, MD, USA	S55	Improving Food Safety in Traditional Food Markets: The EatSafe Approach 101A Organizers: Caroline Smith DeWaal, Elisabetta Lambertini Convenor: Elisabetta Lambertini Sponsored by the IAFP Foundation
S52	Listeria monocytogenes in Ice Cream Products – Review of Outbreaks and Prevention Activities 102BC		Food Hygiene and Sanitation Retail and Foodservice Fruit and Vegetable Safety and Quality
	Organizer: Matthew Doyle Convenor: Laura Gieraltowski  Dairy Quality and Safety Food Safety Culture Communication, Outreach and Education	8:30	The EatSafe Approach: Designing Interventions to Leverage Consumer Demand and Improve Food Safety in Informal Settings CAROLINE SMITH DEWAAL, Global Alliance for Improved Nutrition, Washington, D.C., USA
8:30	Listeriosis and Ice Cream: Review of Outbreaks in the U.S., 2014–2023 AMANDA CONRAD, Centers for Disease Control and Prevention	9:00	The Enabling Environment: Engaging Stakeholders in Traditional Food Markets AUGUSTINE OKORUWA, GAIN – Global Alliance for Improved Nutrition, Abuja, Nigeria
	(CDC), Atlanta, GA, USA	9:30	Evidence on Intervention Impacts from the EatSafe Program ELISABETTA LAMBERTINI, Global Alliance for Improved Nutrition (GAIN). Washington, D.C., USA

S56	A Summary of Recent Consumer Food Safety Behavior Research: Takeaways, Challenges, and Next Steps 101B Organizer: Sheryl Cates Convenor: Ellen Shumaker	9:30	T9-05 Do You Need a HACCP Health Check? the Importance of Avoiding Groupthink and Complacency to Really Understand the Effectiveness of Your HACCP System CAROL WALLACE, Lone Jespersen, University of Central Lancashire, Preston, UK
	Food Safety Education Communication, Outreach and Education	9:45	T9-06 Exploring Home Food Preservation in Montana: A Quantitative Survey on Practices and Motivations among Home Food Preservers BRIANNA ROUTH, Carla Schwan, Montana State University,
8:30	FSIS's Approach for Using Consumer Behavior Research to Inform Outreach Efforts AARON LAVALLEE, U.S. Department of Agriculture, Food Safety	T10	Bozeman, MT, USA  Technical Session 10 – Beverages and Acid/Acidified Foods,
9:00	and Inspection Service, Washington, D.C., USA  Trends in Consumer Behaviors: Findings from FDA's Food Safety and Nutrition Survey and Other Research		Epidemiology, and Plant-Based Alternative Products  201B  Convenors: Yuqian Lou, Francisco Zagmutt
9:30 RT23	FANFAN WU, Food and Drug Administration, College Park, MD, USA A Look Back and Look Forward: Consumer Food Safety Research in Canada IAN YOUNG, Toronto Metropolitan University, Toronto, ON, Canada  Current and Novel Approaches to Food Source Attribution	8:30	T10-01 Assessing Demand for Food Safety in Traditional Markets: Findings from a Baseline Assessment in Ethiopia ARIEL V. GARSOW, Smret Hagos, Gelila Kebede, Tewodros Zerihun, Genet Gebremedhin, Mohammedyasin Jemal Sormolo, Elisabetta Lambertini, Global Alliance for Improved Nutrition, Washington, D.C., USA
8:30	103BC Organizer: Kis Hale Convenor: Isabel Walls Epidemiology TINE HALD, Technical University of Denmark, Lyngby, Denmark	8:45	T10-02 Analysis of Seasonal Trends in Viruses That Cause Food and Waterborne Illness Using Wastewater-Based Epidemiology CHARLES CHETTLEBURGH, Hailey M. Davidson, Valeria R. Parreira, Marc Habash, Lawrence Goodridge, Canadian Research Institute for Food Safety (CRIFS), University of Guelph, Guelph, ON, Canada
5.50	MATT HURST, Public Health Agency of Canada, Guelph, ON, Canada BEN PASCOE, Ineos Oxford Institute for Antimicrobial Research, Department of Biology, University of Oxford, Oxford, UK DANIEL WELLER, CDC, Atlanta, GA, USA	9:00	T10-03 Brucellosis in Food Animals: Re-Emerging Zoonotic Threat Hashim Alhussain, Ahmed Gawish, Manoj Varghese, Abdulaziz Al-Zyara, Susu Zughaier, Asmaa Al Thani, NAHLA ELTAI, Qatar University, Doha, Qatar
Т9	Technical Session 9 – Communication Outreach and Education and Food Safety Systems 201A Convenors: Mara Burr, Vikas Gill	9:15	T10-04 Consumption Frequency and Preparation Practices for Stuffed Breaded Chicken Products – Minnesota, 2023 ALEXANDRA EDMUNDSON, Craig Hedberg, Melanie Firestone, UMN School of Public Health, Minneapolis, MN, USA
8:30	<b>T9-01</b> Salmonella spp. and Listeria monocytogenes Persistence during Recirculating Hydroponic Cultivation of Leaf Lettuce GAYATRI RAJASHEKHAR DHULAPPANAVAR, Zeynal Topalcengiz, Kristen Gibson, University of Arkansas, Fayetteville, AR, USA	9:30	T10-05 Detection of Beverage Spoilage Microorganisms by a Combination of Metabarcoding and PCR Technologies SHU CHEN, Nicola Linton, Anna Tran, Anli Gao, Kelly Shannon, Carlos Leon-Velarde, Saleema Saleh-Lakha, Susan Lee, Agriculture and Food Laboratory (AFL), University of Guelph, Guelph, ON, Canada
8:45	<b>T9-02</b> Boosting Food Safety in LMICs: A Systematic Review of Critical Training Design Factors HIMADRI PAL, Judy Bettridge, Delia Grace Randolph, Natural Resources Institute, University of Greenwich, Chatham, UK	9:45	T10-06 Preliminary Trends in Reported Human Salmonellosis Cases in Virginia, USA Between 2012–2022 CAROLINE R. YATES, Daniel Weller, Monica Ponder, Jingqiu Liao,
9:00	T9-03 Do Latin American Consumers Intend to Handle Food Safely to Prevent Foodborne Diseases? Raísa Mucinhato, LAÍS ZANIN, Diogo Thimoteo da Cunha,	10:00	Kelsey Holloman, Rachel Cheng, Virginia Tech, Blacksburg, VA, USA  Break - Refreshments available in the Poster Session Area
	Carolina Prates, Ana Lúcia Saccol, Carlos Ramos-Urrea, Angélica Quintero-Flórez, Samuel Duran-Aguero, Karin Carrasco, María José Cuvi, Tannia Arias, Jhon Jairo Roncancio, Claudia Cázarez, Rafael Ramírez, Issis Budovalchew, Gabriela Giribaldi, Elke Stedefeldt, University of São Paulo, Ribeirão Preto, São Paulo, Brazil	\$57	Focusing on Foodborne Illness: The Science Supporting U.S.  Department of Agriculture's Proposed Salmonella Framework  104AB  Convenor: Michelle Catlin  Meat and Poultry Safety and Quality
9:15	<b>T9-04</b> Consumer Communication Works, But It Goes Slowly: Understanding How Consumers and Experts Evaluate Food Risks	10:45	Overview of the Science to Strengthen <i>Salmonella</i> Risk Managemen JANELL KAUSE, USDA/FSIS, Manassas, VA, USA
	WIEKE VAN DER VOSSEN-WIJMENGA, Marcel Zwietering, Eric Boer, Elizabeth Velema, Heidy den Besten, Wageningen University & Research, The Netherlands Nutrition Centre, The Hague, The Netherlands	11:05	Scientific Review: NACMCF Guidance and <i>Salmonella</i> Risk Profile JOHN JAROSH, USDA Food Safety Inspection Service, Alexandria, VA, USA
		11:25	Salmonella Risk Assessments: Leveraging Advanced Analytics and Genomic Data JOANNA ZABLOTSKY-KUFEL, USDA Food Safety and Inspection Service, Washington, D.C., USA

11:45	Back to the Bench: Advancing <i>Salmonella</i> Laboratory Testing and Methods WILLIAM SHAW, USDA Food Safety and Inspection Service, Washington, D.C., USA	S61	Wax On Wax Off: Foodborne Pathogen Contamination from Wax Application and Wax Applicators 203BC Organizers: Govindaraj Dev Kumar, Abhinav Mishra, Nitin Dhowlaghar Convenors: Govindaraj Dev Kumar, Abhinav Mishra, Brenda Kroft
S58	From Label to Table: Understanding the USDA's Bioengineering Labeling Rule 104C		Food Hygiene and Sanitation Fruit and Vegetable Safety and Quality
	Organizers: Wendy White, Amalia Beary, Sonja Jones Convenors: Wendy White, Amalia Beary	10:45	Listeria Survival on Waxed Fruit DUMITRU MACARISIN, U.S. Food and Drug Administration-Center for Food Safety and Applied Nutrition, College Park, MD, USA
	Advanced Molecular Analytics Food Law Food Safety Education	11:15	Interventions for Effective Sanitation of Waxer Brushes FAITH CRITZER, University of Georgia, Athens, GA, USA
10:45	Let's Talk About Labeling: What Does It Mean When Food Says Bioengineered?	11:45	Salmonella Persistence on Wax Treated Vegetables SHIRLEY MICALLEF, University of Maryland, College Park, MD, USA
11:15	SONJA JONES, USDA-FSIS Atlanta District, Locust Grove, GA, USA The Coca-Cola Company's Regulatory Journey Towards BE Labeling Compliance EVA HURT, The Coca-Cola Company, Atlanta, GA, USA	S62	Food Safety and Regulatory Considerations for Raw Pet Foods: Challenges and Opportunities 107A Organizers: Deepa Thiagarajan, Beilei Ge, Janak Dhakal
11:45	The Path to Private Label BE Compliance: A Retailer's Perspective TAMEKA CARR, Kroger, Atlanta, GA, USA		Convenors: Deepa Thiagarajan, Jasmine Kataria, Mary-Grace Danao Animal and Pet Food Safety Meat and Poultry Safety and Quality
S59	From Cart to Kitchen: Data-Driven Insights on E-Commerce Food Safety for Delivery 102BC Organizers: Akhila Vasan, Stan Osuagwu, Julie Abouchar, Angela Sanchez Convenors: Aaron Lavallee, Chip Manuel, Blessing Obioma Retail and Foodservice	10:45	Food Safety Capabilities, Manufacturing Learnings, Best Practices and Beyond for Producing Raw Pet Food STEVEN MOORE, Petsource by Scoular, Omaha, NE, USA
		11:15	Salmonella Pet Food JEANETTE MURPHY, US FDA/Center for Veterinary Medicine, Washington, D.C., USA
10:45	Data Management and Analytics  An Academic Perspective: Food Safety Considerations for Food Delivery  DONALD W. SCHAFFNER, Rutgers University, New Brunswick, NJ, USA	11:45	Safeguarding Raw Pet Food and Safeguarding Pet Owners: Clean and Sustainable Solutions to Meet the Evolving Landscape of Regulatory Governance JANAK DHAKAL, University of Maryland Eastern Shore,
11:15	Leveraging Data to Create Smarter E-Commerce Food Safety ANGELA SANCHEZ, Industry, Nashville, TN, USA; Stan Osuagwu, Home Chef, Chicago, IL, USA	S63	Princess Anne, MD, USA; JASMINE KATARIA, Kerry, Beloit, WI, USA  Flour: Fostering Food Safety – Industry and Regulatory
11:45	Managing Delivery Risks Through People and Processes SARA STARCK, Industry, Arlington, VA, USA; AKHILA VASAN, Uber, Chicago, IL, USA		Collaboration to Minimize Health Risks in Raw Flour Products 101B Organizer: David Clifford Convenors: David Clifford, Mark Moorman, Kent Juliot
S60	Rapid Microbiological Test Methods – Are They Still an Important Part of a Food Processor's Food Safety Program? 202BC Organizer: Robert Ferguson Convenors: Purnendu Vasavada, Robert Donofrio Sponsored by the IAFP Foundation Applied Laboratory Methods Microbial Modelling and Risk Analysis		Low-Water Activity Foods HACCP Utilization and Food Safety Systems
		10:45	FDA's Current Thinking on Flour Safety: Risk Management Strategy APARNA TATAVARTHY, U.S. Food and Drug Administration, College Park, MD, USA
		11:15	Reducing Public Health Risk from Raw Flour Through Novel Technology and Collaboration JULIANY RIVERA CALO, Ardent Mills, Denver, CO, USA
10:45	Food Hygiene and Sanitation  Use of Rapid Methods in Food Safety – A Global Survey  ROOF TO FERDISON Food Of the Marrier Charles BA USA	11:45	Vendor Partnership; Preventive Controls; and Process Enhancements to Reduce Food Safety Risk
11:15	ROBERT FERGUSON, Food Safety Magazine, State College, PA, USA  Current and Future Trends in Rapid Methods in Microbiology  PURNENDU VASAVADA, University of Wisconsin-River Falls, River  Falls, WI, USA		ALEXANDRE PANCHAUD, Nestlé USA, Solon, OH, USA
11:45	Review of Best Practices for In-Plant Use of Rapid Methods  ROBERT DONOERIO Neggen Corporation Lansing MLUSA		

RT24	The Required Evolution of Best Practices Based on Science for Fresh-Cut Produce 103BC Organizer: Eric Wilhelmsen	T10	Technical Session 10 – Beverages and Acid/Acidified Foods, Epidemiology, and Plant-Based Alternative Products <i>(continued)</i> 201B Convenors: Yuqian Lou, Francisco Zagmutt	
	Convenor: Jim Brennan Fruit and Vegetable Safety and Quality Microbial Modelling and Risk Analysis Food Safety Culture	10:45	T10-07 Exploring Microbial Spoilage and Pathogen Growth in Plant and Meat-Based Burgers SOLVEIG LANGSRUD, Birgitte Moen, Solveig Nersten, Merete Rusås Jensen, Valérie Lengard Almli, Nofima, Ås, Norway	
8:30	ANA ALLENDE, CEBAS-CSIC, Murcia, Spain FELICE ARBOISIERE, Dole Food Company, Inc., Pacific Grove, CA, USA DREW MCDONALD, Taylor Fresh Foods, Salinas, CA, USA CHANNAH ROCK, University of Arizona, Maricopa, AZ, USA MATTHEW J. STASIEWICZ, University of Illinois at Urbana-	11:00	T10-08 Sequelae of Foodborne Infections in British Columbia (BC), Canada, 2005–2014 SHANNON MAJOWICZ, Eleni Galanis, Bryn Crandles, Dimitra Panagiotoglou, Marsha Taylor, University of Waterloo, Waterloo, ON, Canada	
Т9	Champaign, Urbana, IL, USA  Technical Session 9 – Communication Outreach and Education and Food Safety Systems (continued)  201A  Convenors: Mara Burr, Vikas Gill	11:15	T10-09 From Anecdotal to Analytical: Correlating Self-Reported Norovirus-Like Illness with NoroSTAT Data Patrick Quade, LEE-ANN JAYKUS, Benjamin Chapman, Rebecca Goulter, Distinguished Professor Emeritus, North Carolina State University, Raleigh, NC, USA	
10:45	T9-07 Food Safety Culture Enhancement: Intervention Implementation in a Case Study with Pre- and Post-Assessment Comparison PAULINE SPAGNOLI, Peter Vlerick, Liesbeth Jacxsens, Ghent University, Ghent, Belgium	11:30	T10-10 Stricken with Chicken: The History of Multi-Jurisdictional Salmonella Clusters Related to Poultry in Canada from May 2017 to December 2023  JOYCE CHENG, Vanessa Morton, Megan Tooby, Courtney R. Smith, Russell O. Forrest, Meghan Hamel, Ashley Kearney, Andrea Nesbitt, Public Health Agency of Canada, Guelph, ON, Canada	
11:00	T9-08 Hands-On Sanitation Programming Development for Small Processors CHRISTINA L. ALLINGHAM, Amanda Kinchla, Clint Stevenson, Robson Machado, Stephanie Cotter, Julie Yamamoto, Lynette Johnston, Kathleen Nicholas, Jason Bolton, University of Massachusetts Amherst, Amherst, MA, USA	11:45	T10-11 Retrospective Analysis of Historical <i>Listeria monocytogenes</i> Clinical and Non-Clinical Isolates from New York State between 2000 and 2021 Reveals Large Numbers of Small Localized Clusters HILAL SAMUT, Damaris V. Mendez-Vallellanes, Hannah Hoyt, Samantha Wirth, Brian Sauders, Maria Ishida, William Wolfgang, Martin Wiedmann, Renato H. Orsi, Cornell University, Ithaca, NY, USA	
11:15	T9-09 Identifying and Addressing Food Safety Inequities in Missouri: A Salmonella Use-Case Using SENS-D, a Sensor-Enabled Decision Support System.  KATE TROUT, Sarah Frost, Thomas Vought, Tim Safranski, Amit Morey, Mahmoud Almasri, Haitao Li, University of Missouri, Columbia, MO, USA	12:00	T10-12 Thou Shall Not Pool: Low Certainty of Evidence and Substantial Heterogeneity Prevail in Systematic Review of Antimicrobial Drug Use in Cattle and Antimicrobial Resistance in Salmonella and Commensal E. coli Daniel Taylor, Jane Pouzou, Solenne Costard, FRANCISCO ZAGMUTT EpiX Analytics, Fort Collins, CO, USA	
11:30	<b>T9-10</b> Identifying Gaps and Opportunities in Home Food Preservation: A Needs Assessment Focusing on Extension Professionals	AFTERNOON		
	KRIS INGMUNDSON, Shauna Henley, H. Lester Schonberger, Amarat Simonne, Virginia L. Brown, Carla L. Schwan, University of Georgia, Athens, GA, USA	S64	Cultivating Meaty Cells – A Perspective Focus on Food Safety, Regulatory, and Experiences 104AB	
11:45	T9-11 Immersive Education: Results and Lessons Learned from Incorporating Innovative Technologies into Food Safety Education Efforts H. Lester Schonberger, ELLEN SHUMAKER, Benjamin Chapman, Renee Boyer, Juliana Ruzante, Department of Agricultural and Human Sciences, North Carolina State University, Raleigh, NC, USA		Organizers: Deepa Thiagarajan, Aaron Pleitner, Tamika Sims, Katie Overbey Convenors: Stephanie Brown, Lily Yang Plant-Based Alternative Products Sanitary Equipment and Facility Design HACCP Utilization and Food Safety Systems	
12:00	T9-12 Understanding the Food Safety Needs of Small and Very Small Processors in the Northeast United States: Food Safety Communicator and Regulator Perspectives ANNIE FITZGERALD, Andrea Gilbert-Eckman, Elizabeth Demmings, Jill Fitzsimmons, Amanda Kinchla, Nicole Richard, Dave Seddon, Luke LaBorde, Elizabeth Newbold, University of Vermont, Burlington, VT, USA	1:30	Understanding the Nitty Gritty: An High-Level Perspective of the FDA Review Process KATIE OVERBEY, U.S. Food and Drug Administration – CFSAN, Rockville, MD, USA	
		2:00	Now We're Growing: Exploring and Expanding Past Pain Points ANDREW PANTANO, Upside Foods, Emeryville, CA, USA	
		2:30	Cell Culture and Novel Products: What's GRAS and What's Achievable NATALIE RAINER, K&L Gates LLP, Chicago, IL, USA	

3:00	Clean vs. Clean: Sanitation, and Hygiene Considerations in the Cell- Culture Environment ANGELA ANANDAPPA, Alliance for Advancing Sanitation and Northeastern University, Glenview, IL, USA	1:30	From Outbreak to Solutions: How a Longitudinal Study is Enhancing Produce Safety in the Southwest CHANNAH ROCK, University of Arizona, Maricopa, AZ, USA and VICKI-LYNNE SCOTT, Scott Resources, Yuma, AZ, USA
S65	Empowering the Detection and Characterization of Foodborne Pathogens Using Artificial Intelligence and Advanced Analytical Techniques	2:00	A Novel Low-Cost Approach for Assessing Pathogen Persistence in Air JULIE ANN KASE, U.S. Food and Drug Administration, College Park, MD, USA
	104C Organizers and Convenors: Vijay Juneja, Luyao Ma Sponsored by the IAFP Foundation Data Management and Analytics	2:30	Diversity and Seasonality of STEC and <i>Salmonella</i> in Irrigation and Surface Water REBECCA L. BELL, U.S. Food and Drug Administration, Center for Food Safety and Applied Nutrition, College Park, MD, USA
	Applied Laboratory Methods Microbial Modelling and Risk Analysis	3:00	Utilizing Metagenomics to Assess the Impact of Adjacent Land Use SUSAN LEONARD, U.S. Food and Drug Administration, Laurel, MD, USA
1:30	The Role of Machine Learning-Driven Framework in the Foodborne Disease Surveillance System SHALINI SEHGAL, University of Delhi, New Delhi, India	S68	New Quantitative Risk Assessment Models for Listeria monocytogenes: Insights and Applications 202BC
2:00	Applications of Advanced Data Analytical Techniques to Predict Microbial Behavior for Improved Food Safety ABANI PRADHAN, University of Maryland, College Park, MD, USA		Organizer: Moez Sanaa Convenor: Ursula Gonzales-Barron Microbial Modelling and Risk Analysis
2:30	Predicting the Growth Patterns of Foodborne Pathogens Using Raman Spectroscopy, Data Mining, and Machine Learning KENTO KOYAMA, Hokkaido University, Sapporo, Japan		Fruit and Vegetable Safety and Quality Seafood Safety and Quality
3:00	The Future of Food Safety Systems and Decision-Making as Al- Based Pathogen Detection Methods Scale CLAIRE ZOELLNER, iFoodDS, Seattle, WA, USA	1:30	Quantitative Microbial Risk Assessment of Listeriosis: Are Data Enough? URSULA GONZALES-BARRON, Centro de Investigação de Montanha (CIMO), Instituto Politécnico de Bragança, Bragança, Portugal
S66	Training Low-Literacy Groups Across Cultures: Balancing Universal Principles and Custom Approaches  102BC Organizers: Elisabetta Lambertini, Caroline Smith DeWaal	2:00	Updated Hazard Characterization Models for <i>Listeria</i> monocytogenes: Incorporation of Specific Virulence Profiles MOEZ SANAA, Department Nutrition and Food Safety, World Health Organization, Geneva, Switzerland
	Convenors: Elisabetta Lambertini, Ariel V. Garsow Food Safety Education International Food Protection Issues Developing Food Safety Professionals	2:30	New Quantitative Risk Assessment Models of <i>Listeria</i> monocytogenes in Frozen Vegetables, Cantaloupe and RTE Seafood JULIANA DE OLIVEIRA MOTA, World Health Organization, Geneva, Switzerland
1:30	Food Safety Training Approaches for Low-Literacy Audiences ELIZABETH BIHN, Cornell University, Ithaca, NY, USA	3:00	How Can Risk Managers Make the Most of the WHO QRA Shiny Applications? VASCO CADAVEZ, Polytechnic Institute of Braganza, Braganza, Portugal
2:00	Training Food Vendors in Traditional Markets in LMICs AUGUSTINE OKORUWA, GAIN — Global Alliance for Improved Nutrition, Abuja, Nigeria	S69	From Process to Product: Bio-Mapping and Potential Solutions for Ensuring Poultry Product Safety and Sustainability
2:30	Measuring Outcomes of Food Safety Training for Growers in Latin America CLARE NARROD, JIFSAN; University of Maryland, College Park, MD, USA		203BC Organizer: Rigo Soler Convenors: Ravirajsinh Jadeja, Saurabh Kumar
3:00	Strengthening Food Safety Outcomes Through Community-Led Women's Leadership Programs in Cambodia JESSIE VIPHAM, Kansas State University, Manhattan, KS, USA		Sponsored by the IAFP Foundation  Meat and Poultry Safety and Quality  Microbial Modelling and Risk Analysis  Retail and Foodservice
S67	Unraveling Pathogen Dynamics: Insights from a Multi-Year Collaborative Longitudinal Study in the Southwest 103BC Organizers: Channah Rock, Julie Ann Kase, Rebecca L. Bell	1:30	Understanding the Poultry Supply Chain Through the Lens of Bio Mapping; Salmonella and Indicator Microorganisms MARCOS SANCHEZ, International Center for Food Industry Excellence (ICFIE), Texas Tech University, Lubbock, TX, USA
	Convenors: Eric Brown, Vicki-Lynne Scott  Fruit and Vegetable Safety and Quality  Water Safety and Quality	2:00	Needs Assessment for Food Safety Solutions in Poultry Products HARSHAVARDHAN THIPPAREDDI, University of Georgia, Athens, GA, USA
	Water Safety and Quality Applied Laboratory Methods	2:30	Significance of Quantifying <i>Salmonella</i> in Raw Poultry MANPREET SINGH, University of Georgia, Athens, GA, USA
		3:00	Clean and Sustainable Solutions for Improving the Safety and Shelf Life of Poultry JASMINE KATARIA, Kerry, Beloit, WI, USA

S70	Metagenomic Tools for Identifying Eukaryotes and Associated Microbiota in Complex Samples: Challenges and Strategies 101A Organizers: Monica Pava-Ripoll, Padmini Ramachandran, Jesse Miller Convenors: Padmini Ramachandran, Jesse Miller	2:00	T11-03 Microbiological Risk Assessment of Biological Soil Amendments of Animal Origin and Corn Steep Liquor on the Attenuation of Escherichia coli in Organic Romaine Lettuce Production of California's Low Desert Region: 2022–2023 Seaso CUONG NGUYEN, Peiman Aminabadi, Zirui Ray Xiong,	
	Applied Laboratory Methods Advanced Molecular Analytics		Gilberto Magallon, Anna Zwieniecka, Mayela Castaneda, Jairo Diaz-Ramirez, Manan Sharma, Michele Jay-Russell, University of California-Davis, Davis, CA, USA	
1:30	Metagenomics for Arthropod Identification in Foods MONICA PAVA-RIPOLL, U.S. Food and Drug Administration, Center for Food Safety and Applied Nutrition, Office of Food Safety (OFS), College Park, MD, USA	2:15	T11-04 Prevalence of Shiga-Toxin Producing <i>Escherichia coli</i> and <i>Salmonella</i> in Pecan Orchards under Regenerative Agriculture Management ROSHAN PASWAN, Sulav Indra Paul, Nikki Charlton, Lauren B. Jones,	
2:00	Sequencing Strategies to Detect Potential Pathogens in Production of Insects Used in Food and Feed BRENDA OPPERT, USDA-ARS Center for Grain and Animal Science	0.00	Amy Bridges, Li Maria Ma, Oklahoma State University, Stillwater, OK, USA	
2:30	Research, Manhattan, KS, USA  Assessing the Ability of Shotgun Metagenomics to Detect Foodborne Protozoan Parasites in Irrigation Water Samples KERRY COOPER, The University of Arizona, Tucson, AZ, USA	2:30	T11-05 Random Forest Models of Meteorological and Soil Health Effects on Presence of Generic <i>E. coli</i> in Fresh Produce Fields Grazed by Small Ruminants SEJIN CHEONG, Carolyn Chandler-Khayd, Sequoia Williams, Amelie Gaudin, Peiman Aminabadi, Michele Jay-Russell,	
3:00	The Changing Landscape of Genomics for Animal and Food Safety JESSE MILLER, Neogen, Lansing, MI, USA		Emily Evans, Lee Klossner, Paulo Pagliari, Patricia Millner, Annette Kenney, Fawzy Hashem, Alda Pires, University of California-Davis, Davis, CA, USA	
S71	Microplastics and Nanoplastics: Are They Really Long-Overlooked Food Safety Threats?  1018	2:45	T11-06 Risk Factors for Foodborne Pathogen Occurrence in the Production of Horticultural Food Crops in Ireland CATHERINE (KAYE) BURGESS, Elena-Alexandra Alexa,	
	Organizers: Yifan Cheng, Xuetong Fan, Tracie Sheehan Convenors: Xuetong Fan, Tracie Sheehan, Yifan Cheng		Michael Arthur, Amy McKenna, Michael Gaffney, Teagasc Food Research Centre, Ashtown, Dublin, Ireland	
	Food Packaging Food Chemical Hazards and Food Allergy Physical Hazards and Foreign Material	3:00	T11-07 Survival of <i>Salmonella</i> and Generic <i>Escherichia coli</i> on Agricultural Ground Covers ALYSSA ROSENBAUM, Alexis M. Hamilton, Steven L. Rideout,	
1:30	Advances in Methodologies for Recovering and Characterizing Micro- and Nanoplastics JUSTIN M. GORHAM, National Institute of Standards and Technology, Gaithersburg, MD, USA	3:15	Laura K. Strawn, Virginia Tech, Blacksburg, VA, USA  T11-08 Understanding Climate-Sensitive Food Safety Risks of Pre- Harvest Foods in North America and Europe: A Scoping Review	
2:00	Evidence of Health Risks From Exposure to Micro- and Nanoplastics in Foods		BRENDA ZAI, Shefali Panicker, Victoria Ng, Andrew Papadopoulos, Ian Young, Lauren Grant, University of Guelph, Guelph, ON, Canada	
2:30	SARA BENEDÉ, Spanish National Research Council, Madrid, VA, Spain Enzymatic Mitigation of Micro- and Nanoplastics	T12	Technical Session 12 – Antimicrobials  201B  Convenors: Jessica Chen, Lynne McLandsborough	
3:00	SONIA SU, Cornell University, Ithaca, NY, USA  Regulatory Science Perspective on the Analysis of Microplastics and Nanoplastics in Food STACEY WIGGINS, U.S. Food and Drug Administration, College Park, MD, USA	1:30	T12-01 Antibiotic Susceptibility Profiles and Pathogenic Potential of Shewanella spp. Isolated from Oysters and Seawater Collected from the Mid-Atlantic Region TAHIRAH JOHNSON, Trenton Collins, Gary Richards, Salina Parveen University of Maryland Eastern Shore, Princess Anne, MD, USA	
T11	Technical Session 11 – Dairy and Pre-Harvest Food Safety 201A Convenors: Quynh-Nhi Le, Jovana Kovacevic	1:45	<b>T12-02</b> Lipopeptide Biosurfactants as Potential Natural Preservatives against Food Spoilage Fungi ANA SOUSA, Konstantina Kourmentza, Paula Jauregi,	
1:30	T11-01 Aggregative Soil Sampling Shows Promising Indicator Organism Recovery in Comparison to Grab Soil Sampling from Commercial Romaine Fields JIAYING WU, Jorge Quintanilla Portillo, Rachel Gathman, Matthew J. Stasiewicz, University of Illinois at Urbana-Champaign,	2:00	Kimon-Andreas Karatzas, University of Reading, Reading, UK  T12-03 Next-Generation Probiotics as Antibiotic Alternatives for Controlling Campylobacter Infections in the Food Chain YOSRA A. HELMY, Bibek Lamichhane, Ilhem Messaoudi Powers, University of Kentucky, Lexington, KY, USA	
1:45	Urbana, IL, USA  T11-02 Genomic Insights and Phenotypic Profiles of Novel Lactic Acid Bacteria Isolated from Artisanal Cheese for Use as Starter Cultures GABRIELLA GEPHART, Ahmed Abdelhamid, Ahmed Yousef, The Ohio State University, Columbus, OH, USA	2:15	T12-04 Oral Supplementation of Trans Cinnamaldehyde Reduces Colonization of <i>Listeria monocytogenes</i> in Guinea Pigs and Downregulates Expression of Virulence Proteins CHETNA SHAH, Trushenkumar Shah, Sierra Dean, Neha Mishra, Abhinav Upadhyay, University of Connecticut, Storrs, CT, USA	

2:30 T12-05 Resistome Dynamics in Atlantic Salmon from Norway and

> PIMLAPAS LEEKITCHAROENPHON, Adikrishna Mohan, Frederik Møller, Stephanie Linehan, Samantha White, Håkon Kaspersen, Ottavia Benedicenti, Thomas Haverkamp, Snorre Gulla, Arne Holst-Jensen, Frank Møller Aarestrup, Research Group for Genomic Epidemiology, National Food Institute, Technical University of Denmark, Kgs. Lyngby, Denmark

- T12-06 Sanitizer Solution Susceptibility of Escherichia coli 0157:H7 2:45 Recovered from Inoculated Romaine Lettuce after Simulated Source or Forward Processing Conditions QIAO DING, Ganyu Gu, Yishan Yang, Yaguang Luo, Xiangwu Nou, Shirley Micallef, University of Maryland, College Park, MD, USA
- T12-07 Sodium Selenite Exhibits Antivirulence Effect on Listeria 3:00 monocytogenes In Vitro DIVYA JOSEPH, Poonam Gopika Vinayamohan, Sophia Anderson, Leya Susan Viju, Kumar Venkitanarayanan, University of Connecticut, Storrs, CT, USA
- 3:15 T12-08 Water in Cyclomethicone Emulsions are an Effective Non-Aqueous-Based Sanitizer against Salmonella enterica Enteritidis Galaxie Story, Shihyu Chuang, LYNNE MCLANDSBOROUGH, University of Massachusetts Amherst, Amherst, MA, USA

4:00 p.m. - 4:45 p.m. 104AB

John H. Silliker Lecture "The Future of Food Safety: Future Shock?"



ROBERT BRACKETT Senior Vice President and Dean, IEH Academy IEH Laboratories & Consulting Group, Herndon, Virginia, USA

6:00 p.m. - 7:00 p.m. **Awards Banquet Reception,** Grand Ballroom Foyer 7:00 p.m. - 10:00 p.m. **Awards Banquet** 

Grand Ballroom



### JOHN H. SILLIKER LECTURE



CLOSING SESSION
WEDNESDAY, JULY 17
4:00 P.M.-4:45 P.M.

#### ROBERT BRACKETT

Senior Vice President and Dean, IEH Academy
IEH Laboratories & Consulting Group, Herndon, VA

Dr. Robert E. Brackett has more than 35 years of experience in food safety research, training, and policy. Dr. Brackett currently serves as Senior Vice President and Dean of the Institute for Environmental Health (IEH) Academy, based in Herndon, Virginia. In this capacity, he leads a group of subject matter experts responsible for training and course development in food safety and food processing. In addition, he contributes to the IEH Laboratory and Consulting Group as a subject matter expert in food safety and policy.

Prior to joining IEH, Dr. Brackett served at IIT (Illinois Institute of Technology) in simultaneous roles as Vice President at the university level and as Executive Director of the Institute for Food Safety and Health (a research institute within IIT). He also served as Senior Vice President and Chief Science and Regulatory Officer for the Washington, D.C. - based Grocery Manufacturers Association (GMA - now known as Consumer Brands Association). Before joining GMA, Dr. Brackett was with the U.S. Food and Drug Administration's Center for Food Safety and Applied Nutrition (FDA CFSAN), joining in 2000 as a senior microbiologist in the Office of Plant and Dairy Foods and Beverages. After several promotions, he was appointed CFSAN Director, where from 2004-2007 he provided executive leadership to CFSAN's development and implementation of programs and policies relative to the composition, quality, safety, and labeling of foods, food and color additives, dietary supplements, and cosmetics. Earlier in his career, he held professor positions with North Carolina State University in Raleigh and the University of Georgia in Athens.

