

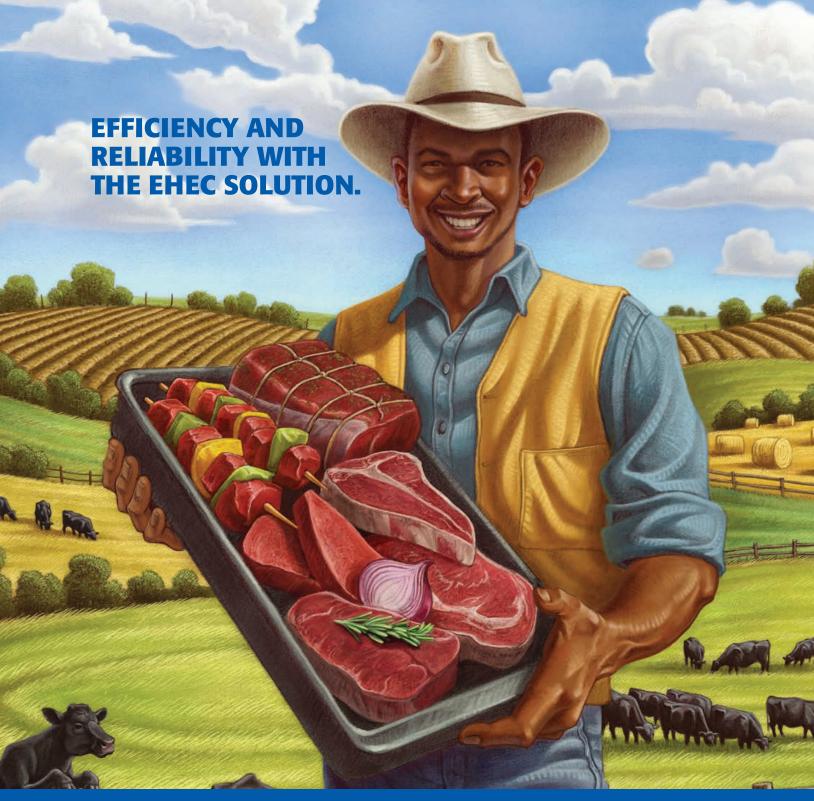
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All sessions will be held at the Tampa Convention Center

Ballroom B	B Ballroom C	Ballroom D	Room 10-11	Room 12	Room 13-14	Room 18-19	Room 20-21	Room 22-23	Room 24-25	Room 15	Room 16	Exhibit Hall
				3 7	SUNDAY, JULY	6 /						
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				V	MONDAY, July 10	10						
S03 Virulence Floating and Host Roseptibility of Foodborne Pathogens	S04 Developments in Mycotoxin Research: From Methodology to Prevention	S 05 Pathogen Contamination at Retail: What are the Next Steps? Perishable Foods Delivered to Homes via Common Carriers: Safe or Sorry?			Latin America: Issues and Initiatives for Food Safety Soft Entries and Refusais. Friding Meaning within the Data	All You Wanted to Rrow about Antimicrobia Hand Santiers as and Vere S10 Developing Evidence-based Recommendations to Improve Productional Approach Approach	Midrobial Food Midrobial Food Midrobial Food Mediumsize Farming Systems: Farming Systems: Mitigation Strategies	Global Dany Global Dany Was Cafform Vas Cafform Vas Other Includes Their Value, Regulatory on Global Trade on Global Trade Stategies for Effective hygeric Zoring	The importance of symple frequential for the many for Merchological Analysis: Anything Part Begins Badly, Ends Worse S16 Are Culture Methods Obsolere?	T1 Technical Session 1 – Produce	T2 Technical Session 2 – Molecular Analytics, Genomics and Microbiome	Poster Session 1 Authrincolais. Beverages and Authrincolais. Beverages and Authrincolais. Food Jefense. Food Defense. Food Defenses in Processing Tethrincolais. Tethrincolais. Systems. Systems. General
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				1	TUESDAY, JULY 11	r 11						
S34 Managing Maraging Mark in a Zero Tolerance World	S35 Novel and Not- so-Novel cleaning and Sanitizing Methods	S36 Getting to the Reality of Implementation: Produce Safety Rule Water Quality Requirements S37 Pro- andror Pre- biotics as Bio- remedies and Foodborne Infection Preventives	SF1 Predictive Microbiology and Risk Assessment Tools		RT3 Seatood- associated Whitosis: Turning the Trand Around RT4 Artismal Food Processing and Food Safety	What is ARCs and CA Beath Do They Mean Safe by Porgant/ Safe by Porgant/ Can Includy and Can Includy and Preparation RYE Can Includy and Preparation RYE Can Includy and Preparation RYE Safe Food Hards of the Consumer?	SSB Moving lower the Sale of Recycled Viviate for Crop Intigation: A suitain of Community and the State of Community and the Stat	Ensuring Food Salety through the Product Development Life-tyde Salety of Processes and Pritate Salety of Processed Rate and Poultry Products's Salety of Processed Mar and Poultry Products's Salety of Frocessed Salety of Salety of Salety of Salety of Salety S	Mechanisms of Hypervirulence in Selected Foodbare Pathogens S43 The Crossroad between Global Tade and Food Safety. Foous on Viruses and Parasites	T5 Technical Session 5 – Antimicrobials	T6 Technical Sassion 6- Microbial Food Spollage and Low-water Activity Foods	Poster Session 2 Outreach and Education, Dainy Food Chemical Food Chemical Food Chemical Food Distriction Food Josephan Food Toxicology, Laboratory and Methods, Meat Poulty and Eggs. Markhols, Meat Poulty and Eggs. Markhols, Meat Markhols, Meat Markhols, Meat Poulty and Eggs. Markhols, Meat Markhols, Meat

Schedule-at-a-Glance

All sessions will be held at the Tampa Convention Center

Exhibit Hall				Paster Session 3 Antimicobalis, Laboratory and Detection Methods, Low-water Low-water Activity Foods, Mirrobal Food Spollage, Packaging, Producie, Water		
Room 16		Technical Session 8 – Food Law and Regulation; Food Defense, Food Safety Systems		T10 Technical Session 10 – Risk Modelling	T12 Technical Session 12 – Modelling and Risk Assessment & Retail and Food Service Safety	
Room 15		T7 Technical Session 7 – Pre-harvest Food Safety and Water		T9 Technical Session 9 Food Processing Technologies	T11 Technical Session 11 Meat. Poultry and Eggs and Epidemiology	
Room 24-25		Sef Tools to improve Interactive Food Safety Training for Small Food Facilities SSG Translating the Big Data to the Food Industry		S86 Challenges and Strategies in Detecting Foodborne Pathogens in Low-water Activity Foods		rsity of Nebraska
Room 22-23		SS2 Total Det Shudies: Designs for Moniforing the Food Supply SS3 Ranking Risks in Low-resource Settings		A Roadmap to Food Aleigy Safety, A Consensus Consensus Report from the National Academies of Sciences, Engineering, and Medicine See See See See See See See See See S	S74 Root Cause Analysis	re <i>We Going?</i> echnology, Unive
Room 20-21		Teaching for Teaching for Teaching for Teaching for Teaching for School and Codege Control and Codege Control and Codege Control and Codege Control and Codege Code Code Code Code Code Code Code Cod		Water for Food Processing Falls in the Crack Between TITCR Reavesed TOTA Colform Ruels and FSMA. SS3 Staying Ahead of the Curve: Food Allerigan Contamination and Recalls in Casys Global Foods System	S73 Toward Risk-based Microbial Standards for Imgation Water	John H. Silliker Lecture – Baliroom A Food Allergies: A Public Health Dilemma – How Did We Get Here? Where are We Going? ad Allergy Research & Resource Program, Department of Food Science & Technology, University of Nebraska
Room 18-19	IAFP Business Meeting Room 16	Next Generation Whole Genome Sequencing in the Sequencing in the Sequencing in the Sequencing in the Poelines. Applications, and Collaboration RT10 Foodomics: Stop Using a Steamroller to Crack a Nutl	ILY 13	National Variation on a Thermer. The Basis and Consequences of Inconsistent Listers asp. Standards in Global Regulation RT14 Hog Slaughter Modernization and Sammonella Standards: Standards: Standards: Standards: Standards: Standards: as Poultry?	S72 Social Responsibility's Influence over Food Safety and Quality	John H. Silliker Lecture – Ballroom A fealth Dilemma – How Did We Get Here source Program, Department of Food S
Room 13-14	IAFP Bus	It's Going to Take a Milage. Grover Pilage. Grover Pilage. Grover Perspectives on Indian	WEDNESDAY, JULY 13	RT11 National and Regional FSMA Training Centers: Lessons Learned Lessons Learned The Devil is in the Details: Experiences with Implementation of the FSMA Produce Safety Rule and Efforts to FIII the	S71 Advancing Food Safety Internationally through the Use of Innovative Technologies: Food Irradiation	John H. Silliker Health Dilemma - ssource Program
Room 12		SF2 Software Fair on Predictive Microbiology and Risk Assesment Tools	WE	Sep	S70 Microbiological Safety of Unpasteurized Fruit and Vegetable Juices Sold in Juice Bars and Small Retail Outlets	ergies: A Public . ly Research & Re
Room 10-11				Fresh Produce- Pathogan Paris in the U.S. and Euros and SS9 Combatting Blotenorism: How Select Agent Testing One Step Absard of the Bad Absard of the Bad Absard of the Bad	S69 Empowering Food Laws in Emerging Economies	Food All Steve L. Taylor , Food Allerg
Ballroom D		S48 Foodborne Viruses: Viruses: Viruses: Assessment, and Control options in Food Processing S49 Hepatitis E Virus: And Emeging Foodborne Pathogen?		S57 Foodborne Outbreak Updates	S68 The National Antimicrobial- resistance Monitoring System: Twenty Years of Vigilance	Steve L. Ta
Ballroom C		S47 Stories from the Trenches: FDA Inspection after Food Safety Modernization Act (FSMA) Implementation				
Ballroom B		S46 Cross Polination of Listeria Learnings across the Industry				
Ballroom A		S44 Modeling Pathogans in Cowwafer Adely Pathogans in Cowwafer Adely Prodes What How, and How on the Processes Salisty New Modes Can Old Processes Salisty New Ruses? New Ruses? New Ruses? Processes Salisty Processes Salisty New Ruses? Processes Salisty Processes		A Debate: Current Perspectives in Food Safety S56 Chemical and Microbial Risk Assessment: Similarities and Differences	S67 Preventive Controls Other Than CCP: CCP: Choosing, Verifying, and	
Room	Tuesday 12:15 p.m.–1:00 p.m.	Tues day		Wednes day 8:30 a.m12:00 p.m.	Wednesday	Wednesday 4:00 p.m4:45 p.m

Welcome From The Executive Board



Linda J. Harris





VICE PRESIDENT Timothy C. Jackson Nestlé USA, Inc.

On behalf of the Executive Board, I would like to welcome you to IAFP 2017 and to Tampa, Florida. Colleagues and friends from around the world are joining us for the next few days. First and foremost, we are here to help fulfill the Association's mission: *To provide food* safety professionals worldwide with a forum to exchange information on protecting the food supply.

Food safety remains a top priority in today's interconnected world. Our meeting will help you stay in touch with current and emerging issues, the latest science, and solutions to new and ongoing problems. And the opportunity to network with our colleagues and developing scientists is of equal or greater importance... often times the most valuable information can be gathered in an impromptu conversation in the hallway. Thank you for joining us to play your role as part of the solution for tomorrow's food safety issues.

The Executive Board offers a special thank you to Alvin C.B. Lee, Program Committee Chair, and the entire Program Committee for organizing an outstanding lineup of symposia, roundtables, technical presentations, posters and interactive sessions. The only thing in short supply will be the time needed to attend all of the interesting sessions! Your greatest challenge will be determining where best to spend your time, so review the program carefully and plan your time accordingly.

The Board would also like to thank the Florida Association for Food Protection volunteers who have been gracious enough to help host the 2017 Annual Meeting. All of their hard work will make IAFP 2017 a memorable experience for all attendees.

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

So, whether you are 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 meeting. And if you see me, or any of our Board members, please come up and say hello. We would love to meet you.

Together, we are Advancing Food Safety Worldwide...! Linda J. Harris **IAFP** President



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(as of 6/6/17)

Welcome from Jocal Arrangements



Let us be the first to welcome you to sunny Florida! We are sure you will find the Tampa area full of exciting and fulfilling activities. Tampa is a great place to bring the family and you will enjoy all our attractions, activities and restaurants.

IAFP 2017 is again, full of the latest and greatest symposia and presentations with even greater minds and information on the ever-evolving world of Food Safety. From the PDG meetings, to outstanding educational sessions, to the hands-on demonstrations and exhibitors on the Expo floor, we will have so many opportunities for you to collaborate and grow our collective knowledge.

The Local Arrangements Committee invites you to enjoy your stay in Tampa. We hope you take advantage of some of our local restaurants and breweries. Tampa is a city on Tampa Bay, along Florida's Gulf Coast. As a major business center, it's also known for its museums and other cultural offerings. Busch Gardens is an African-themed amusement park with thrill rides and animal-viewing areas. The historic Ybor City neighborhood, developed by Cuban and Spanish cigar-factory workers at the turn of the 20th century, is a dining and nightlife destination.

Tampa has a wide variety of things to do and your Local Florida Affiliate would like to help you get the most out of your time here. Please feel free to visit with any of our members and volunteers with your questions and we will be happy to assist you in any way we can.

Have a great conference and welcome again to sunny Tampa, Florida!







Zeb Blanton, Michele Danyluk and Peter HibbardLocal Arrangements Committee Co-Chairs
Florida Association for Food Protection





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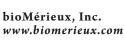
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Eurofins



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Maple Leaf Foods www.mapleleaf.com



MilliporeSigma

www.sigmaaldrich.com/food



Neogen Corporation www.neogen.com



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KYRIAKI CHAUVET, JEAN-FRANCOIS CHAVEN, SUCHART CHAVES ULATE, EVELYN **CAROLINA** CHAVES, BYRON CHAZAN, ADAM CHECKETTS, NEIL CHEN, FUR-CHI CHEN, JINRU CHERMALA, RAVI CHEUNG, SALLY CHIANG, JING CHIPLEY, JOHN CHIRTEL, STUART CHMIELEWSKI, REVIS CHO, SUNG MIN CHONG, JEEYOUN CHOW, EDITH

CHU, HYUNSIK CHU, LYNETTA CHUAH, SOO CHUN, HYANG SOOK CHUNG, DUCK-HWA CHUNG, HYUN-JUNG CHUNG, MYUNG SUB CHUNG, SOO-HYUN CID. ANTONIO CIPRIANI, ANDREA CIRIGLIANO, MICHAEL CLARK, MICHAEL CLAYTON, KATIE CLEMENS, KRISTINE COCOMA, GEORGE COE, PAULA COELHO, BRIAN COHEN, GARY COLAVECCHIO, ANNA COLE, MARTIN COLE, TANESIA COLE, WILLIAM COLEMAN, GARY COLEMAN, PAM COLEMAN, SHANNON COLOMBO, STEFANO COLONY, KRISTIN COMEAU, NATHALIE CONDON, DAVID CONDON, SANTIAGO COOK, NIGEL COOMES, JOHN COOPER, KERRY COOPER, RENETTA CORKRAN, SYDNEY COSBY, CATHERINE COSSI, MARCUS COTTON, CORRIE COURTNEY, POLLY COUSIN, MARIBETH COVENTRY, JOHN COX, JULIAN CRAMER, MICHAEL CRANFORD, VANESSA CRAWFORD, CHRIS CRAWFORD, WILLETTE CRESPO, DONNA CROMPTON, ROBERT CROWLEY, CECILIA CROWLEY, ERIN CURIALE, MICHAEL CURTIS, JULIE CURTIS, PATRICIA CYPESS, RAYMOND DA ROCHA, LIZIANE DACOSTA, LUIS DAFF, JENNIFER DAHL, KRISTEN

DALINA, DAN

DALMACIO, IDA

DAMBAUGH, TIMOTHY

DAMODARAN, SUNDAR

DANESH MANESH, ALI DANIELLO, SCOTT DANIELS, WILL DANISAVICH, THOMAS DANZEISEN, GREGORY DAS, KATIE DATTA, ATIN DAVENPORT, KEN DAVID, DOUGLAS DAVID, ORLANDO DAVIDSON, CATHERINE DAVIDSON, DEAN DAVIDSON, PHILIP DAVIE, JAMES DAVIE, JAMIE DAVIS, CHRISTOPHER DAVIS, DELILAH DAVIS, KATE DAVIS, MEGAN DAVIS, SHERRY DAWSON, ROBERT DE BRUIN, WILLEKE DE LATHOUDER, YANCY DE SENNA, ANTOINETTE DEARDORFF, DAVID DEBECKER, DANNY DECKELMANN, WILLIAM DEERING, AMANDA DEGEER, STACI DEIBEL, CAROL DEIBEL, R. DEIBEL, VIRGINIA DELAZARI, IVONE DELICH, JOHN DELMORE, JAMI DEMESA, RICARLO DEMIREL ZORBA, NUKHET DEN BESTEN, HEIDY DENG, KAIPING DENIRO, JULIA DENUDE, CHRISTOPHER DEPAOLA, ANGELO DESAUTELS, GREG DESRIAC, NOEMIE DEV KUMAR, GOVINDARAJ DEVULDER, GREGORY DEWANTI, RATIH DEWITT, CHRISTINA DI TOMMASO, KATHERINE DIARRA, MOUSSA DIBLASI, JOHN DIEDERICH, SARA DIGRINO, SUSAN DIJK, OLAF DILLEY, JOHN DING, TIAN DING, YIRAN DINSDALE, MICHAEL DINUZZO, FRAN DIPERSIO, PATRICIA

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ETHY ETHY, MARTIN GUY

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HAFER, TROY

HACHMEISTER, KATHY

HAGBERG, ROBERT

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HERMSMEIER, MEGAN

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IN 'T VELD, PAUL

INGHAM, BARBARA

INGRAM, DAVID IOSSIFIDOU, ELENI IRVIN, KARI IRVING, MARQUES IRVING, STEPHEN ITH, PHEAKDEY ITURRIAGA, MONTSERRAT IVERSEN, CAROL IVY, REID IWUCHUKWU, GABRIELLA IZUMI, HIDEMI JACKSON, LEEANNE JACKSON-DAVIS, ARMITRA JACOBS, GREGG JACOBS, RICHARD JACOBSON, ANDREW JADHAV, SNEHAL JAMES, MICHAEL JAMES, SANDY JANES, KENNETH JANES, MARLENE JANKOVIC, RADE JANSSEN, ALEX JANTSCHKE, MICHAEL JARONI, DIVYA JAROS, PATRICIA JASTI, NANDITHA JAY-RUSSELL, MICHELE JEDLICKA, JUSTYCE JEFFERS, JACK JENOTT, JACOB JENSEN, MEGAN JENSON, IAN JEONG, DONG-KWAN JEONG, KWANGCHEOL JEONG, SANGHYUP JETER, OSCAR JHAVERI, SID JIANG, CINDY JIANG, XIUPING JIN, TONY JOHN, LISA JOHNSON, ANDREA JOHNSON, BILLIE JOHNSON, CHRISTOPHER JOHNSON, ERIC JOHNSON, JODY JOHNSON, KEN JOHNSON, MICHAEL JOHNSON, TIM JONES, DONALD JONES, JESSICA JONES, MICHELLE JONES, NICOLE JONES, SARAH JONES, STEPHEN JONES, TIM JONES, TINEKE JONQUIERES, RENAUD JORDAN, HEATHER

JORDAN, KIERAN



JU, WENTING JUBERG, METTE JULIE JULIEN, GISELLE KADER MAIDEEN, ABDUL MUTHALIF KANE, DEBORAH KANENAKA, REBECCA KANG, JEA WOO KANG, JIHUN KAPLAN, SHANNON KARLTON-SENAYE, BERNICE KATAOKA, AI KAUFMAN, JAMES KAUSCH, MATTHIAS KAWATA, JASON KEATEN, WINN KEAVEY, BRENDA KEEBLE, ALLISON KEELARA VEERAPPA, SHIVARAMU KEETON, JIMMY KEIPER, SAM KEITH, GABE KELLEHER, GILLIAN KELLY, BILL KELLY, MEGAN KELLY-HARRIS, SANDRA KEMP, RIKA KEMPKES, MICHAEL KENDRICK, JOHANNAH KENNEDY, PATRICK KENNEDY, TERRENCE KEPHART, DAN KERR, DAVID KERR, RALPH KERSTAN, PETER KEYS, CHRISTINE KHAKBAZ HESHMATI, MARYAM KHAKSAR, RAMIN KHAN, MOHIB AHMED KHAN, SAEED KHINOUCHE, KARIM KHOJASTEH, AZADEH KIERMEIER, ANDREAS KILLNER, MARIO KILONZO-NTHENGE, AGNES KIM, CHYER KIM, GUN-HEE KIM, JEONG-WEON KIM, JI HOE KIM, JINHEE KIM, SANGPIL KIM, SEJEONG KIM, SEUNG KIMBER, MARTHA KINCHLA, AMANDA KINDER, JULIE KINDER, THOMAS KING, HAL

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LANINI, SHARAN

LARA, EDEN

LANNA, FREDERICO

LARKIN, BENJAMIN

LARSEN, LEE LARSON, KURT LARVICK, CAROL LASIC, DAN LATREILLE, GUY LAU, TERENCE LAWRENCE, ROGER LAWRUK, TIMOTHY LEAMAN, SUSAN LEASER, DWAIN LECEA, EDUARDO LEDGERWOOD, KEVON LEE, AMY LEE, DONG WOO LEE, EUN SEOK LEE, HYUN JUNG LEE, JEEYEON LEE, JU-WOON LEE, KEITH LEE, KYU RI LEE, MARILYN LEE, MIN HWA LEE, PETER LEE, REGINA LEE, RICHARD LEE, SUN LEFEBVRE, JACINTHE LEGAN, J. DAVID LEGUERINEL, IVAN LEITCH, STEVEN LEKKAS, PANAGIOTIS LEONARD, CYNTHIA LEONG, BELLA LEROUX, DIDIER LESAULT, FABRICE LESLIE, SUSAN LEWIS, GLENDA LI, HAIPING LI, KA WANG LI, YANBIN LI, ZENGXIN LIACOURAS, GLENN LIANOU, ALEXANDRA LILLEMO, JANET LILLEY, CALEB LILLY, JASON LIM, DAVID LINDHOLM, JEFFREY LINDPAINTNER, KLAUS LINDQVIST, ROLAND LINDSAY, JAMES LINE, J. ERIC LINEBACK, CAITLINN LINN, SUSAN LINTON, RICHARD LITTLE, TONYA LITWIN, IVONNE LIU, BIN LIU, HENRY

LIU, TONG

LIU, XIUMEI

LIVEZEY, KRISTIN

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MERTINS, KAREN

KING, ROBIN

KING, SCOTT



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MURINDA, SHELTON

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NOVAK, JOHN

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For more than 30 years, the IAFP Foundation has been working hard to support the mission of the International Association for Food Protection. But we would like to do more. Much more. Food safety concerns and food defense challenges continue to grow. As a result, it is more important than ever that we provide additional programs and services to achieve our common mission of Advancing Food Safety Worldwide, Remember, when you support the IAFP Foundation everyone benefits, including you.



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IAFP 2017 Schedule

All events held at Tampa Convention Center unless noted.

FRIDAY, JULY 7

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

Validating Pasteurization Processes for Low-moisture Products

FRIDAY JULY 7 AND SATURDAY, JULY 8

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

Characterization and Identification of Spoilage-causing Fungi: A Hands-on Workshop Developing Environmental Monitoring Programs for Small and Midsize Processors

SATURDAY, JULY 8

IAFP Registration Hours — 12:00 p.m. – 7:00 p.m.

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

Drying Technologies: Strategies for Managing Pathogen and Allergen Risks

Next Generation Sequencing – A Tutorial and Hands-on Workshop to Help Understand This Emerging Technology

Committee and PDG Meetings • 2:30 p.m. – 5:00 p.m.

Welcome Reception – 5:00 p.m. – 6:30 p.m. – Sponsored by Eurofins

SUNDAY, JULY 9

IAFP Registration Hours — 7:00 a.m. – 9:00 p.m.

Affiliate Council Meeting • 7:00 a.m. - 10:00 a.m.

Committee and PDG Meetings • 8:00 a.m. – 5:15 p.m.

Student Luncheon (ticket required) • 12:00 p.m. – 1:30 p.m. – Sponsored by Publix

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. - Sponsored by Land O'Lakes, Inc. and Mars, Incorporated

Exhibit Hours • 7:30 p.m. − 9:30 p.m.

MONDAY, JULY 10

IAFP Registration Hours — 7:30 a.m. – 5:30 p.m.

Symposia & Technical Sessions • 8:30 a.m. – 5:00 p.m.

Poster Sessions • 10:00 a.m. − 6:00 p.m.

Exhibit Hours • 10:00 a.m. - 6:00 p.m.

Exhibit Hall Lunch • 11:45 a.m. - 1:30 p.m. - Sponsored by Nestle USA

U.S. Regulatory Update - 12:15 p.m. - 1:15 p.m.

Exhibit Hall Reception • 5:00 p.m. – 6:00 p.m. – Sponsored by Merck Animal Health

TUESDAY, JULY 11

IAFP Registration Hours — 8:00 a.m. – 5:30 p.m.

Committee and PDG Chairperson Breakfast (by invitation) • 7:30 a.m. – 9:00 a.m.

Symposia & Technical Sessions • 8:30 a.m. – 5:00 p.m.

Poster Sessions • 10:00 a.m. - 6:00 p.m.

Exhibit Hours • 10:00 a.m. - 6:00 p.m.

Exhibit Hall Lunch • 11:45 a.m. – 1:30 p.m. – Sponsored by Roka Bioscience, Inc.

Business Meeting • 12:15 p.m. – 1:00 p.m.

Exhibit Hall Reception • 5:00 p.m. – 6:00 p.m. – Sponsored by Sealed Air Corporation

*President's Reception (by invitation) • 6:00 p.m. – 7:00 p.m. – Sponsored by Q Laboratories, Inc.

*Past President's Dinner (by invitation) • 7:00 p.m. – 9:00 p.m.

Student Mixer • 7:00 p.m. − 9:00 p.m.

*Held at the Marriott Tampa Waterside

WEDNESDAY, JULY 12

IAFP Registration Hours — 8:00 a.m. - 12:00 p.m.

Symposia & Technical Sessions • 8:30 a.m. - 3:30 p.m.

Poster Sessions • 9:00 a.m. - 3:00 p.m.

Networking Lunch • 11:45 a.m. - 1:30 p.m.

Closing Session – John H. Silliker Lecture • 4:00 p.m. – 4:45 p.m.

Awards Reception and Banquet • 6:00 p.m. – 9:30 p.m.

General Information

Speaker-Ready Room

The Speaker-Ready Room is located in *Room 17* and is available for speakers Sunday through Wednesday, 8:00 a.m. to 5:00 p.m.

Press Release Postings

A Press Release poster board will be available in the Exhibit Hall for Press Releases. Post your Press Release for maximum exposure.

Cell Phone Policy

As a courtesy to our presenters, we request that you turn off cell phones while attending sessions. Thank you for your cooperation.

Recording Policy

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

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

Sessions sponsored by ILSI North America will be video recorded.

Meeting App

The IAFP 2017 app is available through the App Store, the Android market and through a web-based version.

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Internet Café

The Internet Café is in the IAFP Registration area.

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Committee and PDG Meetings

MAKE CONNECTIONS BASED ON YOUR INTEREST

All attendees are invited and encouraged to participate

While attending IAFP 2017, we welcome your participation in one or more of IAFP's Professional Development Group (PDG) meetings. These groups provide the opportunity for food safety professionals to be part of open and in-depth discussions that help guide the efforts of the Association. The benefits are many with participants discussing a variety of timely and important topics; networking with other food safety professionals in similar positions; and being part of organized presentations on critical issues pertaining to the specific area of interest.

All meetings take place at the Convention Center. **Don't miss out on this additional Annual Meeting benefit!**

TIMES SATURDAY, JULY 8	MEETING	ROOM
2:30 p.m 5:00 p.m. 3:00 p.m 4:30 p.m. 3:30 p.m 4:30 p.m. 4:00 p.m 5:00 p.m	International Food Protection Issues PDG Membership Committee Past Presidents' Committee Committee/PDG Chairs and Vice Chairs	18–19 4 3 5–6
SUNDAY, JULY 9 7:00 a.m 10:00 a.m. 8:00 a.m 5:00 p.m. 8:00 a.m 10:00 a.m. 9:00 a.m 11:00 a.m. 9:00 a.m 11:00 a.m. 9:00 a.m 11:00 a.m.	Affiliate Council Committee on Control of Foodborne Illness Food Hygiene and Sanitation PDG Advanced Molecular Analytics PDG Microbial Modelling and Risk Analysis PDG Pre-harvest Food Safety PDG Viral and Parasitic Foodborne Disease PDG Wester Safety and Overlity PDG	Ballroom D 7 20-21 Ballroom A 24-25 22-23 16 12
9:00 a.m 11:00 a.m. 9:00 a.m 12:00 p.m. 10:00 a.m 12:00 p.m. 10:00 a.m 12:00 p.m. 10:00 a.m 12:00 p.m. 11:00 a.m - 12:00 p.m.	Water Safety and Quality PDG Meat and Poultry Safety and Quality PDG Food Defense PDG JFP Management Committee 3-A Committee on Sanitary Procedures Constitution and Bylaws Committee	13–15 18–19 8–9 5–6 4
12:00 p.m 1:30 p.m. 1:00 p.m 3:00 p.m.	Student PDG Beverages and Acid/Acidifed Foods PDG Dairy Quality and Safety PDG Food Packaging PDG Food Safety Culture PDG - Organizational Fruit and Vegetable Safety and Quality PDG HACCP Utilization and Food Safety Systems PDG Retail and Foodservice PDG Seafood Safety and Quality PDG	Ballroom D 16 20–21 12 24–25 Ballroom A 18–19 22-23 5–6
2:00 p.m 4:00 p.m. 2:00 p.m 4:00 p.m. 3:15 p.m 5:15 p.m. 4:00 p.m 5:00 p.m.	FPT Management Committee Low-water Activity Foods PDG Applied Laboratory Methods PDG Developing Food Safety Professionals PDG Food Chemical Hazards and Food Allergy PDG Food Law PDG Food Safety Education PDG Food Safety Assessment, Audit and Inspection - Organizational Sanitary Equipment and Facility Design PDG Nominating Committee	8-9 13-15 Ballroom A 22-23 12 16 18-19 24-25 5-6

Exhibit Hall Events and Information

CHEESE AND WINE RECEPTION

Sunday 7:30 p.m. – 9:30 p.m.

Sponsored by LAND O'LAKES, INC.

and

MARS global food safety center

EXHIBIT HALL BREAKS

Monday 10:00 a.m. Pastries and Coffee

Sponsored by DEIBEL LABORATORIES

3:00 p.m. Coffee Break

Sponsored by



Tuesday 10:00 a.m. Pastries and Coffee

Sponsored by Roka

3:00 p.m. Coffee Break

EXHIBIT HALL LUNCH

Monday 11:45 a.m. − 1:30 p.m.

Sponsored by

Nestlé

Tuesday 11:45 a.m. – 1:30 p.m.

Sponsored by Roka

EXHIBIT HALL RECEPTIONS

Monday 5:00 p.m. – 6:00 p.m.

Sponsored by MERCK

Animal Health
The Science of Healthier Animals®

Tuesday 5:00 p.m. – 6:00 p.m.

Sponsored by Sealed Air

Exhibit Hall Hours

Sunday, July 9

7:30 p.m. – 9:30 p.m.

Monday, July 10

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

Tuesday, July 11

10:00 a.m. – 6:00 p.m.

30-YEAR EXHIBITORS

3M Food Safety Merieux Nutrisciences Weber Scientific Whirl-Pak

25-YEAR EXHIBITORS

3-A Sanitary Standards, Inc.

bioMerieux, Inc. Charm Sciences Inc. Nelson-Jameson, Inc. Q Laboratories

Thermo Fisher Scientific

20-YEAR EXHIBITORS

Ecolab

Food Quality & Safety Magazine

Food Safety Magazine

IEH Laboratories and Consulting Group

METER Group, Inc., USA Microbiology International Neogen Corporation NSF International

15-YEAR EXHIBITORS

American Proficiency Institute

ASI Food Safety Bio-Rad Laboratories Deibel Laboratories of FL Inc. Food Safety Net Services Hardy Diagnostics

Hygiena

International Food & Meat Topics

Meritech

Michigan State University Online Master of Science in Food Safety

Microbiologics MilliporeSigma Orkin

Springer Nature

10-YEAR EXHIBITORS

A2LA

AEMTEK, Inc.

Alpha Biosciences, Inc. Chemstar Corporation COPAN Diagnostics, Inc.

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USDA National Agricultural Library Food Safety Research Information Office

PROGRAM BOOK 25

Student Activities

Student Luncheon

SUNDAY, JULY 9

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

Tampa Convention Center – Ballroom D

Student Mixer

TUESDAY, JULY 11

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

Tampa Convention Center - Room 7-9





Job Fair

Attention Job Seekers and Employers!

Job announcements will be posted on the career board at the





SUPPORT THE STUDENTS OF IAFP

The IAFP Student Professional Development Group will be selling T-shirts at the Annual Meeting. The shirts will be available at the Student PDG booth.

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Silent Auction

Your participation in the IAFP Foundation Silent Auction is a fun way to support the IAFP Foundation.

The money raised helps to fund the programs of the IAFP Foundation including:

- Ivan Parkin Lecture
- John H. Silliker Lecture (Funded through a contribution from Merieux NutriSciences, Inc.)
- Student Travel Scholarships for Annual Meeting
- Student Travel Scholarships for the European Symposium
- Travel Awards for State or Provincial Health or State Agricultural Department Employees
- Travel Awards for Food Safety Professionals in Countries with Developing Economies
- Travel Support for Speakers at Global IAFP Conferences
- Developing Scientist Student Competition
- Undergraduate Student Competition
- Global Food Traceability Center
- Shipment of JFP and FPT Journals to Countries with Developing Economies through FAO









SUNDAY, JULY 9

Tampa Convention Center _______6:00 p.m.

Ballroom

WELCOME TO IAFP 2017

Linda Harris, IAFP President Zeb Blanton, Florida Association for Food Protection

PEANUT PROUD STUDENT SCHOLARSHIP

Presented by: Darlene Cowart, Peanut Proud Yagmur Yegin

IAFP FOUNDATION

Vickie Lewandowski, Foundation Chairperson

TRAVEL AWARDS

Presented by: Linda Harris, IAFP President and Vickie Lewandowski, Foundation Chairperson

STUDENT TRAVEL SCHOLARSHIPS

Makala Bach Shuxiang Liu Kristen Saniga Nicholas Sevart Stephanie Barnes Itumeleng Matle Sarah Beno Rianna Murray Aswathi Soni Sarah Cope Eugene Nivonzima Constanza Vergara **Dorothy Dupree** Rodney Owusu-Darko Sophie Tongyu Wu Hillary Kelbick Hao Pang Xingning Xiao Giannis Koukkidis Laura Patterson

Special Support by MARLER CLARK

STATE OR PROVINCIAL HEALTH OR AGRICULTURAL DEPARTMENT EMPLOYEES

Ted Gatesy Michael Perry

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FOOD SAFETY PROFESSIONAL IN A COUNTRY WITH A DEVELOPING ECONOMY

Frederick Adzitey Alonzo Gabriel Patrick Njage

FELLOWS AWARD

Presented by: Linda Harris, IAFP President and Alejandro Mazzotta, IAFP Past President

Judy Greig Vijay Juneja Don Schaffner

Dale Grinstead Jeffrey Kornacki

THE IVAN PARKIN LECTURE

Introduction: Mickey Parish, IAFP President-Elect

The Anthropologist, the Chef, and the Kitchen Sink

Jose Emilio Esteban, Ph.D.

CLOSING COMMENTS

Linda Harris, IAFP President

CHEESE AND WINE RECEPTION

Sponsored by: LAND O'LAKES, INC.

MARS

global food safety center

IAFP Exhibit Hall, Tampa Convention Center _

7:30 p.m.



Ivan Parkin lecture

SUNDAY, JULY 9 **OPENING SESSION**

6:00 P.M. - 7:30 P.M.

The Anthropologist, the Chef, and the Kitchen Sink



Jose Emilio Esteban Science Advisor **United States Department** of Agriculture FSIS-OPHS-EALS Athens, Georgia

Jose Emilio Esteban, DVM, MPVM, MBA, Ph.D., is Executive Associate for Laboratory Services for the Food Safety and Inspection Service (FSIS) of the U.S. Department of Agriculture (USDA) in Athens, Georgia. He has served in this role since 2011 (his third position within FSIS, all within the Office of Public Health Science). Prior to his current position, Dr. Esteban served as Scientific Advisor for Laboratory Services and Research Coordination, and as Laboratory Director for the Western Laboratory in Albany, California, where he began his tenure with the USDA FSIS. He previously worked at the Centers for Disease Control and Prevention (CDC) as an Epidemic Intelligence Service Officer, Staff Epidemiologist and Assistant Director of the Food Safety Office.