An active Member of IAFP since 1979, Dr. Brackett has been a member of several Professional Development Groups (PDGs) and has served on numerous award selection committees. He also served on the *Journal of Food Protection's* Editorial Board from 2000–2017. Dr. Brackett served as IAFP President in 1998 and received the Fellow Award in 2005 and the President's Recognition Award in 2012.

Dr. Brackett earned a doctorate in food microbiology from the University of Wisconsin – Madison.

### "The Future of Food Safety: Future Shock?"

Over the past half century, food safety has made great strides, thanks in large part to technological and analytical advancements. During this same 50+ year timeframe, we have also experienced major and rapid changes in other areas of life. We have experienced major changes in society, including the expansion of social media, communications, entertainment, laws and regulations, business and education, technology, and analytical capability. While one may at first not be able to see the connection between these changes and food safety, they have in fact impacted food safety, both in terms of benefitting but also hindering the advancements in food safety. So, what specifically are these changes that we've seen and how are they related to food – and in particular food safety? Some examples of rapid changes that affect food safety follow.

One of the most impactful changes which we need to consider is social change and, specifically, the role of social media. On one hand, social media has enabled food safety professionals to connect and interact with both existing and new colleagues in ways never before possible. This has allowed individuals to more quickly share and adopt new information. On the other hand, social media has also enabled more rapid dissemination of misinformation and food safety myths. Consequently, there is a need going forward to think more critically about the information to which one is subjected.

Another area in which rapid change is impacting food safety is technology, both digital and analytical. The combination of a faster internet, molecular biochemical methods, and automation has and will continue to enable us to identify foodborne pathogens faster and more accurately than food safety professionals in the 1960s could have possibly imagined. However, it is important not to lose focus on the basics and be forever chasing the "next big thing" in food safety technologies. This will result in students not acquiring essential basic food safety knowledge and food safety veterans perpetually feeling like they are falling behind and can never catch up.

So, that leaves us to ask the question: How do we cope with rapid changes and not leave food safety professionals and consumers behind? Perhaps we need a new paradigm on how to communicate and execute 21st century food safety. If we are to deal with rapid change, particularly as it applies to food safety, we must first recognize that this can and likely will profoundly affect how people view food safety. The new paradigm likewise demands changes in our most fundamental thinking on food safety. We must find a way to adopt and understand the new, cutting-edge technologies while at the same time not forgetting the basics that have been and will continue to be foundational to food safety. This starts with educating future generations of scientists and imparting an appreciation for the underpinnings of applied science, such as microbiology, chemistry, and toxicology. With those basics as a foundation, advanced technologies will become more meaningful and useful.

#### JOHN H. SILLIKER

Dr. John H. Silliker founded Silliker Laboratories in 1967, now known as Mérieux NutriSciences with more than 75 locations in 18 countries. Throughout his 50-year IAFP Membership, Dr. Silliker received the Harold Barnum Industry Award and the IAFP Honorary Life Membership Award. He passed away in 2015.



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#### **POSTER SESSION 1**

MONDAY, JULY 15 • 8:30 a.m. - 6:15 p.m.

**Communication Outreach and Education** 

**Food Defense** 

**Food Fraud** 

**Food Law and Regulation** 

**Food Processing Technologies** 

**Food Safety Systems** 

**Laboratory and Detection Methods** 

**Retail and Food Service Safety** 

Sanitation and Hygiene

Seafood

**Viruses and Parasites** 

Exhibit Hall

P1-01 through P1-185 – Authors present 10:00 a.m. – 11:30 a.m. and 5:15 p.m. – 6:15 p.m. P1-186 through P1-306 – Authors present 2:15 p.m. – 3:45 p.m. and 5:15 p.m. – 6:15 p.m.

#### **POSTER SESSION 2**

TUESDAY, JULY 16 • 8:30 a.m. - 6:15 p.m.

**Antimicrobials** 

**Beverages and Acid/Acidified Foods** 

**Epidemiology** 

**Food Toxicology** 

**General Microbiology** 

Meat, Poultry and Eggs

**Modeling and Risk Assessment** 

**Molecular Analytics, Genomics and Microbiome** 

**Plant-Based Alternative Products** 

Exhibit Hall

P2-01 through P2-146 – Authors present 10:00 a.m. – 11:30 a.m. and 5:15 p.m. – 6:15 p.m. P2-147 through P2-288 – Authors present 2:15 p.m. – 3:45 p.m. and 5:15 p.m. – 6:15 p.m.

#### **POSTER SESSION 3**

WEDNESDAY, JULY 17 • 8:30 a.m. - 3:00 p.m.

**Animal and Pet Food Safety** 

**Dairy** 

**Data Management and Analytics** 

**Food Allergens** 

**Food Chemical Hazards** 

**Low-Water Activity Foods** 

Microbial Food Spoilage

**Packaging** 

**Physical Hazards and Foreign Materials** 

**Pre-Harvest Food Safety** 

**Produce** 

Water

Hall A

P3-01 through P3-116 - Authors present 10:00 a.m. - 11:00 a.m. and 12:00 p.m. - 1:00 p.m. P3-117 through P3-243 - Authors present 11:00 a.m. - 1:00 p.m.

#### MONDAY, JULY 15 8:30 a.m. - 6:15 p.m.

P1 Poster Session 1 – Communication Outreach and Education, Food Defense, Food Fraud, Food Law and Regulation, Food Processing Technologies, Food Safety Systems, Laboratory and Detection Methods, Retail and Food Service Safety, Sanitation and Hygiene, Seafood, and Viruses and Parasites

#### Exhibit Hall

P1-01 through P1-185 – Authors present 10:00 a.m. – 11:30 a.m. and 5:15 p.m. – 6:15 p.m.

P1-186 through P1-306 – Authors present 2:15 p.m. – 3:45 p.m. and 5:15 p.m. – 6:15 p.m.

#### **Communication Outreach and Education**

- P1-01 Food Safety Risk Perceptions Foodborne Illness is Serious, But I'm Not Going to Get Sick – SHERYL CATES, Jenna Brophy, Esha Shah, Aaron Lavallee, Meredith Carothers, RTI International, Research Triangle Park, NC, USA
- P1-02 A Publicly Available International Foodborne Outbreak Database, Why Would I Use That? Overview and Descriptive Analysis of Five Years of Requests — AUSTYN BAUMEISTER, Public Health Agency of Canada, Guelph, ON, Canada
- P1-03 Consumers' Reflections on *Poisoned*: A Content Analysis of the YouTube Comments on the Documentary Trailer Autumn Stoll, FANNY GOZZI, Yaohua (Betty) Feng, Purdue University, West Lafayette, IN. USA
- P1-04 Cultivating Education: A Framework for Sustainable Mid-Day
  Meal Accessibility through Student-Maintained Rooftop Gardens
  in Primary Schools of Bangladesh TANVIN MAHTUB FARIHA,
  Sowmik Roy, Mustafizur Rahman, Department of Architecture,
  Bangladesh, Bangladesh
- P1-05 Preliminary Efficacy and Acceptability of an Avatar-Based Mobile Phone App Promoting Food Safety Education in YBMSM Living with HIV SIERRA UPTON, Lauren Tietje, Kara Herrera, Casey Luc, Jeb Jones, Meaghan Woody, E. Lisa Chung, Sangyoon Lee, Mark Dworkin, University of Illinois at Chicago, Chicago, IL, USA
  - Evaluation of the Southern Center for FSMA Training and Lead Regional Coordination Center - PEGGY GEREN, Keith Schneider, Renee Goodrich, Matthew Krug, Matt Benge, Taylor O'Bannon, Armitra Jackson-Davis, Lamin Kassama, E'licia Chaverest, Camila Rodriguez, Jean Weese, Amanda Philyaw Perez, Natasha Cureau, Iris Crosby, Chad Carter, Julie Northcutt, Kimberly Baker, Kelly Johnson, Brooke Horton, Keawin Sarjeant, Harriett Paul, Ramkrishnan Balasubramanian, Juan Carlos Rodriguez, Cesar Rodriguez, Laurel Dunn, Katelynn Stull, Amy Harder, Paul Priyesh-Vijayakumar, Melissa Newman, Achyut Adhikari, Kathryn Fontenot, Juan Silva, Joy Anderson, Frank Louws, Elena Rogers, Otto Simmons, Lynette Johnson, Benjamin Chapman, Kim Butz, Ravirajsinh Jadeja, Rodney Holcomb, William McGlynn, Lynn Branderberger, Lynette Orellana, Maria Plaza, Jose La torre, Edna Negron, Jose Zamora, Carlos Rosario, Annette Wszelaki, Mark Morgan, Robert Williams, Alivar Cyrus Fouladkhah, Thomas Taylor, Alejandro Castillo, Joseph Masabni, Barrett Vaughan, Fatemeh Malekian, Chelsea Triche, Laura K. Strawn, Amber Vallotton, Joell Eifert, Veerachandra Yemmireddy, Tamra Tolen, Joshua Dawson, Michelle Danyluk, University of Florida CREC, Lake Alfred, FL, USA

- P1-07 An Evaluation of Food Safety Training Needs for Food Processors
  Through the Lens of Industry Professionals and Regulators in North
  Carolina CHARISSE BAUTISTA, Kathleen Nicholas, Alexander
  Chouljenko, Clint Stevenson, Lynette Johnston, North Carolina State
  University, Raleigh, NC, USA
- P1-08 Transforming a Grower Needs Assessment into a Worker Training Toolkit ANGELA FERELLI GRUBER, Adrian Aguirre, Pamela Martinez, Anastasia Hames, John Chamberlain, Amy Muise, Nicole Cook, Shauna Henley, The Acheson Group, Bigfork, MT, USA
- P1-09 Assessments of Need for Produce Safety Educational Resources for Non-English Speaking Produce Growers in the Midwest SHANNON COLEMAN, Angelina Adjetey, Djemima Mulonda, Smaranda Andrews, Manreet Bhullar, Sagar Pokhrel, Londa Nwadike, Melissa Cater, Iowa State University, Ames, IA, USA
- P1-10 Louisiana Food Retailer Specialized Processing Methods eLearning Curriculum – YEIMI JULIETH MENDOZA MENCIAS, Evelyn Watts, LSU, Baton Rouge, LA, USA
- P1-11 Assessment of Food Safety Training Barriers for Underserved Value-Added Virginia Producers — MADDYSON FRIERSON, Liv Huselton, Katheryn Parraga, Chyer Kim, Alexis M. Hamilton, Virginia Tech, Food Science and Technology, Blacksburg, VA, USA
- P1-12 Food Safety Culture Perception of the Brazilian Health Surveillance Inspectors — Letícia Ferrigolo Dalla Corte, Maíra de Oliveira Penna, LAÍS MARIANO ZANIN, Ana Lúcia Saccol, University of São Paulo, Ribeirão Preto, São Paulo, Brazil
- P1-13 An Exploration of Doctoral Student Experiences of Recruiting Foodhandlers from Food Manufacturing and Food Service Sector Businesses for Food Safety Culture Research Ellen Evans, Alin Turila, Emma Samuel, Laura Hewitt, Omotayo Irawo, Veronika Bulochova, HELEN TAYLOR, David Lloyd, Elizabeth C. Redmond, ZER02FIVE Food Industry Centre, Cardiff Metropolitan University, Cardiff, Wales, UK
- P1-14 Consumer Perspectives on Using Meal-Kit Boxes: A Mixed Methods
  Approach to Understanding Food Safety Naomi J. Melville,
  Elizabeth C. Redmond, Joseph E. B. Baldwin, David Lloyd, HELEN
  TAYLOR, Ellen Evans, ZERO2FIVE Food Industry Centre, Cardiff
  Metropolitan University, Cardiff, Wales, UK
- P1-15 A Study to Determine the Barriers of Operating an Effective Internal Audit System Within Wales's Food and Drink Manufacturing Sector HELEN TAYLOR, ZERO2FIVE Food Industry Centre, Cardiff Metropolitan University, Cardiff, Wales, UK
- P1-16 Florida's Extension Programs Prepare Produce Growers for Produce Safety Rule Inspection CLARA DIEKMAN, Micah Gallagher, Kirby Quam, Chelsea Peebles, Keith Schneider, Renee Goodrich, Michelle Danyluk, Taylor O'Bannon, University of Florida CREC, Lake Alfred, FL, USA
- P1-17 Exploring Knowledge, Attitudes, and Beliefs for Optimizing Food Safety Communication SARA BRESEE, Everett Long, Kelsey Schwarz, Caroline Morrison, Sarah Divya, CDC, Atlanta, GA, USA
- P1-18 Assessment of YouTube Videos for Vegetable Home Fermentation
  Misinformation JASMINE WILLIAMS, Sujan Acharya, Catherine Cutter,
  Luke LaBorde, Penn State University, University Park, PA, USA
- P1-19 Evaluating Digital Accessibility of Ohio State University Extension's Home Food Preservation Fact Sheets — ALLISON HOWELL, Kate Shumaker, Nicole Arnold, The Ohio State University, Columbus, OH, USA

P1-06

- P1-20 Improving User Experiences (UX) with Food Safety Materials
  Developed by Agricultural Commodity Group: A Case Study of the
  Almond Industry HAN CHEN, Tim Birmingham, Guangwei Huang,
  Yaohua (Betty) Feng, Purdue University, West Lafayette, IN, USA
- P1-21 Project Expressing: A Qualitative, Quantitative, and Thermometry Study of the Hygiene Challenges Associated with Expressing Breastmilk in the Workplace Ellen Evans, Sophia Komninou, SANJA ILIC, The Ohio State University, Columbus, OH, USA
- P1-22 A Global Review of Foodborne Disease Incidence and Definitions
  Used by Food Safety Agencies to Determine Who are the Clinically
  Vulnerable Groups? Ellen Evans, Florian Diekmann, SANJA ILIC,
  The Ohio State University, Columbus, OH, USA
- P1-23 Development of Exciting Citizen Science Approaches to Investigate and Improve Home Food Safety Practices Ellen Evans, Sharon Mayho, Alys Harrop, SANJA ILIC, The Ohio State University, Columbus, OH, USA
- P1-24 Food Safety Practices among Consumers and Food Retailers in Three Districts of Buenos Aires City after COVID 19 Pandemic: Analysis of Consumer Interview Findings and Observations from Food Safety Experts FABIANA GUGLIELMONE, Nancy Toribio, Paola Aldegani, Ximena Aguirre, Natalia Andrade, Laura Martinez, Unilever, Global Quality Expertise, Buenos Aires, Buenos Aires, Argentina
- P1-25 Trends in Consumer Behavior Research: Key Findings to Improve Consumer Food Safety Practices Lisa Shelley, JACLYN MERRILL, Catherine Sander, Aaron Lavallee, Meredith Carothers, Sheryl Cates, Catherine Viator, Department of Agricultural and Human Sciences, North Carolina State University, Raleigh, NC, USA
- P1-26 Exploring Illnesses Reporting Practices among Foodservice Employees — PEI LIU, Yee Ming Lee, University of Missouri-Columbia, Columbia, MO, USA
- P1-27 A Qualitative Study on Tools to Practice Food Safety on Farm to Minority Farmers: A Case Study of Hmong Farmers in Missouri PEI LIU, Touria Eaton, University of Missouri-Columbia, Columbia, MO, USA
- P1-28 A Pilot Survey of Athens-Clarke County, Georgia Community Food Environments and Food-Related Behaviors SITARA CULLINAN, Bradley Averill, Dulce M. Minaya, Kaitlyn Casulli, Kris Ingmundson, Carla L. Schwan, Department of Nutritional Sciences, University of Georgia, Athens, GA, USA
- P1-29 Food Safety Recommendation for Traditional Fermented Food for Small-Scale Producers: Injera as a Model — ANN CHARLES VEGDAHL, Randy Worobo, Cornell University, Geneva, NY, USA

#### **Food Defense**

- P1-30 A Multiplex Digital PCR Method for Screening All EU-Authorized GMO Events for Food and Feed JOANA DIOGO, Inês Santos, Maria Fonseca, João Melo, Joana Cruz, Competence Centre for Molecular Biology, SGS Portugal, Lisbon, Portugal
- P1-31 Exposure of Soybean to Wildfire Nanoparticles (WFPMs) Leads to High Levels of PAHs in Soybean NASSIFATOU TITTIKPINA, Georgios Kelesidis, Christian Dimkpa, Philip Demokritou, Jason White, The Connecticut Agricultural Experiment Station, New Haven, CT, USA
- P1-32 Review of Three Years of Comprehensive Active Surveillance
  Program (CASPr) in Detection and Identification of Foodborne
  Pathogens SHARLANDA KHOSRAVI, Kelli Montanez, U.S.
  Department of Defense, Food Analysis and Diagnostics Laboratory,
  San Antonio, TX, USA

#### **Food Fraud**

- P1-33 Development of a PCR-Based Lateral Flow Immunoassay for the Identification of Rainbow Trout Ingredient in Foods YIHAN HE, Marti Hua, Wenjie Zheng, Xiaonan Lu, McGill University, Sainte-Anne-de-Bellevue, QC, Canada
- P1-34 Use of DNA Barcoding to Detect Adulteration in Ginseng Supplements — DIANE KIM, Adri Ten Cate, Donna Miranda-Romo, Rosalee Hellberg, Chapman University, Orange, CA, USA
- P1-35 Using Foodomics for Food Authentication: The Case of Grass-Finished Beef — LUCAS KRUSINSKI, Rosalee Hellberg, Stephan van Vliet, Chad Bitler, Jason Rowntree, Jenifer Fenton, Chapman University, Orange, CA, USA
- P1-36 Quality Comparison in Phenol Content and Antioxidant Activity of Different Oolong Teas: Application of Chemometrics SUSHANT KAUSHAL, Ho-Hsien Chen, Department of Tropical Agriculture and International Cooperation, National Pingtung University of Science and Technology, Pingtung, Taiwan

#### **Food Law and Regulation**

- P1-37 The Role of Microbiological Criteria Worldwide in Controlling the
  Possible Incoming Outbreaks of Shiga-Toxin Producing *Escherichia coli*(STEC) Notably the Strain O157 from Food Matrix MESHARI AHMED
  ALHADLAQ, SFDA Complex Laboratories, Riyadh, Saudi Arabia
- P1-38 Health Canada Risk Analysis of Shiga Toxin-Producing *Escherichia coli* (STEC) in Canada: STEC and Food Commodities of Concern Marie Breton, Marie-Claude Lavoie, Geneviève Coulombe, Kathryn Storey, MARTIN DUPLESSIS, Health Canada, Ottawa, ON, Canada

#### **Food Processing Technologies**

- P1-39 The Inactivation of Salmonella in All-Purpose and Almond Flour Brownies Cooked via Air Fryer Technology KALA MORRIS, Courtlone Glaspie, Ainsley Jessup, Shecoya White, Mississippi State University, Mississippi State, MS, USA
- P1-40 Effects of Temperature Distribution and Heat Penetration during the Steam-Air Retorting Process on the Quality Properties of Canned Whelk (*Buccinum striatissimum*) YE-SHIN LEE, Na-Yun Kim, Chae-Rin Lee, Ga-Yeon Lee, Hye-Jae Choi, Myong-Soo Chung, Ewha Women's University, Seoul, South Korea
- P1-41 Inactivation of *Bacillus* and *Geobacillus* Species in Pea-Based Milk Alternatives under UHT Processing CHRYSANTHI CHAMPIDOU, Mariem Ellouze, Nabila Haddad, Jeanne-Marie Membré, Nestlé & Oniris INRAE, Lausanne, Switzerland
- P1-42 Mathematical Modeling of *Salmonella* Inactivation in Humidity-Controlled Apple Drying Process — REN YANG, Shuang Zhang, Juming Tang, South Dakota State University, Brookings, SD, USA
- P1-43 Impact of Supercooling Preservation on Salmon Quality Using
  Combined Electric and Magnetic Fields DONGYOUNG LEE, Soojin
  Jun, University of Hawaii at Manoa, Honolulu, HI, USA
- P1-44 Chemical Inactivation of Spore-Forming Bacteria: Simulating Acid and Alkaline Treatments from Gelatin Processing CAROLINE HECKLER, Matheus P. S. Láscaris, Stéfany T. Q. Carvalho, Matheus Garcia do Vale, Emilie Lang, Larissa Margalho, Beatriz M. Ferreira, Anderson Sant'Ana, University of Campinas, Campinas, São Paulo, Brazil
- P1-45 Moved to T8-05

- P1-46 The Effect of Fat Level on the Inactivation and Recovery of Listeria P1-60 Efficacy of Plasma-Activated Water in Cell Membrane Damage and spp. in Ready-to-Eat (RTE) Foods After High Pressure Processing Salmonella Inactivation in Egg Washing - Urvi Shah, Deepti Salvi, (HPP): A Review - YHULIANA NINO FUERTE, Ashley Prow. Bing AVA WEYRICH, North Carolina State University, Raleigh, NC, USA Wang, Gary Sullivan, Leslie Delserone, Subash Shrestha, Mary-Grace P1-61 Evaluation and Comparison of Plasma-Activated Water (PAW) as a Danao, University of Nebraska-Lincoln, Lincoln, NE, USA Sanitizer in Cleaning-in-Place (CIP) with Other Traditional Cleaning P1-47 Survival of B. coagulans Spores in Acidified Tryptic Soy Broth after Solutions - Dhruv Ghevariya, Deepti Salvi, AVA WEYRICH, North High Pressure Processing - MARIO COBO, Ann Charles Vegdahl, Carolina State University, Raleigh, NC, USA Randy Worobo, Cornell University, Ithaca, NY, USA P1-62 Effects of Continuous UV, Pulsed Light, and LED Treatments on Inactivation of Escherichia coli ATCC 25922 - HYE-JAE CHOI, P1-48 Effects of High Hydrostatic Pressure Treatment on Aromatic Amino Acids, Biogenic Amines, and Bacterial Diversity of Stinky Tofu Na-Yun Kim, Ye-Shin Lee, Chae-Rin Lee, Ga-Yeon Lee, Myong-Soo - Po-Chun Liu, Qin-Ru Liu, CHUNG-YI WANG, National Formosa Chung, Ewha Womans University, Seoul, Seoul, South Korea University, Yunlin, Taiwan P1-63 **Development of Visible Light-Induced Antimicrobial Materials** for Ultrafast Inactivation of Microbes - AHMED EL-MOGHAZY, Effects of High-Pressure Assisted Enzyme Penetration Treatment on P1-49 Acrylamide Mitigation in Sweet Potato Fries - Chi-Pei Wu, CHUNG-Nicharee Wisuthiphaet, Nitin Nitin, University of California Riverside, YI WANG, National Formosa University, Yunlin, Taiwan Riverside, CA, USA P1-50 Emerging Topics of High-Pressure Processing: Improving Efficacy of P1-64 Inactivation of Indigenous Microorganisms on Lettuce (Lactuca DNA and Mycotoxins Extraction and Biofilm Formation of Pressuresativa) and Sesame Leaves (Perilla frutescens) Using Intense Pulsed Stressed Bacteria - ALIYAR CYRUS FOULADKHAH, Public Health Light (IPL) Technology — CHAE-RIN LEE, Hye-Jae Choi, Na-Yoon Microbiology Laboratory, Tennessee State University, Nashville, TN, USA Kim, Ye-Shin Lee, Ga-Yeon Lee, Myong-Soo Chung, Ewha Womans University, Seoul, Seoul, South Korea P1-51 Impact of Elevated Hydrostatic Pressure for Improving Extraction and Inactivation of Fungal Secondary Metabolites of Public Health P1-65 Optimization of Pulsed UV-Light Application on the Inactivation of Concern - DACIA RINGO, Ranju Kafle, Aliyar Cyrus Fouladkhah, Listeria monocytogenes in Cold-Smoked Salmon - MANIKANTA SRI Tennessee State University, Nashville, TN, USA SAI KUNISETTY, Lamin Kassama, Armitra Jackson-Davis, Srinivasa Rao Mentreddy, Alabama A&M University, Normal, AL, USA Combining Lactic Acid Dipping and Mild High-Pressure Processing P1-52 for the Inactivation of Non-Pathogenic Enterococcus faecium as P1-66 Effects of Intense Pulsed Light on Inactivation of Salmonella a Salmonella Surrogate in Pork - JABER GHORBANI, Franklin Typhimurium and Quality Characteristics of Pecan Halves – RABIN Sumargo, Gary Sullivan, Mary-Grace Danao, Bing Wang, University GYAWALI, Hema L. Degala, Ajaya K. Biswal, Cameron A. Bardsley, of Nebraska-Lincoln, Lincoln, NE, USA Ajit K. Mahapatra, Fort Valley State University, Fort Valley, GA, USA Efficacy of Intense Pulsed Light and Cold Plasma Technologies for P1-53 Combined Effect of High Hydrostatic Pressure (HHP) and Nisin P1-67 Escherichia coli Inactivation on Pecan Halves - VERA ARTHUR, against Five Strains of Listeria monocytogenes in Aces Buffer Nikolaos Giannoulis, THEOCHARIA TSAGKAROPOULOU, Kimon A. G. Hema L. Degala, Rabin Gyawali, Kaicie S. Chasteen, Cameron A. Karatzas, University of Reading, Reading, UK Bardsley, Ajit K. Mahapatra, Fort Valley State University, Fort Valley, GA, USA P1-54 Unraveling the Synergistic Lethal Effect of Manothermosonication under Dynamic Conditions on the Microbial Resistance of P1-68 Application of Subcritical Water Extraction (SWE) Technology Salmonella Enteritidis in Liquid Whole Egg — Enrique Beitia, for the Extraction of Bioactive Compounds from Ginger (Zingiber THEOCHARIA TSAGKAROPOULOU, Vasilis Valdramidis, Kemal officinale) - NA-YUN KIM, Ga-Yeon Lee, Ye-Shin Lee, Chae-Rin Lee, Aganovic, University of Reading, Reading, UK Hye-Jae Choi, Min-Jung Ko, Myong-Soo Chung, Ewha Womans University, Seoul, Seoul, South Korea P1-55 Microbial Strain Heterogeneity to Pulsed Electric Fields (PEF) Treatments - Fotios Lytras, Georgios Psakis, THEOCHARIA P1-69 Increasing Food Manufacturing Capacity for Local Produce through TSAGKAROPOULOU, Ruben Gatt, Joerg Hummerjohann, Javier Raso, Rural Shared-Use Manufacturing Space - DAVID HILL, Amanda Philyaw Perez, University of Arkansas Division of Agriculture Vasilis Valdramidis, University of Reading, Reading, UK Research and Extension, Little Rock, AR, USA P1-56 Cold Plasma Treatment Distance Influences Reduction of Salmonella enterica on the Surface of Pecan Halves - KAICIE S. CHASTEEN, **Food Safety Systems** Samantha H. Sherman, David I. Shapiro-Ilan, Brendan A. Niemira, P1-70 Survival of Listeria monocytogenes, Yeast and Mold on Fresh Pears Cameron A. Bardsley, Auburn University, Auburn, AL, USA P1-57 Effect of Cold Atmospheric Plasma on the Nutritional Properties.
  - with Different Storage Temperatures MENGOJAN HANG, Edmund Larbi Afari, Xiaoye Shen, Meijun Zhu, Washington State University, Pullman, WA, USA
  - Detection of Listeria spp. Using a Microtally® Mitt and Pre-Moist P1-71 Sticksponge® for the Environmental Sampling of Three Different Inoculated Surfaces - ESTEFANIA ORELLANA, Qingli Hull, Mindy M. Brashears, Marcos Sanchez, Texas Tech University, Lubbock, TX, USA
  - P1-72 Validation of Cranberry Muffin Baking Process to Control Salmonella Contamination - ARSHDEEP SINGH, Conor Hunt, Drushya Ramesh, Lakshmikantha Channaiah, Abdullatif Tay, Rico Suhalim, University of Missouri, Columbia, MO, USA

P1-58

P1-59

Texture and Color of Ready-to-Eat Ham, Salmon, and Cheese

Niemira, Universidad Austral de Chile, Valdivia, Chile

ANIBAL CONCHA-MEYER, Eduardo Suazo, Kong Shun Ah-Hen, Ociel

Muñoz, Alexandra Gonzalez, Olga Garcia, Jose Luis Obando, Brendan

Enhancing Microbial Safety of Almond Milk Using UV-C Irradiation -

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- P1-177 Ultraviolet Light Systems for the Inactivation of Hepatitis A Virus on Food Contact Surfaces BREANNA POLEN, Ankit Patras, Brahmaiah Pendyala, Doris D'Souza, University of Tennessee, Knoxville. TN. USA
- P1-178 Cultivation of Wild-Type Hepatitis A Virus Using Induced Pluripotent Stem Cell-Derived Hepatocytes — DASEUL YEO, Soontag Jung, Danbi Yoon, Seongwon Hwang, Yuan Zhang, Changsun Choi, Chung-Ang University, Anseong, Gyeonggi, South Korea
- P1-179 Hepatitis A Virus Genome Recovered by Using Tiling Multiplex Amplicons and Oxford Nanopore Sequencing — HAIFENG CHEN, Cameron Boerner, U.S. Food and Drug Administration — CFSAN, Laurel, MD, USA
- P1-180 Comparison of Pretreatments to Distinguish Infectious and Non-Infectious Foodborne Viruses — ANNE-MARIE LAUZIER, Émilie Douette, Antoine Labrie, Eric Jubinville, Valérie Goulet-Beaulieu, Fabienne Hamon, Julie Jean, Institut sur la nutrition et les aliments fonctionnels, Université Laval, Québec, QC, Canada
- P1-181 Matrix Extension of the Concentration, Extraction, and Detection of Enteric Viruses in Finfish RACHEL RODRIGUEZ, Jacquelina Woods, U.S. Food and Drug Administration Gulf Coast Seafood Laboratory, Dauphin Island, AL, USA
- P1-182 Cell Line Infectivity Assay May Not be Suitable for Validation of High Pressure Processing against *Cryptosporidium parvum* in Apple Juice RORY WANG, Randy Worobo, Cornell University, Ithaca, NY, USA
- P1-183 Evaluation of a Routine Assay for the Detection of *Cyclospora* cayetanensis in Fresh Produce and Agricultural Water Samples
  Using biomérieux GENE-UP Real-Time PCR BIJAY KHAJANCHI,
  Anastasia Epitropou, Mauricio Durigan, Sonia Almeria, Adam
  Joelsson, U. S. Food and Drug Administration, Center for Food
  Safety and Applied Nutrition, Office of Applied Research & Safety
  Assessment, Laurel, MD, USA
- P1-184 Effects of Environmental Factors on the Persistence of *Cyclospora cayetanensis* Oocysts in Artificially Contaminated Soil and Fresh Herbs Grown under Controlled Conditions JOSEPH ARIDA, John Grocholl, Joyce Njoroge, Sonia Almeria, University of Maryland, Joint Institute for Food Safety and Applied Nutrition, College Park, MD, USA
- P1-185 Exploring the Association Between Parasitic Infection and Climate Parameters in Ethiopia DEVIN LAPOLT, Binyam Moges Azmeraye, Desalegne Degefaw, Getnet Yimer, Zhanpeng Kuang, Samantha Hicks, Silvia Alonso, Barbara Kowalcyk, The Ohio State University, Columbus, OH, USA

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- P1-187 Comparison and Verification of Quantitative Analysis for Low Levels of *Listeria monocytogenes* in Cabbage and Culture by Digital PCR, RT-PCR, and Plate Count Method SEH EUN KIM, So Yeon Park, Kyung Shik Park, Jin Hyun Kim, Seung-Hyeon Jung, Advanced Food Safety Research Group, Brain Korea 21 Plus, Chung-Ang University, Ansung, South Korea
- P1-188 Comparison Study Between the Dry Rehydratable Film and Baird Parker Agar Plate for *Staphylococcus aureus* Enumeration in Selected RTE Products SEH EUN KIM, Seung Wan Hong, Heedae Park, Seong II Kang, Sookyoung Kim, Kyung Shik Park, Jin Hyun Kim, Seung-Hyeon Jung, Advanced Food Safety Research Group, Brain Korea 21 Plus, Chung-Ang University, Ansung, South Korea
- P1-189 An Automated Highly Multiplexed PCR Method for *Listeria*Fingerprinting Also Provides Improved Confirmation Rates with
  Presumptive Environmental Sample Enrichments DANIEL
  DEMARCO, Andrew Stock, Patricia Quinn, Megan Murn, Gwendolyn
  Spizz, Cristina McGuire, Brooke Schwartz, Eurofins Microbiology
  Laboratories, Louisville, KY, USA
- P1-190 Rapid Detection of *Listeria* spp. and *L. monocytogenes* Using the Loop-Mediated Isothermal Amplification (LAMP) Assay – Bioluminescent in Liquid, Fresh and Dry Yeast – VANESSA TSUHAKO, Beatriz Rosa, Vitória Bartolomeu, Neogen, Indaiatuba, Brazil
- P1-191 Evaluation of Alternative Sample Preparation and Loop-Mediated Isothermal Amplification (LAMP) Bioluminescent Assay and Comparison Against ISO 11290-1 for Detection of *Listeria monocytogenes* in Frozen Edamame MICHELE MANUZON, Adam Burthus, Rocio Foncea, Neogen Corporation, Oakdale, MN, USA
- P1-192 Biotyping of an Internal Library of *Listeria* Species Using the Rheonix *Listeria* PatternAlert® Assay OLIVIA ARENDS, Mu Ye, Eric Ewert, Kraft Heinz Company, Glenview, IL, USA
- P1-193 Understanding Non-Confirming Presumptives in Environmental Listeria Testing — ERICA MILLER, Emily Schmitt, Andrzej A. Benkowski, Alex Angel, Luke Anderson, Dustin DeLoach, Qinwei Lu, Daniel DeMarco, J. David Legan, Christopher Crowe, Eurofins Microbiology Laboratories, Louisville, KY, USA
- P1-194 Evaluation of a Proprietary *Listeria* Selective Media for Recovery of Low Levels of *Listeria* spp. from Sponges Hydrated with Wide Spectrum Neutralizer (WSN) and Letheen Followed by Molecular Detection Using Loop-Mediated Isothermal DNA Amplification GABRIELA LOPEZ VELASCO, Rocio Foncea, Adam Burthus, Eric Chlan. NEOGEN, Lansing, MI. USA
- P1-195 Decreasing the Confirmation Time for Salmonella and Listeria Using an Alternative Procedure Coupled with Hygiena's BAX® System JULIE WELLER, Christine Chapman, April Englishbey, Amy Bosco, Hygiena, New Castle, DE, USA
- P1-196 Matrix Verification of 25 g of Soppressata for the Detection of Shiga Toxin-Producing *E. coli* (STEC) Using Hygiena's BAX® System Real-Time PCR Assay JULIE WELLER, Christine Chapman, April Englishbey, Glen Feller, Hygiena, New Castle, DE, USA
- P1-197 Matrix Validation of 30 g Test Portions of Soil for the Detection of E. coli 0157:H7, Salmonella and Listeria Using Hygiena's BAX® System — JULIE WELLER, Christine Chapman, April Englishbey, Ryan Morrow, Hygiena, New Castle, DE, USA
- P1-198 Microbial Verification of a Molecular Technique for Salmonella spp. Detection on Pork Meat, Pork Liver, Rectal Swabs and Feces According to ISO 16140-3 on Colombia — RUTH DALLOS, Neogen Food Safety, Bogotá, Chico Norte, Colombia

- P1-199 Verification of a Rapid Method to Enumerate Microbial Indicator on Several Matrices on Ecuador RUTH DALLOS, Neogen Food Safety, Bogotá, Chico Norte, Colombia
   P1-200 Optimization of Pre-Enrichment and Screening Methods for the Detection of Salmonella enterica in Meat Analog Products KYLIE SACAPANO, Amanda Tabb, LieuChi Phan, Kyson Chou, Jamie Du, Donna Williams-Hill, Rosalee Hellberg, Chapman University, Orange,
- P1-201 Performance Evaluation of Fluorescence Resonance Energy
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  Rinsates NIKKI TAYLOR, Jada Jackson, John Mills, Louisiane
  Giovanetti, Marie Bugarel, bioMérieux, Inc., Hazelwood, MO, USA
- P1-202 Validation of the GENE-UP® EHEC Method Using the eGENE-UP® EASYPREP Solution for the Detection of STEC in MicroTally® Cloths NIKKI TAYLOR, John Mills, Patrick Bird, Louisiane Giovanetti, bioMérieux, Inc., Hazelwood, MO, USA
- P1-203 A Rapid Culture-Independent Detection Method of *Salmonella* spp. in Poultry Carcass and Feed Utilizing Immunomagnetic Separation, Whole Genome Amplification, and LAMP HYUNGSUK OH, Hyunsook Kim, Eun-Ah Jung, So-yeon Kwon, Hyeon-Jin Kim, Kun-Ho Seo, Konkuk University, Seoul, Gwangjin-gu, South Korea
- P1-204 Verification of GENE-UP QUANT Salmonella Method in Raw Poultry and Carcass Rinsate — PHATTARAPHARIN PHANSANIT, Phunnathorn Phuchivatanapong, Janejira Fuangpaiboon, bioMérieux Thailand, Bangkok, Thailand
- P1-205 Novel Loop Mediated DNA Amplification (LAMP) Based Bioluminescent Assays for the Detection of *Salmonella* Enteritidis and *Salmonella* Typhimurium, Including the Monophasic Variant *Salmonella enterica* I 4,[5],12:i:- Toni Bartling, Neil Percy, PREETHA BISWAS, Neogen Corporation, Lansing, MI, USA
- P1-206 Novel *Listeria* spp. Detection Approach for Environmental Monitoring Program Lei Zhang, Jessica Wood, Esteban Valverde Bogantes, PREETHA BISWAS, Neogen Corporation, Lansing, MI, USA
- P1-207 Validation of the Neogen® Molecular Detection Assay 2 Salmonella Enteritidis/Salmonella Typhimurium Method for Specific Detection of Salmonella enterica ser. Enteritidis and Salmonella enterica ser. Typhimurium in Chicken Carcass Rinse, Raw Ground Chicken and Cooked Breaded Chicken QUYNH-NHI LE, Toni Bartling, Mark Mozola, Cynthia Zook, Christina Barnes, Brooke Roman, Preetha Biswas, Susan Noe, Robert Donofrio, Neogen Corporation, Lansing, MI LISA
- P1-208 Development of a Laboratory Procedure to Produce Highly Injured Salmonella spp. on Stainless-Steel Coupons for Efficacy Testing of Environmental Sampling Devices — ALEX MCGILL, N. Robert Ward, World Bioproducts LLC, Woodinville, WA, USA
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  Hanna Hartenstein, Maryse Rannou, Astrid Cariou, Lizaig Gouguet,
  REBECCA OLSEN, Cordt Grönewald, Patrice Chablain, Hygiena, New
  Castle, DE, USA

- P1-210 Validation of a Salmonella Loop-Mediated Isothermal Amplification
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  Barrena, Lisa Wiley, Danielle Kist, Chase Feldmann, Kristen Lozinak,
  Sivaranjani Pagadala, Willis Fedio, Ruben Zapata, Yatziri Presmont,
  Yamir Rosa, Christina Reed, Jessica Maitland, Megan Young,
  Faith Hysell, Zachary Kuhl, Hua Wang, Thomas Hammack, Ruiqing
  Pamboukian, Beilei Ge, U.S. Food and Drug Administration, Center
  for Veterinary Medicine, Laurel, MD, USA
- P1-211 BPW and UHT Enrichment Protocols to Detect Salmonella in Chocolate Using the Assurance® GDS for Salmonella Tq Assay Elodie Abbé, ADAM DIDIER, Emily Jacobs, Guillaume Mesnard, MilliporeSigma, St. Louis, MO, USA
- P1-212 Polyethersulfone-Based Microfluidic Device Integrated with DNA
  Extraction on Paper and Recombinase Polymerase Amplification for the
  Detection of Salmonella enterica YUXIAO LU, Tianqi Li, Yunxuan Chen,
  Yaxi Hu, Xiaonan Lu, McGill University, Montreal, QC, Canada
- P1-213 A Pipeline Approach to Identifying Salmonella Bacteriophages with Tail Spike Proteins BRIDGET XIE, Cristina Chiappe, Opeyemi U. Lawal, Lawrence Goodridge, Canadian Research Institute for Food Safety (CRIFS), University of Guelph, Guelph, ON, Canada
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- P1-215 30-Minute-Screening of Microorganisms for Plant- and Milk-Based Dessert Products with the Hygiena Innovate™ System Anne Rölfing, Rumeysa Göcen, PATRICE CHABLAIN, Hygiena Diagnostics GmbH, Potsdam, Germany
- P1-216 Screening Method for Thermophilic Spore-Formers in Plant-Based Drinks with the Hygiena® Innovate™ System Anne Rölfing, Rumeysa Roelfing, PATRICE CHABLAIN, Hygiena Diagnostics GmbH, Potsdam, Germany
- P1-217 Detection of *Listeria* in Yeast Samples with Foodproof *Listeria* Plus *L. monocytogenes* LyoKit Anne Rölfing, Alexandra Bauer, PATRICE

  CHABLAIN, Hygiena Diagnostics GmbH, Potsdam, Germany
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  LeAnne Hahn, Laurie Post, Brian Farina, Charles Deibel, RYAN MAUS,
  Deibel Laboratories, Delaware, OH, USA
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- Enteropathogen of Escherichia albertii in Food SAKURA ARAI, Shouhei Hirose, Keita Yanagimoto, Yuka Kojima, Satoko Yamaya, Takuya Yamanaka, Norihisa Matsunaga, Akihito Kobayashi, Naoto Takahashi, Takayuki Konno, Yuki Tokoi, Nozomi Sakakida, Noriko Konishi, Yukiko Hara-Kudo, National Institute of Health Sciences, Kawasaki, Japan

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P1-273	Samples with Harmonized Protocols — Evangelos J. Vandoros, Katharine Evans, Salman Zeitouni, Daniele Sohier, Andrew Deterding,	P1-285	Molecular Detection of <i>Salmonella</i> and <i>Listeria</i> in Food Flavorings Using GENE-UP® LIS, LMO and SLM — SAMOA ASIGAU, Jada Jackson, Nikki Taylor, John Mills, bioMérieux, Inc., Hazelwood, MO, USA
P1-274	Wesley Thompson, Erin Crowley, DAVID CRABTREE, Thermo Fisher Scientific, Basingstoke, UK  Salmonella Species Detection in Pet Food Using a Well-Established	P1-286	Identification of <i>Listeria</i> spp. and <i>Listeria monocytogenes</i> with Nanopore Sequencing–Based Whole Genome Sequencing – SILIN TANG, Chongtao Ge, Zhihan Xian, Renato Orsi, Zhousheng Peng,
	RT-PCR Method — Evangelos J. Vandoros, Katharine Evans, Salman Zeitouni, Daniele Sohier, Kateland Lanzit, Wesley Thompson, Erin Crowley, DAVID CRABTREE, Thermo Fisher Scientific,		Xingwen Wu, Bingrui Bai, Xiangyu Deng, Martin Wiedmann, Boris Bolschikov, Mars Global Food Safety Center, Beijing, China
P1-275	Basingstoke, UK Harmonized Large Sample Size (375 g) Testing for Detection of	P1-287	Miniaturized Devices for Point-of-Care Testing of Foodborne Pathogens — Ana Costa-Ribeiro, Adrián Sánchez-Visedo, ALEJANDRO GARRIDO-MAESTU, International Iberian Nanotechnology Laboratory, Braga, Portugal
	Salmonella and Cronobacter spp. in Powdered Infant Formula Using Thermo Scientific SureTect Salmonella PCR Assay and Thermo Scientific SureTect Cronobacter PCR Assay Granted AOAC PTM — Nikki Faulds, Evangelos J. Vandoros, Katharine Evans, Salman Zeitouni, Daniele Sohier, Guillaume Mesnard, François Le Nestour, Kateland Lanzit, Wesley Thompson, Erin Crowley, DAVID CRABTREE,	P1-288	Detection of <i>Salmonella</i> spp. by Loop-Mediated Isothermal Amplification in Environmental Samples from Broiler Flocks — Alexandre Lamas, Patricia Regal, ALEJANDRO GARRIDO-MAESTU, International Iberian Nanotechnology Laboratory, Braga, Portugal
	Thermo Fisher Scientific, Basingstoke, UK	P1-289	Design of a Selective Broth for the Co-Enrichment of Salmonella spp., E. coli 0157:H7 and Listeria monocytogenes, Suitable for
P1-276	Detection of <i>Campylobacter</i> from Raw Milk and Raw Pork Using a Multiplex PCR Workflow — Samuel Griggs, Huma Shaikh, Annette Hughes, Salman Zeitouni, DAVID CRABTREE, Thermo Fisher Scientific, Basingstoke, UK		Molecular Biology Applications — Ana Costa-Ribeiro, Alexandre Lamas, ALEJANDRO GARRIDO-MAESTU, International Iberian Nanotechnology Laboratory, Braga, Portugal
P1-277	Harmonized AOAC PTM PCR Detection Workflows for <i>Salmonella</i> and STEC from 375 g Raw Beef and Leafy Produce Samples — Jessica Williams, Evangelos J. Vandoros, Nikki Faulds, Katharine	P1-290	Rapid Isolation and Detection of <i>Salmonella</i> on an Automated System MagiCyte MB — PAUL LIU, Zerikhun Filatov, Chunjiang Yu, Yang Liu, Microsensor Labs, Chicago, IL, USA
	Evans, Daniele Sohier, Salman Zeitouni, Kateland Lanzit, Wesley Thompson, Benjamin Bastin, Erin Crowley, DAVID CRABTREE, Thermo Fisher Scientific, Basingstoke, UK	P1-291	Rapid Detection and Quantification of Bacterial Cells Recovered on Food-Contact Surfaces Using a Smartphone Microscope — YUZHEN ZHANG, Suraj Pathak, Gabriella Curry, Ngoc Vu, Lili He, University of Massachusetts Amherst, Amherst, MA, USA
P1-278	Detection of Shiga-Toxin Producing <i>Escherichia coli</i> in Raw Flour- Based Foods — Dean Leak, Salman Zeitouni, DAVID CRABTREE, Thermo Fisher Scientific, Basingstoke, UK	P1-292	An Integrated Approach of BAX® System PCR, ISO 22964 and MALDI-TOF for Rapid Detection of <i>Cronobacter sakazakii</i> in Food and
P1-279	Evaluation of Multiple Harmonized PCR Workflows for Detection of Bacteria from Infant Formula — Annette Hughes, Salman Zeitouni, DAVID CRABTREE, Thermo Fisher Scientific, Basingstoke, UK		Probiotic Products — Anli Gao, Emily Wilson, Carlos Leon-Velarde, Saleema Saleh-Lakha, Susan Lee, SHU CHEN, Agriculture and Food Laboratory (AFL), University of Guelph, Guelph, ON, Canada
P1-280	Use of Visible Dye to Prevent Supplementation Error in Rapid Workflows for Detection of <i>Salmonella</i> and <i>Cronobacter</i> — Aidan Doyle, Nikki Faulds, Jaakko McVey, DAVID CRABTREE, Astrid Cariou, Maryse Rannou, Muriel Bernard, Thermo Fisher Scientific, Basingstoke, UK	P1-293	Development of Multi-Residue Analytical Method for 17 Pesticides in Livestock Products Using LC-MS/MS — SO RA PARK, Nam Young Kim, Ji Hyun Kim, So Eun Lee, Miok Eeom, Pesticide and Veterinary Drug Residues Division, National Institute of Food and Drug Safety Evaluation, Ministry of Food and Drug Safety, Cheongju, Chungcheongbuk-do, South Korea
P1-281	Detection of Only Live <i>Escherichia coli</i> with Long-Read Sequencing  — KATRINA COUNIHAN, Shannon Tilman, Chin-Yi Chen, Yiping He, USDA, Agricultural Research Service, Eastern Regional Research Center, Wyndmoor, PA, USA	P1-294	High Resolution Salmonella Detection, Serotyping, Subtyping, Surveillance, Differentiation of Multiple Serotypes and Quantification in a Single Tube and Single PCR by ChapterDx MLSTnext NGS Technology — BABACK GHARIZADEH, Zhihai
P1-282	Validation of the Bio-Rad dd-Check STEC Solution for the Detection and Analytical Confirmation of Shiga-Toxin Producing <i>Escherichia</i> <i>coli</i> in Raw Beef Trim, Fresh Spinach and Carcass Sampling Cloths —		Ma, Steven Huang, Mo Jia, Florence Wu, Chunlin Wang, Chapter Diagnostics Inc., Menlo Park, CA, USA
	MIKE CLARK, Season Xie, Bio-Rad Laboratories, Hercules, CA, USA	P1-295	Rapid and Data-Efficient Classification of <i>Salmonella</i> Serovars Using Augmentation and Deep Learning on Hyperspectral Microscope
P1-283	Approach of a Molecular Biological Diagnostic Pretreatment Utilizing Functionalized Magnetic Nanoparticles for Rapid Detection		Images — Aarham Wasit, Bosoon Park, JIYOON YI, Michigan State University, East Lansing, MI, USA
	of <i>Escherichia coli</i> O157:H7— HUI-DONG SANG, So-Young Lee, Unji Kim, Se-Wook Oh, Kookmin University, Seoul, South Korea	P1-296	Sample-to-Answer Portable Device for Rapid Bacterial Detection in Food Products — LUYAO MA, Nitin Nitin, Florida State University,
P1-284	Verification of Several Dietary Supplements and Nutraceuticals Using the GENE-UP® Salmonella (SLM), Listeria spp. (LIS) and,	D1 207	Tallahassee, FL, USA
	Listeria monocytogenes (LMO) Assays — SAMOA ASIGAU, Jada Jackson, Nikki Taylor, John Mills, Maria Mendres, Krista Chapman, Alax Rieso, Dhruvit Patal Sonia Brown, bioMériaux, Inc. Hazalwood	P1-297	Listeria monocytogenes Rapid Typing Based on Fourier-Transform Infrared Spectroscopy (IR) — PABLA YAIKIN, Javiera Jiménez, Diego Fredes-García, Andrea Moreno-Switt, Aniela Wozniak, Patricia

Catholic University of Chile, Santiago, Chile

García, Clinical Laboratory Resident, Faculty of Medicine, Pontifical

MO, USA

Alex Risso, Dhruvit Patel, Sonia Brown, bioMérieux, Inc., Hazelwood,

D1_209	P1-298 Portable MSI Device for the Monitoring of the Fish Quality throughout Food Supply Chain — Anastasia Lytou, Lemonia-Christina Fengou, Antonis Koukourikos, Pythagoras Karampiperis, Panagiotis Zervas, Isidora Michaliodi, Vassiliki Mastrodima, Aske Schultz Carstensen, Alessia Del Genio, Jens Michael Carstensen, Nette Schultz, Nikos Chorianopoulos, George-John Nychas, PANAGIOTIS SKANDAMIS,	Antimicrobials		
r1-290		P2-01	Efficacy of Orange Terpene against <i>Escherichia coli</i> Biofilm on Beef and Food Contact Surfaces — ANAMUL HASAN CHOWDHURY, Ashrafudoulla, Senakpon Isaïe Ulrich Mevo, A.G.M.Sofi Uddin Mahamud, Sang-Do Ha, GreenTech-Based Food Safety Research Group, BK21 Four, Chung-Ang University, Anseong, South Korea	
Estimation of Fat Conte Fengou, Anastasia Lyto	Quality Parameters of Different Fish Species: A Case Study for Rapid Estimation of Fat Content — Angeliki Doukaki, Lemonia-Christina Fengou, Anastasia Lytou, Evangelia Kristalli, Katerina Pissaridi, Chrysoula Tassou, Nikos Chorianopoulos, George-John Nychas,	P2-02	Chlorine Dioxide's Antimicrobial Efficacy is Not Effected by Agriculture Water Quality when Treating Shiga-Toxin Producing Escherichia coli (STEC) — JARED VAN BLAIR, Alison Lacombe, Vivial Chi-Hua Wu, USDA, Albany, CA, USA	
	PANAGIOTIS SKANDAMIS, Laboratory of Food Quality Control and Hygiene, Agricultural University of Athens, Athens, Greece	P2-03	Prevalence and Genomic Antimicrobial Resistance of <i>Salmonella</i> and <i>Escherichia coli</i> from Retail Poultry in Southern California — MD	
P1-300	Fluorescence Fingerprints of Vegetable Juices: Monitoring Food Safety and Quality by Determining Treatment Efficacy and Remaining Shelf Life — MALEEKA SINGH, Xiaoli Liu, Valeria R. Parreira, Opeyemi U. Lawal, Maia Zhang, Angie Homez-Jara, Xue		SAIFUL ISLAM, Edward Rob Atwill, Megan Elise Gaa, Katie Yen Lee, Maurice Pitesky, Kurtis Lavelle, Jade Sebti, Bakytzhan Bolkenov, Taber Ball, Xiang Yang, Xunde Li, Department of Animal Science, University of California, Davis, Davis, CA, USA	
	Jun, John Shi, Lawrence Goodridge, Maria Corradini, University of Guelph, Guelph, ON, Canada	P2-04	Enhancing <i>in vitro</i> Inactivation of <i>Escherichia coli</i> ATCC 33625 I Sequential Application of Alkaline and Acidic Electrolyzed Water	
P1-301	Evaluation of Rapid ATP Bioluminescence Method for Microbial Detection in Highly Formulated Protein Drinks — Tetyana Shulyak, Alicia Ausilio, Gregory W. Durbin, Sherita Li, Robert S. Salter, DONNA		<ul> <li>SANAZ MIRTALEBI, Natalie Zachman, Lynette Johnston, Greg Bolton, Alexander Chouljenko, North Carolina State University, Raleigh, NC, USA</li> </ul>	
D1 202	STEARNS, Charm Sciences, Inc., Lawrence, MA, USA	P2-05	Transcriptional Analysis of <i>Escherichia coli</i> 0157:H7 and a Non- Pathogenic <i>E. coli</i> in Response to the Chlorine Treatment Regulated	
P1-302	Developing a Surface Plasmon Resonance Biosensor for the Quantification of <i>Salmonella</i> Typhimurium in Ground Chicken — SANDHYA THAPA, Ranju Kafle, Aliyar Cyrus Fouladkhah, Fur-Chi Chen, Tennessee State University, Nashville, TN, USA		by the U.S. Environmental Protection Agency — YEN-TE LIAO, Angela Voelker, Emilie Sidelinger, Ai Kitazumi, Benildo Reyes, Vivian Wu, Produce Safety and Microbiology Research Unit, Western Regional Research Center, Agricultural Research Service, U.S.	
P1-303	Development of a Sequencing-Based Strategy as a Confirmatory Method for Detection of <i>Cyclospora cayetanensis</i> — Mauricio	D0 00	Department of Agriculture, Albany, CA, USA	
	Durigan, Laura Ewing-Peeples, John Grocholl, SACHI IRIZAWA, Joint Institute for Food Safety and Applied Nutrition (JIFSAN), University of Maryland, College Park, MD, USA	P2-06	Effect of Carvacrol Encapsulated into β-Cyclodextrins on the Survival of Escherichia coli 0157:H7 during Common Storage and Cooking Practices of Beef Patties — Antonia Gounadaki, Amalia Dimitropoulou, PANAGIOTIS SKANDAMIS, Agricultural University of	
P1-304	Development of and Optimization of Crystal Diagnostics Xpress® S Kit AOAC Performance Tested Method® (PTM 051602) for Detection	D0 07	Athens, Athens, Greece	
	of <i>Salmonella</i> spp. — SHUANG WU, Noah Zink, Julianan Dudley, Hilary Sullivan, Gary Niehaus, Crystal Diagnostics Ltd., Rootstown, OH, USA	P2-07	Antibiotic Resistance of <i>Escherichia coli</i> Isolated from Green Leafy Vegetables in Accra, Ghana — JOYCELYN K. QUANSAH, Ato Kwamena Paintsil, Angela Parry-Hanson Kunadu, University of	
P1-305	Flow Cytometry for Paraprobiotics: Quantification of Inactivated Cells — ANDREW MORIN, Sarita Raengpradub, Mérieux		Ghana, Accra, Ghana	
	NutriSciences, Crete, IL, USA	P2-08	Application of a Natural Antimicrobial Coating on Hass Avocados and Mangos for the Control of <i>Listeria monocytogenes</i> during	
P1-306	Rapid Commercial Sterility Testing by bioMérieux D-COUNT® in Plant-Based Beverages and Chicken Broth — MICHELLE KEENER, Samoa Asigau, John Mills, bioMérieux, St Louis, MO, USA		Packaging — MARIANA GONZALEZ DE COSSIO, Carlos Carrete, Carmen Hernandez-Brenes, Alejandro Castillo, Texas A&M University, College Station, TX, USA	
TUESDA	AY, JULY 16	P2-09	Cannabidiol Modulates <i>Listeria monocytogenes</i> Proteome and Protects Galleria mellonella against Listeriosis – DIVYA JOSEPH,	

## TUESDAY, JULY 16 8:30 a.m. - 6:15 p.m.

**P2** Poster Session 2 - Antimicrobials, Beverages and Acid/Acidified Foods, Epidemiology, Food Toxicology, General Microbiology, Meat, Poultry and Eggs, Modeling and Risk Assessment, Molecular Analytics, Genomics and Microbiome, and Plant-Based Alternative Products

## Exhibit Hall

P2-01 through P2-146 - Authors present 10:00 a.m. - 11:30 a.m. and 5:15 p.m. - 6:15 p.m.

P2-147 through P2-288 - Authors present 2:15 p.m. - 3:45 p.m. and 5:15 p.m. - 6:15 p.m.

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- Leya Susan Viju, Poonam Gopika Vinayamohan, Chaoyu Zhai, Kumar Venkitanarayanan, University of Connecticut, Storrs, CT, USA
- P2-10 Multi-Species Biofilms Comprised of Environmental Microbiota Isolated from Fruit Packing Facilities Promoted Tolerance of Listeria monocytogenes to Benzalkonium Chloride - M. LAURA ROLON, Olena Voloshchuk, Katelyn V. Bartlett, Luke LaBorde, Jasna Kovac, Penn State University, University Park, PA, USA
- P2-11 Extract from Prunus spinosa L. Kills Listeria monocytogenes upon Photosensitization with Red Light - Aleksandra Zimińska, Anna Draszanowska, MAGDALENA OLSZEWSKA, University of Warmia and Mazury, Olsztyn, Poland

P2-12	The Impact of Different Organic Acids on the Inactivation of <i>Listeria</i> monocytogenes on Food Matrices — NIVIN NASSER, Issmat I. Kassem, University of Georgia, Griffin, GA, USA	P2-26	The Effect of Acetate-Based Preservatives on Outgrowth of <i>Listeria</i> monocytogenes and <i>Pseudomonas</i> sp. in Plant-Based Chicken Chunks — SIMONE POTKAMP, Eelco Heintz, Saurabh Kumar, Kerry
P2-13	The Impact of Coffee Extracts on the Control of Foodborne Bacterial Pathogens in Culture and on Different Food Matrices — NIVIN NASSER, Issmat I. Kassem, University of Georgia, Griffin, GA, USA	P2-27	B.V., Taste & Nutrition, Wageningen, The Netherlands  The Effect of Nourishield D4010 on Outgrowth of <i>Listeria</i> monocytogenes and Slime-Forming <i>Leuconostoc mesenteroides</i> in
P2-14	Prevalence and Comprehensive Characterization of <i>Campylobacter</i> Species Isolated from Poultry Meat in Retail Stores in Georgia, USA — NIVIN NASSER, Issmat I. Kassem, University of Georgia, Griffin,		Frankfurters — SIMONE POTKAMP, Jasmine Kataria, Eelco Heintz, Saurabh Kumar, Kerry B.V., Taste & Nutrition, Wageningen, The Netherlands
P2-15	GA, USA  Evaluating Peracetic Acid Efficacy to Remove <i>E. coli</i> 0157:H7 and <i>L. monocytogenes</i> Biofilms from Food-Contact Surfaces Using a Novel Bio-Inline® Reactor — GRISHMA PRABHUKHOT, Charles D. Eggleton,	P2-28	The Effect of Vinegar and Conventional Acetate-Based Preservatives in Raw Beef Burgers — SIMONE POTKAMP, Rebecca Furbeck, Eelco Heintz, Saurabh Kumar, Kerry B.V., Taste & Nutrition, Wageningen, The Netherlands
	Jitendra Patel, University of Maryland, Baltimore County, Baltimore, MD, USA	P2-29	Efficacy of Dried or Liquid Vinegar and Lemon Buffered Vinegar Systems against <i>Listeria monocytogenes</i> — NICOLETTE HALL, Joyjit Saha, Rebecca Furbeck, Eelco Heintz, Saurabh Kumar, Kerry, Beloit,
P2-16	Evaluation of a Novel Chlorine Dioxide Active Packaging System, Invisishield™, for Reduction of <i>Listeria monocytogenes</i> on Frozen		WI, USA
	Carrots — Jason Frye, Rebecca Goulter, Angela Morgan, Michael Johnston, JEREMY FAIRCLOTH, Lee-Ann Jaykus, North Carolina State University, Raleigh, NC, USA	P2-30	Evaluation of <i>Salmonella</i> Typhimurium Inhibition by Vinegar and Natural Flavor — NICOLETTE HALL, Surabhi Wason, Joyjit Saha, Eelco Heintz, Saurabh Kumar, Kerry, Beloit, WI, USA
P2-17	Inhibition of <i>Listeria monocytogenes</i> in RTE Meats Using Cultured Celery Juice (VegStable® Secure) — KELLY J CANNON, Zhihong Wang, Pavan Soma, John Minnich, Scott Lineback, FFP, Eustis, FL, USA	P2-31	Impact of Sodium Chloride Concentrations on AntiListerial Efficacy of Potassium-Based Organic Acid Salts and Fermentates — NICOLETTE HALL, Rebecca Furbeck, Joyjit Saha, Saurabh Kumar, Kerry, Beloit, WI, USA
P2-18	A Novel, Clean-Label Antimicrobial Solution to Control the Outgrowth of <i>Listeria monocytogenes</i> in Deli-Style Turkey — Luke Brown, TUSHAR VERMA, Anh Linh Nguyen, Rodolfo Garza, Robert Ames, Garrett McCoy, Corbion, Lenexa, KS, USA	P2-32	Sanitizer Susceptibility of Leaf-Associated <i>Escherichia coli</i> 0157:H7 during Washing of Inoculated Romaine Lettuce after Simulated Source or Forward Processing Conditions — QIAO DING, Ganyu Gu, Yishan Yang, Yaguang Luo, Xiangwu Nou, Shirley Micallef, University
P2-19	Buffered Vinegar Alternatives for Controlling the Outgrowth of Listeria monocytogenes in Uncured Deli-Style Meat — TUSHAR VERMA, Luke Brown, Sara LaSuer, Andrew Dillon, Lorraine English, John Leader, Garrett McCoy, Corbion, Lenexa, KS, USA	P2-33	of Maryland, College Park, MD, USA  Luteolin Exhibits Antibiofilm and Antibacterial Actions against  Salmonella Typhimurium and Escherichia coli by Impairing  Cell Adhesion, Membrane Integrity, and Energy Metabolism —
P2-20	A Novel Buffered Lactic Acid Solution as a Surface Treatment for Salmonella spp. Reduction in Fresh Pork — TUSHAR VERMA, Luke Brown, Andrew Dillon, Sara LaSuer, Garrett McCoy, Lorraine English, John Leader, Robert Ames, Corbion, Lenexa, KS, USA		A.G.M.SOFI UDDIN MAHAMUD, Md. Ashrafudoulla, Shamsun Nahar, Md. Anamul Hasan Chowdhury, Sang-Do Ha, GreenTech-Based Food Safety Research Group, BK21 Four, Chung-Ang University, Anseong, South Korea
P2-21	Inhibition of <i>Clostridium perfringens</i> Spores by Antimicrobial Ingredients during Extended Cooling of Cooked Uncured Meat — TUSHAR VERMA, Luke Brown, Juliana Lane Paixão dos Santos, Natassa Rustandi, Garrett McCoy, Corbion, Lenexa, KS, USA	P2-34	Development of Poly Lactic Acid-Based Natural Antimicrobial Film with Caprylic Acid against <i>Salmonella</i> Biofilm Contamination in Meat Industry — EUN HER, Sangha Han, Sang-Do Ha, GreenTech-Based Food Safety Research group, BK21 Four, Chung-Ang University, Anseong, South Korea
P2-22	Comparing Efficacy of Vinegar-Based Antimicrobials in Inhibiting the Outgrowth of <i>Listeria monocytogenes</i> and Extending the Shelf-Life of Ready-to-Eat Meat and Poultry Products — PURVI CHATTERJEE, Jaya Sundaram, Jasdeep Saini, WTI, Inc., Jefferson, GA, USA	P2-35 Extended Spectrum Beta-Lactamase enterica in Agricultural Water of the M - FRANCISCA P. ÁLVAREZ, Constanza Lagos-Leyton, Patricia García, Aiko D.	Extended Spectrum Beta-Lactamase (ESBL)-Producing Salmonella enterica in Agricultural Water of the Metropolitan Region of Chile  — FRANCISCA P. ÁLVAREZ, Constanza Díaz-Gavidia, Valentina Lagos-Leyton, Patricia García, Aiko D. Adell, Magaly Toro, Angélica Reyes-Jara, Rebecca L. Bell, Jianghong Meng, Andrea Moreno-Switt,
P2-23	Efficacy of Liquid Acetate-Diacetate Blend in Inhibiting the Outgrowth of <i>Listeria monocytogenes</i> in Hotdogs — Jaya Sundaram, PURVI CHATTERJEE, Jasdeep Saini, WTI, Inc., Jefferson, GA, USA		Pontificia Universidad Católica de Chile; Faculty of Life Sciences, Universidad Andres Bello, Santiago, Chile
P2-24	Comparing the Efficacy of Buffered Vinegar and Cultured Dextrose in Pork Sausages in Controlling Overgrowth of <i>Leuconostoc mesenteroides</i> — PURVI CHATTERJEE, Jaya Sundaram, Jasdeep Saini, WTI, Inc., Jefferson, GA, USA	P2-36	Treatment of Listeria monocytogenes and Salmonella enterica Biofilms with Antimicrobial Blue Light — MEGHAN DEN BAKKER, Francisco Diez, Center for Food Safety, University of Georgia, Griffin, GA, USA
P2-25	The Effect of Vinegar and Conventional Acetate-Based Preservatives on Outgrowth of <i>Listeria monocytogenes</i> in Pork Ham — SIMONE POTKAMP Swannika Medikonda, Felco Heintz, Saurabh Kumar,	P2-37	Cross-Resistance to 14-,15- and 16-Membered Ring Macrolides in Salmonella and Campylobacter — SAMPA MUKHERJEE, Shaohua Zhao, Lucas Harrison, Beilei Ge, Patrick McDermott, Cong Li, Uday Dessai, Gamola Fortenberry, Jeffrey Gilbert, Ruby Singh, FDA/CVM

Laurel, MD, USA

Dessai, Gamola Fortenberry, Jeffrey Gilbert, Ruby Singh, FDA/CVM,

on Outgrowth of Listeria monocytogenes in Pork Ham - SIMONE POTKAMP, Swapnika Medikonda, Eelco Heintz, Saurabh Kumar,