Dr. Esteban oversees the activities of the USDA FSIS laboratories, including the disciplines of microbiology, chemistry, and pathology. The data generated by the labs is the foundation for documenting the effectiveness of FSIS' food safety policies. Laboratory data provides empirical verification of HACCP control, identification of violations, and support of recall activities. Throughout Dr. Esteban's tenure, the laboratories have maintained a high quality of analytical results while increasing the throughput. He has focused on streamlining the sampling process from the collection point at the plant to the reporting of results. Under his leadership, the laboratory system is also reducing the number of independent data management systems, allowing for a more flexible and responsive IT infrastructure.

More recently, Dr. Esteban led the expansion of the laboratory services by adding capability to characterize pathogens with molecular technologies including serotyping, antimicrobial sensitivity testing, pulsed-field gel electrophoresis (PFGE), and genome seguencing. Adding this capability to the FSIS regulatory activities tremendously enhances the ability of the Agency to detect and respond to food contamination incidents.

Dr. Esteban has been an IAFP Member since 2002, and has served on numerous Committees and Professional Development Groups (PDGs). He also serves as Chair for the Codex Alimentarius Commission Committee on Food Hygiene, where international food hygiene standards are defined for international trade.

A native of Mexico, Dr. Esteban received his DVM and MBA from the National Autonomous University in Mexico, and his Master of Preventive Veterinary Medicine (MPVM) and Ph.D. in Epidemiology from the University of California – Davis.



Ivan Parkin Lecture Abstract

The Anthropologist, the Chef, and the Kitchen Sink

Jose Emilio Esteban

Science Advisor United States Department of Agriculture **FSIS-OPHS-EALS** Athens, Georgia

Food safety today is not the same as it was yesterday or a year ago or even a decade ago. How we interact within and between academia, industry, and government has to change and adapt. Pathogens change; we adjust by creating new interventions. Biocides are developed and drug residues are introduced into our food supply; we find better ways to decontaminate. Constant changes in hazards require us to generate new detection and characterization technologies in an endless attempt to detect at lower levels with faster speed and with more accuracy. Where does this cycle end? In this lecture, I will share two perspectives — that of an anthropologist and that of a chef; both addressing the same goal: to have enough food, feed, and fuel, to sustain an ever-growing (and aging) population.

When was the last time you had time to think about how we got to here? What is considered food today may not have been "food" a few years ago. What is normal for one consumer group may be considered strange for another. Today's level of detection for an analytical method was only considered theoretical a few years ago. Remember life without a cell phone? Remember life without the internet? Pathogens that could be easily neutralized are now resistant and that resistance is now a permanent part of the genetic possibilities for the foreseeable future.

We may all walk different paths and we will all have intermediate stops; however, we are all headed in the same general direction. The IAFP Annual Meeting is the one occasion where industry, academia, and government representatives from around the world assemble to exchange information. Relationships are forged, lifelong partnerships are made, and the seeds of change are planted. We all have one goal in mind food safety. Unless we try to understand where we came from and where we are, it's impossible to know where we want to be.

The anthropologist view will help us understand characteristics of consumers, behaviors, and preferences. Only by understanding this can we move forward to where we want to be. The chef perspective will then give us a sense of reality for today and instill creativity for where we can go.

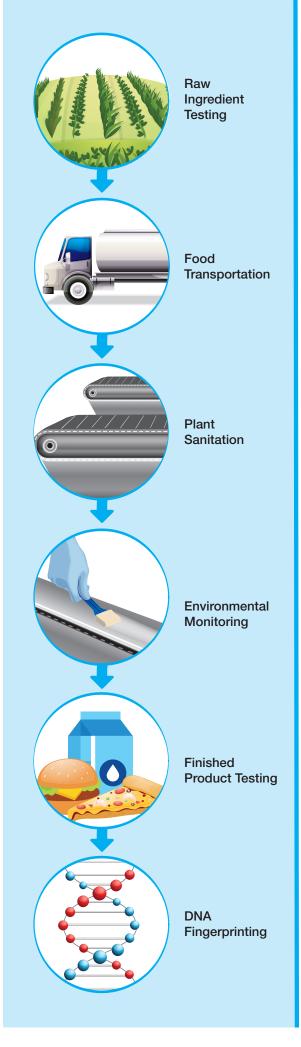
Hope you enjoy a personal perspective of the world through metaphors.

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 & characterization
- Sample collection



Monday, July 10

ALL DAY		
10:00 a.m – 6:00 p.m.	Poster Session 1	
Exhibit Hall	Viruses and Parasites General Microbiology Food Defense Food Processing Technologies Sanitation and Hygiene P1-01 through P1-111 – Authors present 10:00 a.m. – 11:30 a.m. and 5:00 p.m. – 6:00 p.m. P1-112 and above – Authors present 2:00 p.m. – 3:30 p.m. and 5:00 p.m. – 6:00 p.m.	Pre-harvest Food Safety Food Law and Regulation Modeling and Risk Assessment
MORNING 8:30 a.m. – 12:00 p.m. Ballroom B Ballroom C Room 15 Room 16	 Virulence Factors and Host Susceptibility of Foodborne Pathogens Developments in Mycotoxin Research: From Methodology to Prevention Technical Session 1 – Produce Technical Session 2 – Molecular Analytics, Genomics, and Microbiome 	
8:30 a.m. — 10:00 a.m. Ballroom A Ballroom D Room 13-14 Room 18-19 Room 20-21 Room 22-23 Room 24-25	STEC Regulation: What is Needed in Global Food Trade? Pathogen Contamination at Retail: What are the Next Steps? Latin America: Issues and Initiatives for Food Safety All You Wanted to Know about Antimicrobial Hand Sanitizers and Were Afraid to Microbial Food Safety in Small- to Medium-size Farming Systems: Risks and Mitig Global Dairy Indicators (Coliform vs. Enterobacteriaceae vs. Other Indicators): Their The Importance of Sample Preparation for Microbiological Analysis: Anything Th	gation Strategies · Value, Regulatory Impact and Effect on Global Trade
10:00 a.m. – 10:30 a.m.	Break – Refreshments Available in the Exhibit Hall	
10:30 a.m. — 12:00 p.m. Ballroom A Ballroom D Room 13-14 Room 18-19 Room 20-21 Room 22-23 Room 24-25	S2 Antibiotics in Pre-harvest Production and Associated Risks to Food S6 Perishable Foods Delivered to Homes via Common Carriers: Safe or Sorry? S8 FDA Food Import Entries and Refusals: Finding Meaning within the Data S10 Developing Evidence-based Recommendations to Improve Consumer Safe Food- Urban Agriculture/Farming and Food Safety S14 Strategies for Effective Hygienic Zoning Are Culture Methods Obsolete?	handling: International Approach
11:45 a.m. – 1:30 p.m.	Lunch Available in the Exhibit Hall	
AFTERNOON 12:15 p.m. – 1:15 p.m. Ballroom B	U.S. Regulatory Update on Food Safety	
1:30 p.m. – 5:00 p.m. Room 15 Room 16 Room 22-23	T3 Technical Session 3 – Communication Outreach and Education T4 Technical Session 4 – Laboratory and Detection Methods S29 After 20 Years of Seafood HACCP, is Our Food Safer?	
1:30 p.m. — 3:00 p.m. Ballroom A Ballroom B Ballroom C Ballroom D Room 13-14 Room 18-19 Room 20-21 Room 24-25	Wash Water Management for Postharvest Washing of Fresh-cut Produce How Does GFSI Audit Criteria for Sanitation, Hygiene, and Environmental Samplir Do Not Stumble Over a Process Deviation: Regain Control with Predictive Microl How to Exploit Omics Data on Pathogen Behavior in Microbiological Risk Assess Non-thermal Plasma Technology for Improving Food Safety and Quality Starter Cultures as a Natural Antimicrobial to Improve the Safety of Ready-to-Eat Biological Soil Amendments of Animal Origin and the Food Safety Modernization Strategic Intervention Design: A Pragmatic Approach to Validation	bial Modeling ment: An Update on the Current Research : Food
3:00 p.m. – 3:30 p.m.	Break – Refreshments Available in the Exhibit Hall	
3:30 p.m. – 5:00 p.m.		
Ballroom A Ballroom B Ballroom C Ballroom D Room 13-14 Room 18-19 Room 20-21 Room 24-25	 Complexity in Managing Risk from Pathogens in the Fresh Produce Chain: How C A Risk-based Approach to Microbiological Performance Criteria for Addressing R Defining, Capturing, and Assessing the Vulnerability of the Food Supply to Econor Battling Bad Bugs: Biological Approaches to Control Pathogens Let's Get Active! Hear All About It: Managing a Crisis The Produce Safety Alliance: From Education and Training to Implementation an Development of Microbiological Criteria as Indicators of Process Control or Insal Prepared for the United States Department of Defense by the NACMF 	Pathogens in Meat and Poultry nically Motivated Adulteration (EMA) and Food Fraud delay Motivated Adulteration (EMA) and Food Fraud delay Motivated Adulteration (EMA) and Food Fraud delay Motivated Revolution (EMA) and Food Fraud delay Motivated Revolution (EMA) and Food Fraud delay Motivated Revolution (EMA) and Food Fraud delay (EMA) and EMA (EMA) and Food fraud delay (EMA) and EMA (EMA)
	EVENING OPTIONS	

5:00 p.m. – 6:00 p.m. 6:00 p.m. – 8:00 p.m. **Exhibit Hall Reception** bioMérieux Symposium

AFFLIATE MEETINGS

5:15 p.m. – 6:00 p.m. 5:15 p.m. – 6:15 p.m. 5:15 p.m. – 6:15 p.m. 5:15 p.m. – 7:00 p.m. Latin America Group Meeting, Room 18–19 Africa Association for Food Protection, Room 15 SE Asia Association for Food Protection, Room 16

China Association for Food Protection and Chinese Association for Food Protection in North America, Room 22-23

M



MONDAY MORNING **JULY 10**

Posters will be on display 10:00 a.m. - 6:00 p.m. (See details beginning on page 67)

STEC Regulation: What is Needed in Global Food **S1** Trade?

Ballroom A

Organizers and Convenors: Patrice Arbault. Roger Cook, Ian Jenson

- Molecular Characterization and Virulence Factors of 8:30 STEC Strains Involved in Global Foodborne Outbreaks PETER GERNER-SMIDT, Centers for Disease Control and Prevention, Atlanta, GA, USA
- From Adulterant in Beef Products to Contaminant of Concern in Other Foods: A U.S. Perspective of Now and the Future PETER FENG, U.S. Food and Drug Administration, College Park, MD, USA
- 9:30 How Have New Zealand and Australia Responded to STEC Regulations for Food in International Trade and What about the Future? IAN JENSON, Meat & Livestock Australia, North Sydney, Australia
- Break Refreshments Available in the Exhibit Hall 10:00

S₂ **Antibiotics in Pre-harvest Production and Associated** Risks to Food

Ballroom A

Organizer and Convenor: John Heller Sponsored by the IAFP Foundation

- Production Impacts from Antibiotic Removal in the 10:30 Poultry Industry ASHLEY PETERSON, National Chicken Council, Washington, D.C., USA
- 11:00 Synergies of Antibiotic Programs in the Swine Industry: Removing Risks as a Team LIZ WAGSTROM, National Pork Producers Council, Urbandale, IA, USA
- 11:30 Utilizing Research to Inform Antibiotic Use Protocols in the Beef Industry PAUL MORLEY, Colorado State University, Fort Collins, CO, USA
- 12:00 Lunch Available in the Exhibit Hall

S3 Virulence Factors and Host Susceptibility of **Foodborne Pathogens**

Ballroom B

Organizers and Convenors: Michael Doyle, Joshua Gurtler, Jeffrey Kornacki Sponsored by the IAFP Foundation

- 8:30 Foodborne Pathogens and Host Predilection DAVID BEAN, Federation University Australia, Ballarat, Australia
- 9:00 In Defense of the European 100 CFU of Listeria monocytogenes Limit in Ready-to-Eat Foods ROY BETTS, Campden BRI, Gloucestershire, United Kingdom
- The USDA Perspective: Science to Support the 9:30 Prevention of *Listeria monocytogenes* in Food JANELL KAUSE, U.S. Department of Agriculture-FSIS, Washington, D.C., USA
- Break Refreshments Available in the Exhibit Hall 10:00
- 10:30 Infectious Dose as Affected by Pathogen Virulence TRUDY WASSENAAR, Molecular Microbiology and Genomics Consultants, Zotzenheim, Germany
- 11:00 The Effects of Environmental Conditions and External Treatments on Virulence of Foodborne Pathogens KUMAR VENKITANARAYANAN, University of Connecticut, Storrs, CT, USA
- The Effects of Food Composition on Foodborne Illness 11:30 Infectious Dose and Host Susceptibility MONICA PONDER, Virginia Tech, Blacksburg, VA, USA

Lunch Available in the Exhibit Hall

S4 Developments in Mycotoxin Research: From Methodology to Prevention Ballroom C

Organizers: Margarita Gomez, Emilia Rico-Munoz Convenors: Frank Burns, Margarita Gomez Sponsored by: The International Commission in Food Mycology (ICFM), BCN Research Laboratories, Inc., Universal Sanitizers and Supplies, Inc., and the IAFP Foundation

- 8:30 Introduction to Spoilage and Mycotoxin Production by Foodborne Fungi ROB SAMSON, CBS-KNAW Fungal Biodiversity Centre, Utrecht, Netherlands
- 9:00 New Methods for the Detection of Mycotoxins LUDWIG NIESSEN, Lehrstuhl für Technische Mikrobiologie, Freising, Germany

9:30	New Insights on Safety and Quality of Salami Production Related to <i>Penicillium</i> Species and Ochratoxin A (OTA) Risk Accumulation GIANCARLO PERRONE, Institute of Sciences of Food Production National Research Council, Bari, Italy
10:00	Break – Refreshments Available in the Exhibit Hall
10:30	Mycotoxins and Food Security: Deciphering the Impacts of Climate Change Scenarios NARESH MAGAN, Cranfield University, Shrivenham, United Kingdom

- 11:00 Occurrence of Ochratoxin A (OTA) in the U.S. DOJIN RYU, University of Idaho and Washington State University, Moscow, ID, USA
- Prevention of Mold Spoilage and Mycotoxin Production: 11:30 Is It Possible? EMILIA RICO-MUNOZ, BCN Research Laboratories, Inc., Rockford, TN, USA
- 12:00 Lunch Available in the Exhibit Hall
- **S5** Pathogen Contamination at Retail: What are the Next Steps?

Ballroom D

Organizers: Kristina Barlow, Susan Hammons Convenor: Kristina Barlow

- 8:30 FSIS Retail Listeria monocytogenes Surveillance Program and Grinding Log Requirements KRISTINA BARLOW, U.S. Department of Agriculture-FSIS, Washington, D.C., USA
- 9:00 FDA Food Code Controls for Foodborne Pathogens GLENDA LEWIS, U.S. Food and Drug Administration-CFSAN, College Park, MD, USA
- 9:30 Retailers' Perspective on FSIS Grinding Logs and Retail Deli Surveillance HILARY THESMAR, Food Marketing Institute, Arlington, VA, USA
- 10:00 Break - Refreshments Available in the Exhibit Hall
- **S6** Perishable Foods Delivered to Homes via Common Carriers: Safe or Sorry? Ballroom D

Organizers: Meghan Cox, Faye Feldstein, Clyde Manuel, Donald W. Schaffner Convenors: Meghan Cox, Clyde Manuel

- FSIS Regulations and How They Relate to Shipping 10:30 Perishable Meat, Poultry and Processed Egg Products MELANIE ABLEY, U.S. Department of Agriculture, Washington, D.C., USA
- Food Safety Risks Associated with Perishable Poultry, 11:00 Meat and Seafood Delivered Directly to Consumers WILLIAM HALLMAN, Rutgers University, New Brunswick, NJ, USA
- How Online Grocery Shopping is Redefining Food Safety 11:30 FRANK YIANNAS, Walmart, Bentonville, AR, USA
- 12:00 Lunch Available in the Exhibit Hall

S7 Latin America: Issues and Initiatives for Food Safety Room 13-14

Organizers and Convenors: Linda Leake, **Isabel Walls**

Sponsored by the IAFP Foundation

- 8:30 Innovative Approaches to Trends in Global Food Markets: Overview of Food Safety Challenges in Latin MARISA CAIPO, Food and Agriculture Organization of the United Nations, Santiago, Chile
- 9:00 Marrying Local Food Safety Risk Management and Inspection with International Sanitary and Phytosanitary Measures: The Status of Public Private Partnerships among Food Industry Stakeholders in South America JAIRO ROMERO, Jairo Romero y Asociados SAS, Bogota, Colombia
- Quantifying Microbiological Challenges: Food Laboratory Framework Operations in Latin America MARIA TERESA DESTRO, bioMérieux, Inc., São Paulo, Brazil
- Break Refreshments Available in the Exhibit Hall 10:00
- **S8** FDA Food Import Entries and Refusals: Finding Meaning within the Data Room 13-14

Organizer and Convenor: Jeffrey Read

- 10:30 An Overview of FDA Import Refusals Data JEFFREY READ, U.S. Food and Drug Administration, College Park, MD, USA
- 11:00 USDA-ERS Experience Working with FDA Import Refusals Data JEAN BUZBY, U.S. Department of Agriculture, Economic Research Service, Washington, D.C., USA
- 11:30
- 12:00 Lunch Available in the Exhibit Hall
- All You Wanted to Know about Antimicrobial Hand **S9** Sanitizers and Were Afraid to Ask Room 18-19

Organizer: Efstathia Papafragkou **Convenor: Stephen Grove**

- 8:30 Efficacy of Hand Sanitizers against Resistant Pathogens: Viruses and Spores LEE-ANN JAYKUS, North Carolina State University, Raleigh, NC, USA
- 9:00 Regulation of Over-the-Counter Antiseptics: An FDA Perspective PRANVERA IKONOMI, FDA-CDER, White Oak, MD, USA
- 9:30 Industry Perspectives on the Regulatory Landscape for **Hand Sanitizers** PETE CARLSON, Ecolab Inc., St. Paul, MN, USA
- Break Refreshments Available in the Exhibit Hall

S10	Developing Evidence-based Recommendations to
	Improve Consumer Safe Food-handling: International
	Approach

Room 18-19

Organizers and Convenors: Sanja Ilic, Wenqing Xu, Ian Young

- 10:30 A Systematic Review and Meta-analysis of Psychosocial Factors That Affect Consumer Safe Food-handling IAN YOUNG, Ryerson University, Toronto, ON, Canada
- 11:00 Food Safety Behaviors and Strategies to Improve Food Safety in Developing Countries and Marginalized Populations in the U.S. SANJA ILIC, Ohio State University, Columbus, OH, USA
- 11:30 An International and Innovative Perspective on the Methods and Measures Used in Consumer Food Safety Research ELLEN W. EVANS, ZERO2FIVE Food Industry Centre, Cardiff, United Kingdom

Lunch Available in the Exhibit Hall 12:00

Microbial Food Safety in Small to Medium-size **S11** Farming Systems: Risks and Mitigation Strategies Room 20-21

Organizers and Convenors: Eduardo Gutierrez, Siddhartha Thakur

- A Grower's Perspective on Microbial Risks and FSMA 8:30 Regulations within Small to Medium Farming Operations STEVE WARSHAWER, Beneficial Farms CSA, Santa Fe, NM, USA
- Pathogen Survival in Raw Manure, Soil and Water Remediation CHARLES GERBA, University of Arizona, Tucson, AZ,
- 9:30 On-farm Risk Assessment in Small- and Medium-size **Farms** RICHARD BAINES, Royal Agriculture University, Gloucestershire, United Kingdom

Break - Refreshments Available in the Exhibit Hall 10:00

S12 Urban Agriculture/Farming and Food Safety Room 20-21

Organizers and Convenors: Tong-Jen Fu, Patricia Millner

Sponsored by the IAFP Foundation

- 10:30 Urban Farming: Current Practices and Food Safety Considerations PATRICIA MILLNER, U.S. Department of Agriculture-ARS, Beltsville, MD, USA
- 11:00 Produce Safety Rule: Compliance and Implementation in an Urban Farm Environment MICHELLE SMITH, U.S. Food and Drug Administration, College Park, MD, USA
- 11:30 Meeting Food Safety Requirements: An Urban Farmer's Perspective JAMES RATKE, Urban Produce Farms, West Chicago, IL, USA

S13 Global Dairy Indicators (Coliform vs. Enterobacteriaceae vs. Other Indicators): Their Value, **Regulatory Impact and Effect on Global Trade** Room 22-23

Organizer: DeAnn Benesh Convenors: DeAnn Benesh, Deon Mahoney

- Overview of the Use of Dairy Bacterial Indicators in 8:30 the Global Dairy Industry: The History, Present Day Practices, Governmental Requirements, and Impact on International Trade ALLEN SAYLER, EAS Consulting Group, Alexandria, VA, USA
- 9:00 The Case for Enterobacteriaceae MIEKE UYTTENDAELE, Ghent University, Ghent, Belgium
- 9:30 The Case for Coliform DEON MAHONEY, Dairy Food Safety Victoria, Melbourne, Australia
- Break Refreshments Available in the Exhibit Hall 10:00

S14 Strategies for Effective Hygienic Zoning Room 22-23

Organizer: Frederick Cook Convenors: Frederick Cook, Duane Grassmann

- 10:30 Tools and Procedures for Effective Hygienic Zoning DUANE GRASSMANN, Nestle USA, Solon, OH, USA
- 11:00 Overcoming Obstacles to the Implementation of Hygienic **Zoning Concepts** POLLY COURTNEY, General Mills, Inc, Golden Valley, MN, USA
- 11:30 Risk-based Approach for Application of Hygienic Zoning Controls DOUG CRAVEN, Hormel, Austin, MN, USA

Lunch Available in the Exhibit Hall 12:00

S15 The Importance of Sample Preparation for Microbiological Analysis: Anything That Begins **Badly, Ends Worse** Room 24-25

> Organizers: Keith Lampel, David Tomas Fornes **Convenor: Keith Lampel**

- The New ISO 6887 Standards for Sample Preparation 8:30 and the Specific Protocols for Challenging Matrices DAVID TOMAS FORNES, Nestlé, Lausanne, Switzerland
- 9:00 Sampling for Environmental Monitoring and Impact on Further Microbiological Analysis GEOFF BRIGHT, World Bioproducts, Bothell, WA, USA
- 9:30 Sample Preparation Challenges from the Regulatory Perspective PAUL MORIN, U.S. Food and Drug Administration, Jamaica, NY, USA
- Break Refreshments Available in the Exhibit Hall 10:00

S16

Are Culture Methods Obsolete?

10:30	Organizers and Convenors: Byron Brehm-Stecher, Suresh D. Pillai Sponsored by the IAFP Foundation Recent Innovations in Microbial Culture BYRON BREHM-STECHER, Iowa State University,	10:30	Typhimurium, and <i>Listeria innocua</i> Inoculated onto Grape Tomato, Spinach, and Cantaloupe with Aerosolized Hydrogen Peroxide Yunbin Jiang, Kimberly Sokorai, Georgios Pyrgiotakis, Philip Demokritou, Xihong Li, Sudarsan Mukhopadhyay, Tony Jin, XUETONG FAN, USDA-ARS, Eastern Regional Research Center, Wyndmoor, PA, USA	
11:00	Ames, IA, USA A Hidden Pitfall in the Preparation of Agar Media Undermines Microorganism Cultivability CINDY NAKATSU, Purdue University, West Lafayette, IN, USA	T1-08 10:45	Control of Cross-contamination during Retail Handling of Cantaloupe CHRISTOPHER RUPERT, Laura Strawn, Michelle D. Danyluk, Loretta Friedrich, Benjamin Chapman, North Carolina State University, Raleigh, NC, USA	
11:30	Isolation and Identification of Spoilage Microorganisms Using Food-based Media Combined with rDNA Sequencing: Ranch Dressing as a Model Food AHMED YOUSEF, The Ohio State University, Columbus, OH, USA	T1-09 11:00	Minimizing the Risk of Microbial Contamination in Berry Primary Production: From Theory to Implementation in Different Regions of the World FRANÇOISE JULIEN-JAVAUX, John Donaghy, Jean-Jacques Lerouge, Liesbeth Jacxsens, Sophie Zuber, Nestlé Research Center, Lausanne, Switzerland	
12:00	Lunch Available in the Exhibit Hall	T4 40		
T1	Technical Session 1 – Produce Room 15 Convenors: Norma Heredia, Erin DiCaprio	T1-10 11:15	The Use of Systems Thinking to Conceptualize Approaches for Co-managing Produce Production Environments for Food Safety, Conservation, and Profit DANIEL WELLER, Martin Wiedmann, Cornell University,	
T1-01	Thermal Tolerance of Foodborne Pathogens on		Ithaca, NY, USA	
8:30	Inoculated Pistachios MAHTA MOUSSAVI, Christopher Theofel, Linda J. Harris, University of California-Davis, Davis, CA, USA	T1-11 11:30	Improvement of Bacterial Separation from Leafy Vegetables by Enzymatic Digestion DANHUI WANG, Ziyuan Wang, Fei He, Sam Nugen,	
T1-02	Colonization and Internalization of Salmonella enterica		Cornell University, Ithaca, NY, USA	
8:45	in Cucumber Plants KELLIE P. BURRIS, Otto Simmons, Hannah M. Webb, Lee-Ann Jaykus, Jie Zheng, Elizabeth Reed, Christina Ferreira, Eric Brown, Rebecca L. Bell, North Carolina State University, Raleigh, NC, USA	T1-12 11:45	Inactivation of Salmonella, Shiga-toxin Producing Escherichia coli, Listeria monocytogenes, Hepatitis A Virus, and Selected Surrogates on Frozen Blueberries by Candying MATTEO CAMPAGNOLI, Xi Bai, Lise Michot, Thierry	
T1-03 9:00	Assessment of Zoonotic Risks in Aquaponic Lettuce Production: A Prototype for Experimental Greenhouse Trials		Putallaz, Sophie Butot, Frédérique Cantergiani, Mireille Moser, Sophie Zuber, Nestlé Research Center, Lausanne, Switzerland	
	Elizabeth Antaki, Geoffrey Mangalam, Peiman Aminabadi, Fernanda de Alexandre Sebastião, Esteban	12:00	Lunch Available in the Exhibit Hall	
·		T2	Technical Session 2 – Molecular Analytics, Genomics, and Microbiome Room 16 Convenor: Haley Oliver, Dean Akins-Lehenthal	
T1-04	Dynamic Changes in Water Quality and Microbial	T2 04	•	
9:15	Survival during Commercial Fresh-cut Produce Wash Operation YAGUANG LUO, Bin Zhou, Boce Zhang, Xiangwu Nou, Sam Van Haute, Ellen Turner, Zi Teng, Qin Wang, Patricia Millner, U.S. Department of Agriculture–ARS, Beltsville, MD, USA	T2-01 8:30	Enteroaggregative Escherichia coli is the Predominant Diarrheagenic Escherichia coli Pathotype among Irrigation Water and Food Sources in South Africa MATTHEW AIJUKA, Araceli Santiago, Jorge Girón, James Nataro, Elna Buys, University of Pretoria, Pretoria, South Africa	
T1-05 9:30	Efficacy of Wash Water Disinfectants in Reducing Water- to-Mango Cross-contamination by <i>Salmonella</i> under Simulated Mango Packing House Operations ELZA NEELIMA MATHEW, Muhammed Shafeekh Muyyarikkandy, Mary Anne Amalaradjou, University	T2-02 8:45	Antibiotic-resistance Reservoir in Urban Agricultural Soils ABDULLAH IBN MAFIZ, Liyanage Nirasha Perera, Shujie Xiao, Weilong Hao, Yifan Zhang, Wayne State University, Detroit, MI, USA	
T1-06 9:45	of Connecticut, Storrs, CT, USA Assessing Optimal Sanitization Procedures for a Postharvest Produce Brush Washer AMANDA KINCHLA, Kelsi Harper, Catherine Gensler, University of Massachusetts-Amherst, Amherst, MA, USA		Effect of Antibiotic Withdrawal from Broiler Diets on Gut Microbiome and Foodborne Pathogen Prevalence SANJAY KUMAR, Chongxiao Chen, Nagaraju Indugu, Gabriela Werlang, Manpreet Singh, Woo Kyun Kim, Harshavardhan Thippareddi, University of Georgia, Athens, GA, USA	

10:00 Break - Refreshments Available in the Exhibit Hall

T1-07 Inactivation of Escherichia coli O157:H7, Salmonella

- T2-04 Microbial Community Drivers of Escherichia coli O157 9:15 Colonization and Shedding in Early Lactation Dairy Cattle CHLOE STENKAMP-STRAHM, Sheryl Magzamen, Craig McConnel, Zaid Abdo, Amanda VanDyke-Gonnerman, Joshua Schaeffer, Stephen Reynolds, Colorado State University, Fort Collins, CO, USA
- T2-05 Characterization of Multidrug-resistant Salmonella Typhimurium and Salmonella Kentucky Strains 9:30 Recovered from Chicken Carcasses Using Genotypic and Phenotypic Methods SALINA PARVEEN, Rizwana Tasmin, Nur Hasan, Christopher Grim, Arquette Grant, Seon Choi, Mohammad Alam, Rebecca Bell, Christopher Cavanaugh, Kannan Balan, Uma Badu, University of Maryland Eastern Shore, Princess Anne, MD, USA
- T2-06 Contribution of Alternative Sigma Factors on Listeria 9:45 monocytogenes Survival in Synthetic Bile ATSADANG BOONMEE, Soraya Chaturongakul, Haley Oliver, Mahidol University, Bangkok, Thailand
- Break Refreshments Available in the Exhibit Hall 10:00
- Phenotypic and Pan-genomic Characterization T2-07 10:30 of Salmonella enterica serovar Uganda, an Uncommon Foodborne Pathogen

DANIEL HURLEY, Maria Hoffmann, Ellen Wall, Eric Brown, Marc Allard, Salim Mattar, Séamus Fanning, University College Dublin, Dublin, Ireland

- T2-08 Complete Genome Sequence of the Thermotolerant 10:45 Foodborne Pathogen Salmonella enterica Serovar Senftenberg ATCC 43845 and Phylogenetic Analysis of Loci Encoding Thermotolerance SCOTT NGUYEN, James Bono, Timothy Smith, Gregory Harhay, Dayna Harhay, USDA ARS U.S. Meat Animal Research Center, Clay Center, NE, USA
- T2-09 Surveillance of the Listeria monocytogenes Profile of 11:00 an Irish Food Processing Facility over Five Years Using Whole-genome Sequencing LAURA LUQUE-SASTRE, Craig T. Parker, Steven Huynh, Séamus Fanning, University College Dublin, Dublin, Ireland
- T2-10 Virulence Genes and Multi-drug Efflux Pumps are 11:15 Differentially Expressed in Salmonella Heidelberg Exposed to Heat Shock ANDREA RAY, Haley Oliver, Purdue University, West Lafavette, IN, USA
- T2-11 Differentiation of Live and Dead Escherichia coli O157:H7 11:30 Using a PCR-based Method Combined with DNA Photo Labeling AMY JONES, K.C. Jeong, Keith Schneider, Soohyoun Ahn, University of Florida, Gainesville, FL, USA
- T2-12 Molecular Epidemiology of an Emerging Strain of Sal-11:45 monella enterica serotype Infantis in the United States JESSICA CHEN, Allison Brown, Lee Katz, Davina Campbell, Heather Tate, Jason Folster, IHRC, Inc., Decatur, GA, USA
- Lunch Available in the Exhibit Hall 12:00

Check the Program Addendum for changes to the Program.

■ - Symposia

Roundtables

Technicals

■ – Developing Scientist Competitor

Join bioMerieux at the 16th Annual IAFP Scientific Symposium

VALIDATION AND VERIFICATION IN THE FSMA ERA

Prevention of food safety issues is the central tenant of the Food Safety Modernization Act (FSMA). Core to prevention in the production of food products is the use of processes verified to control pathogens. For many industries, verifying process kill steps has been challenging. Validated methods for microbial detection have always been important, but never more so than in today's global food marketplace. The 2017 bioMerieux Scientific Symposium and round table will feature experts to discuss validation and verification expectations from the perspective of the regulator, industry and reference laboratory.

Moderator:

Joy Dell'Aringa, bioMérieux

Regulatory expectations for validation and verification Dr. Robert Brackett, Institute of Food Science and Health

Global harmonization approaches for diagnostic validations Erin Crowley, Q Laboratories

Process control verification Melody Thompson, Cargill

Supply chain - how do you verify? Robin Forgey, Costco

Date: Monday, July 10 Time: 6:00 pm Place: Tampa Convention Center



For more information visit: https://microsite.biomerieux-usa.com/iafp2017/



U.S. Regulatory Update on Food Safety



Al Almanza Acting Deputy Under Secretary for Food Safety U.S. Department of Agriculture



Stephen Ostroff Deputy Commissioner for Foods and Veterinary Medicine U.S. Food and Drug Administration

Monday, July 10 12:15 p.m. - 1:15 p.m. Ballroom B

MONDAY AFTERNOON **JULY 10**

Posters will be on display 10:00 a.m. - 6:00 p.m. (See details beginning on page 67)

12:15 P.M. - 1:15 P.M.

U.S. REGULATORY UPDATE ON FOOD SAFETY

AL ALMANZA, U.S. Department of Agriculture and STEPHEN OSTROFF, U.S. Food and Drug Administration

Ballroom B

S17 Wash Water Management for Post-harvest Washing of Fresh-cut Produce

Ballroom A

Organizers and Convenors: Tong-Jen Fu, Yaguang Luo

- 1:30 Validation Strategies for Fresh-cut Produce Washing TONG-JEN FU, U.S. Food and Drug Administration, Division of Food Processing Science and Technology, Bedford Park, IL, USA
- Assessing the Risk of Pathogen Cross-contamination 2:00 during Post-harvest Washing of Fresh-cut Produce ELLIOT RYSER, Michigan State University, East Lansing, MI. USA
- 2:30 Current Advances in Wash Water Management Practices: An Industry Perspective JIM BRENNAN, SmartWash Solutions, LLC, Salinas, CA, USA
- 3:00 Break - Refreshments Available in the Exhibit Hall
- **S18** Complexity in Managing Risk from Pathogens in the Fresh Produce Chain: How Can Risk Assessment Help?

Ballroom A Organizers: Yuhuan Chen, Marcel Zwietering Convenors: Sherri McGarry, Marcel Zwietering

- 3:30 Risk Assessment for Fresh Produce: Issues Faced While Putting "Formal MRA" into Industrial Practice in the Field ROY BETTS, Campden BRI, Gloucestershire, United Kingdom
- 4:00 Risk Assessment of Salmonella in Alfalfa Sprouts and Evaluation of the Public Health Impact of Sprout Seed Treatment and Spent Irrigation Water Testing YUHUAN CHEN, U.S. Food and Drug Administration, College Park, MD, USA
- 4:30 Collecting and Modeling Practical Data to Assess and Mitigate Risks in Fresh Produce MICHELLE D. DANYLUK, University of Florida, Lake Alfred, FL, USA

5:00 p.m. - 6:00 p.m. - Exhibit Hall Reception

S19 How Does GFSI Audit Criteria for Sanitation, Hygiene, and Environmental Sampling Compare to FSMA Requirements?

Ballroom B

Organizer and Convenor: Charles Giambrone

- 1:30 Certification Body Perspectives of GFSI and FSMA ROBERT PREVENDAR, NSF International, Ann Arbor, MI, USA
- 2:00 How Edition 8 Has/Has Not Improved Synergies with **FSMA** LEANN CHUBOFF, Safe Quality Food Institute, Chicago, IL, USA
- 2:30 FSMA and GFSI: How Will Medium and Small Processing Plants Deal with and Satisfy All Requirements of Both? PAUL HALL, Flying Food Group, Lakeland, FL, USA
- 3:00 Break - Refreshments Available in the Exhibit Hall
- **S20** A Risk-based Approach to Microbiological Performance Criteria for Addressing Pathogens in **Meat and Poultry**

Ballroom B

Organizers: Barbara Kowalcyk, Elisabetta Lambertini, Juliana Ruzante

Convenors: Elisabetta Lambertini, Juliana Ruzante

- 3:30 An Assessment of Prevalence-based Models for Predicting Reductions in Illnesses Attributed to Microbial Food Safety Policies MICHAEL WILLIAMS, U.S. Department of Agriculture-FSIS, Washington, D.C., USA
- 4:00 The Public Health Impact of Semi-quantitative Performance Criteria for Salmonella in Ground Turkey BARBARA KOWALCYK, RTI International, Research Triangle Park, NC, USA
- 4:30 More is Different: Demonstrating and Validating the Relationship between Levels of Contamination and Risk of Salmonella Outbreaks CRAIG HEDBERG, University of Minnesota, School of Public Health, Minneapolis, MN, USA

5:00 p.m. - 6:00 p.m. - Exhibit Hall Reception

S21 Do Not Stumble Over a Process Deviation: **Regain Control with Predictive Microbial Modeling** Ballroom C

> Organizers: Ilene Arnold, Timothy Mohr, Meryl Silverman Convenor: Vijay Juneja

- 1:30 Evaluating Cooling Deviations in Cooked/Heat-treated Meat and Poultry Products TIMOTHY MOHR, Science Staff/OPHS/FSIS/USDA, Salem, OR, USA
- 2:00 Evaluating Type I Heating Deviation (Failure to Meet Critical Limit of Cooking CCP) in Cooked/Heat-treated Meat and Poultry Products DONALD W. SCHAFFNER, Rutgers University, New Brunswick, NJ, USA

2:30	Evaluating Type II Heating Deviation (Slow Heating Come-up Time) in Cooked/Heat-treated Meat and Poultry HARSHAVARDHAN THIPPAREDDI, University of Georgia, Athens, GA, USA	4:00	Application of Probiotics to Control Foodborne Pathogens from Farm to Fork MINDY BRASHEARS, Texas Tech University, Lubbock, TX, USA
3:00	Break – Refreshments Available in the Exhibit Hall	4:30	Application of Bacteriophage to Control Foodborne
S22	Defining, Capturing, and Assessing the Vulnerability of the Food Supply to Economically Motivated Adulteration (EMA) and Food Fraud		Pathogens in the Food Processing Environment and in Ready-to-Eat Foods SAM ALCAINE, Cornell University, Ithaca, NY, USA
	Ballroom C Organizers: Samantha Cooper, Brian Hawkins, Joseph Scimeca Convenors: Samantha Cooper, Brian Hawkins, Joseph Scimeca, John Spink Sponsored by the IAFP Foundation	S25	Non-thermal Plasma Technology for Improving Food Safety and Quality Room 13-14
			Organizers and Convenors: Nitin Nitin, Roger Ruan Sponsored by USDA-NIFA and the IAFP Foundation
3:30	Capturing and Cataloging EMA Incidents: Understanding	1:30	Non-thermal Plasma Fundamentals and Mechanism of Inactivation
	the Past to Protect the Future KAREN EVERSTINE, USP, Rockville, MD, USA		ALEXANDER FRIDMAN, Drexel University, Philadelphia PA, USA
4:00	Case Studies and Trends in Food Fraud Vulnerability Assessments QUINCY LISSAUR, SSAFE, London, United Kingdom	2:00	Non-thermal Plasma Application and Industrial Implementation
4:30	Validation of a Predictive Approach to Assessing EMA		ROGER RUAN, University of Minnesota, St. Paul, MN, USA
	Vulnerability BRIAN HAWKINS, Battelle, Columbus, OH, USA	2:30	Quality Control and Regulatory Considerations BRENDAN NIEMIRA, U.S Department of Agriculture– ARS, Wyndmoor, PA, USA
5:00 p.m. – 6:00 p.m. – Exhibit Hall Reception		3:00	Break – Refreshments Available in the Exhibit Hall
S23	How to Exploit Omics Data on Pathogen Behavior in Microbiological Risk Assessment: An Update on the Current Research Ballroom D Organizers: Luca Cocolin, Lilou van Lieshout, Marcel Zwietering		Let's Get Active! Room 13-14 Organizers: Cynthia Ebner, Dale Grinstead, Upasana Hariram
			Convenor: Dale Grinstead
	Convenors: Luca Cocolin, Marcel Zwietering Sponsored by the IAFP Foundation and ILSI Europe's Microbiological Food Safety Task Force	3:30	Introduction to Active Packaging and Odor Scavenging CYNTHIA EBNER, Sealed Air Corporation, Duncan, SC, USA
1:30	The Use of Metagenomics in Quantitative Microbiological Risk Assessment (QMRA) KALLIOPI RANTSIOU, University of Turin-DISAFA,	4:00	Oxygen Scavenging Technology JOE DUNN, Performance Packaging of Nevada, Daytona Beach, FL, USA
2:00	Turin, Italy The Use of Omics in Exposure Assessment HEIDY DEN BESTEN, Wageningen University, Wageningen, Netherlands	4:30	Bacteriophages for Microbial Control Packaging S. BALAMURUGAN, Agriculture & Agri-Food Canada, Guelph, ON, Canada
2:30	The Use of Omics in Hazard Characterization TREVOR PHISTER, PepsiCo, Leicester, United Kingdom	S27	Biological Soil Amendments of Animal Origin and the Food Safety Modernization Act: Challenges and Opportunities Going Forward
3:00	Break – Refreshments Available in the Exhibit Hall		Room 20-21
S24	Battling Bad Bugs: Biological Approaches to		Organizers and Convenors: Phillip Tocco, Patricia Millner, Michelle Smith
	Control Pathogens Ballroom D	1:30	Biological Soil Amendments of Animal Origin (BSAAO) in
	Organizer: Delia Murphy Convenors: Kendra Nightingale, Isabel Walls Sponsored by ILSI North America Technical Committee		Fresh Fruit and Vegetable Production: A Regulatory Perspective DAVID INGRAM, U.S. Food and Drug Administration, College Park, MD, USA
3:30	on Food Microbiology Biocontrol of the Foodborne Pathogens Listeria monocytogenes and Salmonella enterica Serovar Poona on Fresh-cut Apples with Naturally Occurring Bacterial	2:00	A Research Framework to Assess Pathogen Prevalence and Survival in Raw Manure Used in Produce Production ALDA PIRES, University of California-Davis, Davis, CA,

Check the Program Addendum for changes to the Program.

USA

and Yeast Antagonists

WOJCIECH JANISIEWICZ, U.S. Department of Agriculture-ARS, Kearneysville, WV, USA

2:30	Use of Predictive Risk Modeling to Assess Persistence of
	Pathogens of Human Health Concern in Biological Soil
	Amendments of Animal Origin (BSA of AO)
	ELISABETTA LAMBERTINI, RTI International, Rockville,
	MD, USA

3:00 Break - Refreshments Available in the Exhibit Hall

S28 The Produce Safety Alliance: From Education and Training to Implementation and Beyond Room 20-21

Organizers: Elizabeth Bihn, Gretchen Wall Convenor: Elizabeth Bihn

- 3:30 Produce Safety Frequently Asked Questions from the DONNA PAHL, Cornell University, Riverside, CA, USA
- 4:00 Lessons Learned in Regional Food Safety Coordination and Collaboration ELIZABETH NEWBOLD, University of Vermont, Bennington, VT, USA
- 4:30 Global Partnerships in Produce Safety Education JAMES RUSHING, JIFSAN-University of Maryland, College Park, MD, USA

5:00 p.m. - 6:00 p.m. - Exhibit Hall Reception

S29 After 20 Years of Seafood HACCP, is Our Food Safer? Room 22-23

Organizers: Jessica Jones, Lori Pivarnik, Tori Stivers Convenors: Lori Pivarnik, Tori Stivers

- 1:30 History of Seafood HACCP and Impact on the Seafood Industry LISA WEDDIG, National Fisheries Institute, McLean, VA, USA
- 2:00 The Foundational Role Seafood HACCP Played in Development of Food Safety Systems/Programs STEVEN BLOODGOOD, U.S. Food and Drug Administration, Center for Food Safety and Applied Nutrition, College Park, MD, USA
- 2:30 U.S. Trends in Illnesses Attributed to Seafood, 1998–2015 ERIN BURDETTE, Centers for Disease Control and Prevention, Atlanta, GA, USA

3:00 Break – Refreshments Available in the Exhibit Hall

- 3:30 Vibrios and Natural Toxins: Can We Use Ecological Forecasting to Predict When Seafood is Safer to Harvest? JOHN JACOBS, NOAA, Oxford, MD, USA
- 4:00 Seafood Authenticity and Its Effects on HACCP and Safety JONATHAN DEEDS, U.S. Food and Drug Administration-CFSAN, College Park, MD, USA
- 4:30 What are the Challenges with Farmed Seafood Safety? STEVE OTWELL, University of Florida, Gainesville, FL, **USA**

5:00 p.m. - 6:00 p.m. - Exhibit Hall Reception

S30 Strategic Intervention Design: A Pragmatic **Approach to Validation**

Room 24-25

Organizer: Pablo Alvarez **Convenor: Patrice Arbault** Sponsored by the IAFP Foundation

- 1:30 Proving Process Control When You Cannot Find the Pathogens GARY ACUFF, Texas A&M University, College Station, TX, USA
- 2:00 Proving Process Control: Where Do You Start and What Do You Do JAMES DICKSON, Iowa State University Food Microbiology Group, Ames, IA, USA
- 2:30 Surrogates for In-plant Validation: How to Make an **Optimal Choice** PABLO ALVAREZ, Novolyze Inc., Cambridge, MA, USA
- 3:00 Break - Refreshments Available in the Exhibit Hall
- **S31 Development of Microbiological Criteria as Indicators** of Process Control or Insanitary Conditions: A Summary of the Report Prepared for the United States Department of Defense by the NACMF Room 24-25

Organizers: Jeffrey Kornacki, Robert (Skip) Seward Convenor: Jeffrey Kornacki

- 3:30 Overview of the Department of Defense (DOD) Charge: Identification of Food Categories and Development of Process Flow Diagrams for Use in Designing Microbiological Sampling Plans STEVE INGHAM, Wisconsin Department of Agriculture, Trade and Consumer Protection, Madison, WI, USA
- 4:00 Identification of Target Microorganisms, Microbiological Limits, and Recommended Exceeds-limits Actions for Department of Defense (DOD) Supplier Food Categories KATHLEEN GLASS, University of Wisconsin-Madison, Madison, WI, USA
- 4:30 Taking the Next Steps: Establishment of Microbiological Criteria for Use in a Statistical Process Control Regime MARGERY HANFORD, U.S. Army Medical Research Institute of Chemical Defense (USAMRICD), Aberdeen Proving Ground, MD, USA

5:00 p.m. - 6:00 p.m. - Exhibit Hall Reception

Starter Cultures as a Natural Antimicrobial to Improve the Safety of Ready-to-Eat Food Room 18-19

Organizer: Veronique Zuliani Convenor: Veronique Zuliani, Chad Galar

1:30 Panelists:

> ALEX BRANDT, Food Safety Net Services, San Antonio, TX, USA

KATHLEEN GLASS, University of Wisconsin-Madison, Madison, WI, USA

DAVID B. SCHMIDT, U.S. Department of Agriculture, Leesburg, VA, USA

PETER TAORMINA, Club Chef LLC, Cincinnati, OH, USA ABIGAIL SNYDER, The Ohio State University, Columbus,

OH, USA

VERONIQUE ZULIANI, CHR HANSEN, Arpajon, France

3:00 Break - Refreshments Available in the Exhibit Hall

RT2 **Hear All About It: Managing a Crisis**

Room 18-19

Organizers: Meghan Cox, Faye Feldstein,

David Luedeke, William Weichelt

Convenor: Craig Henry, Denise Pacofsky

3:30 Panelists:

> HAL KING, Public Health Innovations LLC, Fayetteville, GA, USA

ANN MARIE MCNAMARA, Target, Minneapolis, MN, USA

THEODORA MORILLE-HINDS, Kellogg Company, Battle Creek, MI, USA

RYAN NEWKIRK, U.S. Food and Drug Administration, College Park, MD, USA

JENNIFER PIERQUET, Iowa Dept of Inspections & Appeals, Des Moines, IA, USA

MICHAEL ROBERSON, Publix Super Markets, Inc., Lakeland, FL, USA

5:00 p.m. - 6:00 p.m. - Exhibit Hall Reception

T3 Technical Session 3 - Communication Outreach and Education

Room 15

Convenors: Carol Anne Wallace, Rhoma Johnson

T3-01 Changes in Food-handling Following a Food Safety 1:30 Intervention among High School Students (Ontario, Canada) KENNETH DIPLOCK, Andria Jones-Bitton, Scott Leatherdale, Steven Rebellato, Joel Dubin, David Hammond, Shannon Majowicz, School of Public Health and Health Systems, University of Waterloo, Waterloo, ON, Canada

T3-02 Food Safety Attitudes and Self-reported Behaviours of 1:45 Undergraduate Students from a Canadian University SARAH COURTNEY, Ashok Chaurasia, Kitty Corbett, Shannon Majowicz, University of Waterloo, Waterloo, ON, Canada

T3-03 Educating Tailgaters on Best Food Safety Practices at 2:00 College Football Tailgates MARY YAVELAK, John Luchansky, Anna Porto-Fett, Jill Hochstein, Benjamin Chapman, North Carolina State University, Raleigh, NC, USA

Safe Food-handling Behaviors of Student Volunteers in T3-04 2:15 an On-campus Food Reclamation Program HARRY SCHONBERGER, Renee Boyer, Melissa Chase, Virginia Tech, Blacksburg, VA, USA

T3-05 An Evaluation of Food Safety Culture and a Training 2:30 Intervention: Getting the Most Out of Your Training KRISTEN SANIGA, Clint Stevenson, North Carolina State University, Raleigh, NC, USA

"Wash Your Produce": Determination of the Efficacy of a T3-06 Piloted Food Safety Intervention at the Farmers' Market 1:30 SHAUNA HENLEY, David Martin, Jack Fu, Deanna Baldwin, Shelby Watson-Hampton, University of Maryland Extension, Baltimore County, Cockeysville, MD, USA

3:00 Break - Refreshments Available in the Exhibit Hall

T3-07 An Assessment of Produce Growers' Sanitizer Practices 3:30 and Knowledge about Antimicrobial Resistance VAISHALI DHARMARHA, Monica Ponder, Renee Boyer, Laura Strawn, Tiffany Drape, Joell Eifert, Amber Vallotton, Amy Pruden, Virginia Tech, Blacksburg, VA,

T3-08 Mug Cakes Baked in Microwave Ovens: The Influence of Baking Time and Internal Temperature on Risk of 3:45 Foodborne Illness SARAH COPE, Natalie Seymour, Mary Yavelak, Benjamin Chapman, North Carolina State University, Raleigh, NC, USA

T3-09 Needs Assessment of Educational Intervention for 4:00 Artisan Cheesemakers in the United States MADHUMEETA DUTTA, Clint Stevenson, North Carolina State University, Raleigh, NC, USA

T3-10 Thermometer Usage Behaviors for Thanksgiving Turkeys: Analysis of Data Collected by Citizen Scientists 4:15 MINH DUONG, John Luchansky, Anna Porto-Fett, Caitlin Warren, Benjamin Chapman, North Carolina State University, Raleigh, NC, USA

T3-11 Valuable Metrics That Link Training to Successful 4:30 Implementation ZHENGFANG WANG, Janie Dubois, University of Maryland - FDA JIFSAN, College Park, MD, USA

T3-12 Capacity Building through Water Quality and Safety Analyses in Herat, Afghanistan 4:45 Paul Ebner, Amanda Deering, Mosa Mojadady, Zahra Rahimi, Roma Amini, Nesar Isaqzehi, Ehsanulla Azizi, Ershad Ershad, Solaiman Barak, Magsood Popal, Shakib Amini, Neman Mohammadi, Mirwais Rahimi, Kevin McNamara, HALEY OLIVER, Purdue University, West Lafayette, IN, USA

5:00 p.m. - 6:00 p.m. - Exhibit Hall Reception

Technical Session 4 - Laboratory and Detection **T4** Methods

Room 16

Convenors: Francisco Diez-Gonzalez, David Baumler

T4-01 Validation of a Multiplex Real-time PCR Method for the Detection of Crustacean Allergens (Shrimp, Crab, 1:30 and Lobster) in Complex Food Matrices SARAH STADIG, Anne Eischeid, U.S. Food and Drug Administration, College Park, MD, USA

- T4-02 Comparison of Methods for the Detection and Isolation of 1:45 Shiga Toxin-producing Escherichia coli (STEC) in Meat Samples Mst. Thangima Zannat, Carlos Leon-Velarde, Saleema Saleh-Lakha, Jiping Li, Honghong Li, Anli Gao, Roger Johnson, SHU CHEN, University of Guelph, Guelph, ON. Canada
- T4-03 Novel Immunoassay Pathogen Detection Method for Listeria spp. in Food and Environmental Samples 2:00 SIMON ILLINGWORTH, Nevin Perera, Solus Scientific Solutions Ltd., MANSFIELD, United Kingdom
- T4-04 Determination of Trace Metals in Several Off-the-Shelf 2:15 Spices Using Aerosol Phase Dilution NEAL JULIEN, MRIGIobal, Palm Bay, FL, USA
- Bacteriophage-based Dipstick: Inkjet Printing of T4-05 2:30 Bacteriophages to Detect Different Foodborne Pathogens HANY ANANY, Jennifer Sohar, Heather Fenn, Noha Eldougdoug, Nada Alasiri, Luba Brovko, Mansel Griffiths, Agriculture and Agri-Food Canada, Guelph, ON, Canada
- Development of a Novel Hygiene Monitoring T4-06 System Based on the Detection of Total Adenylate 2:45 (ATP+ADP+AMP) MIKIO BAKKE, Shigeya Suzuki, Kikkoman Biochemifa Company, Noda-shi, Chiba, Japan
- Break Refreshments available in the Exhibit Hall 3:00
- T4-07 Extended Enrichment Procedures Can be Used to Define 3:30 False Negative Rate for Cultural Gold Standard Methods for Salmonella Detection Facilitating Comparisons between Gold Standard and Alternative Methods GENEVIEVE SULLIVAN, Xiaodong Guo, Jeffrey Tokman, Sherry Roof, Aljosa Trmcic, Robert Baker, Silin Tang, Peter Markwell, Martin Wiedmann, Jasna Kovak, Cornell University, Ithaca, NY, USA
- T4-08 Digging Deep: Making the Case for Molecular Based 3:45 Detection with Real-world Performance and Discrepant Evaluation WILLIAM CHANEY, Sarah Verver, Janelle Lauffer, Cambria Berry, Ted Andrew, Mary Duseau, Roka Bioscience, San Diego, CA, USA

- T4-09 Insect Contaminants in Foods: Detection Limits of a Qualitative PCR-based Method 4:00 MONICA PAVA-RIPOLL, Amy K. Miller, George C. Ziobrio, Food and Drug Administration (FDA), Center for Food Safety and Applied Nutrition (CFSAN), Office of Food Safety (OFS), College Park, MD, USA
- Culture-independent Detection and Confirmation of T4-10 Shiga Toxin-producing Escherichia coli by Digital PCR 4:15 JIANFA BAI, Xuming Liu, Lance Noll, Xiaorong Shi, T G Nagaraja, Gary Anderson, Kansas State University, Manhattan, KS, USA
- T4-11 Integration and Public Health Protection as Outcomes 4:30 of Food Laboratory Accreditation Shari Shea, ROBYN RANDOLPH, Association of Public Health Laboratories, Silver Spring, MD, USA
- A Unique Workflow Consisting of Metagenomic T4-12 Sequencing and Bioinformatic Analysis to Routinely 4:45 Recover High Quality Cyclospora cayetanensis Whole Genome Sequences from Clinical Samples GOPAL GOPINATH, Hediye Cinar, Helen Murphy, ChaeYoon Lee, Sonia Almeria, Mauricio Durigan, Alexandre da Silva, U.S. Food and Drug Administration, Laurel, MD, USA

5:00 p.m. - 6:00 p.m. - Exhibit Hall Reception

EVENING OPTIONS

5:00 p.m. - 6:00 p.m. Exhibit Hall Reception

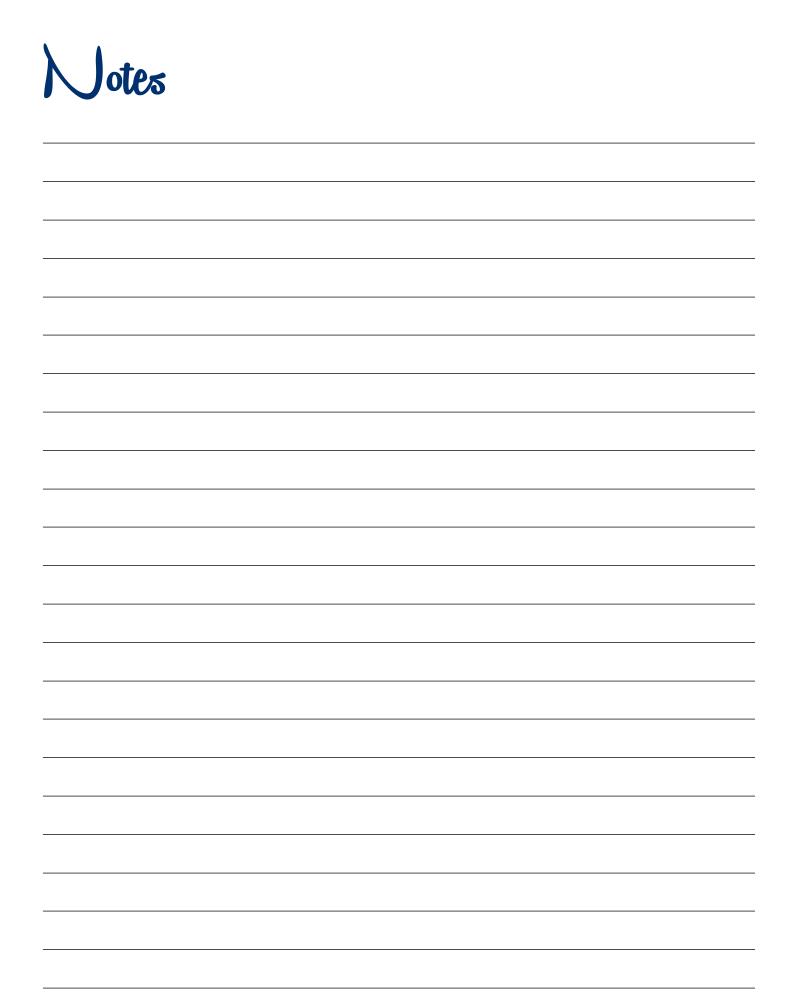
AFFLIATE MEETINGS

Latin America Group Meeting, Room 18-19 5:15 p.m. – 6:00 p.m. 5:15 p.m. – 6:15 p.m. Africa Association for Food Protection, Room 15 SE Asia Association for Food Protection, 5:15 p.m. – 6:15 p.m.

Room 16

China Association for Food Protection and 5:15 p.m. – 7:00 p.m. Chinese Association for Food Protection in

North America, *Room 22–23*





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Room 20-21

Room 22-23

Room 24-25

Tuesday, July 11

ALL DAY						
10:00 a.m – 6:00 p.m.	n. Poster Session 2					
Exhibit Hall	Epide	Chemical Hazards and Food Allergens miology cular Analytics, Genomics and Microbiome	Food Toxicology Retail and Food Service Safety Laboratory and Detection Methods	Meat, Poultry and Eggs Communication Outreach and Education Dairy		
	P2-01 through P2-119 — Authors present 10:00 a.m.— 11:30 a.m. and 5:00 p.m. — 6:00 p.m. P2-120 and above — Authors present 2:00 p.m. — 3:30 p.m. and 5:00 p.m. — 6:00 p.m					
MORNING						
8:30 a.m. – 12:00 p.m.						
Ballroom B Ballroom C	S34 S35	Managing Risk in a Zero Tolerance World Novel and Not-so-Novel Cleaning and Sanitizi	na Mothodo			
Room 10-11	SF1	Predictive Microbiology and Risk Assessment				
Room 15	T5	Technical Session 5 – Antimicrobials	and I am mater Activity Foods			
Room 16	T6	Technical Session 6 – Microbial Food Spoilage	e and Low-water Activity Foods			
8:30 a.m. – 10:00 a.m.	000	MI + 0 - M - D - 11 + 0 000 0 - TI + 0	11 // D :// 1000			
Ballroom A Ballroom D	S32 S36	What Can We Do with 10,000 Genomes That C Getting to the Reality of Implementation: Prod		5		
Room 13-14	RT3	Seafood-associated Vibriosis: Turning the Tree	nd Around			
Room 18-19 Room 20-21	RT5 S38	What is IARC and CA Prop 65? What on Earth Moving toward the Safe Use of Recycled Wat				
Room 22-23	S40	Ensuring Food Safety through the Product Dev		I III all Ela di Cilillate Vallability!		
Room 24-25	S42	Mechanisms of Hypervirulence in Selected Fo	odborne Pathogens			
10:00 a.m. – 10:30 a.m.	Break	– Refreshments Available in the Exhibit Hall				
10:30 a.m. – 12:00 p.m.						
Ballroom A	S33	What Can Complete Closed Microbial Genome				
Ballroom D Room 20-21	S37 S39	Pro- and/or Pre-biotics as Bio-remedies and F Water, Water, Everywhere: The Effects of Floo		ce		
Room 22-23	S41	Clean Label Technologies for Safety of Proces	sed Meat and Poultry Products: Scientific S			
Room 24-25 Room 13-14	S43 RT4	S43 The Crossroad between Global Trade and Food Safety: Focus on Viruses and Parasites RT4 Artisanal Food Processing and Food Safety				
Room 18-19	RT6					
11:45 a.m. – 1:30 p.m.	Lunch Available in the Exhibit Hall					
AFTERNOON						
12:15 p.m. – 1:15 p.m.	LAFR	Destruct Bloods				
Room 16	IAFP	Business Meeting				
1:30 p.m. – 5:00 p.m. Ballroom B	S46	Cross Pollination of Listoria Learnings serves	the Industry			
Ballroom C	S47	Cross Pollination of <i>Listeria</i> Learnings across Stories from the Trenches: FDA Inspection after		plementation		
Room 12	SF2	Software Fair on Predictive Microbiology and	Risk Assessment Tools			
Room 15 Room 16	T7 Technical Session 7 — Pre-harvest Food Safety and Water T8 Technical Session 8 — Food Law and Regulation; Food Defense; Food Safety Systems					
	10	Tool Law and Hogalac	ion, rood Bereinse, rood oursely dystems			
1:30 p.m. – 3:00 p.m. Ballroom A	S44	Modeling Pathogens in Low-water Activity Fo	ods: What How and How to Use It			
Ballroom D	S48	Foodborne Viruses: Detection, Risk Assessme	nt, and Control Options in Food Processing			
Room 13-14	RT7	It's Going to Take a Village: Grower Perspectiv		Jinaa Analiaatiana and Callahanatian		
Room 18-19 Room 20-21	RT9 S50	Next Generation Whole Genome Sequencing Teaching for Tomorrow: Impact of School and	in the Regulatory Arena: Nomenclature, Pipe College Food Safety Curricula on Better Info	eines, Applications, and Collaboration ormed Consumers. Career Opportunities.		
		and the Industry Workforce of the Future		comes consumers, sures. Opportunities,		
Room 22-23 Room 24-25	S52 S54	Total Diet Studies: Designs for Monitoring the Tools to Improve Interactive Food Safety Train	Food Supply ing for Small Food Facilities			
3:00 p.m. – 3:30 p.m.		Refreshments Available in the Exhibit Hall				
3:30 p.m. – 5:00 p.m.						
Ballroom A	S45	Can Old Processes Satisfy New Rules? Pathog		moisture Foods		
Ballroom D Room 13-14	S49 RT8	Hepatitis E Virus: An Emerging Foodborne Patl International Strategies to Deliver Food Safety		Professionals		
Room 18-19	RT10	FoodOmics: Stop Using a Steamroller to Crack	a Nut!			
Room 20-21	S51	Establishing Effective Metrics to Advance You	r Food Safety Training and Education Progra	ms		

EVENING OPTIONS

S51

S53

5:00 p.m. - 6:00 p.m. **Exhibit Hall Reception**

6:00 p.m. – 7:00 p.m. President's Reception (by invitation), Tampa Marriott Waterside, Florida Ballroom

Establishing Effective Metrics to Advance Your Food Safety Training and Education Programs

7:00 p.m. – 9:00 p.m. Student Mixer, Room 7-9

Ranking Risks in Low-resource Settings

Translating the Big Data to the Food Industry

AFFLIATE MEETINGS 5:15 p.m. – 6:15 p.m. Indian Association for Food Protection in North America Meeting, Room 16</sup> 5:30 p.m. – 6:30 p.m. Korea Association for Food Protection Meeting, Room 22–23

TUESDAY MORNING JULY 11

Posters will be on display 10:00 a.m. - 6:00 p.m. (See details beginning on page 79)

S32 What Can We Do with 10,000 Genomes That Couldn't be Done with 100?

Ballroom A

Organizer and Convenor: Edward Dudley Sponsored by the IAFP Foundation

- 8:30 Insights from Massive Salmonella Datasets YAN LUO, U.S. Food and Drug Administration, College Park, MD, USA
- 9:00 Application of Machine Learning to Predict the Zoonotic Potential of Salmonella enterica and E. coli DAVID GALLY, University of Edinburgh, Edinburgh, United Kingdom
- 9:30 Phylogenetic and Phenotypic Analysis of Isolates from Common and Rare Salmonella enterica Serovars LAWRENCE GOODRIDGE, McGill University, Ste-Anne-de-Bellevue, QC, Canada
- 10:00 Break Refreshments Available in the Exhibit Hall

What Can Complete Closed Microbial Genomes S33 Provide to Food Safety?

Ballroom A

Organizers and Convenors: Narjol Gonzalez-Escalona, Maria Hoffmann

Sponsored by: NSF International and the IAFP Foundation

- 10:30 Shiga Toxin-producing Escherichia coli O157:H7 Complete Genomes: Is the Added Expense Worth the Additional Information? JAMES BONO, USDA-ARS U.S. Meat Animal Research Center, Clay Center, NE, USA
- 11:00 Using Closed Whole Genome Sequence Data to Protect Your Business DANIEL HURLEY, University College Dublin, Dublin, Ireland
- 11:30 The Value of Using Complete Genome Sequencing for an Improved Inference of Disease Transmission and Phylogeny of Salmonella JAIME MARTINEZ-URTAZA, University of Bath, Bath, United Kingdom
- 12:00 Lunch Available in the Exhibit Hall

S34 Managing Risk in a Zero Tolerance World Ballroom B

Organizer: Delia Murphy

Convenors: Laurie Post, Edith Wilkin

Sponsored by ILSI North America Technical Committee on Food Microbiology

The Changing Landscape: Implications of New 8:30 Regulations on Risk Assessment DON ZINK, IEH Laboratories & Consulting Group, Herndon, VA, USA

- 9:00 The International Dynamic of Risk Assessment ROBERT BUCHANAN, University of Maryland, College Park, MD, USA
- 9:30 How is Whole Genome Sequencing Impacting Assessments of Risk and Setting of Standards? LUCA COCOLIN, University of Torino-DISAFA, Grugliasco, Italy
- 10:00 Break Refreshments available in the Exhibit Hall
- Setting Risk-based Performance Standards 10:30 ROY BETTS, Campden BRI, Gloucestershire, United Kingdom
- 11:00 Risk Management: Strategies and Challenges in a Zero Risk Environment TIMOTHY JACKSON, Nestle USA, North America, Glendale, CA, USA
- Consumer Perceptions of Risk and How It Influences 11:30 Their Choices WILLIAM HALLMAN, Rutgers University, New Brunswick, NJ, USA
- 12:00 Lunch Available in the Exhibit Hall

S35 Novel and Not-so-Novel Cleaning and Sanitizing Methods

Ballroom C

Organizer: Richard Brouillette Convenors: Jeffrey Kornacki, Nadia Narine

- 8:30 Overview of the Problems and Technologies Associated with Traditional Cleaning and Sanitization in Both Wet and Dry Environments. JEFFREY KORNACKI, Kornacki Microbiology Solutions, Inc., Madison, WI, USA
- 9:00 Experiences with Dry Ice Blasting for Cleaning JOHN MERENICK, Sargento, Plymouth, WI, USA
- Using Phage Technology to Control Pathogens in a Plant Environment ROBIN PETERSON, Micreos, Atlanta, GA, USA
- 10:00 Break Refreshments available in the Exhibit Hall
- 10:30 Novel and Not-so-Novel Cleaning Methods for Low-water **Activity Foods TBD**
- Experiences with Chlorine Dioxide and Heat Disinfection NATHAN MIRDAMADI, Commercial Food Sanitation, Aliquppa, PA, USA
- Verification or Validation of Sanitation Controls: What Should We Do? EVAN ROSEN, PacMoore, Hammond, IN, USA
- 12:00 Lunch Available in the Exhibit Hall

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S36 Getting to the Reality of Implementation: Produce **Safety Rule Water Quality Requirements** Ballroom D

Organizers and Convenors: Diane Ducharme,

8:30 Water Testing Methods and Representative Samples MICHELLE D. DANYLUK, University of Florida, Lake Alfred, FL, USA

Laura Strawn

- 9:00 Water Treatment Alternatives for Non-compliance Utilizing EPA-registered Antimicrobial Devices and Pesticides FAITH CRITZER, University of Tennessee, Knoxville, TN, USA
- Implementation Programs Benefit from Ag Water Surveys and On-farm Preparedness Assessments TREVOR SUSLOW, University of California-Davis, Davis, CA, USA
- 10:00 Break Refreshments Available in the Exhibit Hall
- **S37** Pro- and/or Pre-biotics as Bio-remedies and **Foodborne Infection Preventives** Ballroom D

Organizer and Convenor: Debabrata Biswas

- 10:30 Role of Secondary Metabolites in Enteric Bacterial Infections and Gut Health DEBABRATA BISWAS, University of Maryland, College Park, MD, USA
- 11:00 Pre- and Probiotis in Chronic Diseases: Cancer and Adipogenesis SEONG-HO LEE, University of Maryland, College Park, MD. USA
- 11:30 Pre- and Probiotic in Chronic Diseases: Cardiac SHAIK RAHAMAN, University of Maryland, College Park, MD, USA
- 12:00 Lunch Available in the Exhibit Hall
- Moving toward the Safe Use of Recycled Water for **S38** Crop Irrigation: A Sustainable Solution in an Era of **Climate Variability?**

Room 20-21

Organizers: Sarah Allard, Bassam Annous, Kalmia Kniel, Shirley Micallef, Manan Sharma Convenors: Sarah Allard, Manan Sharma Sponsored by the IAFP Foundation

- 8:30 Recycled Water, Crop Irrigation, and Public Health: Moving the Science Forward to Achieve Sustainable Water Reuse in a Changing Climate AMY SAPKOTA, Maryland Institute for Applied Environmental Health, University of Maryland, School of Public Health, College Park, MD, USA
- 9:00 Will They Use It? Grower Perspectives and the Regulatory Landscape Concerning Recycled Water Use for Irrigation CHANNAH ROCK, University of Arizona, Maricopa, AZ, **USA**

- 9:30 Learning from Leaders in Water Reuse: Practices in Israel and Other Water Conserving Nations CLIVE LIPCHIN, Arava Institute for Environmental Studies, Ketura, Israel
- 10:00 Break Refreshments Available in the Exhibit Hall
- **S39** Water, Water, Everywhere: The Effects of Flooding on the Microbial Safety of Fresh Produce Room 20-21

Organizers: Kellie Burris, Wenging Xu Convenors: Bassam Annous, Kellie Burris, Wenging Xu

Sponsored by the IAFP Foundation

- Spatiotemporal Analysis of Microbiological Contamination 10:30 in New York State Produce Fields Following Extensive Flooding from Hurricane Irene, August 2011 PETER BERGHOLZ, North Dakota State University, Fargo, ND, USA
- Prevalence and Diversity of Salmonella on the Eastern Shore of Virginia after a Flooding Event LAURA STRAWN, Virginia Tech-Eastern Shore, AREC, Painter, VA, USA
- 11:30 Survival of Fecal Indicators and Presence of Foodborne Pathogens on Cantaloupes after Flooding in Louisiana MELANIE IVEY, The Ohio State University, Wooster, OH, **USA**
- Lunch Available in the Exhibit Hall 12:00
- **S40 Ensuring Food Safety through the Product Development Lifecycle: Successes and Pitfalls** Room 22-23

Organizer: Rocelle Clavero Convenor: Fatemeh Ataei

- New Product Development: A Business Perspective KATHRYN MCCANN, The Kellogg Company, Battle Creek, MI, USA
- 9:00 Manufacturing Considerations in Designing Foods JOSEPH MEYER, The Kraft Heinz Company, Glenview, IL, USA
- **Justification for Microbial Intervention Strategies** KATHLEEN GLASS, University of Wisconsin-Madison, Madison, WI, USA
- 10:00 Break – Refreshments Available in the Exhibit Hall
- **S41 Clean Label Technologies for Safety of Processed** Meat and Poultry Products: Scientific Support of **Efficacy**

Room 22-23

Organizers: Betsy Booren, Kathleen Glass, **Amanda King**

Convenor: Amanda King

10:30 Food Safety Equivalence of Curing Ingredients from Synthetic and Natural Sources KATHLEEN GLASS, Food Research Institute, University of Wisconsin-Madison, Madison, WI, USA

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11:00	Adjunct Clean Label Food Safety Ingredients JAMES DICKSON, Iowa State University, Ames, IA, USA	10:30	Presentation of MicroHibro
11:30	Process-based Food Safety Solutions, Spoilage Control, and Pitfalls of Clean Label from a Meat Processor's	10.00	FERNANDO PÉREZ-RODRÍGUEZ, University of Cordoba, Cordoba, Spain
	Perspective AARON ASMUS, Hormel Foods, Austin, MN, USA	11:00	Presentation of Sym-Previus YVAN LE MARC, ADRIA Development, Quimper, France
12:00	Lunch Available in the Exhibit Hall	11:30	Presentation of ComBase
S42	Mechanisms of Hypervirulence in Selected Foodborne Pathogens Room 24-25		MARK TAMPLIN, Food Safety Centre, Tasmanian Institute of Agriculture, University of Tasmania, Hobart Australia
	Organizers and Convenors: Arun Bhunia, Byron Brehm-Stecher	12:00	Lunch Available in the Exhibit Hall
8:30	Sponsored by the IAFP Foundation Hypervirulent Salmonella?	RT3	Seafood-associated Vibriosis: Turning the Trend Around
9:00	JOHN MAUER, University of Georgia, Athens, GA, USA Emergence of a Highly Pathogenic <i>Campylobacter jejuni</i>		Room 13-14 Organizers and Convenors: Jessica Jones, Angela Ruple
	Clone in the United States QIJING ZHANG, Iowa State University, Ames, IA, USA	8:30	Panelists:
9:30	Dynamics of Lysine Acetylation in the Protozoan Parasite <i>Toxoplasma gondii</i> : Opportunities for Drug Development VICTORIA JEFFERS, Indiana University, Bloomington, IN, USA		ERIN BURDETTE, Centers for Disease Control and Prevention, Atlanta, GA, USA
			JOHN JACOBS, NOAA, Oxford, MD, USA
10:00	Break – Refreshments Available in the Exhibit Hall		KEN MOORE, Interstate Shellfish Sanitation Conference Columbia, SC, USA
S43	The Crossroad between Global Trade and Food Safety: Focus on Viruses and Parasites		SALINA PARVEEN, University of Maryland Eastern Shore, Princess Anne, MD, USA
	Room 24-25 Organizers: Alex Da Silva, David Kingsley Convenor: Alex Da Silva		CHRIS SCHILLACI, Massachusetts Division of Marine Fisheries, New Bedford, MA, USA
10:30			WILLIAM WALTON, Auburn University, Dauphin Island, AL, USA
11:00	ROSA PINTO, University of Barcelona, Barcelona, Spain	10:00	Break – Refreshments Available in the Exhibit Hall
11.00	Emerging and Re-emerging Foodborne Parasites and Their Global Impact on the Safety of Foods	RT4	Artisanal Food Processing and Food Safety
	RICHARD BRADBURY, Centers for Disease Control and Prevention, Atlanta, GA, USA		Room 13-14 Organizer and Convenor: Carl Custer
11:30		10:30	Panelists:
			JOSEPH CORBY, Association of Food and Drug Official New York, NY, USA
	CFSAN, College Park, MD, USA		BARBARA INGHAM, University of Wisconsin-Madison,
12:00	Lunch Available in the Exhibit Hall		Madison, WI, USA PANAGIOTIS LEKKAS, University of Vermont,
SF1	Predictive Microbiology and Risk Assessment Tools Room 10-11 Organizers and Convenors: Fanny Tenenhaus-Aziza, Mariem Ellouze		Burlington, VT, USA
			ANNA PORTO-FETT, USDA-ARS-ERRC, Wyndmoor, PA, USA
0.00	Sponsored by the IAFP Foundation	12:00	Lunch Available in the Exhibit Hall
8:30	Introduction to Predictive Microbiology and Risk	RT5	What is IARC and CA Prop 65? What on Earth Do

MARIEM ELLOUZE, Fanny Tenenhaus-Aziza, Nestlé, Lausanne, Switzerland

9:00 Presentation of FDA-iRISK® YUHUAN CHEN, U.S. Food and Drug Administration, College Park, MD, USA

9:30 Presentation of GroPIN PANAGIOTIS SKANDAMIS, Agricultural University of Athens, Athens, Greece

10:00 Break – Refreshments Available in the Exhibit Hall

They Mean to Me and My Food Safety Program? Room 18-19

Organizers: Anthony Flood, Christie Gray **Convenor: Anthony Flood, David Crownover**

8:30 Panelists:

JAMES COUGHLIN, Coughlin and Associates, Laguna Niguel, CA, USA

LAURIE DOLAN, U.S. Food and Drug Administration -HHS, College Park, MD, USA

Check the Program Addendum for changes to the Program.