Kerry B.V., Taste & Nutrition, Wageningen, The Netherlands

P2-38	P2-38 Antimicrobial-Resistance Genes in Salmonella enterica Obtained from Surface Waters of Two Food-Production Regions in the State of Rio De Janeiro, Brazil — Vinicius de Carvalho Moura, MAGALY TORO, Gabriela Bergiante Kraychete, Ana Beatriz Romoaldo, Luca Oliveira Valdez, Dennys Monteiro Girão, Esther Helena Rondon Barretto Prado, Rossiane de Moura Souza, Zhao Chen, Xinyang	P2-50	Sodium Lactate Prevents Growth of Proteolytic and Non-Proteolytic Clostridium botulinum in Uncured Turkey Products More Effectively Than Sodium Diacetate or Propionate — STEVIE WARD, Kristin Schill, Kathleen Glass, Food Research Institute, University of Wisconsin-Madison, Madison, WI, USA
	Huang, Maria Balkey, Sandra Tallent, Eric Brown, Rebecca Bell, Marc Allard, Jianghong Meng, Raquel Regina Bonelli, Joint Institute for Food Safety and Applied Nutrition (JIFSAN), University of Maryland, College Park, MD, USA	P2-51	Evaluation of the Activity of a Coffee Pulp Extract on the Germination of <i>Bacillus cereus</i> Spores — CAROLINA CHAVES-ULATE, Carol Valenzuela-Martínez, Mauricio Redondo-Solano, Carlos Chacón -Díaz, Carlos Quesada-Gómez, Delia Alvarez-Corvo, Kendall Alvarado-Molina, Research Center for Tropical Diseases (CIET)
P2-39	A Targeted Phage Cocktail Designed for Salmonella Infantis Effectively Reduced the Presence of This Emerging Pathogen in Chicken Breast		and Food Microbiology Research and Training Laboratory (LIMA), University of Costa Rica, San José, Costa Rica, San José, Costa Rica
	without Compromising the Quality of the Meat — ROCIO BARRON- MONTENEGRO, Diana Alvarez-Espejo, Cristobal Martinez-Padilla, Alejandro Piña-Iturbe, Dacil Rivera, Andrea Moreno-Switt, Ponitificia Universidad Catolica de Chile, Santiago, Chile	P2-52	Genomic Profiling of Antimicrobial Resistance in Retail Meat Isolates from Kosovo — ANAHITA GHORBANI TAJANI, Afrim Hamidi, Aniket Sharma, Driton Sylejmani, Erënesa Gorçaj, Gente Hashani, Bardhyl Noci, Bledar Bisha, University of Wyoming, Laramie, WY, USA
P2-40	Determination of the Concentrations of Salt, Lactate, and Diacetate That Inhibit the Growth of <i>Salmonella</i> in Meat Products — CHENG- AN HWANG, Lihan Huang, USDA ARS Eastern Regional Research Center, Wyndmoor, PA, USA	P2-53	Use of Carvacrol as Marination Additive for Post-Production Control of Foodborne Pathogens in Lamb — Leah Brown, KATIE ALLGAIER, Jacinda Leopard, Ainsley Jessup, Jailyn Smith, Shecoya White, Mississippi State University, Mississippi State, MS, USA
P2-41	Evaluating the Inhibitory Impact of a Novel Microwave Interventions on Pre-Packed Flour Tortillas Inoculated with <i>Salmonella</i> and Mold Spore Strains — MONICA MORALES, Brayan D. Montoya, Onay Dogan, W. Don Stull, Mindy M. Brashears, Texas Tech University, Lubbock, TX, USA	P2-54	Investigating the Antimicrobial Activity of Turmeric and Rosemary Essential Oils against Predominant Microorganisms Isolated from Raw Beef Obtained from Markets in Accra, Ghana — BENNETT DZANDU, Queenie Bella Ntiamoah, Sharon Mac-Bruce, Lawrence Enchil Amoako, Department of Nutrition and Food Science,
P2-42	Gallic Acid Inhibits the Growth of Antibiotic-Resistant Salmonella — CRISTINA CHIAPPE, Valeria R. Parreira, Opeyemi U. Lawal, Lawrence Goodridge, Canadian Research Institute for Food Safety (CRIFS), University of Guelph, Guelph, ON, Canada	P2-55	University of Ghana, Legon-Accra, Ghana Risk Assessment of Mycotoxin Exposure in Complementary Foods for Children aged 6 Months to 2 Years in Accra, Ghana — BENNETT
P2-43	Effectiveness of Bacteriophage against Antibiotic Resistant (MDR)		DZANDU, Beatrice Aberdey Mensah, Firibu K. Saalia, Department of Nutrition and Food Science, University of Ghana, Legon-Accra, Ghana
	Salmonella Infantis from Poultry — Janak Dhakal, SANDESH CHAPAGAIN, Jeewantha Punchihewage Don, Amit Vikram, Salina Parveen, University of Maryland Eastern Shore, Princess Anne, MD, USA	P2-56	Microbial Diversity and Antimicrobial Resistance in Small Scale Goat and Sheep Farms — AGNES KILONZO-NTHENGE, Ashesh Basnet, Gajender Aleti, Tennessee State University, Nashville, TN, USA
P2-44	Effect of Sublethal Exposure of Peroxyacetic Acid (PAA) against Multi-Drug Resistant Salmonella Infantis — Janak Dhakal, SANDESH CHAPAGAIN, Jeewantha Punchihewage Don, Salina Parveen, University of Maryland Eastern Shore, Princess Anne, MD, USA	P2-57	Exploring Antimicrobial Synergies to Combat <i>Burkholderia cepacia</i> Biofilm Formation — YUKTA GHARAT, Ahmed Abdelhamid, Ahmed Yousef, Food Science and Technology department, The Ohio State University, Columbus, OH, USA
P2-45	Peroxyacetic Acid Reduces Salmonella Load on the Surface of In-Shell Pecans and Prevents Cross-Contamination during Conditioning —	P2-58	Withdrawn
	CAMERON A. BARDSLEY, Kaicie S. Chasteen, Samantha H. Sherman, David Shapiro-Ilan, Brendan A. Niemira, USDA-ARS Southeastern Fruit and Tree Nut Research Unit, Byron, GA, USA	P2-59	Impact of Undissociated Weak Acid Concentration on the Growth Kinetics of Fungal Species in White Bread — JANNY MENDOZA, Kaylee Rumbaugh, Shannon McGrew, Maarten Punt, Janneke
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  YANG, Cal Poly Pomona, Pomona, CA, USA
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- P2-80 Microbial Safety of Cold Brewed Black Coffee during Retail SHIRIN ABD, Martha Kimber, Daljit Kaur, Fei Wang, Anne Nillo, Wilfredo Ocasio, Eurofins Microbiology Laboratories, Fresno, CA, USA
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- P2-84 Salmonella enterica Serovar Braenderup: Comparative Genomic
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MUSA, Katharina Scherf, Karlsruhe Institute of Technology (KIT), ELNA BUYS, University of Pretoria, Pretoria, Gauteng, South Africa Karlsruhe, Germany P2-87 Antimicrobial-Resistant Strains of Major Nontyphoidal Salmonella P2-99 Molecularly Imprinted Solid-Phase Extraction on Microfluidic Chip Serotypes Isolated from Humans and Retail Chicken in the United Coupled with Mass Spectrometry for Rapid Detection of Mycotoxins States - National Antimicrobial Resistance Monitoring System, in Foods - MARTI HUA, Yaxi Hu, Xiaonan Lu, McGill University, 2011-2020 - FELICITA MEDALLA, Heather Tate, Amy Merrill, Sainte-Anne-de-Bellevue, QC, Canada Jared Reynolds, Zachary Ellison, Hayat Caidi, Jason Folster, Louise P2-100 A Bacterial Cellulose Nanocrystal-Based SERS Substrate for François Watkins, Claudine Kabera, Laura Cooley, Shaohua Zhao, Detection of Thiram in Fruit Juices - LI XIAO, Marti Hua, Xiaonan U.S. Centers for Disease Control and Prevention, Atlanta, GA, USA Lu, McGill University, Sainte-Anne-de-Bellevue, QC, Canada **Food Toxicology** P2-101 Survival, Growth, and Toxin Production of Bacillus cereus during Cooking and Storage of Fresh Rice Noodles - BARAKATULLAH P2-88 Combined with Metabolomic and Adverse Outcome Pathway MOHAMMADI, Marco Esterban Perez-Reyes, Stephanie Smith, Analysis to Assess the Genotoxic Effects and Molecular Washington State University, Pullman, WA, USA Mechanisms Induced by the Food Contaminant Glycidol - RONG-JANE CHEN, Yu-Hsuan Lee, Cheng Kung University, Tainan, Taiwan **General Microbiology** P2-89 Occurrence and Risk Assessment of Domoic Acid and Its Isomers in Cytotoxicity Assessment of Psychrotolerant Bacillus cereus Isolates P2-102 Seafood Marketed in South Korea — Si Eun Kim, Sang Yoo Lee, Ju Across Varied Temperatures - TYLER CHANDROSS-COHEN, Hee Im, So Young Woo, HYANG SOOK CHUN, GreenTech-based Food Mackenna Yount, Erin Readinger, Cassidy Prince, Kayla Kimble, Safety Research Group, BK21 Four, Chung-Ang University, Anseong, Carlos Centeno, Jasna Kovac, The Pennsylvania State University, South Korea University Park, PA, USA P2-90 Natural Occurrence of Microcystins and Nodularin in Agricultural P2-103 L-Alanine and Phenylalanine Act Synergistically to Induce Products Marketed in South Korea by Liquid Chromatography-Tandem Germination in B. cereus Biovar Thuringiensis and Non-Mass Spectrometry - SU BEEN PARK, Sang Yoo Lee, Jae Sung Kim, Thuringiensis - TAEJUNG CHUNG, Anna Sarubbi, Jasna Kovac, The Hyang Sook Chun, Chung-Ang University, Anseong, South Korea Pennsylvania State University, University Park, PA, USA Exploring Genotoxicity and Carcinogenicity Effects of ZnO P2-91 P2-104 Isolation and Characterization of Bacillus cereus Strains Isolated Nanoparticles: Insights from in-vitro Studies on NH2-ZnO and from Various Food Products in Mali - KLÈMA MARCEL KONÉ, COOH-ZnO Coated ZnO Nanoparticles — TINGYU LIN, Rong-Jane Moussa Sangaré, National Intitute for Public Health (INSP), Bamako, Chen, National Cheng Kung University, Tainan, Taiwan Mali, Mali P2-92 Distillation as an Alternative Use for Deoxynivalenol-Contaminated P2-105 Inactivation of Clostridium botulinum Spores in Commercial Wheat or Rye: Minimal Carryover of Deoxynivalenol into Distilled Cold Brew Coffee Stored under Aerobic Conditions - TRAVIS Spirits - JIAYING WU, Erin Kealey, Matthew J. 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- P2-139 Listeria monocytogenes and Other Listeria spp. on Food Contact Surfaces of Canadian Ready-to-Eat Red Meat and Poultry Product Establishments — MARINA STEELE, Annie Locas, Canadian Food Inspection Agency, Ottawa, ON, Canada
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- P2-141 Modulation of the Virulence of Multidrug-Resistant *E. coli* 0104:H4 by Subinhibitory Concentrations of Ampicillin CAROLINA ORTIZ, Vianey Ramirez, Jesús Palomino, Yaraimy Ortiz, Santos Garcia, Norma Heredia, Universidad Autonoma de Nuevo Leon, San Nicolas, NL. Mexico
- P2-142 NF Validation Study of a Chromogenic Agar Method for Enumeration of *E. coli* and Coliforms in Animal Feed Guillaume Mesnard, FRANÇOIS LE NESTOUR, Yannick Bichot, Gulustan Kuccuk, Sophie Pierre, Microsept, Le Lion D'Angers, France
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- P2-144 Prevalence and Antimicrobial Resistance of *E. coli* and *Enterococcus* from Retail Pork in Hawaii LAUREN KOVANDA, Katie Lee, Edward R. Atwill, Rajesh Jha, Xiang Yang, Maurice Pitesky, Kurtis Lavelle, Megan Gaa, Lauren Arakaki, Alicia Hara, Bakytzhan Bolkenov, Sudipta Talukder, Tanner Okamura, Shani Houghtailing, Yanhong Liu, Xunde Li, University of California Davis, Davis, CA, USA
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- P2-148 Gas Phase Hydroxyl-Radical Process for Reducing Salmonella and Campylobacter jejuni on Inoculated and Naturally Contaminated Raw Poultry Parts with No Change in Quality Metrics but Increased Shelf Life KEITH WARRINER, Lara Warriner, Vanessa Camacho, Brenda Zai, Mahdiyeh Hasani, University of Guelph, Guelph, ON, Canada
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- P2-150 Analysis of the Performance of Disinfection Treatments in the Reduction of Salmonella Contamination in Costa Rican Fresh Chicken DIANA MORA-LEE, Andrés Zamora Ramírez, María Gabriela Benavides Figueroa, Mauricio Redondo-Solano, University of Costa Rica, San Pedro, San José, Costa Rica
- P2-151 Exploring Peroxyacetic Acid and Chlorine as Promising
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- P2-155 Assessment of Bacteriophages to Control Salmonella Strains of Meat and Poultry Origin NATALIA CARRASQUILLO, Tatum Katz, Dayna Harhay, Tyler Stephens, Edith Chow, Joseph Bosilevac, University of Puerto Rico Mayaquez, Mayaquez, PR, USA
- P2-156 Strategies in Fermented Sausage Safety: A Comprehensive Analysis of Pathogen Inactivation Dynamics JUN HAENG NAM, Corrine Kamphuis, Yawei Lin, Hui Zeng, Michael Schutz, Teresa M. Bergholz, Michigan State University, East Lansing, MI, USA
- P2-157 Shiga Toxin-Producing *Escherichia coli* Contamination on the Surfaces of Beef Carcasses in Slaughterhouses in Japan YUKIKO HARA-KUDO, Shunsuke Ikeuchi, Shouhei Hirose, Yumi Chiba, Hideki Hayashidani, Hiroshi Akiyama, National Institute of Health Sciences, Kawasaki, Japan
- P2-158 Microbiological Quality Assessment of Plant-Based Milk:
  Multivariate Data Analysis Clara Mariana Gonçalves Lima,
  Palloma de Souza Santos, Arthur Kael Rodrigues da Pia, Dionisio
  Amorim Neto, Marcelo Felipe da Silva Estácio de Santana, Matheus
  Péricles Silva Láscaris, Jaqueline Sousa Correia, Bruna Godoi de
  Castro, Beatriz Dal Pian Machado, Héctor Daniel Sierra Canales,
  Larissa Pereira Margalho, Caroline Heckler, Antonio de Anchieta
  Câmara Júnior, Roney Alves da Rocha, Luisa Freire Colombo,
  ANDERSON DE SOUZA SANT'ANA, State University of Campinas,
  Campinas, São Paulo, Brazil

- P2-159 Emerging Non-Thermal Technologies: Application of Ozone in Microbial Reduction of Beef Larissa Margalho, Carla Barbosa, Dionisio Pedro Amorim Neto, Clara Mariana Gonçalves Lima, Palloma de Souza Santos, Matheus Péricles Silva Láscaris, Jaqueline Sousa Correia, Marcelo Felipe da Silva Estácio de Santana, Giulia Paes Strabelo, Héctor Daniel Sierra Canales, Danilo Moreira Vilas Boas, Juliana Silva Graça, Beatriz Dal Pian Machado Beatriz Dal Pian Machado, Wilma Custódio Fumo, Bruna Godoi de Castro, Emilie Lang, Magdevis Yanet Rodríguez Caturla, Carmen Josefina Contreras Castillo, ANDERSON SANT'ANA, University of Campinas, Campinas, São Paulo, Brazil
- P2-160 Salmonella Lethality during Pilot-Scale Rotisserie Chicken Roasting

   AVA CHAVEZ, Ian Hildebrandt, Michael James, Bradley Marks,

  Michigan State University, East Lansing, MI, USA
- P2-161 Salmonella Inactivation in Baked Beef Pasties ROSIE VANLUVEN, Ian Hildebrandt, Michael James, Bradley Marks, Michigan State University, East Lansing, MI, USA
- P2-162 Enterococcus faecium Can Serve as a Surrogate for the Thermal Lethality of Salmonella in Ground Pork Products MOHAN LI, Manirul Haque, Bing Wang, Byron Chaves, University of Nebraska-Lincoln, Lincoln, NE, USA
- P2-163 An Iterative Approach to Identify a Gold-Standard Method for Assessing Salmonella Load and Prevalence in Broiler Houses MARCO REINA, Emily Cason, David Ayala-Velasteguí, Nikki Shariat, University of Georgia, Athens, GA, USA
- P2-164 Prevalence of Shiga-Toxin Producing Escherichia coli in a Meat Processing Facility in the Midwest of the United States: A Longitudinal Study RODRIGO PORTILLO, Rafael Martinez, Mindy Brashears, Markus F. Miller, International Center for Food Industry Excellence (ICFIE), Department of Animal and Food Sciences, Texas Tech University, Lubbock, TX, USA
- P2-165 Antimicrobial Resistant Non-aureus Staphylococci in the Pork Production Chain in Korea: High Prevalence of SCCmec V and Occurrence of cfr-Mediated Linezolid Resistance Ji Hyun Lim, Gi Yong Lee, Ji Heon Park, SOO-JIN YANG, College of Veterinary Medicine and Research Institute for Veterinary Science, Seoul National University, Seoul, South Korea
- P2-166 Prevalence and Phenotypic Resistance of Salmonella enterica Isolated from Guinea Fowl Wet Markets in One Health Concept Stephen K. Kanten Monten, FREDERICK ADZITEY, Juliana Bawah, University for Development Studies, Tamale, Northern Region, Ghana
- P2-167 How Would You Like Your Tacos? Plain, with Salsa, with Vegetables, and/or Salmonella? Valeria López García, Montserrat Hernández Iturriaga, ANGÉLICA GODÍNEZ OVIEDO, Universidad Autónoma de Querétaro, Querétaro, QA, Mexico
- P2-168 Radio Frequency (RF) Plus Heat for In-Shell Egg Pasteurization
   DANIELA BERMUDEZ-AGUIRRE, Joseph Sites, Joshua Carter,
  Brendan A. Niemira, USDA ARS ERRC, Wyndmoor, PA, USA
- P2-169 Growth Kinetics of *Listeria monocytogenes* on Chopped Citric Acid-Treated Hard-Boiled Eggs — MEGAN FAY, Aishwarya Marathe, Bashayer Khouja, Joelle K. Salazar, Diana Stewart, U.S. Food and Drug Administration, Bedford Park, IL, USA
- P2-170 Survival of *Listeria monocytogenes* in Deli Salads Containing Hard-Boiled Eggs Treated with Citric Acid — AISHWARYA MARATHE, Megan Fay, Bashayer Khouja, Joelle K. Salazar, Diana Stewart, Illinois Tech, Bedford Park, IL, USA

- P2-171 Risk Factors Associated with Salmonella enterica and Campylobacter spp. Prevalence among Backyard Poultry in Vermont CHELSEY PATCH, Katalin Larsen, Hannah Blackwell, Purna Chakraborty, Alessandra Michaelides, Alia Lunna, Andrea Etter, The University of Vermont, Burlington, VT, USA
- P2-172 Occurrence and Antimicrobial-Resistance Patterns of Salmonella spp. Isolated from Animal-Origin Food Products Sold at Retail in Chile CONSTANZA DÍAZ-GAVIDIA, Josefina Miranda, Piera Gambetta, Paula Reinoso, Valentina Lagos, Andrea Moreno-Switt, School of Veterinary Medicine, Faculty of Agronomy and Natural Systems, Faculty of Biological Sciences and Faculty of Medicine, Pontificia Universidad Católica de Chile, Santiago, Chile
- P2-173 Salmonella Quantification (SalQuant®) at 1 CFU/g with Hygiena's BAX® System for Raw Chicken Breast DEJA LATNEY, Julie Weller, Savannah Applegate, Hygiena, New Castle, DE, USA
- P2-174 Genome-Based Machine Learning for Predicting Antimicrobial
  Resistance in Salmonella enterica Isolated from Chicken EDMUND
  O. BENEFO, Padmini Ramachandran, Abani Pradhan, Department of
  Nutrition and Food Science, University of Maryland, College Park,
  MD, USA
- P2-175 Multilocus Variable-Number Tandem-Repeat Analysis Genotype
  Diversity, Pathogen-Related Genes and Antimicrobial Susceptibility
  of Enterohemorrhagic *Escherichia coli* Isolates in the Same Food
  Sample SHOUHEI HIROSE, Hidemasa Izumiya, Yoshimasa Sasaki,
  Yukihiro Akeda, Yukiko Hara-Kudo, National Institute of Health
  Sciences, Kawasaki, Kanagawa, Japan
- P2-176 Comparative Effectiveness of Cloth Sampling to Rinse Sampling on Microbial Recovery and Salmonella Detection in Poultry Meats YUYUAN FENG, Sudipta Talukder, Bakytzhan Bolkenov, Toni Duarte, Xiang Yang, University of California Davis, Davis, CA, USA
- P2-177 Development of a Multiplex Real-Time PCR Assay for the Detection of Highly Pathogenic Salmonella enterica (HPS) in Beef and Poultry 
   Hans-Henno Dörries, Cordt Grönewald, REBECCA OLSEN, Stacy 
  Stoltenberg, Patrice Chablain, Hygiena, New Castle, DE, USA
- P2-178 Validation of Hygiena's BAX® System Real-Time PCR Assays for Salmonella, STEC Suite and E. coli 0157:H7 Exact for the Detection of Salmonella and Shiga-Toxin Producing Escherichia coli (STEC) from Beef Trim Sampling Cloths — NISHA CORRIGAN, Savannah Applegate, Julie Weller, Deja Latney, Margaret Morris, Rebecca Olsen, Stacy Stoltenberg, Hygiena, New Castle, DE, USA
- P2-179 Detection of *Salmonella* and *Listeria* from Large Test Portions of Whole Powdered Egg Using Hygiena's BAX® System Real-Time PCR Assays MICAH GREENZWEIG, Julie Weller, April Englishbey, Amy Bosco, Subash Shrestha, University of Delaware, Newark, DE, USA
- P2-180 Use of Qualitative and Quantitative Microbial Data to Determine if Turkey Pre-Chill and Post-Chill Sampling are Predictive of Salmonella enterica Contamination in Ground Turkey MARIANA PAREDES, Marvin Tzirin, Ellen Mendez, Allen Byrd, Travis O'Quinn, Anna Carlson, Jessie Vipham, Kansas State University, Manhattan, KS, USA
- P2-181 Utilizing Pre-Harvest Detection and Enumeration of Salmonella for Ground Turkey Production MARVIN TZIRIN, Ellen Mendez, Mariana Paredes, Anna Carlson, Allen Byrd, Savannah Applegate, Nora Bello, Travis O'Quinn, Morgan Zumbaugh, Jessie Vipham, Kansas State University, Manhattan, KS, USA

- P2-182 Quantification of Salmonella spp. and Campylobacter in Poultry
  Carcasses Collected at Different Processing Stages with Reduced
  Chemical Levels in a Commercial Broiler Facility to Validate the
  Performance of a Physical Intervention GABRIELA K. BETANCOURTBARSZCZ, Diego Casas, Rigo Soler, Daniela Chavez, Juan DeVillena,
  Marcos Sanchez, Texas Tech University, Lubbock, TX, USA
- P2-183 Rapid Quantification of Salmonella in Chicken Carcass Rinses Using Loop Mediated DNA Amplification (LAMP) Assay LEI ZHANG, Esteban Valverde Bongantes, Neil Percy, Jessica Wood, Toni Bartling, Haley Saddoris, Gregory Sitton, Rocio Foncea, Preetha Biswas, Neogen Corporation, Lansing, MI, USA
- P2-184 L. monocytogenes Colony Confirmation Using GENE-UP® LIS and LMO in Liquid Whole Eggs and Several Ready-to-Eat (RTE) Foods SAMOA ASIGAU, Jada Jackson, Nikki Taylor, John Mills, bioMérieux, Inc., Hazelwood, MO, USA
- P2-185 Optimizing the Oxford Nanopore Technologies Flongle Flow Cell for Rapid Detection of Foodborne Pathogens in Whole Chicken Rinsate Anand B. Karki, Elise Delaporte, Hailey Hall, Suhani Sharma, Maya Sous, MOHAMED K. FAKHR, Department of Biological Science, The University of Tulsa, Tulsa, OK, USA
- P2-186 Rapid Detection of Salmonella spp. Using the Loop-Mediated Isothermal Amplification (LAMP) Assay Bioluminescent in Primary Production Boot Swabs Collected from Farms at Sanitary Void Moment VANESSA TSUHAKO, Georgia Barros, Beatriz Rosa, Thomaz Marra, Andressa Barella de Freitas, Juliana Contiero, Gabriela Vicelli, Neogen, Indaiatuba, Brazil
- P2-187 Oxidative Stability of Burger Containing Unconventional Food Plants and Packaged with a Novel Biodegradable Film Incorporated with Apple Pomace Ushieli Valeria Sanguino, SOLANGE TERESINHA CARPES, Jaqueline Iohana Tavares Racoski, Bruno Henrique Fontoura, Luciano de Souza Ramos, Mateus Pasqualotto, Edimir Andrade Pereira, Marina Leite Mitterer Daltoé, Federal Technological University of Paraná, Pato Branco, Paraná, Brazil
- P2-188 Effect of Vinegar and Natural Antioxidants on Shelf Life Enhancement of Turkey Deli Meat — KAYLEE RUMBAUGH, Rebecca Furbeck, Joyjit Saha, Paul Ludtke, Eelco Heintz, Saurabh Kumar, Kerry, Beloit, WI, USA
- P2-189 Evaluating the Efficacy of Different Weak Organic Acid Salts against

  Listeria monocytogenes in an Uncured Turkey Deli Meat System —

  KAYLEE RUMBAUGH, Surabhi Wason, Joyjit Saha, Rebecca Furbeck,
  Paul Ludtke. Eelco Heintz. Saurabh Kumar. Kerry. Beloit. WI. USA
- P2-190 Evaluation of Dose-Response of Sodium Nitrite Concentration on Listeria monocytogenes in Frankfurters — KAYLEE RUMBAUGH, Rebecca Furbeck, Joyjit Saha, Eelco Heintz, Paul Ludtke, Saurabh Kumar, Kerry, Beloit, WI, USA
- P2-191 Enhancement of Fresh Ground Poultry Shelf Life Using a Natural Vinegar and Plant Extract-Based Antimicrobial and Antioxidant Preservation System MELISSA SUAREZ, Jasmine Kataria, Joyjit Saha, Eelco Heintz, Saurabh Kumar, Purdue University, West Lafayette, IN, USA
- P2-192 Effect of Thawing Techniques on the Loads of Microbial and Spoilage Indicators in Chicken Tenders during Distribution in the Food Service Value Chain ISAAC M. ROMERO, Rigo Soler, Guillermo Santos, Mindy Brashears, Marcos Sanchez, Texas Tech University, Lubbock, TX, USA

- P2-193 Shelf-Life Extension of Poultry Using Zero-Oxtech® Packaging System: Minimizing Food Safety Issues and Maximizing Poultry Process Operations — Aishani Tewari, Vijay Juneja, ABHINAV MISHRA, University of Georgia, Athens, GA, USA
- P2-194 Evaluation of Bacteria from Swine-Related Sources as Direct-Fed Probiotics for Enhancement of Feed Utilization and Growth Performance in Swine — KAVYA GAVAI, Scott Carter, Peter Muriana, Oklahoma State University, Stillwater, OK, USA
- P2-195 Mapping of Stakeholders Involved in Avian Influenza Surveillance in Canada ERICA JOHNCOX, Shayan Sharif, Jane Parmley, Lauren Grant, University of Guelph, Guelph, ON, Canada
- P2-196 Consumer Perceptions of Meat and Poultry Safety at Kentucky
  Farmers' Markets MARLAIN KHOURYIEH, Hanna (John)
  Khouryieh, Dominique Gumirakiza, Luiz Silva, Cangliang Shen, Yifan
  Zhang, Western Kentucky University, Bowling Green, KY, USA
- P2-197 Growth Potential of *Clostridium perfringens* during Cooling of Large Mass, Non-Intact Beef Products HAYRIYE CETIN-KARACA, Kiana Thomas, Smithfield Foods, Cincinnati, OH, USA
- P2-198 FSIS Market Basket Study Results for *C. perfringens* in Large Mass Ready-to-Eat Products — Kristina Barlow, Meryl Silverman, Robert Phillips, Sterling Brown, Monique Pichon, JOHN JAROSH, USDA Food Safety Inspection Service, Alexandria, VA, USA
- P2-199 Genomic Analysis of *Clostridium perfringens* from Broilers Raised Conventionally and Without Antibiotics BRENDA KROFT, Sasikala Vaddu, Jinquan Wang, Bharath Mallavarapu, Estefanía Novoa Rama, Harshavardhan Thippareddi, Manpreet Singh, University of Georgia, Athens, GA, USA
- P2-200 Development of a Long-Read, Native DNA Sequencing Analysis
  Pipeline Using a Curated Salmonella enterica subsp. enterica
  Database BRENDA KROFT, Harshavardhan Thippareddi, Manpreet
  Singh, University of Georgia, Athens, GA, USA
- P2-201 Effects of Feed Additives on Production Parameters and Cecal Microbiota of Late-Laying Hens ZACHARY FERRENBERG, Jasmine Moallem, Darin Bennett, Rodrigo Manjarin, Mohammed Abo-Ismail, Siroj Pokharel, Cal Poly San Luis Obispo, San Luis Obispo, CA, USA

## **Modeling and Risk Assessment**

- P2-202 Advancing Antimicrobial Selection: An Advanced Predictive Model for *Listeria monocytogenes* in Industrial Food Production NANJE GOWDA N APPANNA, Gijs Lommerse, Eelco Heintz, Saurabh Kumar, Jeyamkondan Subbiah, University of Arkansas, Fayetteville, AR, USA
- P2-203 Effects of Liquid Smoke Treatment and Inoculation Levels on the Growth of *Listeria monocytogenes* in Broth GIJS LOMMERSE, Simone Potkamp, Matthew McCusker, Surabhi Wason, Eelco Heintz, Saurabh Kumar, Kerry B.V., Taste & Nutrition, Wageningen, The Netherlands
- P2-204 Effect of pH and Temperature on the Inactivation of Foodborne
  Pathogens in Cold Brew Coffee AMANDEEP SINGH, Manoj Sawale,
  Harneel Kaur, Patnarin Benyathiar, Dharmendra Mishra, Purdue
  University, West Lafayette, IN, USA
- P2-205 Antimicrobial Effect of Bovine Lactoferrin and Glycerol Monolaurate on Selected Gram-Positive and Gram-Negative Pathogenic Bacteria MANOJ SAWALE, Amandeep Singh, Ferhan Ozadali, Sundar Bala, Teresa Murguia-Peniche, Dharmendra Mishra, Purdue University, West Lafayette, IN, USA

P2-206	Quantitative Microbial Spoilage Risk Assessment of <i>Aspergillus</i> Niger in White Bread Supply Chain — JINXIN LIU, Kelvin Chou, Hsin-I Hsiao, Xiaonan Lu, McGill University, Sainte-Anne-de-Bellevue, QC, Canada	P2-219	Predictive Modelling of the Psychrotolerant <i>Bacillus cereus</i> Group in Fried Rice and Identification of Strain Variability Using Whole Genome Sequencing — Jin Hwa Park, Miseon Kang, HYUN JUNG
P2-207	Predictive Model for Growth of <i>Salmonella</i> Infantis in Ground Turkey during Temperature Abuse — THOMAS OSCAR, U.S. Department of		KIM, Korea Food Research Institute, Wanju-gun, Jeollabuk-do, South Korea
P2-208	Agriculture-ARS, Princess Anne, MD, USA  How Does Protein Concentration in Food Affect Bacterial Growth Kinetics? Development of Predictive Models for <i>Escherichia coli</i> Growth as a Function of Protein Concentration — MASAKI KATO, Kento Koyama, Shige Koseki, Graduate School of Agriculture,	P2-220	Predictive Model for Growth of <i>Bacillus cereus</i> at Temperatures Applicable to Cooling of Cooked Foods — VIJAY JUNEJA, Marangeli Osoria, Anuj Purohit, Daniela Bermudez-Aguirre, Govindraj Kumar, Abhinav Mishra, USDA ARS Eastern Regional Research Center, Wyndmoor, PA, USA
P2-209	Hokkaido University, Sapporo, Hokkaido, Japan Increased Thermal Resistance of <i>Escherichia coli</i> 0157:H7 and	P2-221	A Decision-Support Tool for Food Safety Technology Investments — CARLY GOMEZ, Bradley Marks, Jade Mitchell, Robert Scharff, Felicia Wu, Michigan State University, East Lansing, MI, USA
	Salmonella in Animal Fat — One-Step Kinetic Analysis — Samet Ozturk, LIHAN HUANG, Cheng-An Hwang, Shiowshuh Sheen, USDA ARS Eastern Regional Research Center, Wyndmoor, PA, USA	P2-222	Artificial Intelligence (AI) as a Tool for Hazard Assessment in the Food Industries: Threats and Opportunities — CLAUDIO GALLOTTINI,
P2-210	Effect of Sodium Nitrite, Sodium Erythorbate, Sodium Tripolyphosphate, and Sodium Chloride on Inhibition of Clostridium perfringens in Cured Meat: Logistic Modeling and Development of Critical Control Surfaces — Nurul Hawa Ahmad, LIHAN HUANG, Cheng-An Hwang, USDA ARS Eastern Regional Research Center, Wyndmoor, PA, USA	P2-223	ITA Corporation, Miami, FL, USA  Cool Insights: Unveiling Key Consumer Messages through Refrigerator Temperature Studies and QMRA Analysis — WIEKE VAN DER VOSSEN-WIJMENGA, Heidy den Besten, Marcel Zwietering, Wageningen University & Research, The Netherlands Nutrition Centre, The Hague, The Netherlands
P2-211	Analysis of Heat Resistance-Related Genes and Development of a Heat Resistance Prediction Model of <i>Campylobacter jejuni</i> Using Whole Genome Multi Locus Sequencing Typing Data — HIROKI ABE, Susum Kawasaki, Institute of Food Research National Agriculture	P2-224	Modeling the Combination Effects of Salt, pH and Time on the Growth of <i>Bacillus cereus</i> and <i>Clostridium perfringens</i> in Sauces at 75°F and 90°F — BROOK XI, Andrew Schissel, Tim Perez, ConAgra Brands, Omaha, NE, USA
P2-212	and Food Research Organization, Tsukuba, Japan  Using a Flexible Supply Chain Risk Model For Leafy Greens to Compare Tradeoffs Between Contamination Variability, Finished Product Testing, and Improved Process Controls — GABRIELLA	P2-225	Spatial Modeling of the Poultry Chilling Process: Impact of Water Recirculation and Counterflow on <i>E. coli</i> and <i>Campylobacter</i> Dynamics — DANIEL MUNTHER, Chandrasekhar Kothapalli, Shawn Ryan, Nerion Zekaj, Cleveland State University, Cleveland, OH, USA
	PINTO, Gustavo A Reyes, YeonJin Jung, Chenhao Qian, Martin Wiedmann, Matthew J. Stasiewicz, University of Illinois at Urbana- Champaign, Urbana, IL, USA	P2-226	Development of Dynamic Models to Describe the Kinetic Behavior of Aerobic Bacteria in Beef — Jungeun Hwang, Yeongeun Seo, Jeonghyun Cho, Eunryeong Yang, YOHAN YOON, Sookmyung
P2-213	Quantitative Microbial Risk Assessment for <i>E. coli</i> 0157:H7 in Formal and Informal Lettuce Production and Supply Chains in South Africa — THABANG MSIMANGO, Edmund O. Benefo, Lise Korsten, Abani Pradhan, University of Pretoria, Pretoria, South Africa	P2-227	Women's University, Seoul, South Korea  Production of Preservatives in Fermented Dairy Drinks — Jiyeon Baek, Miseon Sung, Woojin Jang, YOHAN YOON, Jihyun Lee, Sookmyung Women's University, Seoul, South Korea
P2-214	Estimation of Total Pre-Pandemic Poultry Consumption Subtotals for Parts, Ground, and Comminuted Products Using NHANES Datasets – A Comparison of One- and Two-Day Dataset Distribution Estimates – DAVI LABARRE, U.S. Department of Agriculture – FSIS, Washington, D.C., USA	P2-228	Escherichia coli and Citrobacter koseri Harboring clbA, clbP, and clbQ Genes Cause DNA Cross-Linking In vitro — Minkyoung Oh, Jei Oh, Yoonjeong Yoo, YOHAN YOON, Sookmyung Women's University, Seoul, South Korea
P2-215	Growth of Thermotolerant and Mesophilic <i>Bacillus cereus</i> in Liquid Egg Yolk during Treatment with Phospholipase A2 — NURUL HAWA AHMAD, Lihan Huang, Vijay Juneja, Universiti Putra Malaysia, Seri Kembangan, Selangor, Malaysia	P2-229	Inferential Modeling of Coronavirus Persistence and Surface- Mediated Transfer to Human Skin — Simon Riley, Arie Havelaar, NAIM MONTAZERI, Food Science and Human Nutrition Department, University of Florida, Gainesville, FL, USA
P2-216	Modelling Thermal Inactivation of Salmonella Montevideo in Red Chili Pepper as Impacted by Temperature and Water Activity — NATOAVINA FALIARIZAO, Teresa M. Bergholz, Kirk Dolan, Michigan State University, East Lansing, MI, USA	P2-230	Online Platform for Curating Food Safety Datasets to Facilitate Model Development — CHENHAO QIAN, Huan Yang, Jayadev Acharya, Jingqiu Liao, Martin Wiedmann, Cornell University, Ithaca, NY, USA
P2-217	Modeling Contamination of Peaches from Food Contact Surfaces during Simulated Dry Post-Harvest Handling — YUCEN XIE, Nitin Nitin, Linda J. Harris, University of California, Davis, Davis, CA, USA	P2-231	FSIS' Bioinformatics Supplemental Materials Workbook: A Tool to Enhance Transparency in Regulatory Rulemaking — Joanna Zablotsky, IVA BILANOVIC, USDA, FSIS, Washington, D.C., USA
P2-218	Evaluation of Thermal Inactivation Kinetics of <i>Escherichia coli</i> 0157:H7, Uropathogenic <i>E. coli</i> (UPEC) and <i>Salmonella</i> spp. in Ground Meats by One-Step Dynamic Analysis — SHIOWSHUH SHEEN, Lihan Huang, USDA ARS Eastern Regional Research Center, Wyndmoor, PA, USA	P2-232	Fungal Communities and Metabolites during Activation of Ginger Root Microbiota and Derived Ginger Beer — Louise Iara Gomes de Oliveira, Whyara Karoline Almeida da Costa, Tatiana Colombo Pimentel, Marcos Santos Lima, Melline F. Noronha, Lucélia Cabra Cabral, MARCIANE MAGNANI, Federal University of Paraiba, João Pessoa, Paraiba, Brazil

P2-233 Evaluating the Temperature and Relative Humidity Effects on the Survival Rate of *Salmonella enterica* in Chocolate Filled with Contaminated Cocoa Nibs — Fernando Azevedo de Lucena, Alyson José dos Santos Franco, Ruthchelly Tavares, Geany Targino de Souza Pedrosa, Clifton Baldwin, Donald W. Schaffner, MARCIANE MAGNANI, Federal University of Paraiba, João Pessoa, Paraiba, Brazil

## **Molecular Analytics, Genomics and Microbiome**

- P2-234 Impacts of Glow Discharge Cold Plasma Treatment on Microbiota Composition of Fresh Edible Red Mini-Roses (*Rosa chinensis* Jacq.)