■ - Developing Scientist Competitor ■ - Symposia Roundtables Technicals

CHRISTIE GRAY, Decernis LLC, Rockville, MD, USA ERIC MITTENTHAL, North American Meat Institute (NAMI), Washington, D.C., USA GEORGE PUGH, The Coca Cola Company, Atlanta, GA, USA

- 10:00 Break Refreshments Available in the Exhibit Hall
- **Can Industry and Government Take Safe Food** Handling and Preparation Risks Out of the Hands of the Consumer?

Room 18-19

Organizers and Convenors: Nicole Arnold, Cameron Bardsley, Stephanie Barnes, Lily Yang

10:30 Panelists:

KRISTINA BARLOW, U.S. Department of Agriculture-FSIS, Washington, D.C., USA

TAMIKA SIMS, International Food Information Council, Washington, D.C., USA

DONNA GARREN, American Frozen Food Institute, McLean, VA, USA

SANJAY GUMMALLA, American Frozen Food Institute, McLean, VA, USA

LONE JESPERSEN, Cultivate, Hauterive, Switzerland KELLY STEVENS, General Mills, Minneapolis, MN, USA

- 12:00 Lunch Available in the Exhibit Hall
- **T5 Technical Session 5 - Antimicrobials** Room 15

Convenors: John Luchansky, Dennis D'Amico

- T5-01 Application of Edible Coatings Formulated with Antimicrobials to Control Listeria monocytogenes as Surface Contaminants on Fresh Cheese STEPHANIE BARNES, Sarah Kozak, Dennis D'Amico. University of Connecticut, Department of Animal Science, Storrs, CT, USA
- T5-02 Characterization of Cattle Feedlot Isolated Salmonella spp. Bacteriophages and Evaluation of Their Antimicrobial Capacity against Salmonella on a Cattle Hide Model YICHENG XIE, Jason Gill, Texas A&M University, College Station, TX, USA
- T5-03 Reduced Campylobacter jejuni Colonization in Poultry Ceca with Natural Phenolics from Industry Byproducts SERAJUS SALAHEEN, Zajeba Tabashsum, Debabrata Biswas, University of Maryland, College Park, MD, USA
- T5-04 Use of Olea europaea Byproducts to Stimulate the Growth of Probiotic and Competitively Exclude Enteric Pathogens MENGFEI PENG, Debabrata Biswas, University of Maryland, College Park, MD, USA

- T5-05 Control of Escherichia coli O157:H7 with Deodorized Mustard in Mennonite Fermented Sausages ROCIO MORALES-RAYAS, Angela Tellez, Richard Holley, Jeffrey Farber, Arthur Hill, University of Guelph, CRIFS, Department of Food Science, Guelph, ON, Canada
- T5-06 The Lytic Capacity of Listeriophage is Affected by Phenotypic and Genotypic Characteristics of Listeria monocytogenes AJITA SUNDARRAM, Jia Liu, Karina Desiree, Paige LeMaster, Danielle Marks, MaryKate Harrod, Shelby Meyer, Paul Ebner, Haley Oliver, Purdue University, West Lafayette, IN, USA
- 10:00 Break Refreshments Available in the Exhibit Hall
- T5-07 Disruption of Shiga-toxigenic Escherichia coli Biofilms In Vitro and on Food Contact Surfaces Using Bacteriophages PUSHPINDER KAUR LITT, Tony Kountoupis, Pramila Lamichhane, Divya Jaroni, Oklahoma State University, Stillwater, OK, USA
- T5-08 Reverting Multidrug-resistant Phenotypes of *Escherichia* coli Isolated from Cattle Using 1-(1-Naphthylmethyl)-Piperazine JOÃO ANES, Daniel Hurley, Séamus Fanning, Shabarinath Srikumar, University College Dublin, Dublin, Ireland
- T5-09 Efficacy of Individual and Combinatory Antimicrobial Dip Treatments for the Control of Listeria monocytogenes on Fresh Cheese SARAH KOZAK, Yustyna Bobak, Dennis D'Amico, University of Connecticut, Storrs, CT, USA
- T5-10 Decontamination of Chicken Breast Meat, Romaine Lettuce Leaves, and Stainless Steel Surfaces from a Multidrug-resistant Strain of Salmonella enterica Serovar Heidelberg Using a 2D-Air-based DBD-Plasma Microdischarge Array HAMADA ABOUBAKR, Muhammad Nisar, Kakambi Nagaraja, James Collins, Peter Bruggeman, Sagar Goyal, University of Minnesota, College of Veterinary Medicine, St. Paul, MN, USA
- T5-11 Use of Bacteriophage as an Additive during the Preparation of Ready-to-Eat (RTE) Meat Products to Control Listeria monocytogenes Hanie Ahmadi, Shai Barbut, Loong-Tak Lim, S. BALAMURUGAN, Agriculture & Agri-Food Canada, Guelph, ON, Canada
- T5-12 Evaluation of Recirculating Chlorinated Nanobubble Water to Control Shiga Toxin-producing Escherichia coli Surrogates in a Novel Commercial Ground Beef **Production System** AMANDA WILDER, Nicholas Sevart, Anna Porto-Fett, John Luchansky, Harshavardhan Thippareddi, Christopher Vahl, Gary Acuff, Randall Phebus, Kansas State University, Manhattan, KS, USA

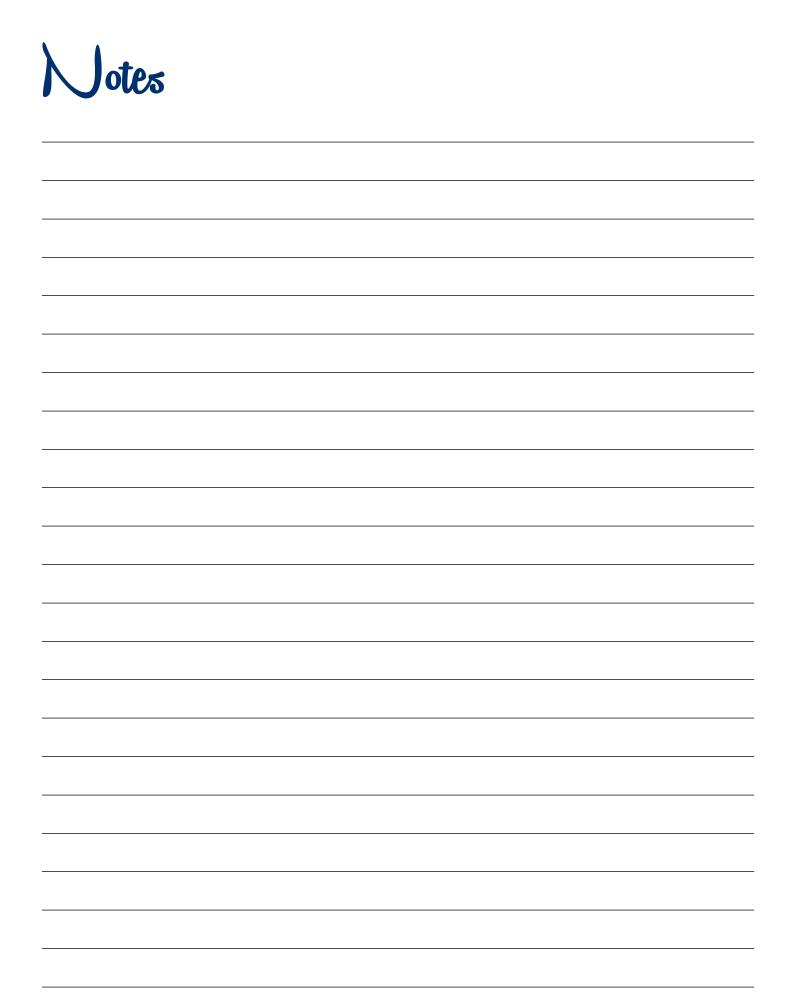
T6 Technical Session 6 - Microbial Food Spoilage and **Low-water Activity Foods**

Room 16

Convenor: Stephen Kenney

- T6-01 Strategies for Enhanced Protection of Agricultural Produce in Outdoor Storage CHIN GOUK, Simone Kreidl, Peta Faulkner, Department of Economic Development, Jobs, Transport and Resources, Melbourne, Australia
- T6-02 The In Vitro and In Vivo Effects of Pseudomonas aeruginosa DesB on Pathogen-host Interaction JIMYEONG HA, Sejeong Kim, Yohan Yoon, Kyoung-Hee Choi, Sookmyung Women's University, Seoul, South Korea
- T6-03 Occurrence of Spore Formers in Processed Milk from Household Refrigerators and the Effect of Heat Treatment on Bacillus Spore Activation Sarisha Devnath, AJIBOLA OYEDEJI, Oluwatosin Ademola Ijabadeniyi, Durban University of Technology, Durban, South Africa
- T6-04 Thermal Death Kinetics of *Bacillus sporothermodurans* Spores Isolated from Ultra-high Temperature Milk RODNEY OWUSU-DARKO, Lungile Shongwe, Elna Buys, University of Pretoria, Pretoria, South Africa
- T6-05 Desaturase-mediated Adaptation to High Salt Concentration in Pseudomonas aeruginosa SEJEONG KIM, Jimyeong Ha, Yohan Yoon, Kyoung-Hee Choi, Sookmyung Women's University, Seoul, South
- T6-06 Can the Adsorption-Desorption State Affect Salmonella Thermal Inactivation Kinetics in Low-moisture Foods? FRANCISCO GARCÉS-VEGA, Bradley Marks, Michigan State University, East Lansing, MI, USA
- 10:00 Break Refreshments Available in the Exhibit Hall

- T6-07 Survival of Salmonella in Low-moisture Military Ration Products Andre Senecal, GENEVIEVE FLOCK, Michelle Richardson, Courtney Cowell, Dominique Pacitto, U.S. Army NSRDEC, Natick, MA, USA
- T6-08 Heat Resistance of Salmonella spp. and Enterococcus faecium Increased Exponentially at Reduced Water Activity in Silicon Dioxide SHUXIANG LIU, Ravi Kiran Tadapaneni, Meijun Zhu, Sablani Shyam, Juming Tang, Washington State University, Pullman, WA, USA
- Evaluation of Survival on Flaxseeds and Subsequent T6-09 Heat Resistance among Four Salmonella Serovars SAHAR MALEKMOHAMMADI, Teresa Bergholz, North Dakota State University, Fargo, ND, USA
- T6-10 A Novel Method to Determine Thermal Death Kinetics of Microorganisms in Low-moisture Foods: Thermal-Death-Time Sandwich SOON KIAT LAU, Harshavardhan Thippareddi, Jeyamkondan Subbiah, University of Nebraska-Lincoln, Lincoln, NE, USA
- Microbial Safety of Edible Low-water Activity Foods: Study of Simulated and Durban Household Samples OLUWATOSIN ADEMOLA IJABADENIYI, Yovani Pillay, Durban University of Technology, Durban, South Africa
- T6-12 Utilization of Enterococcus faecium as a Salmonella spp. Surrogate for Thermal Treatment in Selected Lowmoisture Food Products NURUL AHMAD, Ian Hildebrandt, Shannon Pickens, Soon Kiat Lau, Jie Xu, Shuxiang Liu, Hsieh-Chin Tsai, Angela Maria Rincon, Jeyamkondan Subbiah, Harshavardhan Thippareddi, Meijun Zhu, Juming Tang, Nathan Anderson, Elizabeth Grasso-Kelley, Elliot Ryser, Bradley Marks, Michigan State University, East Lansing, MI, USA



TUESDAY AFTERNOON JULY 11

Posters will be on display 10:00 a.m. - 6:00 p.m. (See details beginning on page 79)

12:15 p.m. - 1:15 p.m. IAFP Business Meeting Room 16

S44 Modeling Pathogens in Low-water Activity Foods: What, How, and How to Use It Ballroom A

> Organizers and Convenors: Sofia Santillana Farakos, Michelle D. Danyluk

- 1:30 What to Look for and Where? A Risk Ranking Approach to Pathogens in Low-water Activity Foods SARAH CAHILL, Food and Agriculture Organization of the United Nations, Rome, Italy
- Plugging in the Numbers: Data Collection, Predictive 2:00 Modeling and Risk Assessment in Dry Foods SOFIA SANTILLANA FARAKOS, U.S. Food and Drug Administration, College Park, MD, USA
- 2:30 Application of Models in a Processing Plant: Understanding the Importance of Validation LINDA J. HARRIS, University of California-Davis, Davis, CA, USA
- 3:00 Break - Refreshments Available in the Exhibit Hall
- **S45** Can Old Processes Satisfy New Rules? Pathogen **Reduction in Legacy Processes for Low-moisture Foods**

Ballroom A

Organizer: Bradley Marks

Convenors: Elizabeth Grasso-Kelley, Sanghyup Jeong

- 3:30 A Systems Approach to Validating Pathogen Reduction in a Legacy Process for Low-moisture Foods NATHAN ANDERSON, U.S. Food and Drug Administration, Bedford Park, IL, USA
- 4:00 Modifying Existing (Legacy) Thermal Processes to Achieve Pathogen Reduction Goals BRADLEY MARKS, Michigan State University, East Lansing, MI, USA
- 4:30 When Existing Legacy Processes are Insufficient: What are the Novel Dedicated Technology Options? JEYAMKONDAN SUBBIAH, University of Nebraska-Lincoln, Lincoln, NE, USA
- 5:00 p.m. 6:00 p.m. Exhibit Hall Reception
- **S46** Cross Pollination of Listeria Learnings across the **Industry**

Ballroom B

Organizers and Convenors: Nancy Eggink, **Timothy Freier**

1:30 Listeria and Listeriosis in the Dairy Industry JOHN ALLAN, International Dairy Foods Association, Alexandria, VA, USA

- 2:00 Applied Learnings from Listeria Outbreaks, Investigations and Environmental Monitoring MATTHEW RANIERI, Acme Smoked Fish Corporation, Brooklyn, NY, USA
- 2:30 Hygenic Design: What We Have Learned from Past Issues That Can be Applied to New Segments JOSEPH STOUT, Commercial Food Sanitation, Kenosha, WI, USA
- Break Refreshments Available in the Exhibit Hall 3:00
- 3:30 Listeria Control in Grocery and Retail Food Environments HILARY THESMAR, Food Marketing Institute, Arlington, VA, USA
- 4:00 The Art of Sampling TIMOTHY FREIER, Merieux NutriSciences, Maple Grove, MN, USA
- 4:30 Listeriostatic Antimicrobials: Use Across Segments and Options for Validating Effectiveness KATHLEEN GLASS, University of Wisconsin-Madison, Madison, WI, USA
- 5:00 p.m. 6:00 p.m. Exhibit Hall Reception
- **S47** Stories from the Trenches: FDA Inspection after Food Safety Modernization Act (FSMA) Implementation Ballroom C

Organizers and Convenors: Akhila Vasan, **Wendy White**

Sponsored by the IAFP Foundation

- 1:30 FSMA Inspection: An Inspector's Perspective LILLIAN HSU, U.S. Food and Drug Administration, CFSAN, College Park, MD, USA
- 2:00 FSMA Inspection: An Industry Perspective BENJAMIN WARREN, Land O' Lakes, Arden Hills, MN. USA
- 2:30 GMA's 10,000 Foot View of Their Members' FSMA Inspection Experiences: Pros and Cons SAMANTHA COOPER, GMA, Washington, D.C., USA
- Break Refreshments Available in the Exhibit Hall 3:00
- 3:30 How Academia is Supporting Industry Implementation of FSMA TRAVIS CHAPIN, University of Florida, Lake Alfred, FL, USA
- FSPCA's Plans to Expand FSMA Education across the 4:00 KATHY GOMBAS, Retired CFSAN, Laurel, MD, USA
- 4:30 An Indepth Look at FDA's FSMA Technical Assistance SHARMI DAS, U.S. Food and Drug Administration, Washington, D.C., USA

5:00 p.m. - 6:00 p.m. - Exhibit Hall Reception

S48 Foodborne Viruses: Detection, Risk Assessment, and Control Options in Food Processing

Organizer and Convenor: Lilou van Lieshout Sponsored by ILSI Europe and Microbiological Food Safety Task Force

- 1:30 Pros and Cons of Methods of Detection for Viruses in ALBERT BOSCH, University of Barcelona, Barcelona,
- 2:00 Translating Risk Assessment of Viruses in Foods into TREVOR PHISTER, PepsiCo, Leicester, United Kingdom
- 2:30 Effect of Processing Technologies to Control Viruses in ALVIN LEE, Institute for Food Safety and Health, Illinois Institute of Technology, Bedford Park, IL, USA
- 3:00 Break - Refreshments Available in the Exhibit Hall
- **S49 Hepatitis E Virus: An Emerging Foodborne** Pathogen? Ballroom D

Organizers: David Kingsley, Efstathia Papafragkou Convenors: Julie Jean, David Kingsley Sponsored by the IAFP Foundation

- 3:30 Hepatitis E Virus: Foodborne and Zoonotic Transmission DANIELLE YUGO. Virginia Polytechnic Institute and State University, Blacksburg, VA, USA
- 4:00 The Silent HEV Epidemic in Europe NICOLE PAVIO, ANSES, Maisons-Alfort, France
- 4:30 Risk Profile for Hepatitis E Virus (HEV) from Pigs and Pork in Canada, and HEV Sero-prevalence in Non-endemic Countries BARBARA WILHELM, Big Sky Health Analytics, Vermilion, AB, Canada

5:00 p.m. - 6:00 p.m. - Exhibit Hall Reception

S50 Teaching for Tomorrow: Impact of School and College Food Safety Curricula on Better Informed Consumers, Career Opportunities, and the Industry **Workforce of the Future** Room 20-21

Organizers: Brian Bedard, Akhila Vasan, **Carol Wallace** Convenors: Brian Bedard, Carol Wallace

- 1:30 Meeting WHO Strategic Objectives by Educating Children in Food Safety: Lessons from the "Five Keys to Safer Food" Program FRANCOISE FONTANNAZ, World Health Organisation (WHO), Geneva, Switzerland
- 2:00 The "Hands On" Middle Schools Program: An Impact Case Study JENNIFER RICHARDS, University of Tennessee Institute of Agriculture, Knoxville, TN, USA
- Embedding Current Standards for Hazard Control into 2:30 the Community College Workforce Education Curriculum CHRIS REEDY, BioNetwork, Raleigh, NC, USA
- Break Refreshments Available in the Exhibit Hall 3:00

S51 Establishing Effective Metrics to Advance Your Food Safety Training and Education Programs

Room 20-21

Organizers: Lone Jespersen, Laura Nelson, **Carol Wallace** Convenors: Lone Jespersen, Laura Nelson

- 3:30 Setting Learning Strategies That Incorporate Appropriate Metrics for All Layers of Decision Makers within an Organization IRENE BOLAND, Learning Development Institute, Orlando, FL, USA
- 4:00 Setting Operational Metrics to Measure Training Effectiveness across Diverse Enterprises KRISTIN KASTRUP, Alchemy Systems, Austin, TX, USA
- Use of Organizational Assessments to Determine Gaps 4:30 and Deployment Strategies for Effective Improvement DAN DENNISON, Denison Consulting and IMD, Braunau, Switzerland
- 5:00 p.m. 6:00 p.m. Exhibit Hall Reception
- **S52 Total Diet Studies: Designs for Monitoring the Food** Supply

Room 22-23

Organizers: Barbara Kowalcyk, Archana Lamichhane. **Katherine Woodward** Convenors: Archana Lamichhane, **Katherine Woodward** Sponsored by the IAFP Foundation

- 1:30 Total Diet Studies: Origin, Evolution, and Current Status GERALD MOY, Food Safety Consultants International, Geneva, Switzerland
- Current Thinking in the U.S. Total Diet Study 2:00 MARK WIRTZ, U.S. Food and Drug Administration, College Park, MD, USA
- Trade-offs in Total Diet Study Sampling Design 2:30 KATHERINE WOODWARD, RTI International, Research Triangle Park, NC, USA
- 3:00 Break - Refreshments Available in the Exhibit Hall
- **S53** Ranking Risks in Low-resource Settings Room 22-23

Organizers: Sarah Cahill, Barbara Kowalcyk, Juliana Ruzante Convenors: Sarah Cahill, Barbara Kowalcyk Sponsored by IAFP Foundation

- 3:30 A Proposed Approach for Ranking Food Safety Risks in Low-resource Settings JULIANA RUZANTE, RTI International, Research Triangule, NC, USA
- 4:00 Lessons Learned from Ranking Food Safety Risks in Qatar and Palestine JOHN BASSETT, John Bassett Consulting Ltd, Bedford, United Kingdom
- 4:30 Lessons Learned from Ranking Food Safety Risks Locally and Globally SARAH CAHILL, Food and Agriculture Organization of the United Nations, Rome, Italy

5:00 p.m. - 6:00 p.m. - Exhibit Hall Reception

Check the Program Addendum for changes to the Program.

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S54 Tools to Improve Interactive Food Safety Training for Small Food Facilities

Room 24-25

Organizers: Omar Oyarzabal, Kaiping Deng **Convenor: James Rogers**

- Experience Gained from Training Sprout Growers of 1:30 Small-size Operations KAIPING DENG, Institute for Food Safety and Health (IFSH), Lisle, IL, USA
- 2:00 Use of Written and Observational Needs Assessments to Develop Tools for Food Regulation Compliance ANGELA SHAW, Iowa State University, Ames, IA, USA
- 2:30 Interactive Food Safety Training for Adult Participants from Mid-size to Small-size Food Facilities OMAR OYARZABAL, University of Vermont Extension, South Burlington, VT, USA
- 3:00 Break - Refreshments Available in the Exhibit Hall

S55 Translating the Big Data to the Food Industry Room 24-25

Organizer and Convenor: Shima Shayanfar

- 3:30 Pathogen Metabolomic Fluxes during Different Food **Processing Conditions** SURESH D. PILLAI, Texas A&M University, College Station, TX, USA
- 4:00 Ensuring Product Quality with Molecular Signatures RAMIN KHAKSAR, Clear Labs Inc., Menlo Park, CA, **USA**
- 4:30 Molecular Barcoding for Transparency and Traceability in Food Supplies ANTONIOS ZOGRAFOS, SafeTraces, Livermore, CA, USA

5:00 p.m. - 6:00 p.m. - Exhibit Hall Reception

1:30 p.m. - 5:00 p.m.

SF2 Software Fair on Predictive Microbiology and Risk **Assessment Tools**

Tampa Convention Center, Room 12

Organizers: Mariem Ellouze, Fanny Tenenhaus-Aziza

Presentation of FDA-Irisk

YUHUAN CHEN, U.S. Food and Drug Administration-CFSAN, College Park, MD, USA

Presentation of Gropin

PANAGIOTIS SKANDAMIS, Agricultural University of Athens, Athens, Greece

Presentation of Microhibro

FERNANDO PÉREZ-RODRÍGUEZ, University

of Cordoba, Cordoba, Spain

Presentation of Sym'Previus

YVAN LE MARC, ADRIA Dévelopement, Quimper,

France

Presentation of Combase

MARK TAMPLIN, University of Tasmania, Hobart, Australia

It's Going to Take a Village: Grower Perspectives on **FSMA** Implementation

Room 13-14

Organizers and Convenors: Justin Falardeau, Angela Ferelli, Daniel Weller

1:30 Panelists:

> SAMIR ASSAR, U.S. Food and Drug Administration, College Park, MD, USA

ELIZABETH BIHN, Produce Safety Alliance, Geneva, NY, USA

CHELSEA MATZEN, National Farmer's Union, Washington, D.C., USA

ROBERT SAKATA, Sakata Farms, Brighton, CO, USA JANIE SIMMS HIPP, Indigenous Food and Agriculture Initiative, Fayetteville, AR, USA

BOB ZIEL, J & J Family of Farms, Loxahatchee, FL, USA

- Break Refreshments Available in the Exhibit Hall 3:00
- RT8 **International Strategies to Deliver Food Safety Education via the "Trusted Source": Health Professionals**

Room 13-14

Organizers: Ellen W. Evans, Yaohua Feng, **Shauna Henley**

Convenors: Christine Bruhn, Carol Anne Wallace Sponsored by the IAFP Foundation

3:30 Panelists:

> ELLEN W. EVANS, ZERO2FIVE Food Industry Centre, Cardiff, United Kingdom

YAOHUA FENG, University of California-Davis, Davis, CA. USA

ANTHONY FLOOD, International Food Information Council, Washington, D.C., USA

SHAUNA HENLEY, University of Maryland Extension, Baltimore County, Cockeysville, MD, USA

JEFFREY LEJEUNE, The Ohio State University, Wooster, OH, USA

GLEE VAN LOON, University of California-Davis, Health System, Sacramento, CA, USA

5:00 p.m. - 6:00 p.m. - Exhibit Hall Reception

Next Generation Whole Genome Sequencing in the Regulatory Arena: Nomenclature, Pipelines, **Applications, and Collaboration** Room 18-19

Organizers and Convenors: Peter Evans, Stevie Hretz, William Shaw

1:30 Panelists:

ERIC BROWN, U.S. Food and Drug Administration, College Park, MD, USA

BILL KLIMKE, NCBI, Washington, D.C., USA

PETER GERNER-SMIDT, Centers for Disease Control and Prevention, Atlanta, GA, USA

GLENN TILLMAN, USDA, FSIS, OPHS, Athens, GA, USA

Check the Program Addendum for changes to the Program.

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3:00 Break - Refreshments Available in the Exhibit Hall

RT10 FoodOmics: Stop Using a Steamroller to Crack a Nut!

Room 18-19

Organizer: Danièle Sohier **Convenor: Patrice Arbault**

3:30 Panelists:

> ROY BETTS, Campden BRI, Gloucestershire, United Kingdom

ERIC BROWN, U.S. Food and Drug Administration, College Park, MD, USA

DOUGLAS MARSHALL, Eurofins Scientific Inc., Fort Collins, CO, USA

KENDRA NIGHTINGALE, Texas Tech University, Lubbock, TX, USA

DANIEL SMIESZEK, Nestlé, Dublin, OH, USA

MIEKE UYTTENDAELE, Ghent University, Ghent, Belgium

5:00 p.m. - 6:00 p.m. - Exhibit Hall Reception

Technical Session 7 - Pre-harvest Food Safety and Water

Room 15

Convenors: Renee Boyer, Benjamin Chapman

- T7-01 Cantaloupe Fruit Microbiome: Responses to Field Location, Cover Crop, and Cold Storage Maria Albarracin, Christopher Gunter, Penelope Perkins-Veazie, Benjamin Chapman, Jonathan Baros, Sophia Kathariou, EDUARDO GUTIERREZ-RODRIGUEZ, North Carolina State University, Raleigh, NC, USA
- T7-02 Fate of Shiga-toxigenic Escherichia coli and Generic Escherichia coli in Central Florida Surface Waters at Different Temperatures ZEYNAL TOPALCENGIZ, Michelle D. Danyluk, Mu

 □ Alparslan University, Mu

 □, Turkey
- T7-03 Spatiotemporal Variability in Microbial Quality of Agricultural Water Supplies: Implications for Cooperative MELISSA L PARTYKA, Ronald F. Bond, Jennifer A. Chase, Edward R. Atwill, University of California-Davis, Davis, CA, USA
- T7-04 Prevalence of Escherichia coli, Salmonella spp., and Listeria monocytogenes in Nontraditional Irrigation Waters in the Mid-Atlantic United States: A CONSERVE ERIC HANDY, Cheryl East, Mary Theresa Callahan, Sarah Allard, Hillary Craddock, Shirley Micallef, Kalmia

Kniel, Fawzy Hashem, Salina Parveen, Eric May, Joseph Haymaker, Amy Sapkota, Manan Sharma, U.S. Department of Agriculture-ARS, Beltsville, MD, USA

T7-05 Evaluation of Cover Cropping, Farming System, and Meteorological Factors on the Survival of Generic Escherichia coli and Listeria innocua in Produce Fields

HAO PANG, Shirley Micallef, Kathryne Everts, Abani Pradhan, University of Maryland, College Park, MD, USA T7-06 Persistence and Transmission of Escherichia coli and Salmonella spp. in a Watermelon Field Ammended with Poultry Litter: Year Two Thais De Melo Ramos, Shani Craighead, Patrick Spanninger, Claire Marik, Samantha Gartley, Adam Vanore, Gordon Johnson, Manan Sharma, KALMIA KNIEL, University of Delaware, Newark, DE, USA

3:00 Break - Refreshments Available in the Exhibit Hall

- T7-07 Association of Fresh Produce Food Safety Hazard with Growth and Persistence of Escherichia coli in Soils Amended with FSMA-compliant Heat-treated Manure PATRICIA MILLNER, Kathryn White, Herbert Clark, Fawzy Hashem, Manan Sharma, U.S. Department of Agriculture-ARS, Beltsville, MD, USA
- T7-08 Differential Tissue Distribution of Internalized Human Norovirus, Porcine Sapovirus, and Tulane Virus in Lettuce and Spinach Plants MALAK ESSEILI, Sarah Tegtmeier, Linda Saif, Tibor Farkas, Qiuhong Wang, Ohio State University, Wooster, OH, USA
- T7-09 Risk Assessment of Factors Associated with the Occurrence of Escherichia coli O157:H7 on Cow/Calf Operations in Oklahoma and Louisiana JOYJIT SAHA, Buddhini Jayasundera, Ravirajsinh Jadeja, Divya Jaroni, Oklahoma State University, Stillwater, OK, USA
- T7-10 Multiplex PCR-based Identification of Shiga Toxinproducing Escherichia coli Other Than the Top Seven Serogroups Found in the Feces of Feedlot Cattle JUSTIN LUDWIG, Xiaorong Shi, Lance Noll, Jianfa Bai, T. G. Nagaraja, Kansas State University, Manhattan, KS. USA
- T7-11 Escherichia coli and Salmonella Derby Carry a Novel Family of Temperate Bacteriophages That Encode Extended Spectrum Beta Lactamase Genes ANNA COLAVECCHIO, Michca Gordon, Julie Jeukens, Jean-Guillaume Emond Rheault, Luca Freschi, Irena Kukavica-Ibruli, Roger Levesque, Lawrence Goodridge, McGill University, Ste-Anne-de-Bellevue, QC, Canada
- T7-12 Mathematical Modeling Approach for Enhancing Preharvest Sampling Plans for the Detection of Pathogenic Bacteria through Consideration of Prior Knowledge of Factors Related to Non-random Contamination AIXIA XU, Robert Buchanan, University of Maryland, College Park, MD, USA

5:00 p.m. - 6:00 p.m. - Exhibit Hall Reception

Technical Session 8 - Food Law and Regulation; Food Defense; Food Safety Systems Room 16

Convenor: M. Alexandra Calle

T8-01 Comparison of Alternative Sanitizers to Chlorine Disinfection for Reducing Foodborne Pathogens in Avocados, Melon, Citrus, and Cucumbers ADRIAN SBODIO, David Hill, Jeremy Roland, John Alaniz, Trevor Suslow, University of California-Davis, Davis, CA, USA

Check the Program Addendum for changes to the Program.

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- T8-02 Enteroaggregative Escherichia coli: Predominant Diarrheagenic Escherichia coli Pathotype among Irrigation Water and Food Sources Matthew Aijuka, Araceli Santiago, Jorge Girón, James Nataro, ELNA BUYS, University of Pretoria, Pretoria, South Africa
- T8-03 Evaluating the United States Food Safety Modernization Act Standard for Microbial Quality of Agricultural Water for Produce Growing KATHLEEN VAZQUEZ, Arie Havelaar, Zeynal Topalcengiz, Rafael Muñoz-Carpena, Michelle D. Danyluk, University of Florida, Gainesville, FL, USA
- T8-04 Methods for Identifying and Mitigating Vulnerable Nodes in a Food Process Clint Fairow, CAROL BREVETT, Jessica Cox, Luke Bicknese, Penny Norquist, Ted Steinmann, Lehman Waiswisz, Joseph Zarzycki, Leidos, Gunpowder, MD, **USA**
- T8-05 Toward an Extended Food Safety Culture Model: Studying the Moderating Role of Burnout and Job Stress, the Mediating Role of Food Safety Knowledge, and Motivation in the Relation between Food Safety Climate and Food Safety Behavior ELIEN DE BOECK, Anneleen V. Mortier, Liesbeth Jacxsens, Lisa Dequidt, Peter Vlerick, Ghent University, Ghent, Belgium
- T8-06 Assessment of Nigerian Food Inspection Capabalities, Practices, and Procedure CHRISTINE IKPEME-EMMANUEL, University of Calabar, CALABAR, Nigeria
- 3:00 Break - Refreshments Available in the Exhibit Hall
- T8-07 USDA-FSIS Food Defense and Recall Preparedness Scenario-based Table Top Exercise Tool BRYAN NORRINGTON, U.S. Department of Agriculture -FSIS, Washington, D.C., USA

- T8-08 Challenging the Food Emergency Response Network with the Detection of a Select Agent in Foods AMIE MINOR, Christian Robinson, Zachary Kuhl, Justin Ferrell, Brenda Keavey, West Virginia Department of Agriculture, Charleston, WV, USA
- T8-09 The Beneficial Impact of Restaurant Letter Grade Posting on the Occurrence of Salmonella Ana Ebbert, CRAIG HEDBERG, University of Minnesota, Minneapolis, MN, USA
- T8-10 Safe Food for Canadians Regulations RICHARD ARSENAULT, Kevin McBain, Canadian Food Inspection Agency, Ottawa, ON, Canada
- T8-11 Valuing the Burden of Foodborne Illness in Regulatory Analysis ANGELA LASHER, U.S. Food and Drug Administration, College Park, MD, USA
- T8-12 Assessment of the Presence of Foodborne Physical Hazards in South East Europe Using Data from EU Rapid Alert System for Food and Feed (RASFF) ANDREJA RAJKOVIC, Danijela Jankovic, Ilija Djekic, Ghent University, Ghent, Belgium

5:00 p.m. - 6:00 p.m. - Exhibit Hall Reception

EVENING OPTIONS

5:00 p.m. – 6:00 p.m. **Exhibit Hall Reception**

6:00 p.m. - 7:00 p.m. President's Reception (by invitation),

Tampa Marriott Waterside, Florida Ballroom

7:00 p.m. - 9:00 p.m. Student Mixer, Room 7-9

AFFLIATE MEETINGS

5:15 p.m. – 6:15 p.m. Indian Association for Food Protection in North America

Meeting, Room 16

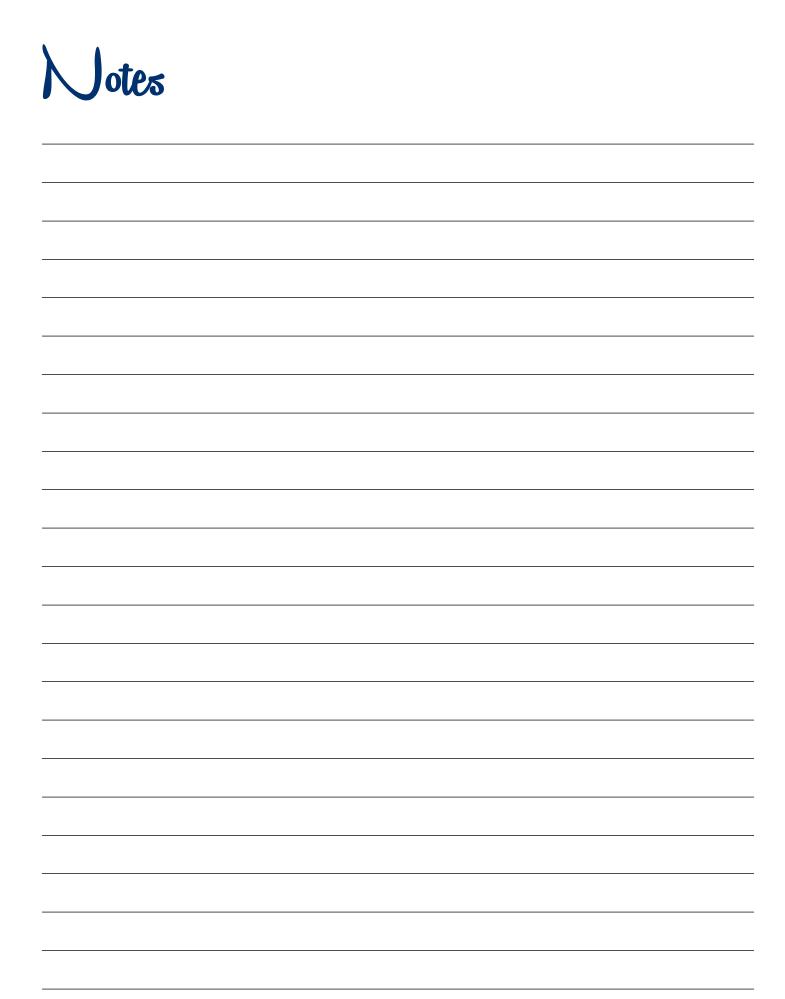
Korea Association of Food Protection Meeting 5:30 p.m. - 6:30 p.m.

Room 22-23

Check the Program Addendum for changes to the Program.

Symposia Roundtables

■ – Developing Scientist Competitor





Mérieux NutriSciences is a global food quality partner whose mission is to protect consumer health by providing food testing, auditing, certification, consulting, education and research services to aid our clients in delivering the safest and highest quality products.

This year we are celebrating 50 years of protecting consumers' health.

We are experts in:

- Food Testing
- GMO Testing
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- Education and Training
- Environmental Monitoring
- Sensory and Consumer Research
- Digital Solutions
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We Have Solutions For:

- Dairy
- Pet Food
- Meat
- Poultry
- Produce
- Seafood
- Spices
- Grains
- Nutrition



Nednesday, July 12

ALL DAY

9:00 a.m - 3:00 p.m. **Poster Session 3**

East Hall Low-water Activity Foods Produce Packaging Microbial Food Spoilage Antimicrobials Laboratory and Detection Methods

P3-01 through P3-109 - Authors present 9:00 a.m. - 11:00 a.m. P3-110 and above - Authors present 1:00 p.m. - 3:00 p.m.

MORNING

8:30 a.m. - 12:00 p.m. Ballroom D S57 Foodborne Outbreak Updates

S66 Challenges and Strategies in Detecting Foodborne Pathogens in Low-water Activity Foods Room 24-25

Room 15 T9 Technical Session 9 - Food Processing Technologies

T10 Technical Session 10 - Risk Modeling Room 16

8:30 a.m. - 10:00 a.m.

D1 A Debate: Current Perspectives in Food Safety Ballroom A Room 10-11 S58 Fresh Produce-Pathogen Pairs in the U.S. and Europe

S60 A Paradigm Shift in Understanding and Controlling Salmonella of the Future Room 12

Room 20-21 S62 Occurrence of Pathogens in Community and Non-community Wells in Minnesota and Performance of Water Quality Indicators Room 22-23 **S64** A Roadmap to Food Allergy Safety: A Consensus Report from the National Academies of Sciences, Engineering, and Medicine

RT11 National and Regional FSMA Training Centers: Application of Lessons Learned Room 13-14

Room 18-19 RT13 Variations on a Theme: The Basis and Consequences of Inconsistent Listeria spp. Standards in Global Regulation

10:00 a.m. - 10:30 a.m.

Break – Refreshments Available in the Exhibit Hall

10:30 a.m. - 12:00 p.m.

Ballroom A **S56** Chemical and Microbial Risk Assessment: Similarities and Differences

Room 10-11 **S59** Combatting Bioterrorism: How Select Agent Testing Laboratories are Staying One Step Ahead of the Bad Guys

Room 12 S61 Foodborne Parasites in Organic and Conventional Agricultural Practices: Food Safety Issues That Can Affect Your Mind

Room 20-21 S63 Staying Ahead of the Curve: Food Allergen Contamination and Recalls in Today's Global Food System

Room 22-23 S65 What is the Meaning of Zero Tolerance in the Age of Food Genomics?

The Devil is in the Details: Experiences with Early Implementation of the FSMA Produce Safety Rule and Efforts to Fill the Information Gaps Room 13-14 RT12

Room 18-19 RT14 Hog Slaughter Modernization and Salmonella Performance Standards: Should Pork be Treated the Same as Poultry?

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

Lunch Available in the Exhibit Hall

AFTERNOON

1:30 p.m. - 3:30 p.m.

Ballroom A **S67** Preventive Controls Other Than CCP: Choosing, Verifying, and Validating

Ballroom D S68 The National Antimicrobial Resistance Monitoring System: Twenty Years of Vigilance

Room 10-11 S69 Empowering Food Laws in Emerging Economies

S70 Microbiological Safety of Unpasteurized Fruit and Vegetable Juices Sold in Juice Bars and Small Retail Outlets Room 12

Room 13-14 S71 Advancing Food Safety Internationally through the Use of Innovative Technologies: Food Irradiation

Room 18-19 **S72** Social Responsibility's Influence over Food Safety and Quality Room 20-21 S73 Toward Risk-based Microbial Standards for Irrigation Water

Room 22-23 S74 Root Cause Analysis

Room 15 T11 Technical Session 11 – Meat, Poultry and Eggs, and Epidemiology

T12 Technical Session 12 - Modeling and Risk Assessment and Retail and Food Service Safety Room 16

3:30 p.m. - 4:00 p.m.

Break - Refreshments Available Outside of Ballroom A

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

Ballroom A

JOHN H. SILLIKER LECTURE

Food Allergies: A Public Health Dilemma - How Did We Get Here? Where are We Going?

Steve L. Taylor, Food Allergy Research & Resource Program, Department of Food Science & Technology, University of Nebraska

EVENING OPTIONS

6:00 p.m. - 7:00 p.m. Reception, Tampa Convention Center Foyer

7:00 p.m. – 9:30 p.m. IAFP Awards Banquet, Tampa Convention Center Ballroom

WEDNESDAY MORNING **JULY 12**

Posters will be on display 9:00 a.m. - 3:00 p.m. (See details beginning on page 91)

A Debate: Current Perspectives in Food Safety Ballroom A

Organizer: Delia Murphy

Convenors: Charles Barton, Kendra Nightingale Sponsored by ILSI North America Technical Committees on Food Microbiology and Food and Chemical Safety

8:30 The Good, the Bad, and the Ugly Foods: Should We Encourage the Consumption of Ugly and Expired Foods? SARAH CAHILL, Food and Agriculture Organization of the United Nations, Rome, Italy

> ROBERT TAUXE. Centers for Disease Control and Prevention, Atlanta, GA, USA

Who's to Blame? Do Consumers Own a Piece of Food Safety?

SARAH BREW, Faegre Baker Daniels LLP, Minneapolis, MN, USA

BILL MARLER, Marler Clark, The Food Safety Law Firm, Seattle, WA, USA

Which is the Real Obesogen? The Pizza or the Pizza

RUTH KAVA, American Council on Science and Health, New York, NY, USA **TBD**

10:00 Break – Refreshments Available in the Poster Session Area

S56 Chemical and Microbial Risk Assessment: Similarities and Differences

Ballroom A

Organizer: Mansi Krishan **Convenor: Douglas Holt**

Sponsored by ILSI North America Technical Committee on Food and Chemical Safety

10:30 Chemical Risk Assessments and Their Uses in Decision Making JOSEPH RODRICKS, Ramboll Environ, Arlington, VA, USA

11:00 Quantitative Microbiological Risk Assessment: Dealing with Biological Diversity ROBERT BUCHANAN, University of Maryland, College Park, MD, USA

Safety and Risk Assessments: Fit for Purpose JANE VAN DOREN, U.S. Food and Drug Administration, College Park, MD, USA

12:00 Lunch Available in East Hall

S57 Foodborne Outbreak Updates

Ballroom D

Organizers: Judy Greig, John Guzewich, Ewen Todd Convenors: Judy Greig, John Guzewich

- Hepatitis A in Strawberries, 2016: Implications for Fresh and Frozen Fruit KARI IRVIN, U.S. Food and Drug Administration, CORE, CFSAN, College Park, MD, USA
- 9:00 Assessing Contributing Factors for Salmonella I 4,[5],12:I: Outbreak Investigations Associated with Pork and Rotisserie Chicken BONNE KISSLER, U.S. Department of Agriculture-FSIS, OPHS, AES, Atlanta, GA, USA
- 9:30 Policy Challenges Posed by Improved Outbreak Detection: Listeria in Frozen Vegetables MICKEY PARISH, U.S. Food and Drug Administration-CFSAN, College Park, MD, USA
- 10:00 Break - Refreshments Available in the Poster Session Area
- 10:30 E. coli O157 in Soynut Butter ALVIN CROSBY, U.S. Food and Drug Administration, Greenbelt, MD, USA
- Listeria monocytogenes in Soft Cheese 11:00 EVELYN PEREIRA, U.S. Food and Drug Administration, College Park, MD, USA
- 11:30 Panel Discussion or Late Breaking Topic
- 12:00 Lunch Available in East Hall

S58 Fresh Produce-Pathogen Pairs in the U.S. and **Europe**

Room 10-11

Organizer: Christopher Baker Convenors: Alan Gutierrez, Zeynal Topalcengiz

- Source Tracing is the Key to Successful Fresh Produce Outbreak Investigations CRAIG HEDBERG, University of Minnesota, School of Public Health, Minneapolis, MN, USA
- Hazard Assessment of Global Produce Chains: An Update CHRISTOPHER BAKER, University of Florida, Gainesville, FL, USA
- The Microbial Ecology of Fresh Produce: Can Behavior of Resident Bacteria Affect Transient Colonizers? ANA ALLENDE, CEBAS-CSIC, Espinardo, Spain
- Break Refreshments Available in the Poster Session 10:00 Area

S59 Combatting Bioterrorism: How Select Agent Testing Laboratories are Staying One Step Ahead of the Bad **Guys**

Room 10-11

Organizer: Amie Minor

Convenors: Brenda Keavey, Amie Minor

10:30 Research, Validation, Proficiency, and National Surveillance: A Behind-the-Scenes Look at the Impact of Food Defense Projects with the Food Emergency Response Network RANDAL LAYTON, Food Emergency Response Network, USDA-FSIS, Athens, GA, USA

11:00 Identifying Clostridium botulinum and Ricin Toxin in Foods by Mass Spectrometry MICHAEL PERRY, New York State Department of Health, Saratoga Springs, NY, USA

Development of an Effective Method for Detecting and Isolating Yersinia pestis from Intentionally Contaminated Foods STEVE WEAGENT, Weagant Consulting, Poulsbo, WA, **USA**

12:00 Lunch Available in East Hall

S60 A Paradigm Shift in Understanding and Controlling Salmonella of the Future Room 12

> Organizers: Jessica Chen, John Marcy, Amit Morey Convenors: Andrea Ray, Ellen Thomas Sponsored by the IAFP Foundation

- Systemic Spread of Bacterial Population through Gut Translocation in Broiler Chickens: Implications for Food Safety in Chicken Meat YOUNG MIN KWON, University of Arkansas, Fayetteville, AR, USA
- 9:00 Microbiome Associated with Salmonella in Poultry STEVEN RICKE, University of Arkansas, Fayetteville, AR, USA
- 9:30 Studying the Genomic/Metabalomic Evolution of Microorganisms MEGAN BEHRINGER, Indiana University, Bloomington, IN. USA
- 10:00 Break Refreshments Available in the Poster Session Area
- **S61 Foodborne Parasites in Organic and Conventional Agricultural Practices: Food Safety Issues That Can Affect Your Mind**

Room 12

Organizers and Convenors: Robert Cowie, Alex Da Silva

Sponsored by the IAFP Foundation

- Advanced Detection of Parasites in Produce Commodities HELEN MURPHY, U.S. Food and Drug Administration-CFSAN, Office of Applied Research and Safety Assessment, Laurel, MD, USA
- 11:00 Risk Factors for Toxoplasma gondii Infection in the Old Order Amish TEODOR POSTOLACHE, University of Maryland, Baltimore, MD, USA
- 11:30 Severe Cases of Cerebral Angiostrongyliasis Acquired in the U.S. ROBERT COWIE, University of Hawaii, Honolulu, HI, USA
- 12:00 Lunch Available in East Hall

S62 Water for Food Processing Falls in the Crack **Between RTCR (Revised Total Coliform Rule)** and FSMA

Room 20-21

Organizers: Phyllis Posy, Dorothy Wrigley,

Ewen Todd

Convenor: Phyllis Posy

- 8:30 Occurrence of Pathogens in Community and Non-community Wells in Minnesota and Performance of Water **Quality Indicators** JOEL STOKDYK, U.S. Geological Survey, Wisconsin Water Science Center, Marshfield, WI, USA
- 9:00 Do We Only Find What We Are Looking for? VINCENT HILL, Centers for Disease Control and Prevention, Division of Foodborne, Waterborne and Environmental Diseases, Atlanta, GA, USA
- 9:30 Solutions Panel: Is There an Addressable Gap and What are Options and Models for Addressing It? Moderator: Phyllis Posy, Atlantium Technologies EPA Perspective: Julie Javier FSIS Perspective: William Shaw
- 10:00 Break Refreshments Available in the Poster Session
- **S63** Staying Ahead of the Curve: Food Allergen Contamination and Recalls in Today's Global Food **System**

Room 20-21

Organizers: Anthony Flood, Bobby Krishna Convenors: Brent Kobielush, Bobby Krishna Sponsored by IAFP Foundation

- 10:30 Statistics and Analysis: Allergen Recalls, FSMA, and Foreign Supplier Verification Program STEVEN GENDEL, IEH Laboratories and Consulting Group, Rockville, MD, USA
- 11:00 Food Recalls and Public Health Alerts: Communicating Food Risk in a Global Environment PETER BEN EMBAREK, World Health Organization/ INFOSAN Network, Geneva, Switzerland
- Best Practices for Allergen Recall Management: How to 11:30 Stay Ahead of the Issue DONALD JONES, Atkins Nutritionals, Inc, Denver, CO, **USA**
- 12:00 Lunch Available in East Hall
- **S64** A Roadmap to Food Allergy Safety: A Consensus Report from the National Academies of Sciences, **Engineering, and Medicine** Room 22-23

Organizer: Maria Oria **Convenor: Anthony Flood**

- 8:30 The Roadmap to Food Allergy Safety: Overall Recommendations VIRGINIA STALLINGS, Children's Hospital of Philadelphia, Philadelphia, PA, USA
- 9:00 Prevalence and Prevention of Food Allergies SHARON DONOVAN, University of Illinois, Urbana, IL, USA

- 9:30 The Roles of the Food, Food Service Industries and 11:00 The Challenges of Detecting Salmonella in Tahini Using Public Health Agencies Real-time PCR STEVE L. TAYLOR, Food Allergy Research & Resource FATMEH KOBAISSI, MEFOSA-MENA, Hamnra Beirut, Program, Department of Food Science & Technology, Lebanon University of Nebraska, Lincoln, NE, USA 11:30
- Break Refreshments Available in the Poster Session 10:00 Area
- **S65** What Is the Meaning of Zero Tolerance in the Age of Food Genomics?

Room 22-23

Organizer: Gregory Siragusa

Convenors: Douglas Marshall, Gregory Siragusa

- 10:30 Using Microbiome Information for Understanding Pathogen Potential in Processing MATTHEW RANIERI, Acme Smoked Fish Corporation, Brooklyn, NY, USA
- 11:00 Zero Tolerance and Diagnostic Performance Impacting Foodborne Pathogen Control DOUGLAS MARSHALL, Eurofins Scientific Inc., Fort Collins, CO, USA
- 11:30 Will Microbiome Data Become the Basis of Zero Tolerance Food Regulations? PALMER ORLANDI, U.S. Food and Drug Administration, Silver Spring, MD, USA
- 12:00 Lunch Available in East Hall
- **Challenges and Strategies in Detecting Foodborne S66 Pathogens in Low-water Activity Foods**

Room 24-25

Organizer: Junia Jean-Gilles Beaubrun Convenors: Junia Jean-Gilles Beaubrun, **Aparna Tatavarthy** Sponsored by the IAFP Foundation

- 8:30 Challenges in Recovering Foodborne Pathogens from Low-water Activity (a,,) Foods (e.g., spices, nuts and flour) as Influenced by Inhibitors or Antimicrobial Components that Interfere with Detection JOSHUA GURTLER, USDA-ARS, Eastern Regional Research Center, Wyndmoor, PA, USA
- 9:00 Mechanisms of Survival, Responses, and Sources of Salmonella in Low-moisture Environments SHABARINATH SRIKUMAR, University College Dublin, Dublin, Ireland
- 9:30 BAM Method for Salmonella Detection and a Novel Approach Using Corn Oil to Increase Salmonella Recovery in Spices JUNIA JEAN-GILLES BEAUBRUN, U.S. Food and Drug Administration, Laurel, MD, USA
- 10:00 Break Refreshments Available in the Poster Session Area
- 10:30 Strategies for Detection of Human Pathogens in Lowwater Activity (a...) Foods: Application of Current Methods to Some Difficult Matrices MONICA PONDER, Virginia Tech, Blacksburg, VA, USA

- Escherichia coli Outbreak in Flour: A Case Study on Low-water Activity Pathogen Detection JULIE ANN KASE, U.S. Food and Drug Administration, College Park, MD, USA
- 12:00 Lunch Available in East Hall
- **National and Regional FSMA Training Centers: Application of Lessons Learned** Room 13-14

Organizer: Angela Shaw **Convenor: Bassam Annous**

8:30 Panelists:

ELIZABETH BIHN, Cornell University, Geneva, NY, USA MICHELLE D. DANYLUK, University of Florida, Lake Alfred, FL, USA

ROBERT MCGORRIN, Oregon State University, Coralville, OR, USA

ELIZABETH NEWBOLD, University of Vermont, Bennington, VT, USA

DAVID READ, IFPTI, Battle Creek, MI, USA

ANGELA SHAW, Iowa State University, Ames, IA, USA

- 10:00 Break Refreshments Available in the Poster Session Area
- RT12 The Devil is in the Details: Experiences with Early Implementation of the FSMA Produce Safety Rule and Efforts to Fill the Information Gaps Room 13-14

Organizers and Convenors: Michelle Smith, **Bassam Annous**

10:30 Panelists:

MICHELLE D. DANYLUK, University of Florida, Lake Alfred, FL, USA

BOB EHART, National Association of State Departments of Agriculture, Arlington, VA, USA

JENNIFER MCENTIRE, United Fresh, Washington, D.C., USA

JAMES RUSHING, JIFSAN-University of Maryland, College Park, MD, USA

DON STOECKEL, Cornell, Geneva, NY, USA TREVOR SUSLOW, University of California-Davis, Davis, CA, USA

12:00 Lunch Available in East Hall

RT13 Variations on a Theme: The Basis and Consequences of Inconsistent Listeria spp. Standards in Global Regulation

Room 18-19

Organizers: Leon Gorris, Tim Jackson Convenor: Jane Van Doren

8:30 Panelists:

KRIS DE SMET, European Commission, Brussels, Belaium

JEFFREY FARBER, University of Guelph, CRIFS, Department of Food Science, Guelph, ON, Canada

MARTA HUGAS, European Food Safety Authority, Parma, Italy

MICKEY PARISH, U.S. Food and Drug Administration, College Park, MD, USA

TAMIKA SIMS, IFIC, Washington, D.C., USA

JANE VAN DOREN, U.S. Food and Drug Administration, College Park, MD, USA

- 10:00 Break - Refreshments Available in the Poster Session
- Hog Slaughter Modernization and Salmonella **Performance Standards: Should Pork be Treated** the Same as Poultry? Room 18-19

Organizers: Alex Bruner, Brooke Schwartz,

Morgan Wallace

Convenor: Brooke Schwartz

10:30 Panelists:

MARTIN APPELT, Canadian Food Inspection Agency, Ottawa, ON, Canada

MICHAEL BRADLEY, Smithfield, Clinton, NC, USA

KATIEROSE MCCULLOUGH, North American Meat Institute, Washington, D.C., USA

DEIRDRE SCHLUNEGGER, STOP Foodborne Illness, Chicago, IL, USA

WILLIAM SHAW, U.S. Department of Agriculture-FSIS-OPPD, Washington, D.C., USA

- 12:00 Lunch Available in East Hall
- **T9 Technical Session 9 – Food Processing Technologies** Room 15

Convenor: Joshua Gurtler

- T9-01 Spores under High-pressure High-temperature **Processing Conditions** Brigitte Cadieux, Hamed Vatankhah, LAWRENCE GOODRIDGE, John W. Austin, Hosahalli S. Ramaswamy, McGill University, Ste-Anne-de-Bellevue, QC, Canada
- T9-02 High-pressure Processing and Cultures: The Right Combination to Produce Safe Semi-dried Italian Fermented Sausages without Taste Compromise Elena Brugnoli, Jenny Triplett, VERONIQUE ZULIANI, CHR HANSEN, Arpajon, France

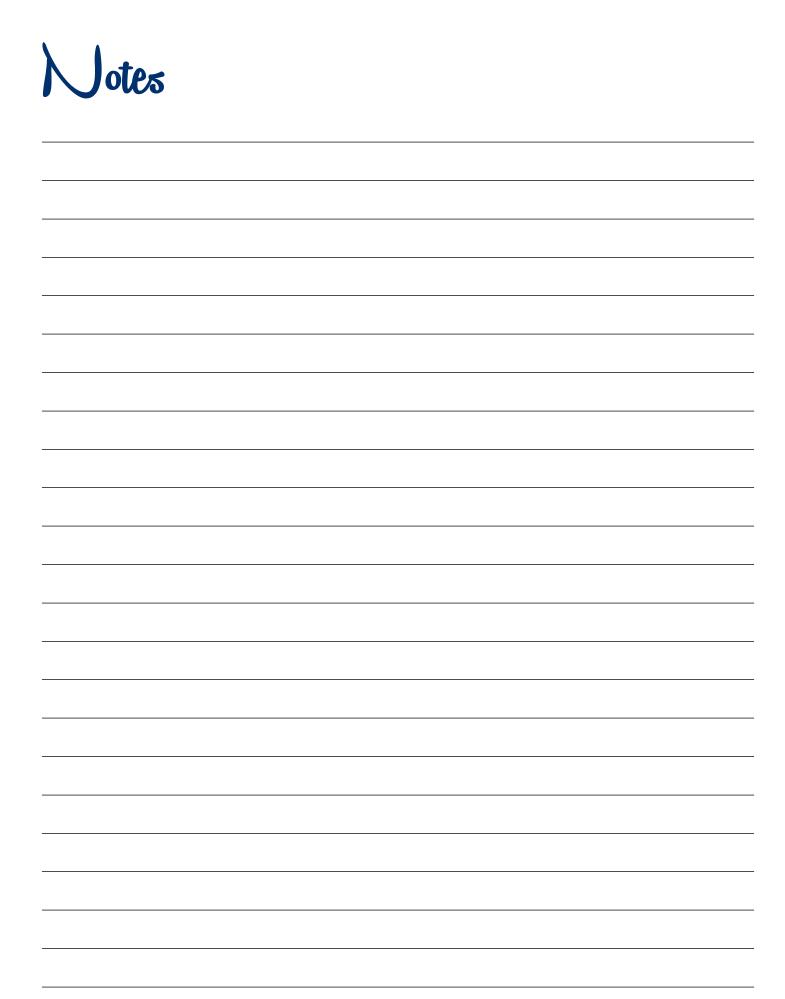
- T9-03 Effect of Pressure, Spoilage Microbiota, and Antimicrobials on Survival and Post-pressure Growth of Listeria monocytogenes on Ham JANUANA TEIXEIRA. Lvnn McMullen. Michael Gänzle. University of Alberta, Edmonton, AB, Canada
- Quality and Safety Evaluation of Striped Catfish Processing Byproducts in Vietnam NGUYEN. V. NGUYEN, Thao. T.H. Nguyen, Trung. D. Le, Men. T. Dinh, Research Center for Aquafeed Nutrition and Fishery Post harvest Technology, Ho Chi Minh, Vietnam
- T9-05 Efficacy of a High-intensity Preconditioner for Reducing Enterococcus faecium Populations as a Nonpathogenic Salmonella Surrogate in Kibble-style Pet Food NICHOLAS SEVART, Tiya Zhou, Sajid Alavi, Charles Stark, Randall Phebus, Kansas State University, Manhattan, KS, USA
- Break Refreshments Available in the Poster Session 10:00 Area
- T9-06 Determination of Acrylamide in Fried Potato Chips and the Impact of Various Treatments on Acrylamide Formation during Frying ASAD AMJAD, Muhammad Nasir, Frasat Rizwan, Mateen Abbas, Muhammad Shahbaz, Abdul Mugeet Khan, Umar Bacha, University of Veterinary & Animal Sciences, Lahore, Pakistan
- T9-07 Design of a Low Concentration Sodium Nitrite Meat Product by Including Ullucus tuberosum from Ventaquemada, Boyacá, Colombia LAURA CHAVES, Pontificia Universidad Javeriana, Bogotá, Colombia
- T9-08 Inactivation of Pathogenic Bacteria in Ice Using an Ultra Violet C Light-emitting Diode SUGURU MURASHITA, Shuso Kawamura, Shigenobu Koseki, Hokkaido University, Sapporo, Japan
- T9-09 Effect of Gaseous Ozone on Foodborne Pathogens and Their Surrogates on Fresh and Frozen Strawberries ZIJIN ZHOU, Frédérique Cantergiani, Frank Devlieghere, Sophie Zuber, Mieke Uyttendaele, Ghent University, Ghent, Belgium
- T9-10 Thermal Process for Inactivating Listeria monocytogenes on Surfaces of Whole Fresh Cantaloupes BASSAM ANNOUS, Angela Burke, U.S. Department of Agriculture-ARS-ERRC, Wyndmoor, PA, USA
- Inactivation of Salmonella in Corn Flour by Radio T9-11 Frequency Heating and the Effect of Cold Shock SAMET OZTURK, Fanbin Kong, Rakesh K. Singh, Juming Tang, Shuxiang Liu, University of Georgia, Athens, GA, USA
- T9-12 Inactivation of Listeria monocytogenes on the Surface of Smoked Salmon by Riboflavin-based, 460nm Light **Emitting Diode Illumination** Min-Jeong Kim, Lianto Dian Kartikasari, HYUN-GYUN YUK, Korea National University of Transportation, Chungju-si, South Korea
- 12:00 Lunch Available in East Hall

T10 Technical Session 10 - Risk Modelling Room 16

Convenor: Arie Havelaar

- T10-01 A Quantitative Risk Model to Assess Post-harvest Parameters That Impact the Levels of Salmonella on JAVAD BAROUEI, Donald W. Schaffner, Linda J. Harris, University of California-Davis, Davis, CA, USA
- T10-02 Farm-to-Fork Quantitative Microbial Risk Assessment for Norovirus on Frozen Berries ROBYN MIRANDA, Donald W. Schaffner, Rutgers University, New Brunswick, NJ, USA
- T10-03 A Farm-to-Fork Exposure Model Predicting Alternaria Mycotoxin Exposure from Derived Tomato Products Evaluating Impact of Climate Change and Processing Conditions LIESBETH JACXSENS, Bruno De Meulenaer, Frank Devlieghere, Ghent University, Ghent, Belgium
- T10-04 Evaluating the Relative Impact of Swine Deep Tissue Lymph Nodes on Human Salmonellosis Due to Consumption of Ground Pork Based on Quantitative Simulation Modeling YANGJUNNA ZHANG, Annette O'Connor, Chong Wang, James Dickson, Bing Wang, University of Nebraska-Lincoln, Lincoln, NE, USA
- T10-05 Prioritizing Pig Farms in the Netherlands to Reduce the Foodborne Disease Burden of Toxoplasma gondii MARTIJN BOUWKNEGT, Derk Oorburg, Bert Urlings, Vion, Boxtel, Netherlands
- T10-06 Developing a Risk Management Framework to Improve Public Health Outcomes by Enumerating Salmonella in **Ground Turkey Products** FERNANDO SAMPEDRO. Scott Wells. Jeff Bender. Craig Hedberg, University of Minnesota, St. Paul, MN, **USA**
- T10-07 Farm-to-Fork Risk Assessment of Listeria monocytogenes in Cold-smoked Salmon in Scotland STOYKA CHIPCHAKOVA, Francisco Perez-Reche, Kenneth Forbes, Ovidiu Rotariu, David Watts, Norval Strachan, University of Aberdeen, Aberdeen, United Kinadom
- 10:00 Break Refreshments Available in the Poster Session Area

- T10-08 Assessment of Public Health Risk Associated with Formalin Exposure in Fish in Southern Bangladesh Md. Sazedul Hogue, LIESBETH JACXSENS, Md. Boktheir Hossain, SM Oasiqul Azad, AKM Nowsad Alam, Bruno De Meulenaer, Carl Lachat, Md. Shahin Alom, Patuakhali Science and Technology University, Patuakhali, Bangladesh
- T10-09 Performance Assessment of the Canadian Food Inspection Agency Establishment-based Risk Assessment Model Cecile Ferrouillet, Manon Racicot, Alexandre Leroux, Mathieu Cormier, ROMINA ZANABRIA, Julie Arsenault, Ann Letellier, Anna Mackay, Ashwani Tiwari, Solomon Aklilu, Mansel Griffiths, Richard Holley, Tom Gill, Sylvain Charlebois, Sylvain Quessy, Canadian Food Inspection Agency, Guelph, ON, Canada
- T10-10 Bayesian Approach to the Evaluation of the Potential Impact of Climatic Change on Hepatocellular Carcinoma Risk Attributable to Chronic Aflatoxins Exposure through Food PATRICK NJAGE, Joseph Wambui, University of Nairobi, Nairobi, Kenya
- T10-11 Development of a Probability Model to Describe the Variability in the Time to Inactivation of Salmonella enterica KENTO KOYAMA, Hidekazu Hokunan, Mayumi Hasegawa, Shuso Kawamura, Shigenobu Koseki, Hokkaido University, Sapporo, Japan
- T10-12 Estimating Risk Attributed to Food-handling Behaviors in Retail and Households IOANA (JULIA) MARASTEANU, Girvin Liggans, Jessica Otto, Angela Lasher, U.S. Food and Drug Administration, Silver Spring, MD, USA
- 12:00 Lunch Available in East Hall



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WEDNESDAY AFTERNOON **JULY 12**

Posters will be on display 9:00 a.m. - 3:00 p.m. (See details beginning on page 91)

S67 Preventive Controls Other Than CCP: Choosing, Verifying, and Validating

Ballroom A

Organizers: Balasubrahmanyam Kottapalli, Loralyn Ledenbach Convenors: Balasubrahmanyam Kottapalli, Loralyn Ledenbach

- 1:30 Using Decision Trees to Determine Whether a Preventive Control is a CCP, OPRP, or PRP LORALYN LEDENBACH, Kraft Heinz Company, Glenview. IL. USA
- 2:00 Practical Examples and Considerations for Controls Other Than CCP BALASUBRAHMANYAM KOTTAPALLI, Conagra Brands, Omaha, NE, USA
- 2:30 Verification and Validation of Controls Other Than CCP RICHARD BROUILLETTE. Commercial Food Sanitation. South Burlington, VT, USA
- 3:00 Regulatory Implications MAILE HERMEIDA, Hogan Lovells US LLP, Washington, D.C., USA
- 3:30 Refreshments Available Outside of Ballroom A
- **S68** The National Antimicrobial-resistance Monitoring **System: Twenty Years of Vigilance** Ballroom D

Organizer: Patrick McDermott Convenors: Cindy Friedman, Patrick McDermott

- 1:30 The National Antimicrobial-resistance Monitoring System: Two Decades of Vigilance PATRICK MCDERMOTT, U.S. Food and Drug Administration, Laurel, MD, USA
- Antimicrobial Resistance in Human Enteric 2:00 Pathogens: Twenty Years of NARMS at CDC CINDY FRIEDMAN, Centers for Disease Control and Prevention, Atlanta, GA, USA
- 2:30 Monitoring Antimicrobial Resistance in Retail Meats: NARMS at the FDA SHAOHUA ZHAO, U.S. Food and Drug Administration, Laurel, MD, USA
- NARMS at the USDA: Monitoring Antimicrobial 3:00 Resistance in Food Animals at Slaughter and Processing UDAY DESSAI, U.S. Department of Agriculture-FSIS, Washington, D.C., USA
- Refreshments Available Outside of Ballroom A 3:30

S69 Empowering Food Laws in Emerging Economies Room 10-11

> Organizers: Atef Idriss, Emefa Monu Convenor: Emefa Monu Sponsored by the IAFP Foundation

- 1:30 The 2010 Food Safety Law in Vietnam: Is It Working? GERALD MOY, Food Safety Consultants International, Geneva, Switzerland
- Lebanon's Food Safety Authority and Sectarian Politics 2:00 ATEF IDRISS, MEFOSA, Beirut, Lebanon
- The Harmonization of Food Regulation in Ghana: 2:30 Progress and Future Steps MARIA LOVELACE-JOHNSON, Food and Drug Authority, Accra, Ghana
- 3:00 Lessons Learned from CODEX Alimentarius: An Outsider's Perspective VINCENT HEGARTY, Michigan State University, Dearborn, MI, USA
- Refreshments Available Outside of Ballroom A 3:30
- **S70** Microbiological Safety of Unpasteurized Fruit and Vegetable Juices Sold in Juice Bars and Small Retail **Outlets**

Room 12

Organizers: Aubrey Mendonca, Armitra Jackson-**Davis**

Convenor: Armitra Jackson-Davis Sponsored by the IAFP Foundation

- 1:30 Trends in Production of Raw Juice Blends: A Pathogen Control Perspective ARMITRA JACKSON-DAVIS, Alabama A&M University, Madison, AL, USA
- 2:00 Raw Juice Characteristics: Influence on Pathogen Survival AUBREY MENDONCA, Iowa State University, Ames, IA, USA
- 2:30 Microbiological Safety and Regulatory Considerations for Juice DAVID WHITMAN, CFSAN Office of Food Safety, San Diego, CA, USA
- 3:00 An International Perspective of Raw Juice LAWRENCE GOODRIDGE, McGill University, Montreal, QC, Canada
- 3:30 Refreshments Available Outside of Ballroom A
- Advancing Food Safety Internationally through the **S71** Use of Innovative Technologies: Food Irradiation Room 13-14

Organizers: Christine Bruhn, Yaohua Feng, **Anthony Flood** Convenors: Christine Bruhn, Anthony Flood

1:30 Overview of Foodborne Illness with a Focus on Where Innovations, Like Irradiation, Could Reduce Foodborne

> ROBERT TAUXE, Centers for Disease Control and Prevention, Atlanta, GA, USA

- 2:00 Health Canada's Review and Proposal to Permit Irradiated Ground Beef in the Marketplace MARTIN DUPLESSIS, Bureau of Microbial Hazards, Food Directorate, Health Canada, Ottawa, ON, Canada
- 2:30 Food Industry Motivators, Barriers, and Uses of Irradiation Today RONALD EUSTICE, Food Irradiation Newsletter, Tucson, AZ, USA
- 3:00 Messages That Work in the Marketplace YAOHUA (BETTY) FENG, University of California-Davis, Davis, CA, USA
- Social Responsibility's Influence over Food Safety **S72** and Quality

Room 18-19

Organizer and Convenor: Wendy White

- 1:30 Animal Welfare Systems and Their Impact on Quality RUTH WOIWODE, Food Safety Net Services, San Antonio, TX, USA
- Vertical Sourcing of Spices in Developing Countries 2:00 LARRY LICHTER, McCormick, Baltimore, MD, USA
- 2:30 The Validity of Shelf-life Dates and Their Contribution to Food Waste BOBBY KRISHNA, Dubai Municipality, Dubai, United **Arab Emirates**
- 3:00 Pros and Cons of Dry vs. Wet Approaches to Cleaning and Sanitation: Which is Better? JEFFREY KORNACKI, Kornacki Microbiology Solutions. Inc., Madison, WI, USA
- Refreshments Available Outside of Ballroom A 3:30
- **S73 Toward Risk-based Microbial Standards for Irrigation** Water