   Janne Santos de Morais, Lucélia Cabra Cabral, Thatyane Vidal Fonteles, Francyeli Araujo, Anderson Sant'Ana, Sueli Rodrigues, Fabiano André Narciso Fernandes, MARCIANE MAGNANI, Federal University of Paraiba, João Pessoa, Paraiba, Brazil
- P2-235 Prebiotic Potential of Cassava (Manihot esculenta) against Lacticaseibacillus casei 1 and Lactobacillus acidophilus 5 Isis Meireles Mafaldo, Lais Matias Araujo, Whyara Karoline Almeida Costa, Francyeli Araujo, Marcos Santos Lima, Tatiana Colombo Pimentel, MARCIANE MAGNANI, Federal University of Paraiba, João Pessoa, Paraiba, Brazil
- P2-236 Machine Learning Approaches to Predict the Clinical Symptoms of Shiga Toxin-Producing *E. coli* Using Public Genome Data MISEON KANG, Hyein Seo, Hyun Jung Kim, University of Science and Technology, Daejeon, South Korea
- P2-237 Understanding the Genetic Regulation of Paenibacillin Biosynthesis through Quorum Sensing Systems SOCHINA RANJIT, Ahmed Abdelhamid, Ahmed Yousef, The Ohio State University, Columbus, OH, USA
- P2-238 Modifying the Powersoil Protocol to Improve the Extraction of DNA from Bacterial and Fungal Cells JINGZHANG FENG, Sarah E. Daly, Abigail B. Snyder, Cornell University, Ithaca, NY, USA
- P2-239 Resistome Analysis of Seafood Samples Using Shotgun Metagenomics — Caitlin A. Welsh, Saul H. Sarria, Claudine Kabera, DANIEL A. TADESSE, U.S. Food and Drug Administration, CVM, Laurel, MD, USA
- P2-240 Assessing Genetic Evolution, Virulence, and Antimicrobial Resistance of *Listeria monocytogenes* Isolated from Food and Food Processing Environments HANNAH BLACKWELL, Calleigh Herren, Andrea Etter, The University of Vermont, Burlington, VT, USA
- P2-241 Resistome, Mobilome, Virulome Analysis and Phylogenomics of Enterococcus faecalis Isolated from Raw Muscle Foods of Beef Origin in Gauteng, South Africa — ITUMELENG MATLE, Thendo Mafuna, Agricultural Research Council, Pretoria, South Africa
- P2-242 Diversity of Environmental and Clinical Strains of *Vibrio*parahaemolyticus in British Columbia KATIE ELORANTA, John *L*.
  Palmer, Jennifer Liu, Hasan Hamze, Tess Macintyre, John R. Tyson,
  Zohaib Anwar, William Hsiao, Chelsea Leung, Zein Jiwani, Janet Fung,
  Robert Azana, Benjamin Hon, James Zlosnik, Linda Hoang, Canadian
  Food Inspection Agency, Burnaby Laboratory, Burnaby, BC, Canada
- P2-243 Mechanisms of Polymyxin Resistance in Acid-Adapted *Escherichia* coli NCCP 13719 Revealed by Transcriptomics DAEKEUN HWANG, Min-Cheol Lim, Hyun Jung Kim, Korea Food Research Institute, Wanju, Jeolla-buk, South Korea
- P2-244 Characterization of Diarrheagenic *Escherichia coli* Isolated from Poultry in the Chobe Region of Botswana by Molecular Methods Including Whole Genome Sequencing MONICA PONDER, Saehah Yi, Auja Bywater, Galaletsang Dintwe, Thomas Haidl, Andrew Cameron, Kathleen Alexander, Virginia Tech, Blacksburg, VA, USA

- P2-245 Evaluation of Metagenomic Wastewater-Based Epidemiology for Enteric Pathogen Surveillance at a Wastewater Treatment Facility KATHRYN JUDY, Padmini Ramachandran, Tamara Walsky, C. Hope Bias, Ruth Timme, Leena Malayil, Amy R. Sapkota, Amanda Windsor, Maria Hoffmann, Christopher Grim, U.S. Food and Drug Administration Center for Food Safety and Applied Nutrition, College Park, MD, USA
- P2-246 Survival and Stress Response of *E. coli* 0157:H7 during Heat
  Treatment after Pre-Exposure to Acidic Abomasal Content of Cattle
   JYOTI ARYAL, Anne Raggio, Achyut Adhikari, Louisiana State
  University AgCenter, Baton Rouge, LA, USA
- P2-247 Genomic Snapshot of Multidrug-Resistant Environmental

  Escherichia coli and the Relevance in Food Safety LOANDI

  RICHTER, Stacey Duvenage, Thabang Msimango, Muneiwa

  Ratshilingano, Manana Dlangalala, Tintswalo Baloyi, Degracious

  Kgoale, Erika Du Plessis, Lise Korsten, University of Pretoria,

  Pretoria. South Africa
- P2-248 Enterobacter Isolates Harboring Class A Carbapenemase Genes blaNMC-A or blaIMI on Chromosomal Integrative Element and Plasmid Sun Hee Moon, Xinhui Li, Xu Yang, Erin DiCaprio, EN HUANG, University of Arkansas for Medical Sciences, Little Rock, AR. USA
- P2-249 Utilizing Whole Genome Sequencing to Characterize *Listeria monocytogenes* Transmission between a Farmstead Dairy
  Processing Facility and Its Associated Farm Environment —
  SAMANTHA BOLTEN, Aljosa Trmcic, Robert D. Ralyea, Timothy Lott,
  Renato Orsi, Nicole Martin, Martin Wiedmann, Cornell University,
  Ithaca, NY, USA
- P2-250 Assessment of Method Providers to Detect Artificially Contaminated Microbiota in Blinded Soy Milk Samples Sophie Butot, Solenn Pruvost, Caroline Barretto, Johan Gimonet, Caroline Gaille, Farid Chaabane, Sylviane Metairon, Enrico Chavez, BALA JAGADEESAN, Société des Produits Nestlé S.A, Nestlé Research, Lausanne, Vaud, Switzerland
- P2-251 Genomic Characterization of an Un-Typable Atypical Salmonella spp. Isolated from Mussels in Spain Antonio Lozano-León, Alexandre Lamas, Narjol Gonzalez-Escalona, ALEJANDRO GARRIDO-MAESTU, Institute of Marine Research (IIM CSIC), Vigo, Spain
- P2-252 Microbiota and Population Dynamics During Selective Enrichment of Listeria monocytogenes in Drains From a Sausage Processing Plant — Birgitte Moen, Merete Rusås Jensen, ANNETTE FAGERLUND, Solveig Langsrud, Trond Møretrø, Nofima, Ås, Norway
- P2-253 A Bioinformatic Approach to Identify Targets for Detection and Genotyping for a *Cronobacter* Targeted Amplicon Sequencing Assay MARK MAMMEL, Gopal Gopinath, Yi Chen, Jolie Li, Rachel Binet, Eric Brown, U.S. Food and Drug Administration, Center for Food Safety and Applied Nutrition, Office of Applied Research and Safety Assessment (OARSA), Laurel, MD, USA
- P2-254 Whole-Genome Sequencing of Salmonella Isolated from a Vegetable Supply Chains in Cambodia Revealed a High Serovar Diversity and Signs of Persistence and Transmission in the Supply Chain ABIMEL SALAZAR, Jessie Vipham, Chanthol Peng, Navin Sreng, Yezhi Fu, Erin Nawrocki, Edward G. Dudley, Jasna Kovac, The Pennsylvania State University, University Park, PA, USA

- P2-255 Molecular Characterization of Non-0157 STEC *Escherichia coli* Isolated from Western Canadian Cattle VALERIA R. PARREIRA, Opeyemi U. Lawal, Kim Stanford, Lawrence Goodridge, Canadian Research Institute for Food Safety (CRIFS), University of Guelph, Guelph, ON, Canada
- P2-256 Cronology: An Automated Bioinformatics Workflow for Cronobacter Whole Genome Sequence Assembly, Subtyping and Isolate Clustering Kranti Konganti, PADMINI RAMACHANDRAN, Monica Pava-Ripoll, Mark Mammel, Karen Jarvis, Maria Balkey, Ruth Timme, Gopal Gopinath, Yi Chen, Christopher Grim, U.S. Food and Drug Administration, Center for Food Safety & Applied Nutrition, Office of Regulatory Science, College Park, MD, USA
- P2-257 Serovar Identification, Predicted Antimicrobial Resistance, and Clinical Relevance of *Salmonella enterica* Collected from Chicks Shipments Destined for the Hobby Poultry Industry Hannah Blackwell, KATALIN LARSEN, Andrea Etter, The University of Vermont, Burlington, VT, USA
- P2-258 Die-Off Rates of *E. coli* 0157:H7 in Agricultural Soils Kerry Cooper, VICTORIA OBERGH, The University of Arizona, Tucson, AZ, USA
- P2-259 Rapid Identification and Characterization of Bacterial Foodborne
  Pathogens through Oxford Nanopore-Based Whole Genome
  Sequencing RICHARD FETHERSTON, Samriti Midha, Sissel Juul,
  Phillip James, Oxford Nanopore Technologies, Oxford, UK
- P2-260 A Tale of Two Kentuckys: Highlighting Genetic and Phenotypic Differences within a Polyphyletic Salmonella Serovar AMBER RICHARDS, Song Kue, Connor Norris, Nikki Shariat, University of Georgia, Department of Population Health, Athens, GA, USA
- P2-261 Clustered Regularly Interspaced Short Palindromic Repeats (CRISPR) in *Campylobacter jejuni* Isolates from Poultry HUNG-YUEH YEH, U.S. Department of Agriculture ARS PMSPRU, Athens, GA, USA
- P2-262 Untargeted Metabolomics Guided the Discovery of Biomarkers for Pseudomonas aeruginosa Hypoxic Biofilm — AHMED ABDELHAMID, Ahmed Yousef, The Ohio State University, Columbus, OH, USA
- P2-263 Adaptive Laboratory Evolution of *Salmonella enterica* under Prolonged Acid Exposure MRINALINI GHOSHAL, Tyler D Bechtel, John Gibbons, Lynne McLandsborough, Department of Microbiology, University of Massachusetts, Amherst, MA, USA
- P2-264 Salmonella enterica Serovar Schwarzengrund: Distribution, Virulence and Antimicrobial Resistance STEVEN FOLEY, Jing Han, Bijay Khajanchi, Danielle Sopovski, Yasser M. Sanad, Food and Drug Administration and National Center for Toxicological Research, Jefferson, AR, USA
- P2-265 Evaluation of Virulence Factors as Targets for Veterinary Drugs for Avian Pathogenic *Escherichia coli* to Combat Colibacillosis in Chickens Heather Harbottle, Jing Han, Grayson Walker, Chalise Brown, Jessica Paredes, M. Mitsu Suyemoto, Luke Borst, Madison Johnson, Marilyn N. Martinez, Jeffrey Gilbert, STEVEN FOLEY, Food and Drug Administration and National Center for Toxicological Research, Jefferson, AR, USA
- P2-266 Whole Genome Sequencing and Characterization of Campylobacter jejuni Strains S27, S33, and S36 Newly Isolated from Retail Chicken YIPING HE, Siddhartha Kanrar, Sue Reed, Joe Lee, Joseph Capobianco, U.S. Department of Agriculture (USDA), Agricultural Research Service (ARS), Eastern Regional Research Center (ERRC), Wyndmoor, PA, USA

- P2-267 Targeted Genomic Sequencing of *Norovirus*es in Contaminated Oysters KEVIN S. KUCHINSKI, E. Chantal Mutanda, Marzieh Kalhor, Ethan Kenmuir, Rachel C. Floyd, Jennifer Choo, Darren B. Mulder, Margaret Cerqueira, Sarah C. Mansour, John *L.* Palmer, John R. Tyson, Katie Eloranta, Natalie A. Prystajecky, University of British Columbia, Department of Pathology and Laboratory Medicine, Vancouver, BC, Canada
- P2-268 A Modern Bioinformatics Pipeline for *Norovirus* Typing and Phylogenetics John L. Palmer, Sarah C. Mansour, KEVIN S. KUCHINSKI, Marzieh Kalhor, Ethan Kenmuir, John R. Tyson, James Zlosnik, Natalie A. Prystajecky, University of British Columbia, Department of Pathology and Laboratory Medicine, Vancouver, BC, Canada
- P2-269 Genomic Characterization of a *Cronobacter sakazakii* Strain ST64
  Recovered from Spice Powder IRSHAD SULAIMAN, Nancy
  Miranda, Steven Simpson, Kevin Karem, U.S. Food and Drug
  Administration, Atlanta, GA, USA
- P2-270 Characterization of the Effect of Probiotics and Essential Oils on Broilers' Resistome — Ana Fonseca, Sophia Kenney, John Boney, ERIKA GANDA, The Pennsylvania State University, University Park, PA. USA
- P2-271 Insights into the Core Soil Microbiomes of Sandy and Clay Soils in Pecan Orchards under Adaptive Multipaddock (AMP) Management Using High-Throughput Amplicon Sequencing SULAV INDRA PAUL, Roshan Paswan, Guodong Zhang, Li Maria Ma, Oklahoma State University, Stillwater, OK, USA
- P2-272 Genomic Analysis of Drug-Resistant *Escherichia coli* Retrieved from Pre-Harvest and Post-Harvest Fresh Produce Issmat I. Kassem, Sarah El Khechen, Mona Zeidan, JOUMAN HASSAN, Marwan Osman, Anahita Ghorbani Tajani, Bledar Bisha, University of Georgia, Center For Food Safety, Griffin, GA, USA
- P2-273 Dissecting Salmonella Serotype Patterns: A Comparative Study
  Between Poultry Industry Sources and Clinical Samples in the
  PulseNet Database DAVID TRAN, Andrew Lin, Adam Allred, Justin
  Ng, Ramin Khaksar, Clear Labs, San Carlos, CA, USA
- P2-274 Application of Repeated Cycles of Elevated Hydrostatic Pressure
  Could Improve DNA Extraction, Increasing Sensitivity of Standard
  and Real-Time PCR Assays for Detection of *Listeria monocytogenes* RANJU KAFLE, Rabin Raut, Sandhya Thapa, Aliyar Cyrus
  Fouladkhah, Public Health Microbiology Laboratory, Tennessee
  State University. Nashville. TN. USA
- P2-275 Application of Electronic Nose and Identification of Signature Volatile Compounds for Rapid Detection of Spoilage of Raw Poultry Subjected to Simulated Cold Chain Disruption VIANCA TASHIGUANO, Katherine Sierra, Luis Jose Guzman, Jaroslav Valenta, Laura Garner, Sungeun Cho, Amit Morey, Auburn University, Auburn, AL, USA
- P2-276 Comparative Genomics for Virulence, Antibiotic Resistance, and Metabolism of Pathogenic Vibrio parahaemolyticus SHUYI FENG, Ryan Blaustein, Abani Pradhan, University of Maryland, College Park. MD. USA
- P2-277 Proteomic Analysis of Stress-Resistant *Listeria monocytogenes* under Acidic, High Salt Concentration, and Cold Temperature HYUNHEE HONG, Hyun Jung Kim, Si Hong Park, Oregon State University, Corvallis, OR, USA

- P2-278 Microbial Community Analysis of *Lepidium sativum L.* (cress) and *Eruca vesicaria L.* (rocket), *Brassicaceae* through High Throughput 16S rRNA Amplicon-Based Sequencing — SHIVA DUBEY, University College of Dublin, Dublin, Dublin, Ireland
- P2-279 Emergence of Salmonella Newport Strains with Worrisome
  Multi-Drug Resistance Profiles in Pork, Beef, and Surface Waters
  in Mexico Enrique Jesus Delgado Suarez, Luisa Maria Sanchez
  Zamorano, MARIA SALUD RUBIO LOZANO, Orbelin Soberanis Ramos,
  Zhao Chen, Magaly Toro, Jianghong Meng, Faculty of Veterinary
  Medicine, National Autonomous University of Mexico,
  Mexico City, Mexico
- P2-280 Systematic Review and Metagenomic Meta-Analysis of Bacterial Communities Harboring *Listeria* JACK BURNETT, Haley Oliver, Purdue University, West Lafayette, IN, USA
- P2-281 Bacterial Fermented Oat and Its Benefits in Human Health ARPITA ADITYA, Nina Wilson, Huanyu Zhu, Kyle Schmitt, Claire Highsmith, Mark Koenigsknecht, Camille Delebecque, Todd Beckman, Noah Zimmerman, Verb Biotics, LLC., Boston, MA, USA
- P2-282 Development of Rapid Species-Specific Molecular Methods for Detecting *Cronobacter* Strains from Critical Foods and Environmental Samples — JOLIE LI, Mark Mammel, Hee Jin Kwon, Xiaohong Deng, Segaran Pillai, Rachel Binet, Yi Chen, Gopal Gopinath, U.S. Food and Drug Administration, College Park, MD, USA
- P2-283 Metagenomic Analysis for Antimicrobial-Resistant Organisms Using Nanopore Sequencing Facilitated the Identification and Recovery of a Multidrug-Resistant Raoultella terrigena Bei Zhang, Tianbi Tan, Derek D. N. Smith, Marc-Olivier Duceppe, Bashudey Rudra, Radhey Gupta, DELE OGUNREMI, Ottawa Laboratory Fallowfield, Canadian Food Inspection Agency, Ottawa, ON, Canada
- P2-284 Metagenomics for the Identification of Non-Culturable Food Spoilage Organisms — Darryll Barkhouse, Sarah Velez, Michelle Keener, DEBORAH BRIESE, bioMérieux, St. Louis, MO, USA

## **Plant-Based Alternative Products**

- P2-285 Thermal Inactivation of Salmonella in Plant-Based Process Cheese as a Function of pH and Water Activity CALVIN SLAUGHTER, Harneel Kaur, Kristin Schill, Kathleen Glass, Food Research Institute, University of Wisconsin, Madison, WI, USA
- P2-286 Microbial and Metagenomic Analysis of Novel Sorghum Kombucha Beverages — VICTORIA LOPEZ, Kawang Li, Fadi Aramouni, Umut Yucel, Valentina Trinetta, Kansas State University, Manhattan, KS, USA
- P2-287 The Use of a Cleaner Label Solution to Increase the Shelf Life of a Plant-Based Meat Alternative Product Subash Shrestha, JERRY ERDMANN, IFF, New Century, KS, USA
- P2-288 Evaluation of the Risk for *C. botulinum* Outgrowth and Toxin
  Production in Commercial Plant-Based Meat Alternative Products —
  CATHERINE ROLFE, Travis Morrissey, Viviana Aguilar, Guy Skinner,
  U.S. Food and Drug Administration, Bedford Park, IL, USA

## WEDNESDAY, JULY 17 8:30 a.m. - 3:00 p.m.

P3 Poster Session 3 – Animal and Pet Food Safety, Dairy, Data Management and Analytics, Food Allergens, Food Chemical Hazards, Low-Water Activity Foods, Microbial Food Spoilage, Packaging, Physical Hazards and Foreign Materials, Pre-Harvest Food Safety. Produce, and Water

#### Hall A

P3-01 through P3-116 – Authors present 10:00 a.m. – 11:00 a.m. and 12:00 p.m. – 1:00 p.m.

P3-117 through P3-243 - Authors present 11:00 a.m. - 1:00 p.m.

### **Animal and Pet Food Safety**

- P3-01 Detection of Salmonella from 375g Dry Kibble Pet Food in 16 Hours Using Hygiena's BAX® System Real-Time PCR Assay MICAH GREENZWEIG, Julie Weller, Ilir Mandija, University of Delaware, Newark, DE, USA
- P3-02 Use of Clean Label Antimicrobial and Natural Flavor to Control Lactic Acid Bacteria and *Salmonella* in Raw Pet Food NICOLETTE HALL, Jasmine Kataria, Joyjit Saha, Saurabh Kumar, Kerry, Beloit, WI, USA
- P3-03 Determination of LOD and RLOD of Salmonella in Raw Pet Food Matrices — Shannon Kiener, Neha Singh, EMILY SMITH, Sarah Nemser, Karina Hettwer, Steffen Uhlig, Ravinder Reddy, U.S. Food and Drug Administration — CFSAN, Bedford Park, IL, USA
- P3-04 Reduction of *Salmonella* spp. in White Grease and Beef Tallow Using Purac® FCC 88— Sara LaSuer, Luke Brown, Andrew Dillon, TUSHAR VERMA, Corbion, Lenexa, KS, USA
- P3-05 Identification of Animal Tissue from Alfalfa Cubes Linked to a
  Multi-State Clostridium botulinum Outbreak in Horses KATHLEEN
  PROIA, David Rotstein, Sarah Peloquin, Jake Guag, Sarah Nemser,
  Lee Anne Palmer, Lauren Carey, Jackie Queen, Mark Glover, April
  Hodges, Amy Barnes, Angela Swinford, William Parsons, Sumit
  Sarkar, Rebecca Wilkes, FDA Center for Veterinary Medicine, Laurel,
  MD LISA
- P3-06 A DNA Purification Method for Continuous Support of the Bovine Spongiform Encephalopathy (BSE) Program KUN LIU, Gabrielle Pires, FDA, Bothell, WA, USA
- P3-07 Metagenomic Profiling of Animal Food Samples Collected through the Laboratory Flexible Funding Model (LFFM)
  Cooperative Agreement Program Ryan Mcdonald, Jenny Eidson, Michael Lunsford, Megan Davis, Dana Waggoner, Codi Broten, Jennifer Glenn, Dominika Kondratko, Ruiqing Pamboukian, BEILEI GE, U.S. Food and Drug Administration Center for Veterinary Medicine, Laurel, MD, USA
- P3-08 Identification and Characterization of *Listeria* Species from Raw Pet Food — DOINA SOLÍS, Andrea Moreno-Switt, Magaly Toro, Paola Navarrete, Angelica Reyes-Jara, Institute of Nutrition and Food Technology (INTA), University of Chile, Santiago, Chile

## Dairy

P3-09 Synthesizing Cleaning and Sanitizing Interventions against *Listeria* spp. Including *L. monocytogenes* in Dairy Processing Facilities: A Systematic Review and Meta-Analysis Approach — KAREN NIETO FLORES, Aryany Peña-Gomez, Ilhami Okur, Jayne Stratton, Bing Wang, Andreia Bianchini, University of Nebraska - Lincoln, Lincoln, NE, USA

- P3-10 Rapid Enumeration of *Lactobacillus* in Dairy Drinks XIANMING ZHAO, Yi Wang, Zhijun Li, Yingli Sun, Wei Cong, Yan Huang, Neogen Biotechnology (Shanghai) Ltd., Shanghai, China
- P3-11 Fermentate, Vinegar and Plant Extract-Based Clean Label Solutions to Replace Potassium Sorbate in Salad Dressings and Sauces SNIGDHA GUHA, Jasmine Kataria, Joyjit Saha, Saurabh Kumar, Kerry, Beloit, WI, USA
- P3-12 Analysis of Method Performance for Quantitative Assessment of Listeria monocytogenes in Queso Fresco Cheese — NEHA SINGH, Ravinder Reddy, Karina Hettwer, Kirstin Frost, Matthew Kmet, Steffen Uhlig, Institute for Food Safety and Health, Illinois Institute of Technology, Bedford Park, IL, USA
- P3-13 The Evaluation of Soleris® Rapid Method as an Alternative GB Method for Commercial Sterility of Dairy Products QINGRUI ZHU, Hang Wang, Meiyun Zhu, Yan Huang, Neogen Biotechnology (Shanghai) Co., Ltd., China, Shanghai, China
- P3-14 Identifying What Drives Small and Medium Dairy Plants to Invest in Listeria Environmental Monitoring Programs — CAROLINE MOTZER, Samantha Bolten, Aljosa Trmcic, Nicole Martin, Martin Wiedmann, Cornell University, Ithaca, NY, USA
- P3-15 Effect of the Bioprotective Properties of Lactic Acid Bacteria Strains in Aerobic Storage of Feta Cheese Inoculated with Listeria monocytogenes Olga Papadopoulou, Angeliki Doukaki, Antonia Baraki, Marina Siapka, Ioannis Ntalakas, Ioannis Tzoumkas, Panagiotis Skandamis, George-John Nychas, NIKOS CHORIANOPOULOS, Agricultural University of Athens, Athens, Greece, Athens, Greece
- P3-16 Prevalence of *Listeria* spp. in Traditional Serbian Dairy Products —
  Biljana Aleksic, Nada Smigic, Zorana Miloradovic, Jelena Miocinovic,
  JOVANA KOVACEVIC, Oregon State University, Portland, OR, USA
- P3-17 Evaluation of the TEMPO® AC Method for the Enumeration of Thermophilic Aerobic Bacteria in Dairy Raw Ingredients JOHN MILLS, Michelle Keener, Samoa Asigau, Deborah Briese, Jada Jackson, Nikki Taylor, Rémy Deschomets, Thierry Sofia, bioMérieux, Inc., Hazelwood, MO, USA
- P3-18 Factors Influencing the Level of Detection of *Listeria monocytogenes* in Ice Cream BAIRU CHEN, Kaiping Deng, Karina Hettwer, Steffen Uhlig, Neha Singh, Ravinder Reddy, Jason Wan, Institute for Food Safety and Health, Illinois Institute of Technology, Bedford Park, IL, USA
- P3-19 Enhancing Microbial Safety and Quality of Milk with Ultrasonication:
  Kinetics Modeling of Pathogenic Bacteria and Milk Characteristics

   NEETU TANEJA, Abishek Kaushik, Vijay Juneja, Joelle K. Salazar,
  National Institute of Food Technology Entrepreneurship and
  Management, Kundli, India
- P3-20 Assessing the Efficacy of a Commercial Probiotic in Preventing Colonization of *Listeria monocytogenes* on Wooden Cheese Aging Boards EURYDICE ABOAGYE, Andrea Etter, University of Vermont, Burlington, VT, USA
- P3-21 Identification and Evaluation of Bioactive Fractions Derived from Bioconverted Milk Having Anti-Inflammatory Effect in RAW264.7 Macrophages Jiyeon Baek, Yewon Lee, Jungeun Hwang, Eunryeong Yang, Yohan Yoon, KYOUNG-HEE CHOI, Wonkwang University, Iksan, South Korea

- P3-22 Anti-Inflammatory Effects of Amino Acids from Milk and *Artemisia herba-alba* by Bioconversion on YD-38 Human Oral Squamous Carcinoma Cells Jiyeon Baek, Yewon Lee, Sangeun Park, Jungeun Hwang, Yohan Yoon, KYOUNG-HEE CHOI, Wonkwang University, Iksan, South Korea
- P3-23 Population Dynamics and Bidirectional Transfer of *Listeria monocytogenes* and Shiga Toxin-Producing *Escherichia coli* during
  Cheese Production in Wooden Vats Lang Sun, DENNIS D'AMICO,
  University of Connecticut, Storrs, CT, USA
- P3-24 Characterization of Mammary Pathogenic *Escherichia coli* Isolates from Bovine Mastitis in South Korea Jun Bong Lee, Se Kye Kim, JANG WON YOON, Kangwon National University, College of Veterinary Medicine & Institute of Veterinary Science, Chuncheon, South Korea
- P3-25 Review of Historical Listeria monocytogenes Outbreaks Linked to Soft Cheeses between 2011–2023, Existing Challenges, and Potential Prevention Efforts CERISE HARDY, Tami Cloyd, U.S. Food and Drug Administration CFSAN, Coordinated Outbreak Response and Evaluation Network, College Park, MD, USA
- P3-26 Salmonella Reduces the Bacterial Diversity in Milk and Requires
  Fur-mediated Iron Metabolism for Milk Colonization GREESHMA
  BHARATHAN, Balamurugan Sadaiappan, Sunil Mundra, Shabarinath
  Srikumar, Auburn University, Auburn, AL, USA
- P3-27 Performance Evaluation of Rapid ELISA Method on Aflatoxin M1
  Workflow Optimization in Dairy Products FANGZHOU YUAN, Yan
  Huang, Neogen Biotechnology (Shanghai) Co., Ltd., China, Shanghai,
  Shanghai, China

## **Data Management and Analytics**

- P3-28 Adapting Statistical Process Control to Salmonella and Total Plate Counts in Commercial Poultry Processing CECIL BARNETT-NEEFS, Minho Kim, Erin Kealey, Linghuan Yang, Renato Orsi, Cristina Resendiz Moctezuma, Kevin Atkins, Jeffrey Shaw, Bruce Stewart-Brown, Martin Wiedmann, Matthew J. Stasiewicz, University of Illinois at Urbana-Champaign, Urbana, IL, USA
- P3-29 Data-Mining Salmonella and Campylobacter Quantification Loads in a Commercial Poultry Processing Facility to Establish Statistical Process Control Parameters, Evaluate the Performance of Antimicrobial Intervention Schemes and Implement Risk-Based Food Safety Management Decisions DANIELA R. CHAVEZ-VELADO, David A. Vargas, Isaac M. Romero, Mindy Brashears, Marcos X. Sanchez-Plata, Texas Tech University, Lubbock, TX, USA
- P3-30 Using Mixed Models to Assess Microbial Contamination in Raw Milk from a Pre- and Post-Training Intervention in the Central Oromia Region, Ethiopia JUAN ARCHILA GODINEZ, Achenef Melaku, Seleshe Nigatu, Kebede Amenu, James Barkley, Ahmed Yousef, Nora Bello, Barbara Kowalcyk, Milken Institute School of Public Health, George Washington University, Washington, D.C., USA
- P3-31 iComplai PestiPredict Advanced Pesticide Risk Prediction for Sourced Ingredients ASLI SOLMAZ-KAISER, Janosch Peters, iComplai UG, Höhenkirchen-Siegertsbrunn, Germany
- P3-32 Evaluation and Verification of WGS Bioinformatic Pipelines CAMERON PARSONS, Angela Nguyen, Mérieux NutriSciences, Crete, IL, USA
- P3-33 Evaluation of Four Key Foodborne Pathogens Over Four Iterations of Healthy People JOHANNA ALFIER, Hazel Shah, Evelyn Crish, Priya Kadam, Mark Montgomery, Centers for Disease Control and Prevention, Hyattsville, MD, USA

## **Food Allergens**

- P3-34 Evaluation of Rapid Allergen Detection Method for Plant-Based Protein Beverages FANGZHOU YUAN, Yan Huang, Neogen Biotechnology (Shanghai) Co., Ltd., China, Shanghai, Shanghai, China
- P3-35 Robustness Evaluation of a Multiplex-Competitive ELISA for the Quantitation of Wheat Gluten in Fermented Dairy Products RAKHI PANDA, Christina Galanis, FDA, College Park, MD, USA
- P3-36 Performance Verification of an ELISA-Based Crustacea Assay in Otak-Otak Mabel Ng, CHLOE NG, Lee Jiuan Chin, Yong Wee Liau, Romer Labs Singapore Pte. Ltd., Singapore
- P3-37 Performance Verification of an ELISA-Based Milk and Peanut Assay from Production Sampling Points in Asian Seasoning Processing Plants Mabel Ng, CHLOE NG, Lee Jiuan Chin, Yong Wee Liau, Romer Labs Singapore Pte. Ltd., Singapore
- P3-38 Performance Verification of an ELISA-Based Soy Assay on Plant-Based Food and Beverage — MABEL NG, Chloe Ng, Lee Jiuan Chin, Yong Wee Liau, Romer Labs Singapore Pte. Ltd., Singapore
- P3-39 An Evaluation of Rapid Lateral Flow Assays for Gluten Detection —
  ALEX KOSTIN, Jennie Orantes, Max Wolf, Julie Kilbourn, Dana DvoracekDriksna, Patrick Mach, Neogen Corporation, Lansing, MI, USA
- P3-40 Development and Evaluation of a Real-Time PCR Assay for the Detection of Bovine Milk in Foods SARAH STADIG, Anne Eischeid, U.S. Food and Drug Administration, College Park, MD, USA
- P3-41 Evaluation of Wiping Treatments for Removal of Allergens from Food-Contact Surfaces JEREMIAH KIDD, Lauren Jackson, Amandeep Sandhu, Peter Teska, David Buckley, Tina Gettis, U.S. Food and Drug Administration, Chicago, IL, USA
- P3-42 Evaluation of Manual and Mechanical Warewashing Treatments for Removal of Allergens from Food-Contact Surfaces — JEREMIAH KIDD, Lauren Jackson, David Buckley, Peter Teska, Tina Gettis, Amandeep Sandhu, U.S. Food and Drug Administration, Chicago, IL, USA
- P3-43 Development of a Mass Spectrometry-Based Non-Specific Fish
  Detection Method for Allergen Control Justin Marsh, PHILIP
  JOHNSON, Food Allergy Research and Resource Program, University
  of Nebraska-Lincoln, Lincoln, NE, USA
- P3-44 Food Safety, Attitude, and Practice of Food Additive, Food Allergen, and Halal Labeling among Supermarket Consumers in Los Banos, Laguna SHEEB MARGARITA QUIAONZA, Ma. Theresa Talavera, University of the Philippines, Laguna, Los Banos, Philippines

## **Food Chemical Hazards**

- P3-45 International Investigation of Lead Contamination of Multi-State Apple Cinnamon Puree Pouches in 2023— MARGARET KIRCHNER, Natalie Cataldo, Kailey Lewis, Monique Salter, Julia Mangia, Katherine Arnold, Bruce Ross, Marianela Aponte, Juan Morales, Ashley McIntyre, Lauren Yeung, Lawrence Schaufler, Alyssa Troeschel, Michael Yeh, Johnni Daniel, Arthur Chang, Brett Weed, U.S. Food and Drug Administration, Laurel, MD, USA
- P3-46 Correlations and Co-Occurrence of Arsenic, Cadmium, and Lead in Baby Foods: Evaluation of Two Statistical Approaches Adapted to Censored Data SARAH I. MURPHY, Régis Pouillot, Marc Boyer, Sherri Dennis, Eileen Abt, Patrick Gray, Dwayne Jarman, Edward Nyambok, Jane Van Doren, U.S. Food and Drug Administration CFSAN, College Park, MD, USA

- P3-47 Total Diet Study-Based Estimates of Children's Exposures to Lead and Cadmium in the U.S. DANA HOFFMAN-PENNESI, Judith Spungen, Alexandra Gavelek, Sarah Winfield, Sofia Santillana Farakos, U.S. FDA, Center for Food Safety and Applied Nutrition, College Park, MD, USA
- P3-48 Development of a Smartphone-Integrated Microfluidic Paper-Based Optosensing Platform for In-Situ Detection of Histamine in Canned Tuna YIHAN HE, Marti Hua, Xiaonan Lu, McGill University, Sainte-Anne-de-Bellevue, QC, Canada
- P3-49 Multispectral Sorting to Reduce Aflatoxins in Bulk Maize Retains
  Some Efficacy when Tested under Less Controlled Field Conditions
   JULIE HWANG, Mauricio Canales, Asha Mohamed, Ruben Chavez,
  Jiaying Wu, Matthew J. Stasiewicz, University of Illinois at UrbanaChampaign, Urbana, IL, USA
- P3-50 Detection of Mycotoxins with Confidence Overcoming Interferences in Challenging Matrices GREGORY NIECKARZ, Bruker Daltonics Applied Mass Spectrometry Division, Billerica, MA. USA
- P3-51 Knowledge of Conventional Food Consumers about Pesticides: How It Can Impact Food Safety and Guide Risk Communication? Bruno Fuschini Favaro, Ana Paula Gasques Meira, Diogo Thimoteo da Cunha, Elke Stedefeldt, LAÍS MARIANO ZANIN, University of São Paulo, Ribeirão Preto, São Paulo, Brazil

## **Low-Water Activity Foods**

- P3-52 Characterization of a Low-Moisture Food Persistent Bacterial Population (LMF PBP) and Impacts of Nutrient Type and Relative Humidity MANITA ADHIKARI, Kavita Patil, Jennifer Acuff, University of Arkansas, Fayetteville, AR, USA
- P3-53 Evaluation of Hygiena's BAX® System Real-Time PCR Assays for the Detection of Salmonella and Listeria from Large Test Portions of Almond Butter and Peanut Butter JULIE WELLER, Micah Greenzweig, Eddie Hall, Amy Erdman, Hygiena, New Castle, DE, USA
- P3-54 Matrix Validation of 375g of Romaine Lettuce for the Detection of Listeria Using Hygiena's BAX® System — JULIE WELLER, Margaret Morris, April Englishbey, Lester Sandoval, Hygiena, New Castle, DE, USA
- P3-55 Process Validation on the Baking of Sugar Waffles: From Lab to Industrial Scale FATIMA TAGHLAOUI, Mariem Somrani Achouri, An Vermeulen, Frank Devlieghere, Ghent University, Ghent, East Flandres, Belgium
- P3-56 Photothermal Inactivation of *Salmonella enterica* in Paprika Powder by Ultra-High Irradiance Blue (405 nm) Light Martha Minor, LAURA MUÑOZ, Sergio Martinez-Monteagudo, Luis Sabillon, New Mexico State University, Las Cruces, NM, USA
- P3-57 Thermal Inactivation of *E. faecium* and *Salmonella* in Oatmeal Cookies with Raisins: Impact of Inclusion ABDULLATIF TAY, Rico Suhalim, Abigail Anderson, Erdogan Ceylan, PepsiCo, Chicago, IL, USA
- P3-58 Enterococcus faecium as a Bacterial Surrogate for Salmonella
  Inactivation during Red Chile Drying Isaac Fabunmi, Estevan
  Alvarez, Yatziri Presmont, Ruben Zapata, WILLIS FEDIO, New Mexico
  State University, Las Cruces, NM, USA
- P3-59 The Survival of *Listeria monocytogenes* on Dried Gala Apple:
  Influence of Water Activity, Storage Temperature MENGQIAN
  HANG, Xiaoye Shen, Juming Tang, Meijun Zhu, Washington State
  University, Pullman, WA, USA

P3-60 Developing and Investigating in vitro Cronobacter sakazakii Dry P3-73 Impact of Inoculum Growth Method on Survival of Salmonella Surface Biofilms from Environmental and Clinical Isolates - DANIEL and Shiga-Toxin Producing Escherichia coli (STEC) during Wheat FAJARDO REYES, Tori Felton, Donald Bryant, Rishi Drolia, Haley Tempering — YAWEI LIN, Teresa M. 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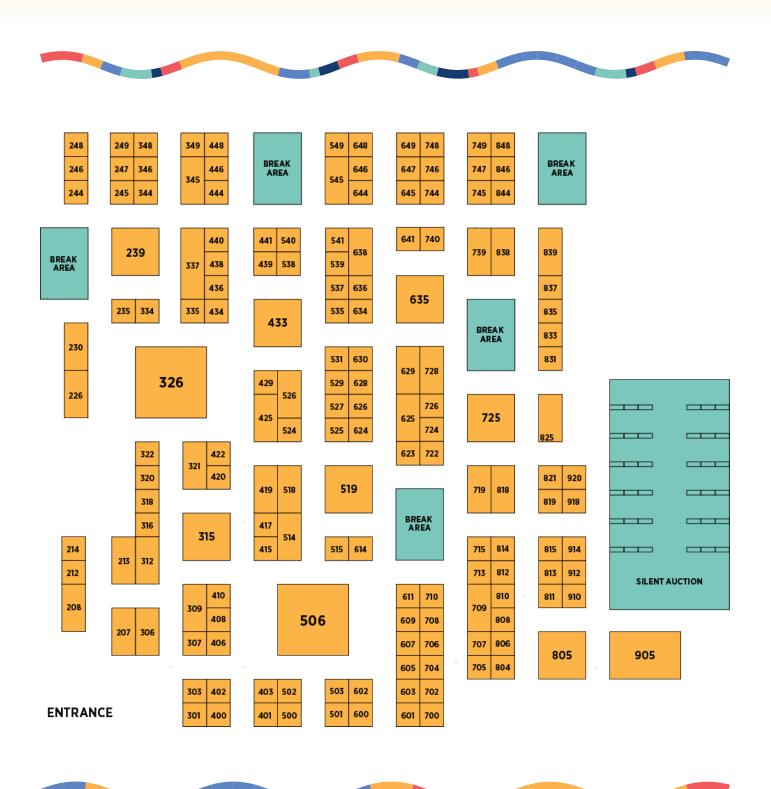




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## **EXHIBITORS**

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3-A Sanitary Standards, Inc. 6888 Elm St., Suite 2D McLean, VA 22101-3829, USA Phone: +1 703.790.0295 www.3-a.org

3-A SSI is dedicated to "Advancing Food Safety Through Hygienic Design." 3-A SSI has a long and respected history of developing criteria for the design of equipment and systems used to produce, process and package milk and dairy products, other foods, and beverages. 3-A SSI also oversees the 3-A Symbol authorization program to help identify equipment built in conformance to 3-A design criteria and evaluated through a rigorous Third-Party Verification inspection program. Today's 3-A SSI offers comprehensive free knowledge resources on hygienic design and is a trusted worldwide partner in helping to assure food safety through hygienic design.

A Chemtek Inc. 470 Wildwood Ave., Unit 3 Woburn, MA 01801, USA Phone: +1 508.471.4121 www.achemtek.com

A Chemtek (ACT) is an ISO9001-certified company and ISO17034-accredited reference material manufacturer based in Boston, Massachusetts.

Our line of First Standard® high quality reference materials offers over 30,000 compounds used in food analysis, pharmaceutical testing, environmental detection, and more. We offer a comprehensive inventory of neat analytes, single-component solutions, multi-component solutions, and stable isotope labeled compounds. With years of experience in the synthesis of mix solutions, our team is ready to help you save time and reduce costs with our conveniently packaged and easy-to-use ISO17034 accredited mix solutions!

The Acheson Group 13983 Ridge Loop Road Bigfork, MT 59911, USA Phone: +1 800.401.2239 www.achesongroup.com

The Acheson Group is a global food safety and public health consulting group that helps companies assess their unique situation, address gaps, and deploy best practices for operational, regulatory, and reputational risk mitigation. With in-depth industry knowledge and real-world experience, TAG's experts provide remote or onsite assistance in Recall and Crisis Management, EMP & ECP, Food Defense, Supply Chain Management, Public Health, Food Safety Culture, Infectious Disease Protections, Toxicology, and Training, to help businesses mitigate risks, improve operational efficiencies, and protect your brand. Visit TAG at www.AchesonGroup.com or call +1 800.401.2239.

Advanced Food Diagnostics 1645 SW 108th Terrace Davie, FL 33324, USA Phone: +1 857.234.2434 https://compact-dry.com/en/

Advanced Food Diagnostics (AFD) offers rapid diagnostic testing platforms for food safety including Compact Dry, River Labs, and Prognosis Biotech products. Compact Dry is a rapid microbiology testing plate with room temperature storage. It is stackable, spill free and self-diffusing. River Labs is our private label quality dehydrated media line manufactured by Conda Labs. Prognosis Biotech offers lateral flow and ELISA test kits for Allergen, Mycotoxin, Dairy Antibiotics, Histamine, and others.

AEMTEK Laboratories 466 Kato Terrace Fremont, CA 94539, USA Phone: +1 510.979.1979 www.aemtek.com

AEMTEK is an ISO 17025-accredited laboratory reshaping food and beverage testing. With four cutting-edge facilities, we offer research, testing, training, and consulting. Committed to accurate, fast, and reliable services, we support your food safety goals.

## Advantages:

- · Data Quality: Confidence in results.
- · Tailored Service: Unparalleled support.
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- · Comprehensive Support: From research to interpretation.
- · Timely: Quick results.

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- · Spoilage Investigations
- · Special Projects
- Product Testing
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- Sampling Plans

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AFCO 550 Development Ave. Chambersburg, PA 17201, USA Phone: +1 717.264.9147 www.afcocare.com

Established in 1855, AFCO is a leading specialty chemical company serving the food and beverage industry. We are your trusted partner delivering sustainable solutions through food safety. We provide products and services that improve operational efficiencies for our customers. Our use of responsible chemistry and water management enable significant cost savings by reducing carbon emissions, water, and waste. We offer high-quality cleaners and sanitizers, intervention solutions, equipment systems, water treatment programs, deep cleaning and abatement services, as well as technical service and support.

AIB International 1213 Bakers Way Manhattan, KS 66502, USA Phone: +1 785.537.4750 https://www.aibinternational.com/

Founded over a century ago, AIB International is dedicated to fostering excellence through rigorous audit and inspection services, training programs, and tailored consulting services. Our mission is to positively impact the food supply chain by promoting food integrity, fostering continuous education, and helping our customers navigate the complexities of the food industry.

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Aladdin Scientific Corporation 14078 Meridian Pkwy. Riverside, CA 92518, USA Phone: +1 833.552.7181 www.aladdinsci.com

Aladdin, established in 2009, is a pioneer in scientific innovation, offering superior reagents, chemicals, and life science tools. With a global workforce of over 700 and facilities across the U.S., Germany, Ireland, Singapore, and China, we're committed to excellence in research and development. Our vision is a future shaped by scientific discovery, driving societal transformation and enhancing lives. Precision and innovation lie at the heart of our operations, guiding our quest for groundbreaking solutions. Join aladdinsci.com on a journey of scientific exploration, where each advancement opens doors to a brighter, more innovative future.

Alchemy Systems 5301 Riata Park Ct., Suite F Austin, TX 78727, USA Phone: +1 512.637.5100 https://www.alchemysystems.com/

Only Intertek Alchemy provides a complete training, reinforcement, and compliance solution assuring your manufacturing workforce has the right knowledge to perform jobs correctly and efficiently. Alchemy partners with companies of all sizes to consistently engage their workforce, building a culture of safety and quality.

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Alpha Biosciences, Inc. 3651 Clipper Mill Road Baltimore, MD 21211, USA Phone: +1 410.467.9983 www.alphabiosciences.com

Alpha Biosciences, Inc., located in Baltimore, Maryland, was founded in 1999 and is a specialty manufacturer of dehydrated culture media for Micro & Molecular biology, bioingredients and agarose. Our reputation has been built by selecting the highest quality raw materials and processing them into a finished product of premium standards. Alpha's product catalogue includes a wide media range for research, food safety, brewery, water & beverages, pharma, cosmetic, fermentation industries, etc... as well as animal/veg peptones and agarose for electrophoresis. Our production process, quality assurance, competitive pricing, and real-time responsiveness all contribute to our main goal: being your next culture media specialist.

American Green Spring Diagnostics Inc. 1218 E Lexington Ave. Pomonam, CA 91766, USA Phone: +1 626.258.9783 https://www.greenspringdx.com/

American Green Spring Diagnostics is a leading provider of screening and testing solutions for food safety and animal health, dedicated to delivering fast and accurate results with our cutting-edge products for more than two decades. Our innovative testing methods ensure flexibility and precision in detecting contaminants, supporting the highest standards of food and animal product integrity.

Operating from a 2000 m² GMP-standard manufacturing facility and a 1000 m² R&D center, our team of over 200 professionals maintains an annual production capacity of hundreds of millions of devices. Certified to ISO9000 and ISO13485 standards, we serve clients in over 50 countries, including the U.S., Germany, South Korea, and Brazil. Trust American Green Spring Diagnostics for reliable, efficient, and high-quality testing solutions.

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- StockX We monitor our customers' inventory and advise exactly what to order so they are always in stock and never over stocked.
- Recircle We help our customer meet their sustainability goals by offering unique services to recycle PPE.
- HACCPTrax Real-time inventory reporting for distributed assets.
- 5S Shadow Boards We Provide standardization, consolidation and efficiency that improve production efficiencies. Amerisan.com.

Ancera 15 Commercial St. Branford, CT 06405, USA Phone: +1 203.315.9985

www.ancera.com

Ancera improves the profitability of food production with deeper supply chain intelligence. Backed by advanced microbiology, data science, and industry insider expertise, Ancera generates the largest decision-focused datasets in the poultry industry for new visibility into the supply chain. With actionable insights in near real-time that make complex data more accessible and easier to understand, Ancera increases profits for food producers by improving productivity, risk, and safety.

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ASI 605
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St. Ann, M0 63074, USA
Phone: +1 314.880.8880
www.asifood.com

ASI is a leading food safety auditing, training, and consulting company based in St. Louis that's provided farm-to-fork food safety solutions since the 1940s. ASI supports your organization's efforts to maintain the highest product safety and quality standards, offering a full suite of safety and quality solutions to the food and beverage, dietary supplement, consumer goods, and cannabis industries. ASI respects the challenges of keeping up with highly regulated industries and ever-changing audit requirements, so we aim to make the certification process as smooth as possible. ASI Food Safety is accredited by ANSI as an SQF Certification Body.

Association of Food and Drug Officials 155 W. Market St., 3rd Floor York, PA 17401, USA Phone: +1 717.757.2888 www.afdo.org

Association of Food and Drug Officials (AFDO) promotes the uniform adoption and enforcement of food, drug, and medical product safety laws, rules, and regulations. Founded in 1896, AFDO is an international, non-profit professional organization consisting of state, federal and local regulatory officials. Industry representatives are welcomed as associate members. AFDO is a mechanism for advancing regulatory program standards advancing an integrated food safety system. The organization provides training and continuing education as well as networking opportunities that foster understanding and collaboration among all stakeholders and an appreciation for each role in the food and medical products safety system.

BCN Research Laboratories, Inc. 2491 Stock Creek Blvd. Rockford, TN 37853, USA Phone: +1 865.573.7511 www.bcnlabs.com

BCN Labs is a full-service microbiological and mycological laboratory. We offer an extensive selection of microbiological and mycological tests, training courses, and auditing programs. BCN Labs is internationally recognized as one of the leaders in food and beverage spoilage including heat-resistant molds (HRM) and *Alicyclobacillus* (ACB) and pathogen contamination prevention and investigation. We offer other services that include challenge, preservative, and shelf-life studies, as well as other customized studies. We are proficient in bacteria, yeast and mold identifications using DNA sequencing and confirmation by traditional identification techniques. We are ISO 17025:2017 accredited and a WBENC certified women-owned company.

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Zhongguancun Science and Technology Park, Tongzhou District
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www.hrhkj.com

HRHT-China leading manufacturer of automated laboratory instruments. Beijing Huironghe Technology Co., Ltd. (HRHT) specializes in R&D, production, sales and technical services of automated laboratory instruments, including Fully Automated QuEChERS System, Automated Culture Medium Dispenser, Automated Ames Test System, High-Flow Bioaerosol Sampler, and Dry Fog Hydrogen Peroxide Sterilizer, etc. Achieved ISO management system certification, HRHT was also recognized as the National High-Tech Enterprise, China Manufacturing Champion Enterprise, Beijing Municipal Corporate Science and Technology Research and Development Institution, Beijing Specialized and Innovative Small and Medium-Sized Enterprise, as well as Beijing Intellectual Property Demonstration Enterprise. U.S. distributor wanted! Welcome to join us!

Best Sanitizers, Inc. 310 Providence Mine Road, Suite 120 Nevada City, CA 95959, USA Phone: +1 888.225.3267 www.bestsanitizers.com/

Since 1995, Best Sanitizers, Inc. has provided food processing customers with highly effective hygiene and sanitation solutions, and we are thrilled to exhibit at IAFP 2024. Don't miss the chance to step-on-up and demo our latest innovation in footwear sanitation: the Airless SmartStep™ Footwear Sanitizing System, a foot-operated unit that uses the force of a human step to deliver an atomized spray of Alpet® D2 or Alpet® D2 Quat-Free Surface Sanitizer − no compressed air or electricity required! Stop by Booth #838 to catch up with our food safety experts and grab some samples of our unique, high-quality product line.

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Bia Diagnostics is a global leading ISO 17025 accredited food, beverage and nutraceutical testing laboratory. With over 40 years of diagnostics experience, we specialize in Food Allergen, GMO, Food Authenticity, Fermented Beverage, Microbiological, and Cannabis/Hemp testing. Focusing on these six critical sectors, our expert scientists are dedicated to working with you to ensure the most accurate and timely results, providing same-day analysis for most testing needs at no additional cost!

Bioeasy Biotechnology Co., Ltd. Bioeasy Bldg. 101, 1st Liuxian St. Xingdong Community, Xin'an Road, Bao'an Shenzhen, Guangdong 518101, China Phone: +86.755.2794.8546 https://en.bioeasy.com/

Shenzhen Bioeasy Biotechnology Co., Ltd. is a public company that operates globally and specializes in rapid test technology development, offering reliable, robust and easy-to-use rapid test kits, with great competitiveness and reliability in the field of food safety. We have been focused on food safety detection solutions for more than 16 years, constantly innovating to provide customers with the best products.

bioMérieux, Inc. 401 N Michigan Ave., #1350 Chicago, IL 60611, USA Phone: +1 224.213.1756 www.biomerieux-industry.com

For over 60 years, bioMérieux has pioneered in vitro diagnostics with an unrelenting commitment to improving public health worldwide. With expertise in microbiology and access to cutting-edge science, we help you achieve your food safety and quality goals so you can protect your brand and your bottom line.

As your trusted partner in Augmented Diagnostics, we're harnessing the power of complex data to provide tangible microbiology solutions for our customers. Our experts help you go beyond the test, creating comprehensive and customized plans for minimizing financial and safety risk at every level of your organization.

Learn more at: https://www.biomerieux.com/us/en.

**Bio-Rad Laboratories, Inc.** 255 Linus Pauling Dr. Hercules, CA 94547, USA Phone: +1 707.363.7658 www.bio-rad.com

Bio-Rad Laboratories have played a leading role in the advancement of scientific discovery for over 70 years. We manufacture tests for food safety with a complete line of solutions for food pathogen testing. We offer a full menu of real-time PCR and Droplet digital PCR test kits for the detection of key pathogens, culture media for nutritive enrichment, RAPID chromogenic media, and this year, we introduced a new product line to serve the food authenticity segment with the ID-Check Speciation kits. As an instrument manufacturer, we provide instrument options for both low- and high-volume users, including our iQ-Check® Prep automation system.

Bioscience International, Inc. 11333 Woodglen Dr. Rockville, MD 20852, USA Phone: +1 301.231.7400 www.biosci-intl.com

Our internationally known yellow SAS viable air samplers and our Pinocchio compressed gas test units raise your Environmental Monitoring Program to a higher level of dependability while achieving conformance with regulatory guidance. Used by NASA, NIH, FDA, USDA and major food processors, the SAS air samplers are backed by our three ISO 17025 accredited service centers in North America.

**BioSurface Technologies Corporation** 421 West Griffin Dr., Suite 2 Bozeman, MT 59715, USA Phone: +1 406.585.2812 www.biofilms.biz

BioSurface Technologies is a pioneering provider of biofilm research solutions, offering innovative tools and technologies for studying microbial biofilms. Our products include cutting-edge biofilm reactors and microscopy flow cells tailored for diverse research applications. With a focus on precision, reliability, and customization. BioSurface Technologies empowers researchers worldwide to unravel the complexities of biofilm formation and develop effective solutions for food processing and safety, healthcare, industrial, and environmental challenges. Join us to explore our comprehensive range of biofilm research solutions and accelerate your research journey with confidence.

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BSI is a global provider of system certification and training. For over 120 years, we have shaped the international standards to help organizations build their capability for sustainable growth.

Bureau Veritas 12400 Shawnee Mission Pkwy. Shawnee, KS 66216, USA Phone: +1 512.713.4598 https://www.bvna.com/

Bureau Veritas is a world leader in laboratory testing, inspection and certification services. Created in 1828, the Group has more than 82,000 employees located in more than 1,600 offices and laboratories around the globe.

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CDG Environmental, LLC is the manufacturer of CDG Solution 3000, a storage-stable chlorine dioxide aqueous solution. There is no need for generation or mixing. Solution 3000 is Organic, Kosher, and Halal certified and may be used for food contact/nonfood contact sanitization. Solution 3000 has several FCNs. Solution 3000 has U.S. government approvals and certifications, including U.S. EPA-FIFRA registrations, registrations in fifty states and Puerto Rico. Solution 3000 is certified as NSF D2, G5, G7, and is NSF ANSI 60 certified as a drinking water additive. Effective against *Listeria, E. coli, Staphylococcus, Salmonella, Pseudomonas*, Avian Influenza, plus many others.

Charm Sciences, Inc.
659 Andover St.
Lawrence, MA 01843, USA
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Charm Sciences is a world leader in food safety diagnostics. Charm's two-pronged Sanitation Monitoring Program ensures the highest level of food safety, quality control, and audit compliance using the novaLUM® II-X System and Charm Peel Plate® Microbial Tests with Colony Counter. Charm offers eBacMap Data Mapping & Trending software to link ATP sanitation, microbial indicators, and pathogen test results onto a 3D facility map and time-lapse hot spots. Rely on Charm Sciences for excellence in quality, innovation, and sensitivity to protect your brand!

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Check-Points' innovative Check&Trace Salmonella 2.0 can discriminate the 105 most relevant Salmonella serotypes including S.Enteritidis and S.Typhimurium. A genetic "barcoding" principle is used employing a single real-time PCR Assay. Check&Trace Salmonella 2.0 confirms Salmonella presence and calls the serotype within 2 hours starting from bacterial colonies on agar media. It has been certified by Microval and AOAC (59 serovars approved and 46 pending) as being equivalent to ISO-6579\_1 for confirmation and ISO-6579\_3 for serotyping of Salmonella. This allows the Check&Trace Salmonella 2.0 to significantly decrease serotyping lead times enabling quick tracing in the food production chain.

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Cornerstone Flooring, in business 33 years, is the nation's largest single-source Manufacturer and Installer of High-Performance Resinous Flooring Systems. Our diverse customer base includes Fortune 500 companies in Food and Beverage, Pharmaceutical, Aeronautical, Industrial and Biotech Markets.

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CultureMediaConcepts® is an independent manufacturer of Culture Media and Reagents utilized in Microbiological testing. Testing for foodborne pathogens requires specified culture media formulations recommended by the methodology used, the testing platform, or governing agency. We specialize in formatting Culture Media formulations for your specific needs. Our SampleReady® line of Prepared DCM offers a RTU format that will eliminate steps and save you hours to results. The DiluteReady® line provides a pre-filled dilution sample bag of prepared culture media for this same purpose. Please come by and allow us to show you how you can save time-to-results.

Deibel Laboratories P.O. Box 1056 Osprey, FL 34229, USA Phone: +1 847 329 990

Phone: +1 847.329.9900 www.deibellabs.com

Deibel Laboratories was founded by Dr. Robert H. Deibel, a former Dean of the Bacteriology Department at the University of Wisconsin and published author of over 80 scientific publications, over sixty years ago. Since its inception, Deibel Labs has continually grown with the ever-changing scientific community and has become an integral part of the global food safety industry. With a network of ISO 17025 Laboratories throughout the United States and Canada, Deibel Labs is able to provide exceptional service while controlling test prices in order to create the perfect combination of value and quality for any size clientele.

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eBacMap® is a cloud-based mapping, tracking, and trending software tool that helps manufacturers organize, visualize and analyze the environmental pathogens and other indicators that threaten your business.

eBacMap® creates multiple heat maps of your facility, equipment and product, allowing you to easily organize result data so that you can quickly visualize the location and frequency of contaminations. Our Sample Scheduler and CAPA modules enable a full environmental management program that is automated and efficient to bring real ROI to your operations. Additionally, eBacMap offers digital integrations with several LIMS systems, Luminometers, and other data sources.

Ecolab 1 Ecolab Place, 11th Floor St. Paul, MN 55102, USA Phone: +1 612.396.7528 www.ecolab.com

As a trusted partner, Ecolab delivers comprehensive science-based solutions, data-driven insights and world-class service to advance food safety, maintain clean and safe environments, and improve sustainability to millions of customers in more than 40 industries globally.

Join our colleagues and team of technical experts at IAFP to learn more about Ecolab's shared commitment to advancing safe food globally...together.

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www.EnvirolyteUSA.org
See app for description

Eurofins
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Des Moines, IA 50321, USA
Phone: +1 515.250.1121
www.eurofinsus.com/food-testing/

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Extreme Microbial Technologies 2800 E River Road, Suite A Moraine, OH 45439, USA www.extrememicrobial.com

At Extreme Microbial Technologies (EMT), we specialize in supplying earth-friendly decontamination systems for numerous food processing and manufacturing facilities. Our technology has been thoroughly tested and shown to reduce viruses, bacteria, molds, and odors by up to 99.9%.

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- · Chemical Free Ideal for products and people.
- Air and Surface Purification Effectively combating the presence of mold, bacteria, and viruses in your indoor space.
- Long Term and Scalable Easily designed and scalable to treat a wide range of facilities.
- Active Our energized hydrogen peroxide molecules seek out and attack the problem at its source.

Vision - Ensuring a healthier planet one indoor environment at a time.

FDA/Center for Food Safety and Applied Nutrition 5001 Campus Dr. College Park, MD 20740, USA Phone: +1 240.402.1907 www.fda.gov

The U.S Food and Drug Administration's Center for Food Safety and Applied Nutrition is responsible for promoting and protecting the public's health by ensuring that the nation's food supply is safe, sanitary, wholesome, and honestly labeled.

FlexXray 514 3751 New York Ave., #130 Arlington, IN 76014, USA Phone: +1 817 453 3539

Phone: +1 817.453.3539 www.flexxray.com

www.foodradar.com

FlexXray is the North American leader in X-ray inspection services to resolve product holds due to foreign material contamination. We work with producers to quickly inspect, detect, and provide a report on affected product so you can make the best decisions about how to resolve foreign material incidents.

Food Radar Frans Perssons vag 6 Gothenburg, 412 76, Sweden Phone: +46.730.51.45.73

The Food Radar® is a unique detection technology based on microwaves that offers the food industry a vital extra layer of protection. Adding to the known benefits of metal detectors and X-ray technology, Food Radar's® unique ability is in detecting low-density foreign bodies that are invisible to traditional technologies. When using the term 'low-density foreign bodies', we are mainly referring to soft and hard plastics, wood, aluminum foil and rubber.

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Food Safety CTS, LLC 1320 Goodyear Drive, Suite 205 El Paso, TX 79936, USA Phone: +1 864.633.6325 www.foodsafetycts.com

Food Safety CTS, LLC develops customized food safety and training solutions for the industry including e-learning programs. The company's industry-wide recognized training programs are culturally compatible, and science based. Food Safety CTS is to be able to translate science, technology and regulatory language to the food industry language. This year we will showcase the Growing Safe Produce program, which is a series of free training materials hosted on a platform through which the Inter-American Institute for Cooperation on Agriculture (IICA) seeks to aid growers improve their understanding of the Food Safety Modernization Act's Produce Safety Rule.

Food Safety Magazine 550 W Merrill St., Suite 200 Birmingham, MI 48009, USA Phone: +1 248.786.1671 https://www.food-safety.com/

Food Safety Magazine (FSM) is the leading provider of content serving food safety/quality professionals worldwide and producer of the annual Food Safety Summit Conference & Expo. FSM publishes a bimonthly eMagazine and weekly eNewsletter featuring original articles from food and beverage industry leaders covering regulations, technologies, trends, and management strategies essential when applying science-based solutions to assure food safety and quality. Our popular Food Safety Matters podcast offers twice monthly episodes featuring news and trends, followed by a conversation with a food safety professional sharing their experiences and insights. Visit our website at www.food-safety.com to learn more and subscribe.

Food Safety News 1012 First Ave. Seattle, WA 98104, USA Phone: +1 913.205.3791 www.foodsafetynews.com

Food Safety News (FSN) was created in 2009 by noted food safety attorney Bill Marler to fill a void in public health media coverage. Since its inception, FSN has provided dedicated journalism addressing critical food safety issues. Starting with just 8,000 subscribers, we're celebrating our 14th anniversary with more than 55,000 subscribers and 300,000+ social media followers. The extent of our expansion and influence encourages us to continue our vital mission. We invite you to be a part of it.

Food Safety Summit 550 W Merrill St., Suite 200 Birmingham, MI 48009, USA Phone: +1 248.786.1671 https://www.food-safety.com/food-safety-summit

The Food Safety Summit brings together food safety professionals from across the entire supply chain to gain valuable insights into technology advancements, regulatory developments, trends in contamination control, and effective food safety program management. Attendees collaborate with top-tier suppliers to discuss applications of the latest equipment and technology, ensuring they have the best tools for their specific needs. The Summit is truly where food safety meets for practical solutions.

Food SMART Strategies Inc. (FSSI) 100 N Brand Blvd., Suite 306 Glendale, CA 91203, USA Phone: +1 213.999.0138 www.foodsmartstrategies.com

Food SMART Strategies International (FSSI) is your comprehensive partner in navigating food industry audits with ease and excellence. We specialize in preparing businesses for audits, ensuring compliance with regulations, and providing unwavering support throughout the entire process. From meticulous preparation to seamless implementation and beyond, we're committed to guiding you towards success and safeguarding your reputation. Trust Food SMART Strategies to elevate your audit experience and ensure your continued excellence in passing your food audits!

FOSS North America 6509 Flying Cloud Dr., #130 Eden Prairie, MN 55344, USA Phone: +1 612.867.5897 www.fossanalytics.com

FOSS innovations are helping to make a real difference to laboratory operations around the world in research, universities and larger commercial laboratories alike. Constantly improving on established methods, our investment in innovative technology gives you new opportunities to improve your laboratory operations safely and efficiently. Whether you want to decrease turnaround times, easily report data to your customers, automate your analysis or simply save on consumables and chemicals, visit us at booth 609 to learn how.

FREMONTA Corp. 1945 Kyle Park Court San Jose, CA 95125, USA Phone: +1 408.581.0118 www.microtally.com

MicroTally® is the premier brand in the food safety industry, recognized as #1 in food safety sampling. Its MicroTally® Swab stands as the USDA/FSIS's preferred method for beef sampling. Through collaborations with industry and regulatory agencies, MicroTally® continuously innovates sample collection methods, delivering high-quality products made in the USA. As an ISO 9001:2015-certified company, MicroTally® sets the gold standard with advanced materials and patented designs, optimized for ease of use. Their solutions provide customers with a reliable, efficient way to ensure food safety. Transition to the future of food sampling with MicroTally®.

FSNS – a Certified Group Company 199 W Rhapsody San Antonio, TX 78216, USA Phone: +1 218.721.2179 https://fsns.com/

As part of Certified Group, Certified Laboratories and Food Safety Net Services strive to deliver technical solutions and quality testing our customers can feel confident in − on time, every time − so the World Can Trust in What It Consumes™. Our North American network of 30+ ISO 17025-accredited labs serve many regulated industries, including beef, dairy, poultry, pet food, spices, seafood, nuts, produce, FDA imports, and ready-to-eat foods. In addition, our Lab+ division performs contract research studies, such as process validations, shelf-life studies, challenge studies, and more serving a full range of food and beverage manufacturers.