Room 20-21

Organizer: Elisabetta Lambertini Convenors: Bassam Annous, Katherine Woodward Sponsored by the IAFP Foundation

- 1:30 Assessment of the Microbial Quality of Irrigation Waters in the Southwest, United States KELLY BRIGHT, University of Arizona, Tucson, AZ, USA
- 2:00 A Risk-based Approach to Assess the Role of Microbial Irrigation Water Quality in Pre-harvest Produce Contamination ELISABETTA LAMBERTINI, RTI International, Rockville, MD, USA
- 2:30 Implementing Risk-based Water Source Monitoring and Intervention Practices: Advantages and Obstacles WILL DANIELS, Will Daniels Consulting Group, Carmel Valley, CA, USA
- 3:00 A Regulatory Perspective on Microbial Risk Management for Irrigation Water KRUTI RAVALIYA, U.S. Food and Drug Administration, College Park, MD, USA
- 3:30 Refreshments Available Outside of Ballroom A

S74 Root Cause Analysis

Room 22-23

Organizers: Judy Greig, John Guzewich, Ewen Todd Convenors: John Guzewich, Ewen Todd

- History of Root Cause Analysis 1:30 KARIN HOELZER, The Pew Charitable Trusts, Washington, D.C., USA
- 2:00 Root Cause Analysis and the National Environmental Assessment Reporting System LAURA BROWN, Centers for Disease Control and Prevention, Atlanta, GA, USA
- 2:30 Root Cause Analysis in the Food Industry TIMOTHY JACKSON, Nestle USA, North America, Glendale, CA, USA
- 3:00 Use of Root Cause Analysis by Government Regulatory JENNY SCOTT, U.S. Food and Drug Administration-CFSAN, College Park, MD, USA
- Refreshments Available Outside of Ballroom A 3:30
- T11 Technical Session 11 - Meat, Poultry and Eggs, and Epidemiology

Room 15

Convenors: Elna Buys, Dane Bernard

- T11-01 Effect of Moisture, pH, and Salt on Pathogen Lethality and Stabilization in Ham with Extended Come-Up and **Extended Cooling Profiles** MAX GOLDEN, Amanda Skarlupka, Katie Osterbauer, Jeffrey Sindelar, Kathleen Glass, University of Wisconsin-Madison, Madison, WI, USA
- T11-02 Tuning the Bloodhound® VOC Analyzer to Detect Campylobacter during Broiler Poultry Production LYNN MCINTYRE, Tim Gibson, Harper Adams University, Newport, United Kingdom
- T11-03 Antimicrobial Neutralization Ability of Buffered Peptone Water Compared to Neutralizing Buffered Peptone Water on Salmonella-inoculated Broiler Carcasses JENNIFER VUIA-RISER, Christine Alvarado, Christopher Kerth, Matt Taylor, Texas A&M University, College Station, TX, USA
- T11-04 Prevalence of Salmonella in Deep Tissue Lymph Nodes of Pork TINEKE JONES, Cara Service, Scott Hrycauk, Agriculture and Agri-Food Canada, Lacombe, AB, Canada
- T11-05 Evaluation of Transfer Rates of Salmonella from Singleuse Gloves and Sleeves to Dehydrated Pork Jerky JIAN WU, Monica Ponder, Thomas Saunders, Kendall Fogler, Kim Waterman, Virginia Tech, Blacksburg, VA, **USA**
- T11-06 Effect of Persistent and Transient Generic Escherichia coli and Salmonella spp. Recovered from a Beef Packing Plant on Biofilm Formation of Escherichia coli O157:H7 Jeyachchandran Visvalingam, XIANQIN YANG, Agriculture and Agri-Food Canada, Lacombe, AB, Canada

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- T11-07 Changing United States Population Demographics: What Does This Mean for Listeriosis Incidence and Exposure? AURELIE POHL, Regis Pouillot, Jane Van Doren, U.S. Food and Drug Administration-CFSAN, College Park, MD, USA
- T11-08 Prevalence and Antibiotic Resistance of Escherichia coli and Enterococcus spp. in Urban Agriculture LIYANAGE NIRASHA PERERA, Abdullah Ibn Mafiz, Yifan Zhang, Wayne State University, Detroit, MI, USA
- 3:30 Refreshments Available Outside of Ballroom A
- T12 Technical Session 12 - Modeling and Risk **Assessment and Retail and Food Service Safety** Room 16

Convenors: Lenny Ogomo, Fatemeh Ataei

- T12-01 Microbiological Safety of Chicken Sold in Flow Pack Wrappers THOMAS OSCAR, U.S. Department of Agriculture-ARS, Princess Anne, MD, USA
- T12-02 Using a Quantitative Risk Assessment on Norovirus Transmission in Food Establishments to Improve and Prioritize the Implementation of Control Measures GIRVIN LIGGANS, Wendy Fanaselle, Steven Duret, Efstathia Papafragkou, Regis Pouillot, Laurie Williams, Jane Van Doren, U.S. Food and Drug Administration, College Park, MD, USA
- T12-03 Modeling for Predicting the Growth of Salmonella in Chicken Fillets under Different Temperatures HAIYING PANG, Wen Wang, Xingning Xiao, Jianming Zhang, Ming Liao, Yanbin Li, Zhejiang University, College of Biosystems Engineering and Food Science, Hangzhou, China
- T12-04 Growth of Salmonella Enteritidis in Liquid Egg Whites during Refrigerated Storage and Temperature Abuse: A One-step Dynamic Analysis LIHAN HUANG, U.S. Department of Agriculture-ARS, Wyndmoor, PA, USA
- T12-05 Evaluating a Demonstration-based Training Model for Educating Environmental Health Specialists on Validation and Verification of HACCP Plans VERONICA BRYANT, Natalie Seymour, Katrina Levine, Benjamin Chapman, NC Dept of Health & Human Services, Raleigh, NC, USA

- T12-06 Analysis of Certified Food Protection Manager Examination Results after a New Training Approach NATALIE SEYMOUR, Benjamin Chapman, North Carolina State University, Raleigh, NC, USA
- T12-07 Evaluation of Grocery Store Food Safety Audits for Patterns in Handwashing and Temperature Compliance Natalie Seymour, THOMAS FORD, Eric Laber, Joyce Cahoon, Benjamin Chapman, Ecolab Inc., Greensboro, NC, USA
- T12-08 Food Safety Knowledge and Practices and Consumers' Willingness to Pay for Fresh-cut Produce HEYAO YU, Jack Neal, Sujata A. Sirsat, University of Houston, Houston, TX, USA
- Refreshments Available Outside of Ballroom A 3:30

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

JOHN H. SILLIKER LECTURE, Ballroom A

Food Allergies: A Public Health Dilemma How Did We Get Here? Where are We Going?

Steve L. Taylor, Food Allergy Research & Resource Program, Department of Food Science & Technology, University of Nebraska

EVENING OPTIONS

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

Tampa Convention Center Ballroom Fover

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

IAFP Awards Banquet

Tampa Convention Center Ballroom

Check the Program Addendum for changes to the Program.

WEDNESDAY, JULY 9 **CLOSING SESSION** 4:00 PM - 4:45 PM

Food Allergies: A Public Health Dilemma – **How Did We Get Here? Where are We Going?**



Steve L. Taylor University of Nebraska Lincoln, Nebraska

Dr. Steve L. Taylor, Ph.D., is a Professor in the Department of Food Science and Technology, and Founder and Co-Director of the Food Allergy Research and Resource Program (FARRP) at the University of Nebraska – Lincoln (UNL).

Dr. Taylor initiated his professional interest in food allergies and sensitivities in 1980. His primary research interests involve the development of methods for the detection of residues of allergenic foods; the determination of the minimal eliciting doses for specific allergenic foods and their use in quantitative risk assessment; the assessment of the allergenicity of ingredients derived from allergenic sources; and the assessment of the allergenicity of foods produced through agricultural biotechnology. Dr. Taylor is heavily involved in outreach to the food industry on food allergies and sensitivities and has helped countless companies on a wide range of allergen-related topics.

Prior to his current position, Dr. Taylor served as Head of the Department of Food Science & Technology at UNL for 17 years. Before joining the university, he was an Associate Professor and Assistant Professor in the Food Research Institute at the University of Wisconsin – Madison for nine years. Throughout his academic career, he has mentored approximately 30 graduate students, several postdoctoral students, and numerous technicians.

An IAFP Member since 1988, Dr. Taylor is a member of the Food Chemical Hazards and Food Allergy Professional Development Group (PDG). He is also a member and Fellow of the Institute of Food Technologists, as well as a member of the American Academy of Allergy, Asthma & Immunology; the American Chemical Society; the European Academy of Allergology & Clinical Immunology; and the AOAC International. In addition, Dr. Taylor has served in a variety of roles with two dozen other professional organizations and has been recognized with more than a dozen awards and honors from various establishments.

Dr. Taylor received his B.S. and M.S. in Food Science and Technology from Oregon State University in Corvallis, Oregon, and his Ph.D. in Biochemistry, along with the National Institute of Environmental Health Sciences (NIEHS) Postdoctoral Fellow in Environmental Toxicology Nutrition, from the University of California – Davis. Dr. Taylor is the author/ co-author of nearly 400 publications.

John H. Silliker Lecture Abstract

Food Allergies: A Public Health Dilemma – How Did We Get Here? Where are We Going?

Steve L. Taylor

Professor & Co-Director Food Allergy Research & Resource Program Department of Food Science & Technology University of Nebraska Lincoln, Nebraska

Food allergies have been described in medical literature for over 100 years. But the first 75 years of that history were fairly quiescent. Beginning in about 1990, food allergies began to emerge as an important public health issue. The prevalence of food allergies began to rise and rise dramatically, especially among infants and young children. Food allergies began to be recognized as a potentially severe, life-threatening condition. And, the potency of certain foods as allergens — "it only takes one bite" — became known. As the awareness and seriousness of food allergies emerged, the food industry struggled because the most commonly allergenic foods and especially milk, egg, soy and wheat were almost ubiquitous in food processing facilities. The industry had no tools or ability to assess the risk. The public health authorities similarly lacked tools and knowledge but were obliged to take a conservative approach to protect food-allergic consumers.

In the intervening 25 years, enormous progress in our understanding of food allergies has been made. We are beginning to understand the reasons for the increasing prevalence of food allergies. The path toward prevention of the development of food allergies among infants and young children seems clear. While a cure for food allergies still seems elusive, clinicians are investigating immunotherapy strategies that promise to curtail the potency and severity of food allergies. On the public health side, improved labeling regulations have been implemented in the U.S. and several other countries; packaged foods are safer for those with food allergies than they have ever been. The Food Safety Modernization Act identifies food allergens as a recognized public health hazard and mandates the development of preventive allergen controls. The industry now has the analytical tools needed to identify allergen hazards and assess the effectiveness of allergen control approaches. Quantitative risk assessment is emerging as a decision-making approach to guide labeling and industrial allergen management.

We may not put this public health issue completely behind us over the next 25 years, but I do think that we will lessen the public health impact of food allergies considerably.





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MONDAY, JULY 10 ● 10:00 a.m. – 6:00 p.m.

Tampa Convention Center, Exhibit Hall

Poster Session 1

Viruses and Parasites
Beverages and Acid/Acidified Foods
Pre-harvest Food Safety
General Microbiology
Food Defense
Food Law and Regulation
Food Safety Systems
Food Processing Technologies
Modeling and Risk Assessment
Sanitation and Hygiene
Antimicrobials

P1-01 through P1-111 – Authors present 10:00 a.m. – 11:30 a.m. and 5:00 p.m. – 6:00 p.m. P1-112 and above – Authors present 2:00 p.m. – 3:30 p.m. and 5:00 p.m. – 6:00 p.m.

TUESDAY, JULY 11 • 10:00 a.m. - 6:00 p.m.

Tampa Convention Center, Exhibit Hall

Poster Session 2

Food Chemical Hazards and Food Allergens
Food Toxicology
Meat, Poultry and Eggs
Epidemiology
Retail and Food Service Safety
Communication Outreach and Education
Molecular Analytics, Genomics and Microbiome
Laboratory and Detection Methods
Dairy

P2-01 through P2-119 – Authors present 10:00 a.m. – 11:30 a.m. and 5:00 p.m. – 6:00 p.m. P2-120 and above – Authors present 2:00 p.m. – 3:30 p.m. and 5:00 p.m. – 6:00 p.m

WEDNESDAY, JULY 12 • 9:00 a.m. - 3:00 p.m.

Tampa Convention Center, East Hall

Poster Session 3

Low-water Activity Foods
Packaging
Produce
Microbial Food Spoilage
Antimicrobials
Laboratory and Detection Methods
Water

P3-01 through P3-109 – Authors present 9:00 a.m. – 11:00 a.m. P3-110 and above – Authors present 1:00 p.m. – 3:00 p.m.



MONDAY POSTERS 10:00 AM - 6:00 PM

Viruses and Parasites Beverages and Acid/Acidified Foods Preharvest Food Safety General Microbiology Food Defense Food Law and Regulation **Food Safety Systems Food Processing Technologies Modelling and Risk Assessment** Sanitation and Hygiene **Antimicrobials**

Tampa Convention Center. Exhibit Hall

P1-01 through P1-111 – Authors present 10:00 a.m. - 11:30 a.m. and 5:00 p.m. - 6:00 p.m.

P1-112 and above – Authors present 2:00 p.m. - 3:30 p.m. and 5:00 p.m. - 6:00 p.m.

Viruses and Parasites

- P1-01 **Detecting Thermal Inactivation of Human Norovirus** on Spinach Using Propidium or Ethidium Monoazide Combined with Real-time Quantitative Reverse Transcription-polymerase Chain Reaction — MYEONG-IN JEONG, Shin Young Park, Seh Eun Kim, Rui Meiling, Heedae Park, Sang-Do Ha, Advanced Food Safety Research Group, Brain Korea 21 Plus, Chung-Ang University, Ansung, South Korea
- P1-02 Withdrawn
- P1-03 The Effects of Electron Beam Irradiation on the Inactivation of Murine Norovirus-1 in Abalone Meat and Viscera — SEH EUN KIM, Rui Mei-ling, Shin Young Park, Jiyeon Jo, Sang-Do Ha, Advanced Food Safety Research Group, Brain Korea 21 Plus, Chung-Ang University, Ansung, South Korea
- Efficacy of Hypochlorite Bleach Treatment on Different P1-04 Human Norovirus Genotypes — Flor Maes, Genesis Chavez Reyes, Giselle Almeida, KRISTEN GIBSON, University of Arkansas, Fayetteville, AR, USA
- P1-05 Thermal Stability of Viruses in Coculture with Enterobacter cloacae — KRISTEN GIBSON, Giselle Almeida, University of Arkansas, Favetteville, AR, USA
- P1-06 Rapid Association of Enteric Viruses with Whole Cell Bacteria in Suspension — Giselle Almeida, KRISTEN GIBSON, University of Arkansas, Fayetteville, AR, USA
- P1-07 Impact of Moisture Content and Temperature during Rice Storage on Levels of Mold and Aerobic Bacteria over Time — KRISTEN GIBSON, Giselle Almeida, Wenjun Deng, Bhagwati Prakash, Shweta Kumari, Terry Siebenmorgen, University of Arkansas, Fayetteville, AR, USA

- P1-08 Effect of Plant Proteases on Infectivity of Tulane Virus, Murine Norovirus, and Hepatitis A Virus — ADRIENNE SHEARER, Kalmia Kniel, University of Delaware, Newark, DE, USA
- P1-09 Persistence of Murine Norovirus in Vegetable Wash and Brackish Tidal Surface Waters — ADAM VANORE, Adrienne Shearer, Samantha Gartley, Kalmia Kniel, University of Delaware, Newark, DE, USA
- P1-10 Optimization of Virus Recovery from Non-porous Surfaces with Application in Environmental Persistence Studies — NICOLE TURNAGE, Kristen Gibson, University of Arkansas, Fayetteville, AR, USA
- P1-11 Survival of Norovirus Surrogates, Feline Calicivirus, and Murine Norovirus on Carpets — DAVID BUCKLEY, Angela Fraser, Guohui Huang, Xiuping Jiang, Clemson University, Clemson, SC, USA
- P1-12 Development and Evaluation of Nucleic Acid Aptamers to a Novel Target Protein for Treatment and Detection of Human Norovirus — MATTHEW MOORE, Jeremy Faircloth, Lee-Ann Jaykus, North Carolina State University, Raleigh, NC, USA
- P1-13 Detection of Human Norovirus in Fermented Food Using a Conductive Polymer Coated Magnetic Separation Combined with Quantitative Reverse Transcription-PCR - JEEHYOUNG HA, Sung Hyun Kim, Su-Ji Kim, Hee Min Lee, Hae-Won Lee, Ji-Hyun Lee, Jae Yong Lee, World Institute of Kimchi, Gwangju, South Korea
- P1-14 Norovirus Contamination on Environmental Surfaces during Norovirus Outbreaks on Cruise Ships, 2015 to 2016 — GEUN WOO PARK, Amy Freeland, Nikail Collins, Aimee Treffiletti, Jan Vinjé, Centers for Disease Control and Prevention, Atlanta, GA, USA
- P1-15 Evaluation of the Efficacy of Copper (100% Cu) and Brass (70% Cu) for Inactivation of a Human Norovirus Surrogate by Porcine Gastric Mucin Binding and Infectivity Assays — JORDAN RECKER, Xinhui Li, University of Wisconsin-La Crosse, La Crosse, WI, USA
- P1-16 Comparison of Filtration Methods to Recover Cyclosspora cayetanensis Oocysts from Agricultural Water Samples — ALEXANDRE DA SILVA, Mauricio Durigan, Helen Murphy, Amy Kahler, Mia Mattioli, Jannifer Murphy, Vincent Hill, U.S. Food and Drug Administration-CFSAN, Office of Applied Research and Safety Assessment, Laurel, MD, USA

- P1-17 Molecular Characterization of Cyclospora cayetanensis in Produce and Clinical Samples Using Whole Mitochondrial Genome Sequencing — HEDIYE CINAR, Gopal Gopinath, Seon Ju Choi, Jeongu Lee, Sonia Almeria, Mauricio Durigan, Helen Murphy, Alexandre da Silva, U.S. Food and Drug Administration-CFSAN, Office of Applied Research and Safety Assessment, Laurel, MD, USA
- P1-18 Comparison of Detection of Cyclospora cayetanensis in a Variety of Food Matrices — SONIA ALMERIA, Alexandre da Silva, Mauricio Durigan, Tyann Blessingnton, Helen Murphy, U.S. Food and Drug Administration-CFSAN, Office of Applied Research and Safety Assessment, Laurel, MD, USA
- Evaluation of 405 nm CW Visible Blue Light as a Means P1-19 of Inactivating Tulane Virus on Blueberries - DAVID KINGSLEY, Rafael Perez, Glenn Boyd, Joseph Sites, Brendan Niemira, U.S. Department of Agriculture, Dover, DE, USA
- P1-20 Occurrence of Hepatitis E Virus in Regionally Produced Meat Products and the Meat Processing Environment ARTUR RZEZUTKA, Iwona Kozyra, Ewelina Bigoraj, National Veterinary Research Institute, Pulawy, Poland
- P1-21 The Use of an Atmospheric Cold Plasma Jet to Inactivate Cryptosporidium parvum Oocysts on Cilantro - SHANI CRAIGHEAD, Adrienne Shearer, Sarah Hertrich, Glenn Boyd, Joseph Sites, Brendan Niemira, Kalmia Kniel, University of Delaware, Newark, DE, USA
- Development of PCR Amplification Methods Based P1-22 on Cyclospora cayetanensis Mitochondrial Genomes — MAURICIO DURIGAN, Gopal Gopinath, ChaeYoon Lee. Hedive Cinar. Sonia Almeria. Helen Murphy. Alexandre da Silva, U.S. Food and Drug Administration-CFSAN, Office of Applied Research and Safety Assessment, Laurel, MD, USA
- A New RT-Real-time PCR Method for Simultaneous P1-23 Detection of Hepatitis A Virus, Norovirus (GI, GII), and MS2 Phage in Food and Water Samples — Arnt Ebinger, OLAF DEGEN, Cordt Groenewald, Kornelia Berghof-Jager, BIOTECON Diagnostics, Potsdam, Germany
- P1-24 Survival of Hepatitis A Virus on Strawberries under Freeze Drying and Room Temperature Storage — YAN ZHANG, Runan Yan, Christina K. Carstens, David Laird, Y. Carol Shieh, Illinois Institute of Technology, Chicago, IL, USA
- P1-25 Differential Virus Recoveries from Contaminated Abiotic Surfaces — RUNAN YAN, Rutuja Khadye, Karl Reineke, Ashutosh Sharma, Timothy Duncan, Y. Carol Shieh, Illinois Institute of Technology, Chicago, IL, USA
- P1-26 Isolation and Characterization of Bacillus cereus Bacteriophages from Foods and Soil — HYEJIN OH, Dong Joo Seo, Su Been Jeon, Hyunkyung Park, Suntak Jeong, Hyang Sook Chun, Mihwa Oh, Changsun Choi, Chung-Ang University, Ansung-si, South Korea
- P1-27 Aqueous Extracts of the Underutilized Garcinia Fruit and Pulp Decrease Tulane Virus Infectivity — MANAS SAHOO, Doris D'Souza, University of Tennessee, Knoxville, TN, USA

- P1-28 Recovery Efficiency of Coccidian Parasites from Cilantro Depending on Sample Size and Elution Solution Volume - YNES R. ORTEGA, Maria Torres, University of Georgia, Griffin, GA, USA
- P1-29 Hepatitis A Virus in Scallops Implicated in a 2016 Outbreak — JACQUELINA WOODS, Rachel Rodriguez, Toni Morales, Gilberto Vaughan, Yulin Lin, Guo-Liang Xia, U.S. Food and Drug Administration, Dauphin Island, AL, USA
- P1-30 Organic Load Impacts the Virucidal Efficacy of Heat and Chlorine against Human Norovirus and Tulane Virus, a Cultivable Surrogate — NAIM MONTAZERI, Eric Moorman, Matthew Moore, Blanca Escudero-Abarca, Lee-Ann Jaykus, North Carolina State University, Raleigh, NC, USA

Beverages and Acid/Acidified Foods

- P1-31 Quantifying the Destruction of Salmonella spp. during a 24-hour Kombucha Brewing Process — CHRISTINE A. ROCK, Daniel Unruh, Sara Gragg, Kansas State University, Olathe, KS, USA
- P1-32 Influence of Sodium Chloride and Calcium Chloride on the Growth and Death of Pathogenic Escherichia coli and Lactic Acid Bacteria in Cucumber Brines - FRED BREIDT, Robert Price, Breanne Burgess, Dorothy Dupree, Elizabeth Andress, U.S. Dept. of Agriculture-ARS, Raleigh, NC, USA
- P1-33 Microbial Safety and Quality Evaluation of Ultraviolet Treated, Cold-pressed, Colored and Turbid, Fruit and Vegetable Beverages — JESSIE USAGA, Randy Worobo, Cornell University, Geneva, NY, USA

Preharvest Food Safety

- Investigation of the Prevalence and Distribution P1-34 of Salmonella in United States Feed Mills — GABRIELA MAGOSSI, Natalia Cernicchiaro, Steve Dritz, Terry Houser, Jason Woodworth, Cassandra Jones, Valentina Trinetta, Kansas State University, Food Science Institute, Manhattan, KS, USA
- P1-35 Influence of Amendment Type on Persistence of Salmonella Newport in Soil — JUNE TEICHMANN, University of Delaware, Newark, DE, USA
- P1-36 Remediation of Soil Contaminated by Salmonella enterica to Expedite Plant or Replant of Vegetables - MULATUA METAFERIA, University of Sydney, Sydney, Australia
- P1-37 Factors That Contribute to Salmonella Persistence in Field Soil Samples — CLAIRE MARIK, Shani Craighead, Samantha Gartley, Adam Vanore, Thais Ramos, Manan Sharma, Gordon Johnson, Kalmia Kniel, University of Delaware, Newark, DE, USA
- P1-38 The Impact of Heavy Rainfall on Salmonella Survival and Transport — DEBBIE LEE, Timothy Coolong, George Vellidis, Karen Levy, Emory University, Atlanta, GA, USA
- P1-39 Microbial Evaluation of Preprocessed and Postprocessed Tomatoes from Florida Packing Houses during 2013 to 2015 — Jaysankar De, Aswathy Sreedharan, ALAN GUTIERREZ, You Li, Jubair Mohammad, Keith Schneider, University of Florida, Gainesville, FL, USA

- P1-40 Assessment of Generic Listeria spp. and Listeria monocytogenes Occurrence in Apple and Stone Fruit Orchards — Ishani Sheth, Darina Kantsavenka, Hee jin Kwon, Dohee Kim, Jessica Palmer, Abby Gao, Anna Wooten, Kari Peter, Yi Chen, DUMITRU MACARISIN, U.S. Food and Drug Administration, College Park, MD, USA
- Isolation of Salmonella and Campylobacter Strains P1-41 from Superficial Irrigation Water, Soil, and Vegetables Samples from Small Agriculture Fields around the Capital of Chile — LISETTE LAPIERRE, Constanza Vergara, Patricio Retamal, Maria Cristina Martinez, Universidad de Chile, Santiago, Chile
- P1-42 Flies as Possible Vectors for Transfer of Shigatoxigenic — Stuart Gorman, VALERIE NETTLES, Dara Smith, David Paulsen, Rebecca Trout Fryxell, Annette Wszelaki, John Buchanan, Faith Critzer, University of Tennessee, Knoxville, TN, USA
- P1-43 Plant Growth-promoting *Pseudomonas* spp. Reduces the Persistence of Salmonella spp. on Spinach and Tomato Leaf Surfaces — CHIUN-KANG HSU, Shirley Micallef, University of Maryland, College Park, MD, USA
- P1-44 Effect of Postharvest Cooling on the Microbial Quality and Storage of Florida Peaches — Jaysankar De, BRUNA BERTOLDI, Alan Gutierrez, Jubair Mohammad, Steven Sargent, Keith Schneider, University of Florida, Gainesville, FL, USA
- P1-45 Comparison of Forced-air Cooling and Hydrocooling on the Microbial Quality Control of Florida Blueberries — JAYSANKAR DE, Aswathy Sreedharan, You Li, Alan Gutierrez, Steven Sargent, Keith Schneider, University of Florida, Gainesville, FL, USA
- P1-46 In Silico Evaluation of a Novel Iterative Bayesian Sampling Strategy for Efficient Detection of Pathogenic Bacteria in Preharvest Produce and Environments — AIXIA XU, Robert Buchanan, University of Maryland, College Park, MD, USA
- Survival of Listeria monocytogenes on the Surface P1-47 of Basil, Cilantro, Dill, and Parsley Plants Grown in a Greenhouse Environment — Cameron Bardsley, LAURA STRAWN. Rachel Pfuntner. Laura Truitt. Renee Boyer, Steve Rideout, Virginia Tech, Blacksburg, VA, USA
- P1-48 Investigation of Microbial Contamination Sources during Production of Radish Sprout — SE-RI KIM, Hyun-mi An, Bohyun Yun, Won-II Kim, Sanghyun Han, Hyun-Ju Kim, Byeong-Yong Park, Jae-Gee Ryu, National Institution of Agricultural Science, Rural Development Administration, Wanju, South Korea
- Investigation of Fecal Contamination Indicators and P1-49 Foodborne Pathogens for Irrigation Water Used in Napa Cabbage Cultivation — SE-RI KIM, Bohyun Yun, Hyun-mi An, Won-II Kim, Sanghyun Han, Hyun-Ju Kim, Byeong-Yong Park, Jae-Gee Ryu, National Institution of Agricultural Science, Rural Development Administration, Wanju, South Korea
- P1-50 Recovery of Salmonella Agona and Typhimurium on Sprouting Alfalfa after Seed Sanitation — YUE DAI, Pascal Delaguis, Carmen Wakeling, Siyun Wang, University of British Columbia, Vancouver, BC, Canada

- P1-51 Sunlight Exposure Reduces Viability in Salmonella enterica — GOVINDARAJ DEV KUMAR, Shirley Micallef, Dumitru Macarisin, University of Maryland, College Park, MD, USA
- P1-52 Metabolic Profiling of Non-O157:H7 Shiga Toxinproducing Escherichia coli Isolated from Spinach - GOVINDARAJ DEV KUMAR, Shirley Micallef, Peter Feng, University of Maryland, College Park, MD, USA
- P1-53 My Salmonella is Longer Than Yours: Filamentous Cell Phenotype in Response to Stress — GOVINDARAJ DEV KUMAR, Shirley Micallef, Dumitru Macarisin, University of Maryland, College Park, MD, USA

General Microbiology

- Isolation and Identification of Listeria spp., Staphy-P1-54 lococcus aureus, and Salmonella during Dry Aging - HYEMIN OH, Jiyoung Lee, Yohan Yoon, Sookmyung Women's University, Seoul, South Korea
- Inactivation of Norovirus during Smoked Salmon P1-55 Storage — HYEMIN OH, Yewon Lee, Hyun Jung Kim, Changsun Choi, Yohan Yoon, Sookmyung Women's University, Seoul, South Korea
- Microbiological Quality and Flavor Profile of P1-56 Alkaline Fermented Bambara Groundnut Made into a Dawadawa-type African Food Condiment Using Bacillus Species Starter Cultures — GABRIEL AKANNI, Henriette de Kock, Elna Buys, University of Pretoria, Pretoria, South Africa
- P1-57 Microbiological Map of Selected Caribbean Foods over the 11-year Period 2004 through 2014 — ZOE GORDON, Andre Gordon, James Kerr, Technological Solutions Limited, Kingston, Jamaica
- P1-58 Synergistic Effect of Heat and Elevated Hydrostatic Pressure for Inactivation of *Listeria monocytogenes* — ABIMBOLA ALLISON, Eleonora Troyanovskaya, Shahid Chowdhury, Aliyar Fouladkhah, Public Health Microbiology Laboratory, Tennessee State University, Nashville, TN, USA
- P1-59 Listeria Interspecies Competition during Selective Enrichment Compared Using Three Regulatory Methods - Kaitlin Cauchon, Anthony Hitchins, RONALD SMILEY, U.S. Food and Drug Administration/ORA/ Arkansas Regional Laboratory, Jefferson, AR, USA
- P1-60 Biofilm Formation and Sanitizer Resistance of Listeria monocytogenes in Mono- and Mixed-species with Cultivable Indigenous Microorganisms in Fresh Salmon — XINYI PANG, Chun Hong Wong, Hyun-Jung Chung, Hyun-Gyun Yuk, National University of Singapore, Singapore, Singapore
- P1-61 Cold Shock Domain Family Proteins Contribute to Virulence, Cellular Aggregation, and Flagella-based Motility in Listeria monocytogenes — Athmanya Eshwar, Roger Stephan, TAURAI TASARA, University of Zurich, Zurich, Switzerland
- Diversity of *Listeria monocytogenes* Isolated from P1-62 Clinical Cases and Food in Chile — Viviana Toledo, Henk Den Bakker, Marc Allard, Martin Wiedmann, Helia Bello, Gerardo Gonzalez-Rocha, ANDREA MORENO SWITT, Universidad Andrés Bello, Santiago, Chile

- Extended Exposure to Low-temperature Stress Promotes P1-63 the Formation of Listeria monocytogenes Variants with Enhanced Cold, Acid, and Salt Tolerance — PATRICIA HINGSTON, Lisbeth Truelstrup Hansen, Siyun Wang, University of British Columbia, Vancouver, BC, Canada
- P1-64 Changes in Zones of Inhibition and Minimum Inhibitory Concentrations of Antibiotics in Listeria monocytogenes Strains after Exposure to Chlorineinduced Sublethal Oxidative Stress - Mohit Bansal, RAMAKRISHNA NANNAPANENI, Chander Shekhar Sharma, Mississippi State University, Mississippi State, MS, USA
- P1-65 Antimicrobial Hydrogel Composed of Whey Protein or Maillard Reaction Products to Control Foodborne Pathogens — SEJEONG KIM, Hyemin Oh, Yohan Yoon, Sookmyung Women's University, Seoul, South Korea
- P1-66 Comparison of Listeria Swabbing Methods Using Residual Bacterial Method — NICOLE FAMILIARI, Delia Calderon, Paul Meighan, Hygiena, Camarillo, CA, USA
- P1-67 A Shelf-life Estimation and Growth of Listeria monocytogenes on Thawed Catfish Stored at Refrigerated Temperature — Thao. T.H. Nguyen, VIJAY SINGH CHHETRI, Karuna Kharel, Achyut Adhikari, Louisiana State University AgCenter, Baton Rouge, LA, USA
- P1-68 Presence and Distribution of *Listeria monocytogenes* in South African Meat and Meat Products — ITUMELENG MATLE, Evelyn Madoroba, Khanyisile Mbatha, Agricultural Research Council - Bacteriology Division, Pretoria, South Africa
- P1-69 Hygienic Design Shortcomings of Batch Frozen Dessert Freezers: Potential for Survival of Listeria monocytogenes in Ice Cream Mix-based Soil -Aisha Inuwa, Ashley Lunt, Brett Andersen, Davin Marta, CHARLES CZUPRYNSKI, Scott Rankin, University of Wisconsin - Madison, Madison, WI, USA
- P1-70 Characterization of Vibrio parahaemolyticus and Vibrio vulnificus Recovered from Oysters during the Salinity Relaying Process — Sara Elmahdi, Sylvia Ossai, Ligia DaSilva, John Jacobs, Michael Jahncke, SALINA PARVEEN, University of Maryland Eastern Shore, Princess Anne, MD, USA
- P1-71 Virulence Assessment of Vibrio spp. in a Galleria mellonella Model — MIRA RAKIC MARTINEZ, Rohinee Paranipye, Christopher Grim, Atin Datta, U.S. Food and Drug Administration, Laurel, MD, USA
- Fitness of Vibrio parahaemolyticus in Seawaters at P1-72 Different Oyster Harvesting Temperatures — CHAO LIAO, Luxin Wang, Auburn University, Auburn, AL, USA
- Migration of Enterohemorrhagic Escherichia P1-73 coli Artificially Internalized into Vegetable Seeds to Different Sections of Sprouts/Seedlings during Germination — DA LIU, Ronald R. Walcott, Jinru Chen, Yue Cui, University of Georgia, Griffin, GA, USA
- P1-74 T4 Bacteriophage Insensitive Mutants of Escherichia coli Display Altered Antibiotic Resistance and Ability to Ferment Glucose — ZEYAN ZHONG, Anna Colavecchio, Lawrence Goodridge, McGill University, Ste-Anne-de-Bellevue, QC, Canada

- P1-75 Biofilm-forming Capacity and Resistance to Sanitizers of a Range of Escherichia coli O26 Pathotypes from Human Clinical Cases and Cattle in Australia — Salma Lajhar, Jeremy Brownlie, ROBERT BARLOW, CSIRO Agriculture & Food, Brisbane, Australia
- P1-76 The Lack of Toll-like Receptor 11 Expression in Mice Does Not Allow for Colonization by Shiga Toxinproducing Escherichia coli — LISA HARRISON, Prabha Kc, Monika Proszkowiec-Weglarz, Uma Babu, Andrew Do, Mohammad Alam, Kristina Williams, Kannan Balan, CFSAN, Laurel, MD, USA
- Effect of Adaptation to Sublethal Concentrations of P1-77 Acetic Acid and pH on Serovar- and Strain-dependent Acid Resistance of Salmonella spp. — ALKMINI GAVRIIL, Adamantia Papaioannou, Nefeli Lysimachou, Panagiotis Skandamis, Agricultural University of Athens, Athens, Greece
- P1-78 Evaluation of Selective and Nonselective Plating Media for Recovery of Salmonella Enteritidis PT 30, Salmonella Seftenberg 775W, and Salmonella Typhimurium DT 104 Colonies from Heat-treated Almonds — BUKOLA ONARINDE, Pauline Lovatt, Yunus Khatri, Gerrit Meerdink, University of Lincoln, Lincoln, United Kingdom
- P1-79 Metabolomic Analysis of Electron Beam Inactivated Salmonella Typhimurium — SOHINI BHATIA, Suresh D. Pillai, Texas A&M University, College Station, TX, USA
- P1-80 Survival and Heat Resistance of Salmonella during Simulated Commercial Manufacturing of Tortillas - MINTO MICHAEL, Daniel Vega, Keyla Lopez, Jennifer Acuff, Lakshmikantha Channaiah, George Milliken, Harshavardhan Thippareddi, Randall Phebus, Kansas State University, Manhattan, KS, USA
- P1-81 Comparison of Heat Resistance of Salmonella during Simulated Commercial Baking of Hard and Soft Cookies — MINTO MICHAEL, Jennifer Acuff, Keyla Lopez, Lakshmikantha Channaiah, George Milliken, Harshavardhan Thippareddi, Randall Phebus, Kansas State University, Manhattan, KS, USA
- P1-82 Validation of a Frying Process to Control Salmonella in Donuts — MINTO MICHAEL, Jennifer Acuff, Keyla Lopez, Daniel Vega, George Milliken, Harshavardhan Thippareddi, Randall Phebus, Lakshmikantha Channaiah, Kansas State University, Manhattan, KS,
- P1-83 Reduction of Salmonella spp. and Shiga Toxin-producing Escherichia coli on Alfalfa Seeds and Sprouts Using an Ozone Generating System — ZAHRA MOHAMMAD, Ahmad Kalbasi, Alejandro Castillo, Texas A&M University, College Station, TX, USA
- P1-84 Concentration-dependent Neutralization of Antimicrobials Used in Poultry Processing Allowing Survival of Campylobacter spp. — ZAHRA MOHAMMAD, Matt Taylor, Christine Alvarado, Texas A&M University, College Station, TX, USA
- P1-85 Comparison of Survival and Heat Resistance of Escherichia coli O121 and Salmonella in Muffins — Minto Michael, Jennifer Acuff, DANIEL VEGA, Keyla Lopez, George Milliken, Harshavardhan Thippareddi, Randall Phebus, Kansas State University, Manhattan, KS, USA

- P1-86 Efficacy of the InnovaPrep Concentrating Pipette for Concentrating Salmonella spp., Listeria spp., and Escherichia coli in Ground Beef and Leafy Greens for Rapid Detection — GIANNA PRATA, Patrick Marek, Tobyn Branck, Christina Crivello, Natick Soldier Research Development & Engineering Center, Natick, MA, USA
- Improved Recovery of Salmonella spp. and Crono-P1-87 bacter spp. in Dry Milk Powders Enriched in Brilliant Green Water Compared to Buffered Peptone Water - Philip Feldsine, Markus Jucker, Mandeep Kaur, Amy Immermann, ANDREW LIENAU, BioControl Systems, Bellevue, WA, USA
- Effect of Ultraviolet C Light on the Reduction of Asper-P1-88 gillus and Penicillium Species on Moist and Dry Surfaces - HASSAN GOURAMA, Penn State University, Reading, PA, USA
- P1-89 Microbiological Evaluation in Infant Formulas Powdered and Reconstituted at Home — ADRIANE NARUMI ONODERA ANDRADE, Eliezer Flavio Do Nascimento Andrade, Rosana Francisco Siqueira Dos Santos, Agueda Cleofe Marques Zaratin, Ana Valeria Ulhano Braga, Metrocamp College Devry Group, Campinas, Brazil
- Microbial Safety of Human Milk Purchased from Online P1-90 Markets — DONG JOO SEO, Hyunkyung Park, Suntak Jeong, Hanseam Shin, Changsun Choi, Chung-Ang University, Food & Nutrition, Anseong, Kyounggi, South Korea
- P1-91 Histamine Production by *Photobacterium* spp. — KRISTIN BJORNSDOTTIR-BUTLER, Paul V. Dunlap, Ronald A. Benner, Jr., FDA Gulf Coast Seafood Laboratory, Dauphin Island, AL, USA
- P1-92 **Evaluation of Composite Sterility Testing Procedures** for Ready-to-Eat Pudding Products — CHRISTOPHER SHOWALTER, Balasubrahmanyam Kottapalli, Kari Sweeney, Deann Akins-Lewenthal, Conagra Brands, Omaha, NE, USA
- P1-93 Persistence of Fecal Indicator Bacteria and Bacteroidales Universal Marker on Two Different Texture Surfaces — GILBERTO ORDAZ, Angel Merino, Santos Garcia, Norma Heredia, Universidad Autonoma de Nuevo Leon, San Nicolas, Mexico
- P1-94 Independent Evaluation of Prepared Gamma Irradiated Dehydrated Culture Media to Traditional Bulk Dehydrated Culture Media from Various Manufacturers — PATRICK BIRD, Tony Gonzalez, Joe Benzinger, Erin Crowley, James Agin, David Goins, Q Laboratories, Inc., Cincinnati, OH, USA
- P1-95 Molecular Characterization of Methicillin-resistant Staphylococcus aureus and the Discovery of Novel Spa-Types — SAEED KHAN, Kidon Sung, Jung-Whan Chon, Bernard Marasa, Mohamed Nawaz, U.S. Food and Drug Administration/NCTR, Jefferson, AR, USA

- P1-96 Effects of Coffee Mucilage Extracts on the Growth of Bacteria Associated with Disease, Food Deterioration, and the Human Gut — CAROLINA CHAVES, Maria Laura Arias, César Rodriguez, Patricia Esquivel, Universidad de Costa Rica, San Jose, Costa Rica
- P1-97 Isolation and Characterization of Lactobacillus parafarraginis KU495926 Inhibiting Multidrug-resistant Gram-negative Bacteria — RACHELLE ALLEN-MCFARLANE, Broderick Eribo, Howard University, Washington, D.C., USA
- P1-98 Shedding of Foodborne Pathogens by Slaughtered Reindeer in Northern Finland — CLAUDIO ZWEIFEL, Sauli Laaksonen, Lisa Fierz, Nicole Cernela, Maria Fredriksson-Ahomaa, Roger Stephan, University of Zurich, Zurich, Switzerland
- P1-99 Isolation and Characterization of Bacillus spp. as Potential Probiotics for Poultry — Alejandro Penaloza-Vazquez, LI MA, Brienna Mileson, Patricia Rayas-Duarte, National Institute for Microbial Forensics & Food and Agricultural Biosecurity, Stillwater, OK, USA
- P1-100 Salmonella is Unlikely to Develop Resistance to Cold Plasma Treatment Based on RNA Sequencing Analysis — LI MA, Chris Timmons, Kedar Pai, National Institute for Microbial Forensics & Food and Agricultural Biosecurity, Oklahoma State University, Stillwater, OK, USA
- P1-101 Bacterial Metabolites from Intra- and Inter-species Influencing Thermotolerance: The Case of Bacillus cereus and Geobacillus stearothermophilus — Mayra Gomez-Govea, Santos Garcia, NORMA HEREDIA, Universidad Autonoma de Nuevo Leon, San Nicolas, Mexico
- P1-102 Comparison of Thermal D-Values of Nonproteolytic Clostridium botulinum and Bacillus cereus Spores - TRAVIS MORRISSEY, Viviana Loeza, Eduardo Patazca, Lindsay Halik, N. Rukma Reddy, Guy Skinner, Kristin M. Schill, U.S. Food and Drug Administration, Bedford Park, IL, USA
- P1-103 Evaluation of Enzyme Effects and Characterization of Modes of Biofilm Formation in Bacillus cereus — EUN SEOB LIM, Joo-Sung Kim, Korea University of Science and Technology, Daejeon, South Korea
- P1-104 Passage of Campylobacter spp. Subtypes through 0.45 and 0.65 um Filters — MARK BERRANG, Richard Meinersmann, Nelson Cox, U.S. Department of Agriculture-ARS-USNPRC, Athens, GA, USA
- P1-105 Effect of Water Activity and Temperature on Growth and Ochratoxin A Production by Aspergillus fresenii and Aspergillus sulphureus on Niger Seeds - YUNG-CHEN HSU, Dawit Gizachew, W.T. Evert Ting, Purdue University Northwest, Hammond, IN, USA
- P1-106 Reducing the Thermal Resistance of Bacillus cereus Spores - ASWATHI SONI, Phil Bremer, Indrawati Oey, Patrick Silcock Silcock, University of Otago, Dunedin, New Zealand

P1-107 Effect of Temperature on Mycelia Growth and Aflatoxin B1 Production of Aspergillus flavus and Aspergillus parasiticus on Niger Seeds — JUAN FRANCISCO HERNANDEZ, Francisco Hernandez, Dawit Gizachew, W.T. Evert Ting, Purdue University Northwest, Hammond, IN, USA

Food Defense

P1-108 Monitoring of Illegally Added Compounds and Drugs in Foods: Prohibited Ingredients — JUNGEUN LEE, Woogin Cho, Soyoung Won, Inseon Kim, Jaehee Hyun, Kyeongwook Kim, Jaei Kim, Wooseong Kim, Center for Food & Drug Analysis, Busan Regional Korea Food & Drug Administration, Busan, South Korea

Food Law and Regulation

- P1-109 Revised EN ISO 22964: Evaluation of Granucult® and Chromocult® Culture Media for Pre-enrichment, Selective Enrichment, and Detection of Cronobacter spp. — Barbara Gerten, Michael Gampe, ANDREAS BUBERT, Lisa John, Merck KGaA, Darmstadt, Germany
- P1-110 Does Irradiation of Half Fraser Broth, in Pre-weighed Pouches for Listeria monocytogenes Enrichment, Impact Growth Promotion and Stability? — ANNE PRIGGE, Andreas Bubert, Regina Petrasch, Michael Bülte, University of Giessen, Giessen, Germany
- P1-111 FSMA Rules and EU Food Safety Regulations: Differences and Opportunities — CLAUDIO GALLOTTINI, Franco Rapetti, Sara Trombetti, ITA Corporation, Miami, FL, USA

Food Safety Systems

- P1-112 A Survey Study of the Food Safety Management Systems of Colombian Food Exporters to the United States of America — NAYRA ALVARINO-MOLINA, Deivis Lujan-Rhenals, Universidad Pontificia Bolivariana, Monteria, Colombia
- P1-113 An Overview of Food Safety Compliance and Technical Accreditation in the Welsh Food and Drink Manufacturing and Processing Industry — ELLEN W. EVANS, Leanne Ellis, Ann Marie Flinn, Jessica Lacey, Jamie Old, David Lloyd, Helen Taylor, ZERO2FIVE Food Industry Centre, Cardiff Metropolitan University, Cardiff, United Kingdom
- P1-114 Assessment of Video Observation to Evaluate Hand Hygiene Practices of Food Handlers in Food and Drink Manufacturing and Processing Businesses: A Feasibility Study — ELLEN W. EVANS, Elizabeth C. Redmond, ZERO2FIVE Food Industry Centre, Cardiff Metropolitan University, Cardiff, United Kingdom
- P1-115 Development and Validation of a Comprehensive Index to Evaluate Food Safety at the Household Level in India — S.G.D.N. LAKSHMI REDDI, SubbaRao M. Gavaravarapu, Naveen R. Kumar, Vishunuvardhana, Rao M. M, Sudershan R. Vemula, Food and Drug Toxicology Research Centre, National Institute of Nutrition (ICMR), Hyderabad, India

Food Processing Technologies

- P1-116 Application of a Novel Supercritical Carbon Dioxide (CO₂) Drying Process to Inactivate Foodborne Pathogens on Cilantro and Strawberry — Siméon Bourdoux, Stijn De Sutter, Sara Spilimbergo, Alessandro Zambon, Filippo Michelino, Mieke Uyttendaele, Frank Devlieghere, ANDREJA RAJKOVIC, Ghent University, Ghent, Belgium
- P1-117 Inactivation of Murine Norovirus and Bacteriophage MS2 on Strawberries and Blueberries by High Pressure Processing — MU YE, Yingyi Zhang, Catherine Rolfe, Alvin Lee, Illinois Institute of Technology/IFSH, Bedford Park, IL, USA
- P1-118 Inactivation of Escherichia coli, Listeria monocytogenes and Salmonella spp. on Strawberries by Pulsed Light — MU YE, Dandan Feng, Sophie Zuber, Alvin Lee, Institute for Food Safety and Health, Illinois Institute of Technology, Bedford Park, IL, USA
- P1-119 Heat Inactivation of Tulane Virus in Inoculated Spinach Contained in Vacuum Bags — Sukriti Ailavadi, Mark Morgan, DORIS D'SOUZA, University of Tennessee, Knoxville, TN, USA
- P1-120 Chlorine Dioxide Gas for the Inactivation of Human Norovirus Genogroup II on Formica Coupons — Purni Wickramasinghe, Mark Morgan, DORIS D'SOUZA, University of Tennessee, Knoxville, TN, USA
- P1-121 Decontamination of Whole Cantaloupe Using Chlorite and Acid in a Sequential Application — CHENG-AN HWANG, Lihan Huang, Vivian Chi-Hua Wu, U.S. Department of Agriculture-ARS-ERRC, Wyndmoor, PA, USA
- P1-122 Application of High-pressure Processing on Fresh and Frozen Strawberries and Blueberries to Inactivate Salmonella spp. and Enterococcus faecium — Mu Ye, Alvin Lee, Yingyi Zhang, Mengyi Huang, CATHERINE ROLFE, Illinois Institute of Technology/IFSH, Bedford Park, IL, USA
- P1-123 Surface Pasteurization of Post-harvest Raw Whole Onions to Eliminate Listeria Contamination Prior to Further Processing — MANISH ARYAL, Peter Muriana, Oklahoma State University, Stillwater, OK, USA
- P1-124 Kinetic Inactivation of Foodborn Pathogens and Model Viruses in Milk Using UV-C Irradiation — DANIELLE GUNTER-WARD, Ankit Patras, Manreet Bhullar, Agnes Kilanzo-Nthenge, Bharat Pokharel, Michael Sasges, Tennessee State University, Nashville, TN, USA
- P1-125 Study of Inactivation Effect of Cronobacter sakazakii on Nonfat Milk Powder — DONGJIE CHEN, University of Minnesota, St. Paul, MN, USA
- P1-126 Inactivation of Clostridium sporogenes Spores in Buffer and Coconut Water Using UV-C Irradiation — SUDHEER KUMAR YANNAM, Ankit Patras, Yvonne Myles, Michael Sasges, Tennessee State University, Nashville, TN, USA
- P1-127 Assessing the Efficacy of Microwave on the Inactivation of Bacillus coagulans Spores in Coconut Water - RAQUEL OM PINTO, Renata B Nascimento, Cynthia J. Kunigk, Luiz Alberto Jermolovicius, Mariza Landgraf, University of São Paulo, São Paulo, Brazil

- P1-128 Withdrawn
- P1-129 Utilization of Bioindicators to Validate Thermal Processes: Case Study Example for Small Canning Processors — FELIX BARRON, Philip Pstrak, Clemson University, Clemson, SC, USA
- P1-130 Fabrication of Nano-engineered Stainless Steel to Prevent Biofilm Formation by Foodborne Pathogens - GAHEE BAN, Jaclyn Lee, Yong Li, Soojin Jun, University of Hawaii, Honolulu, HI, USA
- P1-131 Application of Elevated Hydrostatic Pressure for Inactivation of Wild-type and Rifampicin-resistant Phenotypes of Cronobacter sakazakii — ELEONORA TROYANOVSKAYA, Abimbola Allison, Shahid Chowdhury, Aliyar Fouladkhah, Public Health Microbiology Laboratory, Tennessee State University, Nashville, TN, USA
- P1-132 Efficacy of Plasma Generated Novel Sanitizers in Egg Washing — SHRUTHI LAKSHMI NARASIMHAN, Shardul Dabir, Deepti Salvi, Donald W. Schaffner, Mukund V. Karwe, Rutgers University, New Brunswick, NJ, USA
- P1-133 Antimicrobial Efficacy of Radiant Catalytic Ionization against Shiga Toxin-producing Escherichia coli on Inoculated Beef — XIANG YANG, Norasak Kalchayanand, Keith Belk, Tommy Wheeler, University of California-Davis, Davis, CA, USA
- P1-134 Evaluation of Enterococcus faecium Nrrl B-2354 as Surrogate for Salmonella for Pasteurization Processes of Raisin — ERDOGAN CEYLAN, Yvette Avina, Joe Leon, Merieux NutriSciences, Crete, IL, USA

Modelling and Risk Assessment

- P1-135 Modeling the Effect of Thermal Stress on the Lag Phase of Bacillus cereus Strains in Reconstituted Infant Formulae — NATHÁLIA B. SILVA, Bruno A. M. Carciofi, Gláucia M. F. Aragão, Jozsef Baranyi, Mariem Ellouze, UFSC - Universidade Federal de Santa Catarina, Florianópolis, Brazil
- Tracking Contamination through Ground Beef Production and Identifying Points of Recontamination Using a Novel Green Fluorescent Protein (GFP) Expressing, Escherichia coli O103, Non-pathogenic Surrogate — MICK BOSILEVAC, Brandon Luedtke, Rong Wang, Yemi Ogunrinola, U.S. Department of Agriculture-ARS, Clay Center, NE, USA
- P1-137 Quantitative Microbiological Risk Assessment of Campylobacter spp. on Processed Ground Meat Products in S. Korea — JEEYEON LEE, Hanna Yoo, Heeyoung Lee, Ki Sun Yoon, Kun-Ho Seo, Yohan Yoon, Sookmyung Women's University, Seoul, South Korea
- Mathematical Model to Describe Campylobacter Survival in Processed Ground Meat Products — JEEYEON LEE, Hanna Yoo, Heeyoung Lee, Yohan Yoon, Sookmyung Women's University, Seoul, South Korea
- P1-139 Mathematical Models to Describe Kinetic Behavior of Campylobacter jejuni in Dried Meat Products - JIMYEONG HA, Sejeong Kim, Yohan Yoon, Sookmyung Women's University, Seoul, South Korea

- P1-140 Quantitative Microbial Risk Assessment of Campylobacter spp. on Various Jerky — JIMYEONG HA, Sejeong Kim, Ki Sun Yoon, Yohan Yoon, Sookmyung Women's University, Seoul, South Korea
- P1-141 A Novel Mathematical Model to Study Antimicrobial Interactions against Campylobacter spp. — MOHAMMED HAKEEM, Khalid Asseri, Xiaonan Lu, University of British Columbia, Vancouver, BC, Canada
- P1-142 Quantitative Risk Assessment of Listeria monocytogenes in Ready-to-Eat Fish Products — PETRA PASONEN, Jukka Ranta, Pirkko Tuominen, Finnish Food Safety Authority Evira, Risk Assessment Research Unit, Helsinki, Finland
- P1-143 Modeling the Growth of *Listeria monocytogenes* in Cooked Deli Turkey Breast as a Function of a Clean Label Antimicrobial, Product pH, Moisture, and Salt - SUBASH SHRESTHA, Oscar Esquivel, Russ Lanzarth, Jerry Erdmann, Cargill Inc., Wichita, KS, USA
- P1-144 Microbiological Survey of Not-Ready-to-Eat Frozen Foods — WEI CHEN, Loralyn Ledenbach, Joseph Meyer, Kurt Deibel, Wendy McMahon, Merieux NutriSciences, Crete, IL, USA
- P1-145 Fates of *Clostridium perfringens* in Marinated Steamed Pig Trotter under Changing Temperatures — HYEMIN OH, Heeyoung Lee, Hyun Jung Kim, Yohan Yoon, Sookmyung Women's University, Seoul, South Korea
- P1-146 Isolation and Serotyping of *Listeria monocytogenes* from Smoked Salmon, and Developing a Dynamic Model to Predict L. monocytogenes Survival in Smoked Salmon — HYEMIN OH, Hyun Jung Kim, Yohan Yoon, Sookmyung Women's University, Seoul, South Korea
- P1-147 Kinetic Behavior of *Escherichia coli* in Steamed Pig Feet — HYEMIN OH, Soomin Lee, Hyun Jung Kim, Yohan Yoon, Sookmyung Women's University, Seoul, South Korea
- P1-148 Quantitative Risk Model for Predicting Mycobacterium avium subsp. paratuberculosis Contamination in Bulk Tank Milk on Dairy Farms — SURABHI RANI, Abani Pradhan, University of Maryland, Hyattsville, MD, USA
- P1-149 Growth and Enterotoxin Production of Staphylococcus aureus on Beef Jerky as a Function of Temperature — Gun Woo Nam. Yeon Ho Kim. YUN JIN LEE. Mi iin Kwon, Soo Hwan Seo, Jeong A Han, Ki Sun Yoon, Kyung Hee University, Seoul, South Korea
- P1-150 Optimal Isothermal Data Collection Practices for **Estimating Microbial Thermal Inactivation Parameters** — IAN HILDEBRANDT, Bradley Marks, Michigan State University, East Lansing, MI, USA
- P1-151 An Alternative Risk Ranking Method Based on Log Transformation for Ranking Produce-hazard Pairs - MIN LI, Moez Sanaa, Barbara Kowalcyk, Kostas Koutsoumanis, Arie Havelaar, University of Florida, Gainesville, FL, USA
- P1-152 The Health-related Economic Burden of Foodborne Illness from Meat and Poultry — ROBERT SCHARFF. The Ohio State University, Columbus, OH, USA

- P1-153 A Statistical Model to Determine the Thermal Inactivation of Three Heat-resistant Salmonellae in Liquid Egg Yolk — JOSHUA GURTLER, Hans Allender, Deana Jones, U.S. Department of Agriculture-ARS, Eastern Regional Research Center, Wyndmoor, PA,
- P1-154 Survival of 22 Avirulent Strains of Escherichia coli and Salmonella spp. in Crop Soil with 10% Fastpyrolysis Switchgrass Biochar, to Validate Surrogate Bacteria — JOSHUA GURTLER, Akwasi Boateng, Manan Sharma, Trevor Suslow, Xuetong Fan, Tony Jin, U.S. Department of Agriculture-ARS, Eastern Regional Research Center, Wyndmoor, PA, USA
- Survival of Osmotically Adapted and Non-adapted Salmonella spp. in Bakery Products Containing Different Sweet Fillings — IFIGENEIA MAKARITI, Anastasia Kapetanakou, Eleftheria Nazou, Panagiotis Skandamis, Agricultural University of Athens, Athens, Greece
- P1-156 Impact of Exceptional Situations Occurring Prior to Microbial Reduction Treatment on the Risk of Human Salmonellosis Arising from the Consumption of Pistachios in the United States: A Quantitative Assessment — GORDON DAVIDSON, Sofia Santillana Farakos, Regis Pouillot, Rhoma Johnson, Judith Spungen, Insook Son, Nathan Anderson, Jane Van Doren, U.S. Food and Drug Administration, College Park, MD, USA
- P1-157 A Dynamic Secondary Model to Describe Survival of Salmonella in Low-water Activity (a...) Foods — Steven Duret, SOFIA SANTILLANA FARAKOS, Toluwanimi Ogungbesan, Ian Hildebrandt, Susanne Keller, U.S. Food and Drug Administration, College Park, MD, USA
- P1-158 Evaluation of Different Animal Feces Levels on Contamination of Leafy Greens Using Sensitivity Analyses of a Mathematical System Model — ABHINAV MISHRA, Hao Pang, Robert Buchanan, Donald W. Schaffner, Abani Pradhan, University of Maryland, College Park, MD, USA

Sanitation and Hygiene

- P1-159 Reality Check for Handwashing Practices and Guidance for Its Monitoring — NIRAJ SHRESTHA, Iryna Sybirtseva, Kayla Simon, Northland Laboratories, Northbrook, IL, USA
- P1-160 NaCl Upregulates *Icaa* gene of *Staphylococcus* aureus, Increasing Biofilm Formation — SOOMIN LEE, Kyoung-Hee Choi, Yohan Yoon, Sookmyung Women's University, Seoul, South Korea
- P1-161 In Vitro and In Vivo Efficacies of Hand Sanitizers against Human Norovirus — BLANCA ESCUDERO-ABARCA, Lee-Ann Jaykus, Rebecca Goulter, North Carolina State University, Raleigh, NC, USA
- P1-162 Effect of Disinfectants on the Biofilm Formation Capacity of Listeria monocytogenes Isolated from Ready-to-Eat (RTE) Meat Products — MAURICIO REDONDO, María Arias-Echandi, University of Costa Rica, San José, Costa Rica

- P1-163 Sanitizing Effectiveness of Electrolyzed Water on Listeria monocytogenes and Listeria innocua and the Inactivation Mechanism Elucidated by ¹h NMR-based Metabolomics — QIN LIU, Ji'en Wu, Zhi Yang Lim, Hongshun Yang, National University of Singapore, Singapore, Singapore
- P1-164 A Benchtop Drain System to Benchmark Efficacy of Chemicals in Drain Sanitation — Griffin Jadwin, ERIN DALMATA, Charles Giambrone, Rochester Midland Corp, Rochester, NY, USA
- P1-165 Inactivation of Salmonella enterica on Food Contact Surfaces during Log, Stationary, and Long-term Survival (LTS) Phases — DORRA DJEBBI-SIMMONS, Wenging Xu, Louisiana State University, Baton Rouge, LA, USA
- P1-166 Efficacy Evaluation of Commercial Sanitizers on the Decontamination of Salmonella spp., Escherichia coli O157:H7, and Listeria monocytogenes in Irrigation Well and Pond Water — GANYU GU, Steve Rideout, Virginia Tech, Painter, VA, USA
- P1-167 A Comparison of the Ability of Various Collection Solutions to Neutralize Residual Sanitizers from Environmental Surface Samples — N. Robert Ward, GEOFF BRIGHT, World Bioproducts, Bothell, WA, USA
- P1-168 Chlorine-based Inactivation of Escherichia coli O157:H7: Impact of Residual-free Chlorine Content, Organic Load, Residence Time, and pH — ZI TENG, Yaguang Luo, Solmaz Alborzi, Bin Zhou, Boce Zhang, Patricia Millner, Qin Wang, University of Maryland, College Park, MD,
- P1-169 Hydrogen Peroxide-based Disinfectants Inactivate Human Norovirus and Its Surrogate, Tulane Virus — Naim Montazeri, ERIC MOORMAN, Jeremy Faircloth, Emma Lepri, Lee-Ann Jaykus, North Carolina State University, Raleigh, NC, USA
- P1-170 Understanding the Efficacy of Sodium Hypochlorite against Norovirus Epidemic Strain GII.4 Sydney — JUSTIN BRADSHAW, Lee-Ann Jaykus, North Carolina State University, Raleigh, NC, USA
- P1-171 Efficacy and Stability of Disinfectant Solutions Applied to Papaya (Carica papaya) at Packing Facilities in Mexico JORGE ADRIÁN MUNIZ FLORES, Jennifer A. Chase, Edward R. Atwill, Ma. Ofelia Rodríguez-García, Elisa Cabrera-Diaz, Universidad de Guadalajara, Guadalajara, Mexico
- P1-172 Efficacy of Sanitizers in Inactivating Fecal Coliforms in Cell Cultures and on Coupons Made from Blueberry Contact Surface Materials — HIMABINDU GAZULA, Jinru Chen, University of Georgia, Griffin, GA, USA
- P1-173 The Combined Effects of Physical Removal, Proper Cleaner Selection and Sanitizer on the Reduction of a Pseudomonas aeruginosa Biofilm — Igor Ignatovich, Joshua Luedtke, Oriana Leishman, TERESA PODTBURG, Ecolab Inc., St. Paul, MN, USA
- P1-174 Selection of Alternative Indicators for Monitoring the Washing Effect of Salted Cabbages — EUNSOM CHOE, Sunghyuk Bang, Seulki Byeon, Gyiae Yun, Ki-Hwan Park, Chung-Ang University, Anseong, South

- P1-175 Evaluating Current Industry Dry Cleaning Practice Using Vacuum with Regard to Food Allergens on Processing Surfaces — CHRISTOPHER WELLS, Sanghyup Jeong, Self, St. Johns, MI, USA
- P1-176 Survival of *Listeria* sp. on 3M Condensation Management Tape and Its Potential Application in the Food Industry — Jayne Stratton, BISMARCK MARTINEZ, Andreia Bianchini, Steve Swanson, David Peterson, Kurt Halverson, University of Nebraska, Lincoln, NE, USA
- P1-177 Withdrawn
- P1-178 Cross-contamination of Human Pathogens from Pressed Paper and Bamboo Cutting Boards to Tomato and Kale — HOLLY PADEN, Kevin Mo, Kristin Motil, Sanja Ilic, Ohio State University, Columbus, OH, USA
- P1-179 Histamine-related Hygienic Quality and Adulteration with Pork or Poultry in Commercial Dried Fish Floss Products — YUNG-HSIANG TSAI, Yi-Chen Lee, Hsien-Feng Kung, Pei-Hsiang Lee, National Kaohsiung Marine University, Kaohsiung City, Taiwan
- P1-180 Food Deserts and Food Safety: An Examination of the Microbial Profile of Leafy Greens from the Houston Area High-income and Low-income Grocery Stores KRISTINA INFANTE, Sujata A. Sirsat, University of Houston, Conrad N. Hilton College of Hotel and Restaurant Management, Houston, TX, USA

Antimicrobials

- P1-181 Antibacterial Efficacy of Eugenol against Escherichia coli O157:H7 and Salmonella enterica in Unpasteurized Apple Juice Produced in Juice Bars and Held at 4°C ARMITRA JACKSON-DAVIS, Aubrey Mendonca, Floyd Woods, Salam Khan, Alabama A&M University, Madison, AL, USA
- P1-182 Effectiveness of Citric/Lactic Acid Solution Alone or Combined with Added Linoleic Acid for Inhibiting Salmonella enterica and Escherichia coli O157:H7 on Chicken Skin — Loutrina Staley, ARMITRA JACKSON-DAVIS, Aubrey Mendonca, Leopold Nyochembeng, Ernst Cebert, Alabama A&M University, Madison, AL, USA
- P1-183 Molecular Characterization of Antimicrobial-resistant Non-typhoidal Salmonella enterica Serovars from Imported Food Products — ASHRAF KHAN, Dongryeoul Bae, U.S. Food and Drug Administration/NCTR, Jefferson, AR, USA
- P1-184 Antimicrobial Resistance of Salmonella spp. Isolated from Retail Beef and Beef Cattle during Harvesting in Honduras — DIEGO CASAS, Brenda Inestroza. Alejandra Ramirez, Mindy Brashears, Mark Miller, Alejandro Echeverry, Texas Tech University, Lubbock, TX. USA
- P1-185 Prevalence of Resistant Salmonella spp. Isolated from Pasteurized Cow Milk and Its Related Samples in the Tamale Metropolis of Ghana — ADZITEY FREDERICK, Patricia Asiamah, Courage Kosi Setsoafia Saba, University for Development Studies, Tamale, Ghana

- P1-186 Synergistic Effect of X-Ray Irradiation and Sodium Hypochlorite or Chlorine Dioxide against Salmonella Typhimurium Biofilm on the Quail Eggshells — SOO-JIN JUNG, Shin Young Park, Hye-Ran Cho, Do Hyoung Kim, Sang-Do Ha, Advanced Food Safety Research Group, Brain Korea 21 Plus, Chung-Ang University, Ansung, South Korea
- P1-187 Effectiveness of Yogurt and Kefir in Reducing Salmonella spp. Numbers on Chicken Skins — HUSNU SAHAN GURAN, Dicle University, Divarbakir, Turkey
- P1-188 Use of LED Ultraviolet (UV) Light for the Reduction of Salmonella sp. on Surface of Chicken and Food Contact Surfaces — M. ALEXANDRA CALLE, Ilan Arvelo, Brayan Montoya, Jon Thompson, Mindy Brashears, Texas Tech University, Lubbock, TX, USA
- P1-189 Reduction of Salmonella on a Meat-based Pet Kibble Using Lactobacillus salivarius (L28) — ADAM CASTILLO, David Campos, Jorge Franco, Mindy Brashears, Texas Tech University, Lubbock, TX, USA
- P1-190 Presence of BlaCTX-M-8 in Salmonella Infantis Isolated from Poultry at Slaughterhouse in Brazil — DANIEL MONTE, Quezia Moura, Andressa Mem, Nilton Lincopan, Mariza Landgraf, University of São Paulo, São Paulo, Brazil
- P1-191 Antimicrobial Effectiveness of Eugenol or Geraniol Alone or Combined against Escherichia coli O157:H7 and Salmonella enterica in Pineapple Juice Held at 4°C - Aubrey Mendonca, EMALIE THOMAS-POPO, Angela Shaw, Samuel Kiprotich, Floyd Woods, Armitra Jackson-Davis, Iowa State University, Ames, IA, USA
- P1-192 Effect of Essential Oils and Their Active Components on Salmonella enterica Serovar Newport-Inactivation or Induction into the Viable but Nonculturable (VBNC) State? — AISHWARYA RAO, University of Arizona, Tucson, AZ, USA
- P1-193 Efficacy of Jatropha curcas Plant Extract against the Survival of Salmonella Enteritidis — AUTUMN WOODS. Armitra Jackson-Davis, Ernst Cebert, Arthur Hinton, Jr., Lamin Kassama, Alabama A&M University, Huntsville, AL, USA
- P1-194 Cinnamaldehyde Enhances the Killing Effect of Highpressure Processing against Escherichia coli O157:H7 and Salmonella enterica in Refrigerated (4°C) Carrot and Berry Juices — David Manu, AUBREY MENDONCA, Aura Daraba, James Dickson, Joseph Sebranek, Angela Shaw, Alan DiSpirito, Iowa State University, Ames, IA, USA
- P1-195 Antibacterial Efficacy of Geraniol against Escherichia coli O157:H7 and Salmonella enterica in Carrot Juice and a Mixed Berry Juice Held at 4°C - AUBREY MENDONCA, David Manu, Fei Wang, Aura Daraba, Angela Shaw, Iowa State University, Ames, IA, USA
- P1-196 Inhibition of Salmonella spp. and Escherichia coli by Lentil Protein Edible Films with Added Natural Antimicrobials — RAUL AVILA SOSA, Carlos Enrique Ochoa-Velasco, Addí Rhode Navarro-Cruz, Obdulia Vera-López, Paola Hernández-Carranza, Claudia Montalvo Paquini, Martin Alvaro Lazcano-Hernandez, Benemérita Universidad Autónoma de Puebla, Puebla, Mexico

- P1-197 Antimicrobial Activity of White Mustard Essential Oil on Salmonella spp. in Vitro and in Ground Chicken - ADAM PORTER, Emefa Monu, Auburn University, Auburn, AL, USA
- P1-198 Essential Oil Nanoemulsions as Post-harvest Wash Solutions on Snacking Peppers — Laurel Dunn, Marion Harness, Dara Smith, Stuart Gorman, ALEXIS HAMILTON, P. Michael Davidson, Qixin Zhong, Faith Critzer, University of Tennessee, Knoxville, TN, USA
- P1-199 Antibiotic-resistant Salmonella spp. from Flies of Cattle Source — YUMIN XU, Sha Tao, Mark Harrison, Jinru Chen, University of Georgia, Griffin, GA, USA
- P1-200 Slow-release Chlorine Dioxide Gas Treatment to Reduce Salmonella Contamination on Spices for Smallscale Processors — CHASE GOLDEN, Mark Berrang, William Kerr, Mark Harrison, University of Georgia, Athens, GA, USA
- P1-201 SalmoFresh™ Effectiveness as a Bio-control Method to Eliminate Salmonella Prevalence on Romaine Lettuce. Mungbean Sprouts, and Mungbean Seeds — XUAN ZHANG, Yan Dong Niu, Kim Stanford, Richard Holley, Tim McAllister, Claudia Narvaez, University of Manitoba, Winnipeg, MB, Canada
- P1-202 Antimicrobial Activity of Curcumin under UVA Light Radiation: Application to Fresh Produce Sanitation - ERICK FALCAO DE OLIVEIRA, Juliano Tosati, Andrea Cossu, Rohan Tikekar, Alcilene Monteiro, Nitin Nitin, University of California-Davis, Davis, CA, USA
- P1-203 Inhibitory Effects of *Mentha piperita L.* Essential Oil against Escherichia coli O157:H7 and Salmonella Enteritidis PT4 in Fruit Juices — MARCIANE MAGNANI, Rayssa Juliane de Carvalho, Larissa de Fátima Romão da Silva, Maísa Gomes Chaves, Evandro Leite de Souza, Geany Targino de Souza, Federal University of Paraiba, Joao Pessoa, Brazil
- P1-204 Antimicrobial Properties of High Molecular Weight, Water Soluble Chitosan in Gram Negative Foodborne Pathogens — NANCY RUBIO, Rita Quintero, Jose Fuentes, Marlene Janes, Witoon Prinyawiwatkul, Louisiana State University, Baton Rouge, LA, USA
- P1-205 Determination of the State of Escherichia coli O157:H7 Cells Treated with Electrolyzed Oxidizing (EO) Water Using Flow Cytometry — G. KWABENA AFARI, Yen-Con Hung, University of Georgia, Griffin, GA, USA
- P1-206 Development of Predictive Reduction Models for Escherichia coli as a Function of Sodium Dichloroisocyanurate and Chlorine Dioxide Concentration and Exposure Time — SO-JEONG YOON, Shin Young Park, Kye-Hwan Byun, Hyung-Suk Kim, Yong-Soo Kim, Sang-Do Ha, Advanced Food Safety Research Group, Brain Korea 21 Plus, Chung-Ang University, Ansung, South Korea
- P1-207 Antimicrobial-resistance Patterns of Generic Escherichia coli Isolated from Feedlot Cattle Feces after Feeding Direct-fed Microbials in Diets with and without Tylosin During Finishing — ANDREA ENGLISH, Alejandro Echeverry, Jhones Sarturi, Kendra Nightingale, Tosha Opheim, Mark Miller, Mindy Brashears, Texas Tech University, Lubbock, TX, USA