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Global Food Safety Resource (GFSR) 503-1316 Kingston Road Scarborough, ON M1N 1R1, Canada Phone: +1 416.312.3269 https://globalfoodsafetyresource.com/

GFSR is a leading educational resource for food safety professionals across the globe. Through our online media channels plus Safe Food Training Hub (SFTH) platform, we deliver perspectives, knowledge and training on the latest food safety trends, regulatory compliance, industry standards, and more.

Gold Standard Diagnostics 124 Railroad Dr. Warminster, PA 18974, USA Phone: +1 215.357.3911 www.goldstandarddiagnostics.com

Gold Standard Diagnostics is a global producer of a wide range of LFD, ELISA and PCR rapid test kits and instruments for the detection and measurement of pathogens, allergens, mycotoxins (including patulin), glyphosate and pesticides, GMOs, VDRs and much more. The Bolt™ automated ELISA analyzer makes testing easy and efficient and our RapidScan ST5-W lateral flow strip reader has multiple applications. Our BACGro™ culture media offers a wide variety of superior dehydrated and prepared culture media products in compliance with global standards. Contact info@abraxis@us.goldstandarddiagnsotics.com for more information.

Goodway Technologies 420 West Ave. Stamford, CT 06902, USA Phone: +1 203.359.4708 www.goodway.com

With over 55 years of providing innovative maintenance and sanitation solutions, Goodway Technologies has the industry's most reliable surface and conveyor belt sanitizing equipment for robust hygiene in food production plants, as well as powerful dry steam cleaners that can be used to clean tough grime on virtually any surface. Commercial bakeries, snack producers, produce processing facilities, and breweries are just some of the places where sanitation professionals can find our high-quality machines worldwide.

GS1 US 300 Charles Ewing Blvd. Ewing, NJ 08628, USA Phone: +1 610.314.8718 https://www.gs1us.org/

GS1 US® enables companies to power their supply chains to deliver safe, consistent, authentic, and trusted experiences. Best known as a source for UPC barcodes, GS1 is a not-for-profit, global data standards organization that creates a common language for companies to identify, capture, and share trusted data that links their physical and digital supply chains. Millions of businesses around the world power commerce with GS1 Standards. Learn more at www.gs1us.org.

Hamilton Company 4970 Energy Way Reno, NV 89502, USA Phone: +1 775.858.3000 www.hamiltoncompany.com

Hamilton Company is a global leader in liquid handling and laboratory automation technology, advancing the laboratory analytical sciences through reliability, performance, and flexibility. For more than 70 years, Hamilton has exceeded expectations.

Hanna Instruments 270 George Washington Hwy. Smithfield, RI 02917, USA Phone: +1 800.426.6287 https://www.hannainst.com/

Hanna's analytical and scientific instruments help food manufacturers and beverage companies improve the quality and consistency of their products while ensuring compliance standards. Our solutions help the scientific community and consumers achieve accurate, precise, and repeatable test results through affordable and customized products with personalized customer service. Thousands of consumers and major brands trust Hanna to help produce products from raw ingredients to shelf.

Companies like Kraft-Heinz, Coca-Cola, Tyson Foods, Sam Adams, and Legacy Foods, as well as home brewers, winemakers, and artisan cheese makers, trust Hanna to help produce products from raw ingredients to shelf.

Hardy Diagnostics 1430 W McCoy Lane Santa Maria, CA 93455, USA Phone: +1 805.346.2766 www.hardydiagnostics.com

Hardy Diagnostics has been in business since 1980 and is 100% employee owned. The company is ISO 13485-certified and manufactures over 2,700 products for microbiological testing. With over 9,000 laboratory customers across a broad spectrum of markets, Hardy Diagnostics understands the microbiological needs of the food testing industry and offers an extensive product portfolio for sample collection and preparation, microbial identification, HACCP compliance, and environmental monitoring. Hardy Diagnostics is uniquely qualified to assist the food processor in achieving its quality goals.

Heathrow Scientific 620 Lakeview Pkwy. Vernon Hills, IL 60061, USA Phone: +1 847.816.5070 www.heathrowscientific.com

Heathrow Scientific is a global manufacturer of bench-top equipment and lab essentials used in laboratories across multi-disciplines including Food & Beverage Development, Testing and Processing.

We offer a vast range of sample handling tools and products from gathering, measuring, processing and all the way to storage, including sterile and non-sterile laboratory consumables made from FDA approved materials.

Featured Booth Products:

- · Benchtop Equipment: Centrifuges, Magnetic Stirrers, Vortexers
- Consumables: Weighing, Glassware, Pipetting, Tube Racks and Storage
- Instruments: Refractometers, Hydrometers, Water Activity Meter

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Hettich 100 Cummings Center, Suite 136L Beverly, MA 01915, USA Phone: +1 978.232.3957 https://www.hettweb.com

Hettich is an industry-leading laboratory equipment manufacturer known for our vast array of quiet, reliable, and safe centrifugation products and our highly efficient, accurate, and space-saving incubators. We manufacture and support quality equipment for sample preparation, climate control, and automation.

HiMedia Laboratories C40, Road no 21/Y, Wagle Estate Thane, Maharashtra 400604, India Phone: +1 484.734.4401 www.himedialabs.com

Founded 40 years ago, HiMedia, a leader in Bacteriological Culture Media formulations, now spans over 130 countries. Comprehensive identification kits for various food spoilage organisms as well as conventional and animal-free culture media are part of the HiMedia repertoire. Conforming to WHO-GMP standards and ISO updated protocols, HiMedia's world class facilities bring to you reliable products. Our tech-service team is available to assist you wherever you are, to match our products to your precise needs. Products available in North America from HiMedia Laboratories LLC, infous@himedialabs.com, www.himediastore.com.

Hygiena 941 Avenida Acaso Camarillo, CA 93012, USA Phone: +1 224.628.0693 www.hygiena.com

Hygiena® delivers innovative food safety solutions to ensure a healthier world. At the end of the day, you need a reliable data point to make a critical business decision involving people's safety. Hygiena is focused on delivering reliable solutions that help you make that decision. Starting with our SureTrend data analysis platform and including ATP cleaning verification, allergens detection, molecular diagnostics, product quality and more. All our solutions are designed to help you see the bigger picture and make a time-sensitive decision to protect your customers and your brand. Visit us at booth 519 to learn more.

IEH Laboratories & Consulting Group 15300 Bothell Way NE Lake Forest Park, WA 98155, USA Phone: +1 206.522.5432 www.iehinc.com

IEH is the largest network of accredited testing labs in North America. We work with food companies to design, implement, and monitor food safety and quality systems through testing, consulting, and training.

IFC 13420 W 99th St. Lenexa, KS 66215, USA Phone: +1 800.477.4432 www.indfumco.com

Our mission is to provide world-class service and value to our clients while continuing to build on our role as the food industry service leader through delivering innovative pest prevention and sanitation solutions.

IFSH – Food Safety Preventive Controls Alliance (FSPCA) 708
6502 S. Archer Road
Bedford Park, IL 60501, USA
Phone: +1 708.563.8188
https://www.fspca.net/

The Food Safety Preventive Controls Alliance (FSPCA) is a broad-based public-private alliance of industry, academia, and government stakeholders. It was established in late 2011 by a grant from the U.S. Food and Drug Administration to Illinois Tech's Institute for Food Safety and Health (IFSH). FSPCA's mission is to assist the human and animal food industry and related entities in building food safety capacity through education, training and outreach with an emphasis on small- and medium-sized businesses.

Institute for Food Safety and Health (IFSH) 6502 S. Archer Road Bedford Park, IL 60501, USA Phone: +1 708.563.8278 https://www.iit.edu/ifsh

The Institute for Food Safety and Health (IFSH) is a one-of-a-kind applied food science research consortium comprised of Illinois Tech, the U.S. Food and Drug Administration (FDA), and the food industry. In collaboration with the FDA, we provide stakeholders with the opportunity to develop and exchange knowledge, experience, and expertise in the areas of food safety, food defense, and nutrition.

International Association for Food Protection 2900 100th St., Suite 309 Des Moines, IA 50322, USA Phone: +1 515.276.3344 www.foodprotection.org

IAFP is an international member-based association focused on protecting the global food supply. Membership benefits include free access to the *IAFP Report, Food Protection Trends (FPT)* Online and *Journal of Food Protection (JFP)* Online. Network with 4,300 + Members around the world through *IAFP Connect*, our Online Community, plus receive special registration rates to attend leading global food safety meetings. Members also receive reduced publication page charges in *JFP*, internationally recognized as the leading publication in food microbiology. Visit our booth for more information.

International Association for Food Protection – Student PDG 2900 100th St., Suite 309
Des Moines, IA 50322, USA
Phone: +1 515.276.3344
www.foodprotection.org

Welcome, students, to IAFP 2024! If you wish to take control of your career and enrich your IAFP experience by interacting with other students and networking with professionals, get involved with the IAFP Student Group. We are an organization of undergraduate and graduate students who wish to enhance food safety through active participation in IAFP. Stop by our booth to meet your colleagues, exchange ideas, and become involved in future student group activities.

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Interscience Laboratories Inc. 32 Cummings Park Woburn, MA 01801, USA Phone: 781.937.0007 www.interscience.com

Interscience is a family-owned company with a dynamic R&D department that has more than 30 patents filed worldwide. The company has been a key player in microbiology control since 1979. Designer and manufacturer, the company equips laboratories in the food, pharmaceutical, environmental, cosmetic and research industries in more than 130 countries, to enable them to provide healthy products for consumers. Our product range covers equipment from sample preparation to bacterial analysis, and includes gravimetric dilutors, lab blenders, peristaltic dispensing pumps, automatic spiral platers and colony counters, including ScanStation, the real-time incubator and colony counter.

Kerry Food Protection & Preservation 3400 Millington Road Beloit, WI 53511, USA Phone: +1 608.201.7038

https://www.kerry.com/products/functional-ingredients/Food-protectionand-preservation

Kerry is the market leader in food protection and preservation. We are an industry force for change in food waste elimination through relentless innovation in shelf-life protection and extension. Speak to our experts about partnering with us for next generation food protection.

Keyence Corporation 500 Park Blvd., Suite 500 Itasca, IL 60143, USA Phone: +1 201.930.0100 www.keyence.com

Keyence Corporation aims to provide high quality technology to serve our customers across all industries. Our recent microscopy expansion has led to the birth of the new BC Series Automatic Colony Counter. This device streamlines microbiological testing by reducing count time to one second, while allowing for image storing and repeatable results. Even the least experienced counters can quickly and accurately gather data at the push of a button! We offer on-site demonstrations, sample testing, training, and short lead times to help your processes improve as quickly as possible.

Kikkoman Biochemifa Co. 2-1-1 Nishi Shinbashi, Minato-Ku Tokyo, 105-0003, Japan Phone: +1 443.244.5245 http://biochemifa.kikkoman.com

Kikkoman Biochemifa Company has developed the ATP Test (Kikkoman A3) that makes your ATP testing more effective than using conventional ATP tests and the new Easy Plate, dry pre-prepared media.

Independent laboratory testing using different foods prove that the ATP Test (Kikkoman A3) detects food residues that other ATP tests miss. The Kikkoman Easy Plate is available now and ready to ship! Easy Plate is validated (AOAC RI PTM, MicroVal NordVal) and comes as easy-to-use, stackable film plates that save space, reduces waste, eliminates preparation time and labor, and streamlines your test procedures. Find out more at Kikkoman Biochemifa!

KLEANZ Food Safety Technologies 4305 S Lee St., Suite 100 Buford, GA 30518, USA Phone: +1 770.831.9191 www.kleanz.com

KLEANZ Food Safety Technologies is proud to be the leader in software and services for the food and beverage industry. For over 40 years, we have ensured that our clients' Food Safety, Sanitation Management, and Maintenance needs are satisfied and streamlined.

KLEANZ is the only complete Food Safety Compliance and Sanitation Management solution for food and beverage manufacturing. The system focuses on risk mitigation, driving continuous improvement, and adhering to all compliance requirements while managing resources.

Our clients include the largest food and beverage companies worldwide, as well as many regional operations. Our headquarters is in the Metro Atlanta area.

LABPLAS 1951 Nobel Sainte-Julie, QC J3E 1Z6, Canada Phone: +1 450.649.7343 https://labplas.com/en\_CA/

LABPLAS, a Canada-based company founded in 1987, specializes in manufacturing sterile sampling products to meet the highly specialized needs of food safety testing and compositional analysis. Our sampling products simplify the sample collection, transportation, and analysis processes in over 60 countries, through our extensive network of independent distributors. At LABPLAS, our commitment to research and development enables us to continuously improve our production process and create new products that meet the evolving needs of the agro-food industry. We are the only company offering a full range of sterile biodegradable sampling products. Contact LABPLAS for safe and reliable sampling solutions tailored to your needs!

LGC AXIO Proficiency Testing 1159 Business Park Dr. Traverse City, MI 49686, USA Phone: +1 231.668.9700 www.lgcstandards.com/pt

LGC AXIO Proficiency Testing understands that laboratories need confidence in their measurements and the methods they use to produce them. For the past 40 years we've been leading the direction of proficiency testing, bringing our technical expertise and influence to drive the future of quality assurance and accreditation.

LGC AXIO Proficiency Testing carries out over 2,700 tests each year and operates PT schemes across the food, beverage, environmental, clinical, pharmaceutical, consumer safety, forensic and petroleum sectors. With the majority of our schemes accredited to ISO/IEC 17043, you can have confidence in your continuous improvement with AXIO, the globally trusted, expert partner in proficiency testing.

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MACHEREY-NAGEL 924 Marcon Blvd., Suite 102 Allentown, PA 18109, USA Phone: +1 267.382.9575 www.mn-net.com

MACHEREY-NAGEL is a family-owned company which specializes in client-driven solutions for purification, concentration and/or clean-up of plasmid DNA, genomic DNA and RNA. From single prep to 96-well plates, our nucleic acid purification kits are available in both magnetic bead or silica membrane technologies. Our team is available to assist you and answer any questions you may have to help you get started. We offer sample kits for testing, tech support and automation consultations. Reach out to us at sales-us@mn-net.com for more information.

MadgeTech 6 Warner Road Warner, NH 03278, USA Phone: +1 603.746.8222 www.madgetech.com

MadgeTech, a leading provider of data logging solutions, specializes in monitoring critical parameters in food production, storage, and transportation. MadgeTech's innovative technology ensures compliance with food safety regulations and enhances quality control processes. MadgeTech offers a comprehensive range of data loggers and software, enabling real-time monitoring of temperature, humidity, pressure, and more. With a commitment to accuracy and reliability, MadgeTech empowers food manufacturers, distributors, and regulatory agencies worldwide to uphold the highest standards of food safety.

Matrix Sciences 123 N Wacker Dr., Suite 1500 Chicago, IL 60606, USA Phone: +1 847.272.8700 www.matrixsciences.com

In an increasingly complex environment, Matrix Sciences brings together the expertise, resources and support needed to partner with the agri-food supply chain—from Cultivation to Consumer®. The results: the information required to make informed decisions with confidence in the cultivation, production and research of food and agriculture products.

MDPI AG St. Alban-Anlage 66 Basel, 4052, Switzerland Phone: + 41.61.683.77.34 www.mdpi.com

MediaBox 5350 Partners Court Frederick, MD 21703, USA Phone: +1 301.662.6835 www.800ezmicro.com

MediaBox was developed by Microbiology International as a fast, easy solution for labs needing sterile broths and buffers on-demand. MediaBox seamlessly integrates with your lab's existing SOPs, and helps streamline processes that require sterile liquids. MediaBox is available in 5L, 10L, and 20L box formats, is shipped ready to use and with a Certificate of Analysis. Microbiology International is an ISO 9001:2015 certified company of manufactured media products.

Mérieux NutriSciences 401 N Michigan Ave., Suite 1400 Chicago, IL 60611, USA Phone: +1 773.366.0775 www.na.mxns.com

Mérieux NutriSciences leverages over 50 years of scientific and entrepreneurial expertise to answer food industry needs. Today's global challenges transform the way food is produced, marketed, and consumed, which is why we know our clients need more than reliable analytical results; they need practical and innovative solutions that will contribute to making food systems safer, healthier, and more sustainable. From our initial expertise in microbiology and consulting, we have broadened our scientific specialties into the fields of chemistry, education, certification, research, labeling, sensory, and digital to offer a complete suite of services to meet our customer needs.

Michelson Laboratories 6280 Chalet Dr. Commerce, CA 90040, USA Phone: +1 562.928.0553 www.michelsonlab.com

Since 1970, Michelson Laboratories has specialized in offering comprehensive chemical and microbiological analyses to the food industry. We offer rapid turnaround times, accurate results, and exceptional customer service. We specialize in various methodologies for indicator organism and pathogen analysis, including PCR, as well as shelf life and challenge studies. Our chemistry lab conducts tests such as antibiotic residues, melamine by LC/MS, nutritional labeling, pesticide analysis, heavy metals testing by ICP/MS, aflatoxins, allergens, and more, including PFAS testing. Moreover, we excel in sampling and analyzing products on FDA import alert. Our Southern and Northern California locations are accredited to ISO/IEC 17025 standards.

Microbac Laboratories 2009 Mackenzie Way, Suite 100 Cranberry Township, PA 16066, USA Phone: +1 412.459.1060 www.microbac.com

Explore Microbac Laboratories at booth #719 at IAFP 2024 for cuttingedge food safety solutions. Our team of experts are dedicated to ensuring the highest standards of quality and accuracy in microbiological and chemical testing services. Learn about our state-of-the-art technology and innovative approaches to safeguarding the food supply chain. Offering testing from microbial, chemical, and allergen to shelf life, consulting, and labeling services, we're your trusted partner in maintaining food safety and compliance.

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IAFP Sustaining Members

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Microbiologics 200 Cooper Ave. N Saint Cloud, MN 56303, USA Phone: +1 320.253.7400 https://www.microbiologics.com

Microbiologics is your trusted source for microbial quality controls. We offer a diverse range of reference strains made into convenient test-ready formulations. Our standout products for food laboratories include Epower™ and UV-BioTAG™. Available in concentrations ranging from 102 and 108 CFU per lyophilized microorganism pellet, Epower™ streamlines your quantitative QC with its unparalleled flexibility. UV-BioTAG™ strains contain a green fluorescent protein marker so cultures visibly fluoresce under UV light, making your QC microbes easily distinguishable from naturally occurring microflora and true contamination. Visit us at Booth #524 to discover how we can streamline and elevate your QC program.

Microbiology International 5350 Partners Court Frederick, MD 21703, USA Phone: +1 800.396.4276 www.800ezmicro.com

Stop by the Microbiology International booth and modernize your lab! Check out our automation equipment for colony counting, spiral plating, plate pouring, media-making, and sample preparation. Ensure sterile means sterile in your lab with a Systec autoclave and NEW for 2024 is the AirPrep™ CUB air sampler from Innovaprep.

Microsensor Labs 2242 W Harrison St., Suite 201 Chicago, IL 60612, USA Phone: +1 312.358.6217 www.microsensorlabs.com

Microsensor Labs develops novel technologies to address unmet needs in health care, diagnostics, and life science. The award-winning MagiCyte MB product is a novel miniaturized assay on an Al-powered robot for rapid detection, isolation, enumeration of microorganisms and picking of their discrete colonies: fully automated — samples in, results and colonies out (and days sooner than your current approaches); up to 96 samples in a run in a standard 96-well microplate (no Petri dishes); Al-assisted analysis and pick of discrete colonies. Please visit Booth 318 for the MagiCyte MB demo and find out how it makes your lab's workflow efficient.

Midland Scientific, Inc. 10651 Chandler Road, Suite 102 La Vista, NE 68128, USA Phone: +1 402.952.4211 www.midlandsci.com

Midland Scientific, Inc. is a woman-owned, full-line distributor of laboratory products such as chemicals, glassware, lab consumables, equipment, solutions, and much more! MSI primarily serves the agricultural, educational, food, industrial, and research markets with a sales force that covers the entire United States. Today our website currently carries over 500,000 products and is constantly being updated with new products and promotions. Midland Scientific has a wide range of customers; however, some of our major industries include ethanol, petroleum, food and beverage, education and research, and water/wastewater.

Visit midlandsci.com for more information and check out our Booth #810!

Midwest Laboratories, Inc. 13611 B St. Omaha, NE 68144, USA

Phone: +1 402.334.7770 www.midwestlabs.com

Midwest Laboratories is an ISO 17025 and NELAP-accredited lab renowned for its precision and reliability. With state-of-the-art facilities and expert personnel, we offer comprehensive testing services tailored to ensure the safety and quality of food products. Our advanced methodologies and stringent quality control measures guarantee accurate results, empowering clients to meet regulatory standards and consumer expectations with confidence. From microbiological analysis to allergen detection, we provide timely insights to safeguard consumer health and brand reputation. At Midwest Laboratories, we're committed to driving smart decisions, offering peace of mind in every test result.

MilliporeSigma 400 Summit Dr. Burlington, MA 01803, USA Phone: +1 800.645.5476 www.milliporesigma.com

MilliporeSigma, the U.S. life science business of Merck KGaA, Darmstadt, Germany, partners with food safety teams to enable you to improve lab testing efficiencies with reliable products and services that meet everchanging regulations. It is through our collaborations that we can advance the safety and analysis of foods and beverages using trusted brands like Millipore® with microbiology solutions for hygiene, environmental monitoring & pathogen detection, and Milli-Q® lab water solutions.

Morinaga BioScience, Inc. 2-1-1 Shimosueyoshi, Tsurumi-ku Yokohama, Kanagawa 2308504, USA Phone: +81.906.127.3368 https://www.miobs-e.com/index.html

Morinaga BioScience: A Test Kit Manufacturer, Your Partner in Food Safety. Advanced Test Kits for Food Allergen Detection

For over 20 years, Morinaga BioScience has been a trusted partner in food safety, developing reliable test kits based on immunoassay technology. Our ELISA and lateral flow devices offer high accuracy and specificity for various food allergens, making them ideal for: Food manufacturers: Ensuring product safety and compliance with regulations. Laboratories: Providing accurate and reliable allergen-testing services. Government institutions: Upholding food safety standards and consumer protection. Visit Booth #835 to discover how our advanced technology can streamline your food safety processes.

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Nelson-Jameson, Inc. 3200 S Central Ave. Marshfield, WI 54449, USA Phone: +1 800.826.8302 www.nelsonjameson.com

Nelson-Jameson is a fourth-generation, family-owned distributor to the food processing industry. From the company's roots in dairy production supplies, it has expanded to offer a broad range of food processing products and services that help food and beverage organizations operate efficiently with the highest quality, food safety, and compliance standards. The company represents more than 1,000 vendors, distributes more than 78,000 curated products, and employs more than 260 people nationwide. The food processing industry leader also operates NEXT Logistics, a transportation arm that provides delivery services from its Wisconsin, California, Idaho, Pennsylvania, and Texas strategic distribution centers.

Neogen 620 Lesher Place Lansing, MI 48912, USA Phone: +1 404.697.2547 https://www.neogen.com/usac

For companies that care about safeguarding the food supply, proactively minimizing risks, and increasing testing efficiency, Neogen is the partner you can trust. Improve how you manage food safety and quality with proven and innovative solutions, and a global team of food safety and technical experts. Get in front of potential food safety issues that can compromise your products – and your brand – by digitalizing your environmental monitoring program. Simplify work and optimize lab efficiency by using solutions that make testing easy, reduce variability, and deliver rapid test results. We are your trusted partner in Food Safety and Quality.

Nestlé Quality Assurance Center (NQAC) Dublin 6625 Eiterman Road Dublin, OH 43016, USA Phone: +1 614.526.5018 www.nqacdublin.com

The Nestlé Quality Assurance Center (NQAC) Dublin provides the analytical testing businesses need to get products safely onto consumers' tables. We have supported food manufacturers, processors, ingredient suppliers, retailers, and restaurants worldwide for over three decades. These companies rely on our laboratory to provide the highest quality food safety testing and services, from routine to highly-specialized, to meet their specific product needs. Now offering an expansive portfolio of over 200 methods to support your business.

Neutec Group, Inc. 1 Lenox Ave. Farmingdale, NY 11735-5619, USA Phone: +1 516.870.0877 www.neutecgroup.com

Neutec Group is an automation market leader for QA and R&D laboratories. At IAFP 2024, we will showcase our Water Activity Meters, Sterilizers and Media Preparators, Agar Fillers, Spiral Platers, Automated Colony Counters as well as Dilutors and mixers

312 NOMADX 1145 Broadway, 5th Floor New York, NY 10001, USA

Phone: +1 646.589.3800 www.nomadxholdings.com

NOMADX is a revolutionary tool engineered to enable faster, more accurate testing in food, water, and air safety. Our platform sets a new benchmark, offering unparalleled efficiency, accuracy, and adaptability in detecting and managing safety risks. Offering the precision of PCR testing, the ease of an ATP test, and results that are available in under 5 minutes, it requires no specialized training and features multiplexing testing capabilities and automated result reporting.

NSF 402 789 N Dixboro Road

Ann Arbor, MI 48105, USA Phone: +1 847.867.5276 https://www.nsf.org

NSF's mission is to improve human and planet health. For 80 years we have provided certification, testing and auditing to public health standards and training and consulting in all key industries and sectors globally. Our food experts help you effectively manage food safety and deliver quality on your farms, in your factories, on the road, and in your stores and restaurants. Our professional staff of auditors, engineers, microbiologists, toxicologists, chemists and public health experts provides services in 180 countries.

Oxford Nanopore Technologies Gosling Building, Edmund Halley Road, Oxford Science Park Oxford, OX4 4DQ, UK Phone: +1 415.694.8989 https://nanoporetech.com/

Oxford Nanopore Technologies has developed the world's first and only nanopore DNA and RNA sequencing devices. Access real-time, scalable sequencing technology and unrestricted read lengths, whether in scientific research, education, or real-world applications: from outbreak surveillance and microbial risk assessments to functional food product development and food authentication. To make the technology suitable for any user, we focus on increasing ease of use and automation. Nanopore sequencing offers easy and rapid preparation, including end to end workflows, to streamline your food testing operations, from farm to fork. Join us in shaping the future of food safety.

OZ Packaging Technical Service & Sales 250 W Orange Show Lane San Bernardino, CA 92408, USA Phone: +1 909.937.0000 www.ozpackaging.com

Unveil the next generation of packaging technology with OZ Packaging at IAFP 2024, Booth 645. Experience firsthand our state-of-the-art X-ray systems, offering unparalleled detection capabilities for various materials, ensuring the highest food safety standards. Explore our range of Continuous Ink Jet date coding solutions for precise product labeling. Plus, don't miss our food protection bags, designed to preserve freshness and purity. Elevate your packaging game with OZ Packaging — visit us today!

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PathogenFocus 880 Facet Road Henderson, NC 27549, USA Phone: +1 252.430.6970 www.pathogenfocus.com

PathogenFocus technology improves indoor air quality by quickly, safely, and effectively disinfecting air and surfaces. This technology mitigates viruses, bacteria, mold, and VOCs through proprietary Modulated Dielectric Barrier Discharge cold plasma technology. PathogenFocus can extend the shelf life of produce by mitigating pathogens and reducing ethylene. It is also beneficial for meat processing, mitigating pathogens that could lead to contamination or recalls.

PathogenFocus products can be integrated into HVAC systems, which disperses the treatment throughout the space. Standalone portable and wall-mounted units are also available. PathogenFocus technology can be scaled to accommodate virtually any size space.

Pathotrak 14300 Cherry Lane Court, Suite 109/110 Laurel, MD 20707, USA Phone: +1 608.770.4899 www.pathotrak.com

Pathotrak is revolutionizing food safety testing with the AOAC-accredited Next-Generation Enrichment (NGE) platform. The NGE system is a novel, scalable method of isolating detectable bacteria with a shortened, or even zero enrichment time. We make single-shift pathogen test results possible – and we have the AOAC accreditations to prove it. The NGE system is validated for detecting *Salmonella*, *E. coli*, and *Listeria* across a range of products including beef, poultry, and vegetables, with validations tailored to specific products. Don't miss the chance to speak with Pathotrak's expert scientists about your unique challenges to see how you can sell fresher!

Pelsis 746
135 Region S Dr.
Jackson, GA 30233, USA
Phone: +1 800.544.8811
www.pelsis.com

Pelsis develops leading brands for commercial and retail customers, delivering innovative pest control and garden care products to a worldwide customer base.

Our vision is to provide sustainable and innovative solutions, providing peace of mind, protecting public health, and working in harmony with nature. The introduction of Pelsis Digital Insect Light Traps underscores our mission to develop intelligent products and services that help our customers minimize the impact of pests. Through remote, real-time monitoring of flying insect activity, sensitive accounts can stay ahead of emerging problems, reducing the risks of product contamination, outbreaks, and reputational damage.

PPB Technology 446
3 Farrelly Close
Oxley, Australian Capital Territory 2903, Australia
Phone: +61.435.005.522
www.ppbtechnology.com.au

A revolutionary new point of care diagnostic system for the food industry. Originally developed by a team of experts at Australia's National Research Agency (the CSIRO) PPB Technology's CYBERTONGUE® System helps you improve food quality and safety on-site, delivering "Laboratory Quality Results in Minutes™".

First tests on the CYBERTONGUE® Platform provide sensitive and accurate measurement of the proteases responsible for premature spoilage of long-life milk, and measurements of trace levels of lactose in lactose-free dairy. Future tests will include measurements of food allergens, heavy metals and mycotoxins; all of which can be performed on the same easy-to-use device.

Premier Food Safety 14241 Firestone Blvd., Suite 400 La Mirada, CA 90638, USA Phone: +1 800.676.3121 https://premierfoodsafety.com

Premier Food Safety, with over 45 years of excellence providing food safety and compliance training to restaurants around the nation, is your #1 choice for ServSafe Manager Certification, Food Handler Card Training, and Responsible Alcohol Service Training.

Our top-notch in-person and online-training solutions offer the perfect blend of flexibility, affordability, and effectiveness to meet your compliance training needs. Our programs meet national standards, including ANAB accreditation under the ASTM 2659-18 standard, and comply with local regulatory requirements.

Whether you are a large corporation, a mom-and-pop restaurant, or an individual food industry professional, Premier Food Safety is ready to serve you and support you in achieving your goals.

Pribolab Biotech Co., Ltd. China Building 21, Max Business Hongwan, High-Tech Zone Qingdao, Shandong 2661114, China Phone: +86.1765.712.7611 www.pribolab.com

PURE Bioscience, Inc.
771 Jamacha Road, #512
El Cajon, CA 92019, USA
Phone: +1 619.596.8600
https://purebio.com/

PURE Bioscience, Inc. is focused on solutions using our proprietary antimicrobial products that provide solutions to the health and environmental challenges of pathogen and hygienic control. Our technology, Silver Dihydrogen Citrate (SDC) is a broad-spectrum, non-toxic antimicrobial agent that is manufactured as a liquid and delivered in various concentrations. We also manufacture and sell SDC-based formulations to manufacturers for use as a raw material ingredient in the production of personal care products. Our technology platform has potential application in several industries, and we intend to focus our current resources on providing food safety solutions to the food industry.

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PureLine Solutions 1241 N Ellis St. Bensenville, IL 60106, USA Phone: +1 847.732.7253 www.pureline.com

PureLine Chlorine Dioxide Solutions for the Food & Beverage Industry. PureLine offers advanced chlorine dioxide fumigation and sanitation solutions for the food and beverage industry. Our services include facility decontamination, new construction treatment, and specialized systems like MobileClean and PureFlo for large-scale fumigation. We also provide PureCIP for Clean-In-Place systems and pHlorSan for floor and drain treatment, ensuring comprehensive hygiene and safety in food processing facilities. PureLine's chlorine dioxide technology is efficient, cost-effective, and less corrosive, making it the superior choice for food safety management.

Q Laboratories 1930 Radcliff Dr. Cincinnati, OH 45204, USA Phone: +1 517.614.6240 www.qlaboratories.com

For over 50 years, Q Laboratories has operated a third-party contract laboratory that integrates state-of-the-art technology with personalized service and attention. We offer a wide range of services to fulfill all your testing and quality assurance requirements, as well as customized solutions tailored to your specific needs. Registered with the FDA (Reg. #1527260), compliant with cGMP/GLP regulations, and ISO 17025 accredited, Q Laboratories is dedicated to upholding the quality standards required for food testing.

QualiTru Sampling Systems 471 Hayward Ave. N Oakdale, MN 55128, USA Phone: +1 651.501.2337 www.qualitru.com

Since 1983 QualiTru Sampling Systems has been the leader in the science of aseptic liquid sampling, with innovative, easy-to-use, versatile, and cost-effective sampling systems that help the liquid dairy, food and beverage industries produce safe, quality products. Our systems are used for gathering trusted aseptic and representative samples by thousands of dairy, food and beverage processors across the United States and in over 30 countries worldwide. QualiTru's unique four-part configurations for representative sampling can be customized, allowing for accurate microbiological, component, and chemical data from beginning to end, building transparency and confidence in product quality.

Quality Assurance & Food Safety Magazine
5811 Canal Road
Valle View, OH 44125, USA
Phone: +1 216.393.0300
www.qualityassurancemag.com

QA Magazine, a bi-monthly publication from GIE Media, provides digital and print publications for the food and beverage processing industry with a specific focus on food safety, quality, and defense across the global supply chain. Through practical insights and analysis of plant processes, practices, regulation, and current issues, the QA Media family—including our print publication, website and e-newsletters—addresses the growing market need for targeted information in these key areas.

R & F Products, Inc. 2725 Curtiss St. Downers Grove, IL 60515, USA Phone: +1 630.969.5300 www.rf-products.net

R & F Products, Inc. specializes in developing and manufacturing chromogenic media for detecting and isolating food, environmental, and clinical pathogens. The company's goal is to create innovative and distinct chromogenic plating media and enrichment broths that enhance laboratory efficiency, accuracy, sensitivity, and specificity in isolating pathogens. R & F Products supplies chromogenic media for the isolation of various pathogens, including Escherichia coli 0157:H7, Listeria monocytogenes, Salmonella species, Bacillus cereus/Bacillus thuringiensis, Cronobacter sakazakii, Shigella species, Campylobacter jejuni/C. coli, Yersinia pestis, and non-0157 Shiga-toxin E. coli (STEC), and Arcobacter butzleri/cryaerophilus/skirrowii.

R-Biopharm Inc. 870 Vossbrink Dr. Washington, MO 63090, USA Phone: +1 438.968.9686 https://food.r-biopharm.com/

R-Biopharm specializes in providing innovative and reliable food and feed analysis solutions worldwide. Our cutting-edge technology enables accurate detection of contaminants, allergens and more, ensuring food safety and quality. We offer a comprehensive range of products, including rapid test kits, ELISAs, and PCR assays, supported by a dedicated team of experts. Come visit our booth to learn more about our advanced solutions and how they can benefit your business.

REAGEN INC. 7098 Miratech Dr., Suite 110 San Diego, CA 92121, USA Phone: +1 626.250.7756 https://reagen.us/

Since its inception in 2012, REAGEN INC. has been focusing on ensuring your health and safety in the food industry for over 12 years. We manufacture a complete line of innovative diagnostic testing kits including PCR, ELISA and easy to use strip tests for the fish, meat, dairy, honey and grain industries. Our fast and easy to use diagnostic kits include, but are not limited to, testing for growth hormones in meat, antibiotics in dairy and mycotoxins in grain. Our products are designed to the highest standards for accuracy and precision to ensure your results in the food safety processes.

REALZYME LLC 219 South Pioneer Blvd. Springboro, OH 45066, USA Phone: +1 937.350.5660 www.realzyme.com

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Remco: a Vikan Company 4735 W 106th St. Zionsville, IN 46077, USA Phone: +1 317.876.9856 www.remcoproducts.com

Remco and Vikan provide color-coded tools for cleaning and material handling tools where hygiene and safety are critical. Our tools are durable, ergonomically friendly, and long-lasting. As Vikan's dedicated presence in North America, Remco delivers even greater support to our customers through our combined industry knowledge, world-class manufacturing capabilities, and unwavering integrity.

Remco features an extensive online knowledge center, in-house customer service representatives, and training departments that can assist with tool selection and setting up color-coding plans. Regardless of an operation's size or complexity, we have the tools and expertise to help food manufacturers execute color-coding plans.

Rochester Midland Corporation 155 Paragon Dr. Rochester, NY 14624, USA Phone: +1 800.836.1627 www.rochestermidland.com

Rochester Midland Corporation's BrandGuard® program is a HACCP and GMP-based food safety and sanitation program designed to support SQF, BRC and other GFSI standards. We partner with food and beverage manufacturers looking for a comprehensive and quality sanitation program that is focused on innovative chemical cleaning options, process improvements, training, technical support, sustainable solutions, and safety.

Romer Labs 130 Sandy Dr. Newark, DE 19713, USA Phone: +1 302.650.9217 www.romerlabs.com

At Romer Labs, innovation is at the heart of what we do. Learn more about our new allergen testing application. Test for allergens, GMOs, or mycotoxins all with one piece of equipment- the AgraVision™ Pro reader. Eliminate subjectivity in strip result readings and simplify your workflow with automatic timing and an integrated incubator. Seamlessly collect, document, and manage data with Romer Labs Data Manager. Enjoy exceptional support every day from our technical and customer service teams who LISTEN to you. Visit Booth #239 every day of the show for the chance to win a pair of Apple Airpods Max.

725 RQA, Inc. 18504 West Creek Drive, Suite 200 Tinley Park, IL 60477, USA Phone: +1 630.512.0011

www.rga-inc.com

RQA, Inc. provides world class risk reduction, quality assurance and food safety services to the food industry. RQA's consultancy and training services include supplier risk assessment, development of crisis management plans, review of existing plans and customized simulation exercises. Our FSPCA-certified Lead Instructors offer public and private FSMA compliance courses for PCQI for Human Food, PCQI for Animal Food, Foreign Supplier Verification and Intentional Adulteration Vulnerability Assessments. Count on RQA to provide on-demand QA resources, assess product quality at retail, retrieve consumer complaint samples, identify foreign material, inspect and remediate product at DCs, or execute a product recall.

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Saldesia "Goddess of Food Safety" 22413 West North Ave. Antioch, IL 60002, USA Phone: +1 616.422.7233 www.saldesia.com

Saldesia "Goddess of Food Safety" is a focused distributor of products and solutions specifically tailored to meeting the demands of Food and Beverage processing facilities. Our team is devoted to serving the Quality, Production, Safety and Sanitation departments. With more than 10 years of distribution and industry experience, we are determined to source and supply the best offerings to meet and exceed the Food & Beverage industry's requirements. This determination supports our customers' efforts to produce the safest and highest quality products.

Sanigen
Pyeongchon Digital Empire Bldg. 411, 16 Heungan-daero
427 beon-gil, Dongan-gu
Anyang-si, Gyeonggi-do 14059, South Korea

Phone: +82.1833.8010 www.sanigen.kr

Sanigen is a food safety specialist that develops a total solution for safe food manufacturing.

Seward Laboratory Systems Inc. 155 Keyland Court Bohemia, NY 11716, USA Phone: +44.0.7971.123947 www.stomacher.com

Seward Laboratory Systems Inc will be showing their world-famous range of Stomacher® blenders and accessories. Our latest model, Stomacher® 400 EVO, will showcase a range of new and convenient features for the improvement of laboratory efficiency. Our technical experts will be on hand to discuss methods and developments in food sample preparation for food microbiology. Seward has several innovative new consumable products and accessories to support our customers.

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SGS 201 Route 17 North Rutherford, NJ 07070, USA Phone: +1 973.866.9043 www.sgs.com/foodsafety

SGS is the world's leading testing, inspection and certification company. Our global network of food experts, including highly-qualified auditors and food safety specialists, and utilizing state-of-the-art laboratories and software applications, provide independent solutions covering all your knowledge, risk management and compliance needs. We offer a wide range of testing solutions to internationally recognized standards. Our highly-qualified analysts and industry experts will ensure your products meet client expectations and the requirements set by accreditation bodies and governments. From essential microbiological analysis to food authenticity, nutrition or allergen testing, our experts will process your samples quickly, professionally and accurately.

Shoe Cover Magic, Inc. 161 Compass Point Court St. Charles, MO 63301, USA Phone: +1 606.393.0949 www.shoecovermagic.com

Our simple but powerful shoe cover dispensers allow employees to put on shoe covers SAFER, FASTER, and CLEANER. No longer will you find employees cutting corners and putting themselves at risk of falling by balancing precariously on one foot or leaning against a wall. The added safety handle keeps them on two feet and the hands-free aspect stops the risk of spreading harmful bacteria that can lurk on shoes.

Smart Food Safe 455 BD, Fenelon, Suite 311 Dorval, QC H9S 5T8, Canada Phone: +1 647.987.7194 www.smartfoodsafe.com

Smart Food Safe stands as a prominent provider of state-of-the-art technology solutions for businesses to excel in Quality, Food Safety, Regulatory, and Traceability management by offering a comprehensive suite of customizable modules designed to streamline processes, ensure regulatory compliance, enhance product quality, and enable real-time visibility into operations.

Our software's specialized features include automated Document Control, Record Digitization, Corrective and Preventive Actions (CAPA) Management, Audit Management, Supplier Management, Risk Assessment and Management, Training and Competency Tracking, Recipe and Formulation Management, Allergen and Ingredient Management, and HACCP (Hazard Analysis Critical Control Point) Compliance.

SmartSense by Digi 186 Lincoln St., Floor 9 Boston, MA 02111, USA Phone: +1 866.806.2653 www.smartsense.co

SmartSense by Digi® is a leading global provider of condition monitoring and RTLS through Internet of Things (IoT) Sensing-as-a Service solutions that deliver dynamic and personalized asset monitoring, process digitization, and digital decisioning across key verticals. We enable our customers to leverage IoT automation, prescriptive workflows, and insightful analytics to ensure compliance and productivity while reducing waste and energy consumption and improving sustainability.

Spex CertiPrep 203 Norcross Ave. Metuchen, NJ 08840, USA Phone: +1 508.838.3108 www.spex.com

Spex CertiPrep is a market leader of high quality, innovative Inorganic and Organic Certified Reference Materials. We will exceed customer expectations by forming collaborative relationships and maintaining highly-skilled employees in a positive, creative working environment. Our products are used in laboratories (worldwide/globally) conforming to international environmental and safety standards.

Springer Nature
One New York Plaza, Suite 4600
New York, NY 10004, USA
Phone: +1 212.451.8766
www.springernature.com/gp

Springer Nature opens the doors to discovery for researchers, educators, clinicians and other professionals. Every day, around the globe, our imprints, books, journals, platforms and technology solutions reach millions of people. For over 180 years our brands and imprints have been a trusted source of knowledge to these communities, and today, more than ever, we see it as our responsibility to ensure that fundamental knowledge can be found, verified, understood and used by our communities — enabling them to improve outcomes, make progress, and benefit the generations that follow.

StateFoodSafety 225 E Robinson St., #570 Orlando, FL 60050, USA Phone: +1 720.900.2420 https://www.statefoodsafety.com

StateFoodSafety is an online food safety education company dedicated to educating the public about food safety and helping ensure the health of communities nationwide. The StateFoodSafety training and certification programs are built using industry-leading technology and food safety best practices. Whether you are a food handler, food manager, alcohol server, member of a health department, or work for a foodservice company, StateFoodSafety has the food safety training solution for you.

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Steamericas, Inc. 18022 S Figueroa St. Gardena, CA 90248, USA Phone: +1 310.327.8900 www.steam.am

Steamericas leads in eco-friendly industrial cleaning with high heat, dryvapor steam machines and accessories such as conveyor belt cleaning tools. Our Optima Steamer™ ensures thorough sanitation, saving time and resources while meeting regulatory standards like the FSMA and increasing ESG performance. With up to 98% water savings, our technology tackles labor shortages, drainage issues, and removes pathogens and allergens effectively. Choose Steamericas for superior cleaning results and sustainable practices.

Sterilex 111 Lake Front Dr. Hunt Valley, MD 21030, USA Phone: +1 785.499.3227 https://www.sterilex.com/

Sterilex is a total food safety solution provider and is committed to providing solutions for pathogen control from farm to fork. As a recognized leader in developing innovative solutions for microbial control, we are uniquely positioned to bring together multiple parts of the food supply chain. Sterilex PerQuat technology is an EPA-registered product that both removes biofilm and kills biofilm bacteria in public health and industrial use sites. Sterilex's recently launched ProvaStride, is a quat-free, EPA-registered floor powder and non-food contact surface sanitizer specifically designed to improve sanitation in quat-sensitive facilities.

To learn more, visit www.sterilex.com.

Symcel Tomtebodavagen 6 Stockholm, 17165, Sweden Phone: +46.07.37.259.236 www.symcel.com

We measure life. Symcel is leading a new era in metabolic measurements for use in R&D, quality control and rapid diagnostics. Using a highly sensitive technique called isothermal microcalorimetry, machine learning algorithms and biological databases, the company provides solutions for real-time measurement of biological activity that to date has been unattainable. By focusing on key areas of expertise – speed, sensitivity, specificity, and biological complexity – the company aims to be the best bio-calorimetrists in the world and so to use its science to generate unique solutions for the betterment of global health and the environment.

Synexis 11711 W 79th St. Lenexa, KS 66214, USA Phone: +1 844.352.7680 www.synexis.com

Our innovative Synexis Dry Hydrogen Peroxide (DHP®) is the solution to creating healthy indoor environments by reducing viruses, bacteria, mold, and VOCs both in the air and surfaces 24/7/365 within occupied spaces. Our patented technology works by transforming naturally occurring oxygen and humidity in the air into Dry Hydrogen Peroxide (DHP®). Synexis provides a continuous microbial reduction to make the indoor spaces we work, heal, and live safer for all.

TandD US, LLC. 534 N Guadalupe St., #32886 Santa Fe, NM 87501, USA Phone: +1 518.669.9227

www.tandd.com

TandD US, LLC. manufactures a comprehensive line of wireless and stand-alone Data Loggers with innovative web-based data collection, remote monitoring and notification features. Included in the product lineup are models that incorporate Bluetooth interfaces, for direct connection with Smartphones and Tablets, and Wi-Fi connectivity for automatic uploading of data to the company's free WebStorage Service, where customers can view, share and archive their recorded data without paying monthly fees. Included in this family is a wireless core temperature logger for use in monitoring the internal temperatures of food in preparation and holding areas.

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TEC Services 8601 Robert Fulton Dr., Suite 110 Columbia, MD 21046, USA Phone: +1 833.TEC.SRVC https://www.tecserv.com

TEC Services booth featuring information on our Sanitation and Janitorial programs for Food Distribution and Grocery.

Tentamus Laboratories 860 Greenview Dr., AFL Grand Prairie, TX 75050, USA Phone: +1 469.927.5002 www.tentamus.com

Tentamus offers a global network of laboratories that provide analytical data for the consumer goods industry working with clients in the food, pharmaceutical, dietary supplement, beverage, water, personal care, and foodservice segments.

From farm to fork, food quality can be influenced by environmental pollution or contamination during processing, storage, packing and transportation.

Our comprehensive laboratory services cover a diverse array of analyses and testing including: *Cyclospora* detection, allergen testing, shelf-life studies, chemistry and nutritional analysis, vendor compliance, metals and minerals analysis, sensory and environmental testing, microbiological, pesticide and residue analysis, product labeling, and hemp products and cannabinoids testing.

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Thermo Fisher Scientific 12076 Santa Fe Trail Dr. Lenexa, KS 66215, USA Phone: +1 800.255.6730 www.thermofisher.com

Thermo Fisher Scientific supplies innovative solutions for the world's food manufacturing and testing industry, offering applications for food safety and authenticity testing that span the food production process including raw materials, finished products and environmental monitoring.

- · Validated, simple real-time PCR manual and automated workflows.
- Next Generation Sequencing based solutions for meat, fish, and plant species identification for food authenticity testing.
- Convenient culture media formats and instrumentation for sample preparation.

We believe we are uniquely positioned to help the food industry effectively protect its customers, brand, and reputation by delivering simpler, faster, smarter solutions.

Stop by Booth 337 or visit thermofisher.com/foodandbeverage.

USDA Accredited Laboratory Program 950 College Station Road Athens, GA 30605, USA Phone: +1 706.713.5168 https://www.fcic.usda.gov/science-data/labo

https://www.fsis.usda.gov/science-data/laboratories-procedures/accredited-laboratory-program

The FSIS Accredited Laboratory Program (ALP) accredits non-federal analytical chemistry and microbiology laboratories for analytical testing of meat, poultry, and egg products. Accreditations are available for moisture, protein, fat, and salt (MPFS) content, chemical residues of chlorinated pesticides (CP), polychlorinated biphenyls (PCBs) and identification, serotyping, and whole genome sequencing of *Salmonella*.

USDA NAL, Food Safety Resarch Information Office (FSRIO) 10301 Baltimore Ave. Beltsville, MD 20705, USA Phone: +1 240.351.1165 www.nal.usda.gov/programs/fsrio

The USDA National Agricultural Library (NAL), Food Safety Research Information Office (FSRIO) is one of the key information centers at NAL. It reaches a target audience of food safety researchers across government, academia, and industry. Discover its key information product, the research projects database, and food safety topical information (i.e., *Salmonella* and other Bacterial Pathogens, Antimicrobial Resistance, Food Quality, Produce Safety, Chemical Contaminants, etc.).

Search the web pages at www.nal.usda.gov/programs/fsrio.

Veeva Systems, Inc. 4280 Hacienda Dr. Pleasanton, CA 94588, USA Phone: +1 215.847.9611 https://www.industries.veeva.com/

Veeva provides seamless digital solutions to modernize food safety, quality, and compliance, transforming how companies manufacture and deliver safe, sustainable, and trusted products. Developed in partnership with F&B industry leaders, our cloud platform elevates standards, fosters collaboration, and instills consumer trust in every product, pushing the boundaries of consumer delight.

The Vincit Group 412 Georgia Ave., Suite 300 Chattanooga, TN 37403, USA Phone: +1 888.484.6248 www.vincitgroup.com

The Vincit Group – As a network of eight vertically integrated industrial companies, we create an exchange of ideas and services geared toward raising the bar and changing for the better the ways we make what we make.

We're here to help your business be better—to be more sustainable and more profitable. Because that's true, we can only reach our full potential by helping you elevate your operations.

Vitsab International AB 16 Randall Road Winslow, ME 04901, USA Phone: +1 207.210.1753 www.vitsab.com

Vitsab International AB/Freshtag® won IAFP's 2023 Food Safety Innovation Award for their Freshtag® products resulting in published articles in *Bloomberg, Business Insider*, and *Yahoo News*. Perishable products need validation of proper temperature handling from source to plate. With the rapid increase of direct shipments of perishable products with eCommerce retail leading the way, there is an increased concern for "The Last Mile" of shipments. Freshtag® is that verification − Temperature Monitoring Made Simple™. Visit Freshtag.com to learn about their exclusive "Stop Light" color changing technology, or stop by Booth #213 at IAFP 2024 in Long Beach, California.

Weber Scientific 2732 Kuser Road Hamilton, NJ 08691, USA Phone: +1 609.249.1409 www.weberscientific.com

Founded in 1959, Weber Scientific has grown into a premier manufacturer and comprehensive distributor of laboratory supplies and equipment. We remain committed to offering our customers a broad range of innovative food, beverage, and water testing products including exclusive and hard to find items. Please stop by our Booth #334 to explore our products on display and to allow our dedicated team to help with all your laboratory needs. While there, feel free to pick up our 232 page, full-color, free catalog. We look forward to seeing you!

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Whirl-Pak® 9501 80th Ave. Pleasant Prairie, WI 53158, USA Phone: +1 512.516.1085 www.whirl-pak.com

Established in 1959, Whirl-Pak® provides a safer, healthier, more productive world with sterilized, disposable closure bags used in over 75 countries in industry applications including food & beverage.

At Whirl-Pak, we continue to strive for excellence with secure sampling bags that ensure the safety of consumers while improving efficiencies in processing facilities and laboratories. As quality management policies and regulation requirements change, the health and safety of the consumer depends on the accuracy of your test results. Whirl-Pak can help you deliver the best possible outcome – for results you can trust.

World Bioproducts P.O. Box 947 Bothell, WA 98041, USA Phone: +1 425.242.4153 www.worldbioproducts.com

World Bioproducts provides innovative environmental sample collection devices designed to address the specific challenges of recovering microorganisms from food processing operations. The EZ Reach™ Sponge Sampler and PUR-Blue™ Swab Sampler are available with a variety of collection broths and buffers, including HiCap™ Neutralizing Broth, proven to effectively neutralize residual sanitizers, recover injured organisms, and maintain their viability for up to 96 hours after collection. Visit our booth to learn how we can help improve your EMP.

Xcluder Rodent & Pest Defense 750 W Lake Cood Road, #480 Buffalo Grove, IL 60089, USA Phone: +1 847.975.8221 www.buyxcluder.com

Ben Channon of Xcluder Rodent & Pest Defense is available to answer questions regarding the role of exclusion in protecting a facility against infestation and audit failure. He will address facilities' biggest vulnerabilities to rodents and outdoor contaminants and how to properly safeguard them, as well as the role of exclusion in leading certification programs including SQFI, NSF, GFSI and others. Channon will offer practical advice on how auditors determine whether a facility is secure, identify common misconceptions that leave a facility vulnerable and demonstrate leading product solutions for protecting personnel doors, garage doors, roll-up doors and loading docks.

# **CONTINUING EXHIBITORS**

#### THANK YOU FOR YOUR PARTICIPATION

#### **35-YEAR EXHIBITORS**

3-A Sanitary Standards, Inc. Charm Sciences, Inc. Merieux NutriSciences Nelson-Jameson, Inc. Weber Scientific Whirl-Pak®

#### **30-YEAR EXHIBITORS**

bioMérieux, Inc. Ecolab IEH Laboratories & Consulting Group Michelson Laboratories Q Laboratories Thermo Fisher Scientific

#### 25-YEAR EXHIBITORS

FDA/Center for Food Safety and Applied Nutrition Food Safety Magazine Food Safety Summit Hygiena Microbiologics Microbiology International Neogen

#### **20-YEAR EXHIBITORS**

ASI

Bio-Rad Laboratories, Inc.
Deibel Laboratories
FOSS North America
FSNS – a Certified Group Company
Hardy Diagnostics
LGC AXIO Proficiency Testing
MilliporeSigma
NSF

Quality Assurance & Food Safety Magazine Springer Nature

# 15-YEAR EXHIBITORS AEMTEK Laboratories

Bioscience International, Inc.
Eurofins
HiMedia Laboratories
IFC
Interscience Laboratories Inc.
Matrix Sciences
Microbac Laboratories
Neutec Group, Inc.
R & F Products, Inc.
Rochester Midland Corporation
Romer Labs
SGS

#### **10-YEAR EXHIBITORS**

**AIB International** Alchemy Systems Alpha Biosciences **AOAC Research Institute** Association of Food and Drug Officials **Bia Diagnostics Laboratories** Bruker **Detectamet Detectable Products** Food Safety News **LABPLAS** QualiTru Sampling Systems Remco: a Vikan Company RQA, Inc. Seward Laboratory Systems, Inc. **Spex Certiprep** Sterilex TandD US, LLC. USDA NAL/Food Safety Research Information Office (FSRIO) **World Bioproducts** 

# POLICY ON COMMERCIALISM FOR ANNUAL MEETING PRESENTATIONS

#### 1. INTRODUCTION

No printed media, technical sessions, symposia, posters, seminars, short courses, and/or other related types of forums and discussions offered under the auspices of the International Association for Food Protection (hereafter referred to as to Association forums) are to be used as platforms for commercial sales or presentations by authors and/or presenters (hereafter referred to as authors) without the express permission of the staff or Executive Board. The Association enforces this policy in order to restrict commercialism in technical manuscripts, graphics, oral presentations, poster presentations, panel discussions, symposia papers, and all other type submissions and presentations (hereafter referred to as submissions and presentations), so that scientific merit is not diluted by proprietary secrecy.

Excessive use of brand names, product names or logos, failure to substantiate performance claims, and failure to objectively discuss alternative methods, processes, and equipment are indicators of sales pitches. Restricting commercialism benefits both the authors and recipients of submissions and presentations.

This policy has been written to serve as the basis for identifying commercialism in submissions and presentations prepared for the Association forums.

#### 2. TECHNICAL CONTENT OF SUBMISSIONS AND PRESENTATIONS

#### 2.1 Original Work

The presentation of new technical information is to be encouraged. In addition to the commercialism evaluation, all submissions and presentations will be individually evaluated by the Program Committee chairperson, technical reviewers selected by the Program Committee chairperson, session convenor, and/or staff on the basis of originality before inclusion in the program.

#### 2.2 Substantiating Data

Submissions and presentations should present technical conclusions derived from technical data. If products or services are described, all reported capabilities, features or benefits, and performance parameters must be substantiated by data or by an acceptable explanation as to why the data are unavailable (e.g., incomplete, not collected, etc.) and, if it will become available, when. The explanation for unavailable data will be considered by the Program Committee chairperson and/or technical Policy on Commercialism for Annual Meeting Presentations reviewers selected by the Program Committee chairperson to ascertain if the presentation is acceptable without the data. Serious consideration should be given to withholding submissions and presentations until the data are available, as only

those conclusions that might be reasonably drawn from the data may be presented. Claims of benefit and/or technical conclusions not supported by the presented data are prohibited.

#### 2.3 Trade Names

Excessive use of brand names, product names, trade names, and/ or trademarks is forbidden. A general guideline is to use proprietary names once and thereafter to use generic descriptors or neutral designations. Where this would make the submission or presentation significantly more difficult to understand, the Program Committee chairperson, technical reviewers selected by the Program Committee chairperson, session convenor, and/or staff, will judge whether the use of trade names, etc., is necessary and acceptable.

#### 2.4 "Industry Practice" Statements

It may be useful to report the extent of application of technologies, products, or services; however, such statements should review the extent of application of all generically similar technologies, products, or services in the field. Specific commercial installations may be cited to the extent that their data are discussed in the submission or presentation.

#### 2.5 Ranking

Although general comparisons of products and services are prohibited, specific generic comparisons that are substantiated by the reported data are allowed.

#### 2.6 Proprietary Information (See also 2.2.)

Some information about products or services may not be publishable because it is proprietary to the author's agency or company or to the user. However, the scientific principles and validation of performance parameters must be described for such products or services. Conclusions and/or comparisons may be made only on the basis of reported data.

#### 2.7 Capabilities

Discussion of corporate capabilities or experiences are prohibited unless they pertain to the specific presented data.

#### 3. GRAPHICS

#### 3.1 Purpose

Slides, photographs, videos, illustrations, art work, and any other type visual aids appearing with the printed text in submissions or used in presentations (hereafter referred to as graphics) should be included only to clarify technical points. Graphics which primarily promote a product or service will not be allowed. (See also 4.6.)

#### 3.2 Source

Graphics should relate specifically to the technical presentation. General graphics regularly shown in, or intended for, sales presentations cannot be used.

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#### 3.3 Company Identification

Names or logos of agencies or companies supplying goods or services must not be the focal point of the slide. Names or logos may be shown on each slide so long as they are not distracting from the overall presentation.

#### 3.4 Copies

Graphics that are not included in the preprint may be shown during the presentation only if they have been reviewed in advance by the Program Committee chairperson, session convenor, and/or staff, and have been determined to comply with this policy. Copies of these additional graphics must be available from the author on request by individual attendees. It is the responsibility of the session convenor to verify that all graphics to be shown have been cleared by Program Committee chairperson, session convenor, staff, or other reviewers designated by the Program Committee chairperson.

#### 4. INTERPRETATION AND ENFORCEMENT

#### 4.1 Distribution

This policy will be sent to all authors of submissions and presentations in the Association forums.

#### **4.2 Assessment Process**

Reviewers of submissions and presentations will accept only those that comply with this policy. Drafts of submissions and presentations will be reviewed for commercialism concurrently by both staff and technical reviewers selected by the Program Committee chairperson. All reviewer comments shall be sent to and coordinated by either the Program Committee chairperson or the designated staff. If any submissions are found to violate this policy, authors will be informed and invited to resubmit their materials in revised form before the designated deadline.

#### 4.3 Author Awareness

In addition to receiving a printed copy of this policy, all authors presenting in a forum will be reminded of this policy by the Program Committee chairperson, their session convenor, or the staff, whichever is appropriate.

#### 4.4 Monitoring

Session convenors are responsible for ensuring that presentations comply with this policy. If it is determined by the session convenor that a violation or violations have occurred or are occurring, he or she will publicly request that the author immediately discontinue any and all presentations (oral, visual, audio, etc.) and will notify the Program Committee chairperson and staff of the action taken.

#### 4.5 Enforcement

While technical reviewers, session convenors, and/or staff may all check submissions and presentations for commercialism, ultimately it is the responsibility of the Program Committee chairperson to enforce this policy through the session convenors and staff.

#### 4.6 Penalties

If the author of a submission or presentation violates this policy, the Program Committee chairperson will notify the author and the author's agency or company of the violation in writing. If an additional violation or violations occur after a written warning has been issued to an author and his agency or company, the Association reserves the right to ban the author and the author's agency or company from making presentations in the Association forums for a period of up to two (2) years following the violation or violations.

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#### FRIDAY, JULY 12 AND SATURDAY, JULY 13, 2024 (8:30 A.M. - 5:00 P.M.)

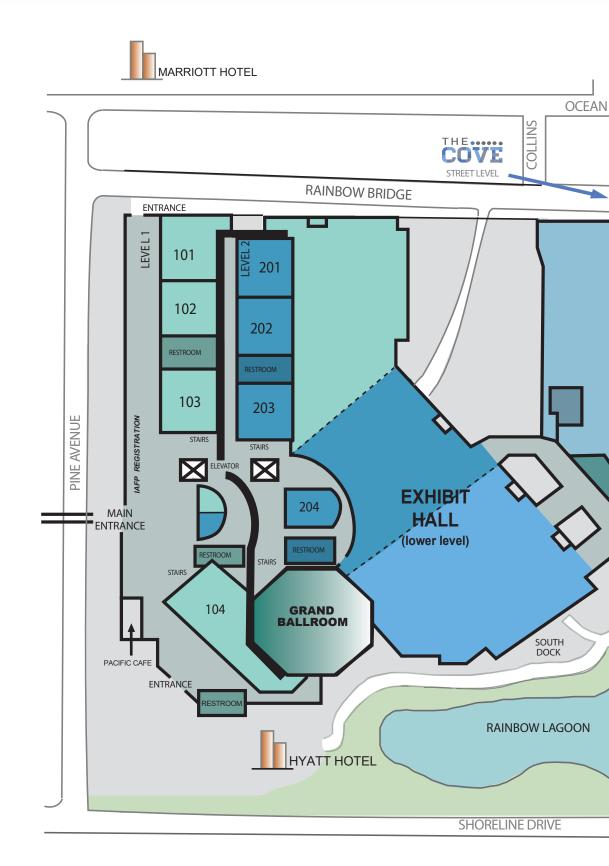
- Workshop 1 Demystifying Dry Cleaning: Understanding the When, How and Why of Dry Cleaning & Sanitizing (Disinfecting)
- Workshop 2 Selecting and Validating Pathogen Reduction Processes for Low-Moisture Foods and Ingredients
- Workshop 3 Whole Genome and Metagenomic Sequence Analyses: A Tutorial and Hands-on Workshop to Help Understand This Process

#### **SATURDAY, JULY 13 (8:30 A.M. - 5:00 P.M.)**

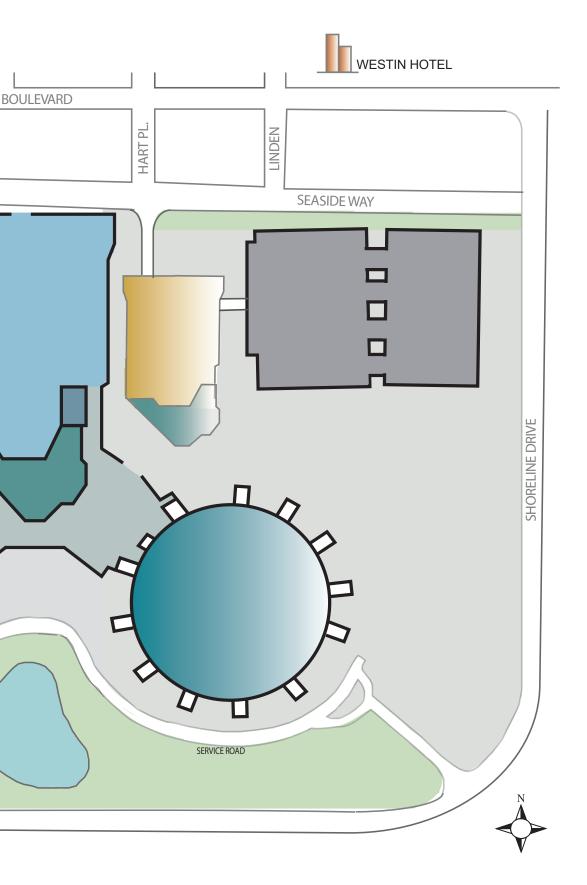
- Workshop 4 Application of Principles of Hazard Analysis Beyond the Basics
- Workshop 5 How to Select the Best Solutions to Common Food Safety Culture Problems

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1912 – Milwaukee, WI	<b>1940</b> — New York, NY	<b>1968</b> — St. Louis, MO	<b>1996</b> – Seattle, WA
<b>1913</b> – Chicago, IL	<b>1941</b> – Tulsa, OK	1969 – Louisville, KY	<b>1997</b> – Orlando, FL
<b>1914</b> – Chicago, IL	<b>1942</b> — St. Louis, MO	1970 — Cedar Rapids, IA	1998 — Nashville, TN
<b>1915</b> — Washington, D.C.	1943 — Cancelled	1971 — San Diego, CA	<b>1999</b> – Dearborn, MI
1916 — Springfield, MA	<b>1944</b> – Chicago, IL	1972 – Milwaukee, WI	<b>2000</b> – Atlanta, GA
<b>1917</b> — Washington, D.C.	1945 — Cancelled	1973 – Rochester, NY	2001 — Minneapolis, MN
<b>1918</b> – Chicago, IL	1946 – Atlantic City, NJ	1974 — St. Petersburg, FL	<b>2002</b> — San Diego, CA
1919 — New York, NY	1947 – Milwaukee, WI	1975 — Toronto, Ontario	2003 — New Orleans, LA
<b>1920</b> – Chicago, IL	1948 — Philadelphia, PA	1976 – Arlington Heights, IL	<b>2004</b> — Phoenix, AZ
<b>1921</b> — New York, NY	<b>1949</b> – Columbus, OH	<b>1977</b> — Sioux City, IA	<b>2005</b> — Baltimore, MD
<b>1922</b> – St. Paul, MN	1950 — Atlantic City, NJ	1978 — Kansas City, MO	<b>2006</b> — Calgary, Alberta
<b>1923</b> — Washington, D.C.	1951 — Glenwood Springs, CO	<b>1979</b> – Orlando, FL	<b>2007</b> — Lake Buena Vista, FL
<b>1924</b> — Detroit, MI	1952 – Milwaukee, WI	1980 – Milwaukee, WI	<b>2008</b> – Columbus, OH
1925 – Indianapolis, IN	1953 — East Lansing, MI	<b>1981</b> — Spokane, WA	2009 — Grapevine, TX
1926 — Philadelphia, PA	1954 – Atlantic City, NJ	1982 – Louisville, KY	<b>2010</b> — Anaheim, CA
1927 — Toronto, Ontario	<b>1955</b> — Augusta, GA	<b>1983</b> — St. Louis, MO	2011 – Milwaukee, WI
<b>1928</b> — Chicago, IL	<b>1956</b> – Seattle, WA	1984 – Edmonton, Alberta	2012 – Providence, RI
<b>1929</b> — Memphis, TN	1957 – Louisville, KY	1985 — Nashville, TN	<b>2013</b> — Charlotte, NC
<b>1930</b> — Cleveland, OH	1958 — New York, NY	1986 — Minneapolis, MN	2014 – Indianapolis, IN
1931 — Montreal, Quebec	1959 — Glenwood Springs, CO	<b>1987</b> — Anaheim, CA	<b>2015</b> — Portland, OR
<b>1932</b> — Detroit, MI	<b>1960</b> – Chicago, IL	<b>1988</b> — Tampa, FL	<b>2016</b> — St. Louis, MO
1933 — Indianapolis, IN	<b>1961</b> – Des Moines, IA	<b>1989</b> — Kansas City, MO	<b>2017</b> – Tampa, FL
<b>1934</b> — Boston, MA	1962 — Philadelphia, PA	1990 — Arlington Heights, IL	<b>2018</b> — Salt Lake City, UT
1935 — Milwaukee, WI	1963 — Toronto, Ontario	1991 – Louisville, KY	<b>2019</b> – Louisville, KY
1936 — Atlantic City, NJ	<b>1964</b> – Portland, OR	1992 — Toronto, Ontario	<b>2020</b> – Virtual
1937 – Louisville, KY	<b>1965</b> — Hartford, CT	<b>1993</b> — Atlanta, GA	<b>2021</b> — Phoenix, AZ
<b>1938</b> — Cleveland, OH	1966 — Minneapolis, MN	1994 — San Antonio, TX	<b>2022</b> — Pittsburgh, PA
1939 – Jacksonville, FL	1967 — Miami Beach, FL	1995 — Pittsburgh, PA	2023 — Toronto, Ontario

#### **FUTURE ANNUAL MEETINGS**

**IAFP 2025** 

July 27-30 Cleveland, Ohio **IAFP 2026** 

**July 26–29**New Orleans, Louisiana

**IAFP 2027** 

July 18-21 Kansas City, Missouri





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