- P1-208 Polyphenolic Compounds Alter Viability, Swarming Motility and Biofilm Formation of Pathotypes of Escherichia coli — CAROLINA GIL, Santos Garcia, Norma Heredia, Jorge Dávila-Aviña, Luisa Solís-Soto, Universidad Autonoma de Nuevo Leon, San Nicolas, Mexico
- P1-209 Effectiveness of Individual and Combined Antimicrobial Spray Interventions Commonly Used on Chilled Beef Subprimals — JENNIFER ACUFF, Matthew Krug, Daniel Vega, Nicholas Sevart, Sarah Jones, Amanda Wilder, Keyla Lopez, Minto Michael, Christopher Vahl, Gary Acuff, Harshavardhan Thippareddi, Randall Phebus, Kansas State University, Manhattan, KS, USA
- P1-210 Efficacy of an Ambient Water Wash, Hot Water Wash, and Application of Three Antimicrobial Sprays Using a Three-stage Commercial Carcass Washing Cabinet for Reducing Shiga Toxin-producing Escherichia coli Contamination on Beef Carcasses — MATTHEW KRUG, Jennifer Acuff, Nicholas Sevart, Minto Michael, Daniel Vega, Christopher Vahl, Gary Acuff, Harshavardhan Thippareddi, Randall Phebus, Kansas State University, Manhattan, KS, USA
- P1-211 Efficacy of Peracetic Acid Washes Applied at Increasing Concentrations to Control Shiga Toxinproducing Escherichia coli Contamination on Chilled Beef Subprimals — MATTHEW KRUG, Sarah Jones, Nicholas Sevart, Jennifer Acuff, Amanda Wilder, Minto Michael, Christopher Vahl, Randall Phebus, Kansas State University, Manhattan, KS, USA
- P1-212 Efficacy of Lactic Acid Washes Applied at Increasing Concentrations to Control Shiga Toxin-producing Escherichia coli Contamination on Chilled Beef Subprimals — MATTHEW KRUG, Ian Patterson, Nicholas Sevart, Jennifer Acuff, Minto Michael, Christopher Vahl, Randall Phebus, Kansas State University, Manhattan, KS, USA
- P1-213 Prevalence and Mechanism of Fluoroguinolone Resistance in Escherichia coli Isolated from Swine Feces in Korea — KUN TAEK PARK, Yoon Sung Hu, Young Kyung Park, Sook Shin, Yong Ho Park, Seoul National University, Seoul, South Korea
- P1-214 Low Temperature Inactivation Kinetics to Determine Bacteriophage Shelf-life Stability — JOYJIT SAHA, Pushpinder Kaur Litt, Divya Jaroni, Oklahoma State University, Stillwater, OK, USA
- P1-215 Bacteriophage Fitness Indicated by Modeled Adsorption Efficacy — JOYJIT SAHA, Pushpinder Kaur Litt, Divya Jaroni, Oklahoma State University, Stillwater, OK, USA
- P1-216 Effect of pH on the Fate of Novel Bacteriophages Targeting Non-O157 Shiga-toxigenic Escherichia coli — JOYJIT SAHA, Pushpinder Kaur Litt, Divva Jaroni, Oklahoma State University, Stillwater, OK, USA
- P1-217 Efficacy of Chlorinated Nanobubble Solutions to Control Shiga Toxin-producing Escherichia coli, Salmonella spp., and Non-pathogenic Escherichia coli Surrogates in Chilled Solutions — AMANDA WILDER, Austin McDaniel, Randall Phebus, Christopher Vahl, Kansas State University, Manhattan, KS, USA

- P1-218 Biocontrol of Shiga-toxigenic *Escherichia coli* Using Lytic Phages on Mung Beans and Germinated Sprouts
 YIRAN DING, Yan Dong Niu, Kim Stanford, Richard Holley, Tim McAllister, Claudia Narvaez, University of Manitoba, Winnipeg, MB, Canada
- P1-219 Detection Extraction and Evaluation of Phage Depolymerase Enzyme against Shiga-toxigenic *Escherichia coli* Biofilms BEATA MACKENROTH, Pushpinder Kaur Litt, Divya Jaroni, Oklahoma State University, Stillwater, OK, USA
- P1-220 A Survey of Antimicrobial Resistance among Dairy Cattle in Kosovo SULAIMAN ALJASIR, Jeffrey Chandler, Afrim Hamidi, Driton Sylejmani, Baolin Wang, Katherine Schwam, Bledar Bisha, University of Wyoming, Laramie, WY, USA
- P1-221 Extended-spectrum β-Lactamase Producing *Escherichia coli* in Feed, Manure, and Soil from the Poultry Farm Environment AGNES KILONZO-NTHENGE, Samuel Nahashon, Siqin Liu, Tennessee State University, Nashville, TN, USA

- P1-222 Antibacterial Activity of D-Tryptophan against *Salmonella enterica* and *Escherichia coli* O157:H7 under Osmotic Stress and Its Application to Oyster Preservation JIAN CHEN, Shuso Kawamura, Shigenobu Koseki, Hokkaido University, Sapporo, Japan
- P1-223 Prevalence of Antibiotic-resistant Enteric Escherichia coli Isolated from Fecal Samples of Food Handlers in Qatar WALID ALALI, Nahla Eltai, Marwan Abou-Madi, Hamad Bin Khalifa University, Doha, Qatar
- P1-224 Prevalence and Characterization of Antimicrobialresistance Patterns of *Campylobacter* Associated with Poultry — MATTHEW BAILEY, Rhonda Taylor, Jagpinder Brar, Estefania Novoa Rama, Manpreet Singh, Purdue University, West Lafayette, IN, USA

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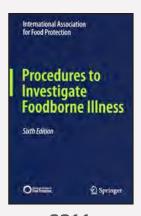
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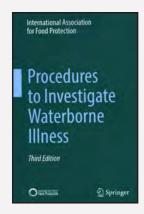
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P2 Food Chemical Hazards and Food Allergens Food Toxicology Meat, Poultry and Eggs **Epidemiology Retail and Food Service Safety Communication Outreach and Education Molecular Analytics Genomics and Microbiome Laboratory and Detection Methods** Dairy

Tampa Convention Center, Exhibit Hall

P2-01 through P2-119 - Authors present 10:00 a.m. - 11:30 a.m. and 5:00 p.m. - 6:00 p.m. P2-120 and above – Authors present 2:00 p.m. - 3:30 p.m. and 5:00 p.m. - 6:00 p.m

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- Determination of Aflatoxin B1 in Vegetable Oils P2-02 Using Low-temperature Clean-up Combined with Immunomagnetic Solid-phase Extraction — Xi Yu, HONGSHUN YANG, National University of Singapore, Singapore, Singapore
- P2-03 Occurrence and Factors Associated with Aflatoxin M. Breast Milk Contamination in Lebanon — HUSSEIN F. HASSAN, Maya Bassil, Jomana El Aridi, Joelle Abi Kharma, Farah Daou, Lebanese American University, Beirut, Lebanon
- Lactobacillus rhamnosus GG Inhibits BID-dependent P2-04 Apoptosis in Human Hepatocellular Carcinoma Cells Exposed to Patulin — BERNICE KARLTON-SENAYE, Rishipal Bansode, Priscilla Randolph, Leonard Williams, North Carolina A&T State University Center of Postharvest Technologies (CEPHT), Kannapolis, NC, USA
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- Assessment of Selected Metal Concentrations in Shelf-P2-06 stable Commercial Apple Juices and Fresh Apple Ciders in Michigan — LOAN CAO, Leslie Bourquin, Michigan State University, East Lansing, MI, USA
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- P2-09 Detection of Gluten in a Barley-Malt Beer Produced with and without a Prolyl Endopeptidase Enzyme -Magdalena Naziemiec, Wanying Cao, Liyun Zhang, Nicholas Smith, Matthew Arbuckle, Arnoldo Lopez-Hernandez, Lanlan Yin, Katherine Fiedler, BINAIFER BEDFORD, Lauren Jackson, U.S. Food and Drug Administration, Bedford Park, IL, USA
- P2-10 Development of a Rapid and Nontoxic Procedure for Extraction and Detection of Gluten from Processed Foods — LeAnna Willison, Henry Grise, Ken Roux, JASON ROBOTHAM, BioFront Technologies, Tallahassee, FL, USA
- P2-11 Review of Recent Advances in the Use of Proficiency Test Data from Fapas — Mark Sykes, JASON ROBOTHAM, Craig Eaton, BioFront Technologies, Tallahassee, FL, USA
- Characterization of the Monotrace Gluten Sandwich P2-12 ELISA, a Specific and Sensitive Assay for the Detection of Gluten within Processed Foods and Unprocessed Ingredients — HENRY GRISE, LeAnna Willison, Ken Roux, Jason Robotham, BioFront Technologies, Tallahassee, FL, USA
- P2-13 Real-time PCR for the Detection of Allergenic Peanut and Tree Nuts — ANNE EISCHEID, Caroline Puente-Lelievre, U.S. Food and Drug Administration, College Park, MD, USA
- P2-14 A Sensitive and Ara h2 Specific Competitive ELISA for the Detection of Peanut in Processed Foods - SHYAMALI JAYASENA, Steve L. Taylor, Joseph Baumert, University of Nebraska-Lincoln, Lincoln, NE, **USA**

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- Antibiotic Contaminations of Locally Formulated Cat Fish Feeds from Southwestern Nigeria — MOMODU OLORUNFEMI, Adegboyega Odebode, Ifeoluwa Adekoya, Patrick Njobeh, Rui Krause, University of Ibadan, Ibadan, Nigeria
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- Pathogen Reductions in Fermented Dry Sausages Using a Low-temperature Heat Treatment — SAMANTHA MCKINNEY, Catherine Cutter, Nancy Ostiguy, Jonathan Campbell, Penn State University, University Park, PA, **USA**
- P2-31 The Effect of Dipping in Organic Acids for Short or Extended Times on Reduction of Escherichia coli Surrogates on Pieced Beef Clods — ASHLEY MCCOY, Dennis Burson, University of Nebraska-Lincoln, Lincoln, NE, USA

- P2-32 Application of Bacteriophages to Reduce Shiga Toxinproducing Escherichia coli on Beef Cattle Hide Surfaces — TAMRA TOLEN, Yicheng Xie, Thomas Hairgrove, Jason Gill, Thomas Taylor, Texas A&M University, College Station, TX, USA
- P2-33 Neutralization of Commercial Broiler Carcass Antimicrobials by Phosphate Buffered Saline, Buffered Peptone Water, and Neutralizing Buffered Peptone Water — JENNIFER VUIA-RISER, Christine Alvarado, Matt Taylor, Texas A&M University, College Station, TX, USA
- P2-34 Validation of a Chicken Surface Methodology to Assess the Performance of Antimicrobial Interventions on Chicken Parts - ALEJANDRA RAMIREZ-HERNANDEZ, Mindy Brashears, Marcos X. Sanchez-Plata, Texas Tech University, Lubbock, TX, USA
- P2-35 Validation of Fermentation, Drying, and Storage Parameters for Control of Shiga Toxin-producing Escherichia coli, Salmonella spp., and Listeria monocytogenes in Fuet, a Traditional Spanish Sausage ANNA PORTO-FETT, Esteve Sargatal, Laura Shane, Lianna McGeary, Bradley Shoyer, Laura Stahler, Manuela Osoria, John Luchansky, U.S. Department of Agriculture-ARS-ERRC, Wyndmoor, PA, USA
- P2-36 Biofilm Forming Capabilities of Shiga-toxigenic Escherichia coli Recovered from Cow/Calf Operations in Oklahoma and Louisiana — TONY KOUNTOUPIS, Pushpinder Kaur Litt, Radhika Kakani, Divya Jaroni, Oklahoma State University, Stillwater, OK, USA
- P2-37 The Effect of Preharvest Feeding Strategies on the Prevalence of Salmonella enterica in the Feces and Trimmings of Feedlot Cattle — KATLYN HOLZER, Carla Weissend, Jennifer Martin, Kate Huebner, Ifigenia Geornaras, Paul Morley, Keith Belk, Colorado State University, Ft Collins, CO, USA
- P2-38 Salmonella and Campylobacter Prevalence in Broiler Ceca and on Ready-to-Cook Carcasses Processed at a Pilot Mobile Poultry Processing Unit — KA WANG LI, Lacey Lemonakis, Brian Glover, Cangliang Shen, West Virginia University, Morgantown, WV, USA
- P2-39 Isolation and Characterization of Extended-spectrum Beta-lactamase-producing Escherichia coli from Beef Cattle Farms — SHINYOUNG LEE, Lin Teng, JaeHyun Lim, JungHoon Park, KwangCheol Casey Jeong, University of Florida, Gainesville, FL, USA
- P2-40 Near-neutral Electrolyzed Oxidizing Water Applied as Postharvest Intervention to Control Escherichia coli O157:H7, Salmonella Enteritidis and Yersinia enterocolitica in Fresh Pork — DONG HAN, Yen-Con Hung, Luxin Wang, Auburn University, Auburn, AL, USA
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- P2-43 Effect of Sodium Chloride on the Heat Resistance of Enterohemorrhagic Escherichia coli in Ground Beef - ZIYI HU, Alina Rohde, Jiayue Chen, Lynn McMullen, Michael Gänzle, University of Alberta, Edmonton, AB, Canada
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- P2-46 Effectiveness of Sanitizer D7™ against Escherichia coli O157:H7 and Salmonella Biofilms — RONG WANG. Norasak Kalchayanand, Dayna Brichta-Harhay, You Zhou, U.S. Department of Agriculture-ARS, Clay Center, NE, USA
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- P2-54 Prevalence and Characterization of Antimicrobialresistant Campylobacter Isolated from Eggshells in Different Commercial Laying Hen Housing Systems - ESTEFANIA NOVOA RAMA, Matthew Bailey, Deana Jones, Richard Gast, Kenneth Anderson, Jagpinder Brar, Rhonda Taylor, Haley Oliver, Manpreet Singh, Purdue University, West Lafayette, IN, USA
- P2-55 Isolation and Characterization of Shiga Toxin-producing Escherichia coli in Ground Beef from Santiago, Chile — Daniel Rivera, Maria Fernanda Jimenez, Leonela Diaz, Paola Antivero, Paola Navarrete, Angelica Reyes-Jara, MAGALY TORO, INTA, University of Chile, Santiago, Chile
- P2-56 Relatedness of Amylase-producing, Endospore-forming Bacteria from the Alimentary Tract of Commercially Processed Broilers — ARTHUR HINTON, JR., Kimberly Ingram, U.S. Department of Agriculture-ARS, USNPRC, Athens, GA, USA
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- P2-59 The Prevalence of Salmonella in Organically Produced Chicken Meat Parts — HUSNU SAHAN GURAN, Resat Ciftci, Dicle University, Diyarbakir, Turkey
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- P2-78 A Survey of the Microbiome Sampled from Surfaces of Supermarket Shopping Carts and Grocery Baskets — M. ALEXANDRA CALLE, Brayan Montoya, Andrea English, Mindy Brashears, Texas Tech University, Lubbock, TX, USA
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- P2-88 Listeria monocytogenes is Prevalent in Retail Grocery Produce Environments, but Salmonella enterica is Rare — JOHN BURNETT, Tongyu Wu, Susan Hammons, Deklin Veenhuizen, Manpreet Singh, Haley Oliver, Purdue University, West Lafayette, IN, USA
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- P2-91 Influence of Cooling Rate on Growth of Bacillus cereus from Spore Inocula in Cooked Rice, Beans, Pasta, and Combination Products — VIJAY JUNEJA, Timothy Mohr, Oscar Snyder, U.S. Dept. of Agriculture-ARS, Wyndmoor, PA, USA
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- P2-93 Nears and Nors Merge: A Preliminary Analysis KRISTI-WARREN SCOTT, Centers for Disease Control and Prevention, Atlanta, GA, USA
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- P2-106 Investigation and Outreach to Increase Public Awareness of Campylobacteriosis — HANNAH BOLINGER, North Carolina State University, Raleigh,
- P2-107 Teaching through Tweeting: Lessons Learned through NoroCORE's Social Media Campaigns — ELIZABETH BRADSHAW, Rebecca Goulter, Katie Overbey, Catharine Gensel, Benjamin Chapman, Lee-Ann Jaykus, North Carolina State University, Raleigh, NC, USA
- P2-108 How to Communicate with Consumers When Flavor Preferences and Safety Conflict — CHRISTINE BRUHN, Yaohua Feng, University of California-Davis, Davis, CA, USA
- P2-109 Investigating the Role of Dietitians in the Provision of Food Safety Advice for Vulnerable Patients in the UK - ELLEN W. EVANS, Denise Parish, Elizabeth C. Redmond, ZERO2FIVE Food Industry Centre, Cardiff Metropolitan University, Cardiff, United Kingdom
- P2-110 Food-Safety Experts' Perceptions of the Potential of Television Cookery Programmes to Deliver Consumer Food-safety Information — Simon Dawson, Ruth Fairchild, Nick Perham, ELLEN W. EVANS, ZERO2FIVE Food Industry Centre, Cardiff Metropolitan University, Cardiff, United Kingdom
- P2-111 Assessing Recommendations Found in Recipes for Determining Doneness of Poultry: How Prevalent is Internal Temperature? — SANDRIA GODWIN, Edgar Chambers IV, Fur-Chi Chen, Terry Taylor, Tennessee State University, Nashville, TN, USA
- P2-112 Impact of Poultry and Egg Education Project (PEEP) Workshops on Food Safety Knowledge, Perceptions, Attitudes, and Intentions of 4-H Youth — SANDRIA GODWIN, John Ricketts, Morgan Beaty, Tennessee State University, Nashville, TN, USA

- P2-113 Determining the Presence of Pathogen Reduction Strategies at Livestock Interactions — SAVANA EVERHART, Derek Foster, Benjamin Chapman, Megan Jacob, North Carolina State University, Raleigh, NC, USA
- Animal Contact in Public Settings: Infectious Disease P2-114 Risk Awareness and Hand Hygiene Behaviors - WENQING XU, Melissa Cater, Rebecca Gravois, Christine Navarre, Diana Coulon, Dorra Simmons, Louisiana State University AgCenter, Baton Rouge, LA, USA
- P2-115 Identification of Prevention Efforts for Flour-associated Outbreaks Involving Shiga Toxin-producing Escherichia coli — Cerise Robinson, TAMI CRAIG CLOYD, India James, Marianne Fatica, Sheila Merriweather, Donald Obenhuber, Diane Gubernot, Gary Weber, FDA-CORE, College Park, MD, USA
- P2-116 Development of a FSMA Preventive Controls for Human Food Rule Audit Checklist for Fruit and Vegetable Processors — JACQUES OVERDIEP III, Angela Shaw, Catherine Strohbehn, Linda Naeve, Iowa State University, Ames, IA, USA
- P2-117 North Central Region Produce Needs Assessment for FSMA Produce Safety Rule — BRIDGET PERRY, Arlene Enderton, Catherine Strohbehn, Angela Shaw, Linda Naeve, Iowa State University, Ames, IA, USA
- P2-118 Promoting Food Safety Research and Collaboration — JOHN JOHNSTON, Glenn Tillman, U.S. Department of Agriculture-FSIS, Fort Collins, CO, USA
- P2-119 Withdrawn

Molecular Analytics, Genomics and Microbiome

- P2-120 Using Whole Genome Sequencing to Provide Insight in the Epidemiology of Resistance and Virulence Genes in Listeria monocytogenes — Katleen Vranckx, KYLE KINGSLEY, Koen Rombouts, Katrien De Bruyne, Hannes Pouseele, Applied Maths Inc, Austin, TX, USA
- P2-121 Investigating the Epidemiology of Resistance and Virulence Genes in Listeria monocytogenes Using Bionumerics® 7— Katleen Vranckx, KYLE KINGSLEY, Katrien De Bruyne, Hannes Pouseele, Applied Maths Inc., Austin, TX, USA
- P2-122 Storage Temperature and Sanitizer Washing Influences the Bacterial Community Dynamics of Carrots — VAISHALI DHARMARHA, Natalie Pulido, Giselle Kristi Guron, Monica Ponder, Amy Pruden, Renee Boyer, Laura Strawn, Virginia Tech, Blacksburg, VA, USA
- P2-123 Complete Genome Sequence of a Novel Lytic Vibrio parahaemolyticus Phage VPp1 and Characterization of Its Endolysin — MENGZHE LI, Jingxue Wang, Hong Lin, Xiuping Jiang, Yangiu Jin, Ocean University of China, Qingdao, China
- P2-124 Whole-genome Sequence Analysis of Poultry-associated Salmonella Infantis Isolates from Turkey Reveal a Distinct Phylogenetic Clade and Increased Antimicrobial Resistance Elements — Sinem Acar, Ece Bulut, Ye□im Soyer, MATTHEW J. STASIEWICZ, University of Illinois at Urbana-Champaign, Urbana, IL, USA

- P2-125 Evaluation of Whole Genome Sequencing (WGS) to Molecularly Characterize, Serotype, and Predict Antibiograms of Salmonella spp. Isolated from Raw Chicken Products in Singapore — YE HTUT ZWE, Seow Fong Chin, Liang Yang, Hyun-Gyun Yuk, Food Science and Technology Programme, National University of Singapore, Singapore, Singapore
- P2-126 Genetic and Phenotypic Characteristics Associated with Listeria monocytogenes Plasmids — PATRICIA HINGSTON, Jessica Chen, Chad Laing, Lisbeth Truelstrup Hansen, Siyun Wang, University of British Columbia, Vancouver, BC, Canada
- P2-127 A Novel Method to Achieve Complete Low-copy Number Plasmid Sequences of Salmonella enterica — KUAN YAO, Narjol Gonzalez-Escalona, Julien Marquis, Marc Allard, Maria Hoffmann, U.S. Food and Drug Administration, College Park, MD, USA
- P2-128 Phylogenomic Analyses of Efflux Pump Complexes in the Foodborne Pathogen Cronobacter spp. Using DNA Microarray Analysis Combined with Sequenced-based Bioinformatics Demonstrates the Presence of Species-Specific Orthologues — FLAVIA NEGRETE, Jayanthi Gangiredla, Samantha Finkelstein, Isha Patel, Hannah Chase, ChaeYoon Lee, HyeJin Jeong, Ben Tall, Gopal Gopinath, U.S. Food and Drug Administration, Laurel, MD, USA
- P2-129 Development of a New Generation Microarray Assay for the Detection and Identification of Foodborne Pathogens - CHRISTINE YU, Mark Mammel, Jayanthi Gangiredla, Michael Kulka, U.S. Food and Drug Administration, Laurel, MD, USA
- P2-130 Utility of the FDA-ECID Microarray for Comprehensive Molecular Serotyping of Escherichia coli — KYSON CHOU, Isha Patel, Jayanthi Gangiredla, Nelly Tran, Donna Williams-Hill, Richelle Richter, Peter Feng, Keith Lampel, Christopher Elkins, U.S. Food and Drug Administration, Irvine, CA, USA
- P2-131 Phylogenomic Analyses of Type II Toxin-Antitoxin Genes in the Foodborne Pathogen Cronobacter spp. Using Sequenced-based Bioinformatics Combined with DNA Microarray Analysis Demonstrates an Evolutionary Shared Species-Specific Line of Evolution - SAMANTHA FINKELSTEIN, Jayanthi Gangiredla, Flavia Negrete, Hannah Chase, ChaeYoon Lee, HyeJin Jeong, Isha Patel, Gopal Gopinath, Ben Tall, U.S. Food and Drug Administration, Laurel, MD, USA
- P2-132 Interlab Comparison of Community Analysis Via Next Generation Sequencing — MATTHEW MARKIEWICZ, Clyde Manuel, Stephen Lyon, Sealed Air Corporation, Sturtevant, WI, USA
- P2-133 Leveraging Microbiome Analysis to Discriminate between Organic and Non-organic Produce: Apple Case Study — KENNETH HARARY, Abhishek Hegde, Hossein Namazi, James Maloney, Shadi Shokralla, Anay Campos, Ramin Khaksar, Clear Labs Inc., Menlo Park, CA, USA

- P2-134 Short-term Supplementation of Potato Starch and VSL# in Male C57 BL/6 Mice - MIGUEL RIVAS, Nadia Saadat, Liyanage Nirasha Perera, Smiti Gupta, Yifan Zhang, Wayne State University, Detroit, MI, USA
- P2-135 Microbial Ecology Survey of Bacteria, Lactic Acid Bacteria, and Fungi in Fermented and Non-fermented Ready-to-Eat Food and Drink — MATT HUNDT, Alexandra Smith, Tom Rehberger, Agro BioSciences Inc, Wauwatosa, WI, USA
- P2-136 Food Microbiomes Defined Using 16S rRNA Gene Amplicon and Shotgun Metagenomic Sequencing — KAREN JARVIS, Ninalynn Daquigan, Christopher Grim, James White, Paul Morin, Julia Mullins, Darcy Hanes, U.S. Food and Drug Administration, Laurel, MD, USA
- P2-137 Microbiota of Retail Foods Available to Populations of Different Socioeconomic Status: Implications to Food Safety — DALENIECE HIGGINS, Chandan Pal, Irshad Sulaiman, Pratik Banerjee, University of Memphis, Memphis, TN, USA
- P2-138 Foodborne Outbreak Detection: Florida Department of Agriculture and Consumer Services' WGS SNP Pipeline in Action — S. Brian Caudle, CARL FRANCONI, JR., Serena Giovinazzi, Amy Bryant, Jason Crowe, Florida Department of Agriculture and Consumer Services. Tallahassee, FL, USA
- P2-139 Characterization of the Young Turkey Cecal Microbiome and Its Role in the Prevention of Irritable Crabby Syndrome (ICS) — MARGARET KIRCHNER, Donna Carver, Brian Badgley, Sophia Kathariou, North Carolina State University, Raleigh, NC, USA
- P2-140 NGS Based Method for Enterobacteriaceae Discrimination and Reliability for Cronobacter spp. Identification — Sofia Nogueira, Fan Mingzhen, David Tomas Fornes, SANDRA CHAVES, SGS Molecular, Lisboa, Portugal
- P2-141 Comparative Genomics of Diarrheagenic Bacillus cereus Isolates from Dried Food and Animal Feed - LAURENDA CARTER, Hannah Chase, Cynthia Stine. Charles Gieseker. Nicholas Hasbrouck. Ashraf Khan, Kyuyoung Han, Ben Tall, Gopal Gopinath, U.S. Food and Drug Administration, Laurel, MD, USA
- P2-142 Extended-Spectrum Beta-Lactamase-producing Escherichia coli from Meconium of Newborn Calves LIN TENG. Peixin Fan. Amber Ginn. Joseph Driver. KwangCheol Casey Jeong, University of Florida, Gainesville, FL, USA
- P2-143 Roles of Staphylococcus aureus in Intestine - HEEYOUNG LEE, Yohan Yoon, Sookmyung Women's University, Seoul, South Korea
- P2-144 Patterns of Source Distribution for Salmonella enterica Serotype Typhimurium Revealed by Large-Scale Whole Genome Sequencing — SHAOKANG ZHANG, Dave Boxrud, Angie Taylor, Chandler Roe, Elizabeth Driebe, David Engelthaler, Paul Keim, Eija Trees, Efrain Ribot, Patricia Fields, Xiangyu Deng, University of Georgia, Center for Food Safety, Griffin, GA, USA

- P2-145 Transcriptomics is a Useful Approach for Investigating the Effects of Long-term Storage on Salmonella enterica Serotype Montevideo Survival When Spiked on Oregano — LAURA EWING, Gopal Gopinath, Nicole Addy, Darcy Hanes, Junia Jean-Gilles Beaubrun, U.S. Food and Drug Administration, Laurel, MD, USA
- P2-146 Comparative Genomics of $Bla_{ctx-M-65}$ -resistant Clinical Strains of Salmonella enterica serovar Infantis from Peru and Resistant Strains from Chicken. Cattle and Humans — BEN TALL, Gopal Gopinath, Hannah Chase, Jayanthi Gangiredla, Isha Patel, Nicole Addy, Junia Jean-Gilles Beaubrun, Baoquang Li, Christopher Elkins, Flavia Negrete, Samantha Finkelstein, HyeJin Jeong, ChaeYoon Lee, Kyuyoung Han, Shaohua Zhao, Gregory Tyson, Heather Tate, Drake Tilley, Mark Simons, Andrea McCoy, Rina Meza, Allison Brown, Cindy Friedman, U.S. Food and Drug Administration, Laurel, MD, USA
- P2-147 Transcriptome Analysis of Salmonella enterica Newport in-planta after Desiccation and Postharvest Sanitization - LAUREL DUNN, Dara Smith, Dean Kopsell, Faith Critzer, University of Tennessee, Knoxville, TN, USA
- P2-148 Salmonella Newport Gene Expression Profile on Sterile Tomato Seedlings is Indicative of Mitigating Plant Stress - ANGELA FERELLI, Samantha Bolten, Shirley Micallef, University of Maryland, College Park, MD, USA
- P2-149 Transcriptome Response of Salmonella Newport to Oxidative Antimicrobials — DARA SMITH, Laurel Dunn, Faith Critzer, University of Tennessee, Knoxville, TN, USA
- P2-150 Next Generation 16S rRNA Microbiome Analyses of a Mixed Culture MPN from Chicken Breast Samples Inoculated with a Salmonella — SUN AE KIM, Si Hong Park, Sang In Lee, Steven Ricke, University of Arkansas, Fayetteville, AR, USA
- P2-151 Comparative Genomics Confirms Persistence of Salmonella Serovar Newport in Environmental Waters of Southern and Central Georgia — Christopher Grim, Meimin Wang, Susan Leonard, Erin Lipp, John Maurer, Michele Ray-Russell, George Vellidis, Mark Mammel, Christopher Elkins, BAOGUANG LI, U.S. Food and Drug Administration-CFSAN, Laurel, MD, USA
- P2-152 Transcriptional Profiling of Salmonella Montevideo Exposed to the Probiotic Lactobacillus animalis NP — DIANA AYALA, Mindy Brashears, Kendra Nightingale, Texas Tech University, Lubbock, TX, USA
- P2-153 Identification of Putative Surface Proteins Involved in Adherence of *Listeria monocytogenes* on Abiotic Surfaces — Peter Muriana, HUNG KING TIONG, Oklahoma State University, Stillwater, OK, USA
- P2-154 Whole Genome Sequencing of Listeria monocytogenes Strains Carrying Loss of Function Mutations in inIA Supports These Strains are Evolving Away from a Pathogenic Lifestyle — PETER COOK, Henk Den Bakker, Guy Loneragan, Kendra Nightingale, Texas Tech University, Lubbock, TX, USA
- P2-155 Determining if Phylogenetic Relatedness of *Listeria* monocytogenes Isolates Corresponds to Persistence in Poultry Processing Plants Using Whole-genome Sequencing — LAUREN HUDSON, Mark Berrang, Richard Meinersmann, Xiangyu Deng, Mark Harrison, University of Georgia, Athens, GA, USA

- P2-156 A Comprehensive Evaluation of the Genetic Relatedness of Listeria monocytogenes Serotype 4b Variant Strains — LAUREL BURALL, Christopher Grim, Mark Mammel, Atin Datta, U.S. Food and Drug Administration-CFSAN, Laurel, MD, USA
- P2-157 Prevalence, Distribution, and Comparative Genomics of a Hemolysin III Gene (COG1272) and Related Hemolysin Genes among Cronobacter spp. - CHAEYOON LEE, HyeJin Jeong, HaNa Kwon, Kyuyoung Han, SeonJu Choi, SoHyun Kim, Jeong Woo Lee, Jung Youn Do, Samantha Finkelstein, Flavia Negrete, Hannah Chase, Isha Patel, Jayanthi Gangiredla, Gopal Gopinath, Ben Tall, U.S. Food and Drug Administration, Laurel, MD, USA
- P2-158 Characterization of Australian Escherichia coli O111 Isolates from Human and Cattle Sources — ROBERT BARLOW, Kate McMillan, Theo Allnutt, P. Scott Chandry, Narelle Fegan, Glen Mellor, CSIRO Agriculture & Food, Brisbane, Australia

Laboratory and Detection Methods

- P2-159 Comparison of Two Diagnostic Methods to Detect Five Different Bacterial Pathogens Associated with Porcine Respiratory Disease Complex (PRDC) and Investigation of Their Prevalence in Pathologic Lung Tissues in Korea - KUN TAEK PARK, Chan Hee Lee, Young Kyung Park, Chung Wung Kim, Sook Shin, Yong Ho Park, Seoul National University, Seoul, South Korea
- P2-160 Impact of Temperature Dependence of Water Activity on Salmonella Inactivation in a Multicomponent Food System — NATHAN ANDERSON, Yuqi Luo, Elizabeth Grasso-Kelley, U.S. Food and Drug Administration, Bedford Park, IL, USA
- P2-161 Development of a Real-time Food Pathogen Detection Platform Using Immunoassay Nanoparticle Technology MIHO MATAKATSU, Kiyoshi Yamaki, Hideyuki Tanaka, Kazuo Haga, Michael Weber, John Coomes. John Bodner, Toho Technology Inc., Chicago, IL, USA
- P2-162 Production and Characterization of Monoclonal Antibodies Highly Specific to Peanut Protein — JEONG SOOK KIM, Won Bo Shim, Gyeongsang National University, Jinju, South Korea
- P2-163 Detection of Pork Fat in Heat-processed Beef Meat Products by ELISA Using Monoclonal Antibody Specific to Pork Fat Protein — JEONG SOOK KIM, Won Bo Shim, Gyeongsang National University, Jinju, South
- P2-164 ELISA Screening Assays for Florfenicol and Fluoroquinolones — RONALD SARVER, Brent Steiner. Meaghan Sherry, Douglas MacRae, Danielle Delamarter, John Heller, Neogen Corporation, Lansing, MI, USA
- P2-165 ELISA Screening Assays for Tetracycline and Sulfonamides — RONALD SARVER, Brent Steiner, Meaghan Sherry, Douglas MacRae, Danielle Delamarter, John Heller, Neogen Corporation, Lansing, MI, USA

- P2-166 Comparison of Manual Assurance GDS and Assurance GDS Pickpen PIPETMAX Procedures for Preparation of Challenging Food and Environmental Samples — Philip Feldsine, Khanh Soliven, Khyati Shah, Joseph Berry, TIM KELLY, BioControl Systems, Bellevue, WA, USA
- P2-167 Genetic Characterization Based on Four Housekeeping Genes of Sixteen Human-pathogenic Bacillus Species Isolated from Foods, Cosmetics, and Environmental Surveillance Samples — IRSHAD SULAIMAN, Ying-Hsin Hsieh, Emily Jacobs, Steven Simpson, Khalil Kerdahi, U.S. Food and Drug Administration, Atlanta, GA, USA
- P2-168 Real-time Monitoring of TVC Using Non-invasive Bioluminescence Growth Media — Ryan Marder, Brandon Katz, DELIA CALDERON, Paul Meighan, Hygiena, Camarillo, CA, USA
- P2-169 Optimizing Methods for Recovering Heat-injured Enterococcus faecium and Indigenous Enterococci in Turkey Litter Compost — HONGYE WANG, Zhao Chen, Xiuping Jiang, Clemson University, Clemson, SC, USA
- P2-170 Evaluation of a Novel Method for Detection of Enterobacteriaceae in Dairy Infant Formula Using Real-time PCR — LAURENT JAIN, André Quintanar, Jean-Philippe Tourniaire, Sophie Pierre, Jean-François Mouscadet, Bio-Rad, Marnes-la-Coquette, France
- Inhibition of Bacterial and Plant AB Toxins by P2-171 Polyphenolic Compounds — BEATRIZ QUIÑONES, U.S. Department of Agriculture-ARS-WRRC-PSM Unit, Albany, CA, USA
- P2-172 Assessing Biological, Chemical, and Radionuclide Detection Methods — PENNY NORQUIST, John Larkin, FPDI, Saint Paul, MN, USA
- P2-173 Evaluation of Potential Temperature Abuse on Different Meat Packaging Systems during Outdoor Cooking Events — MARGARET JACKS, Luxin Wang, Thomas Taylor, Auburn University, Auburn, AL, USA
- P2-174 Performance of a Rehydratable Film Medium for the Quantitative Enumeration of Lactic Acid Bacteria — MARA CELT, Adam Stanenas, Robert Jechorek, John David, Cari Lingle, 3M Food Safety, St. Paul, MN, USA
- P2-175 Extended Spectra Database for Quality Indicators and Other Spoilers Identification By MALDI-TOF: A Never-Ending Story... — Marian Awad, DANIÈLE SOHIER, Simone Becker, Markus Kostrzewa, Bruker Daltonics, Bremen, Germany
- P2-176 Isolation and Characterization of Wide Host Rangespecific Bacteriophage for the Development of a Magnetoelastic Biosensor Method — DO HYEON PARK, Kyungpook National University, Daegu, South Korea
- P2-177 A Single Laboratory Validation for the Microbial Identification of Salmonella spp., Escherichia coli, and Listeria monocytogenes Utilizing MALDI-TOF Technology - MICHAEL BROWN, Kristopher Stanya, Nichelle Kunecke, Lauren May, Ken Yoshitomi, Lisa Newberry, U.S. Food and Drug Administration, Bothell, WA, USA

- P2-178 Evaluation of Enumeration and MPN Prediction Methods for Staphylococcus aureus — JENNIFER HAIT, Sandra Tallent, U.S. Food and Drug Administration, College Park, MD, USA
- P2-179 Suitability of ATP Bioluminescence Compared to pH Measurement or Microbial Growth on Agar to Evaluate Commercial Sterility in UHT Milk — Cristian Morano, Marcela Smichth, Luciana Maiorano, MICHELE FONTANOT, Gabriela Stancanelli, 3M Peru SA, Lima, Peru
- P2-180 Development of Loop-mediated Isothermal Amplification (LAMP) for Detection of BW10KD Allergen in Buckwheat DONG JOO SEO, Hyunkyung Park, Suntak Jeong, Hanseam Shin, Changsun Choi, Chung-Ang University, Food & Nutrition, Anseong, Kyounggi, South Korea
- Strategy for Quantification of Staphylococcus aureus Enterotoxins from Foodborne Intoxication Cases by Mass Spectrometry — MIRJANA ANDJELKOVIC, Sarah Denaeyer, Nadine Botteldoorn, Andreja Rajkovic, Scientific Institute of Public Health, Brussels, Belgium
- P2-182 Validation Report for the Method Comparison Evaluation of the bioMérieux TEMPO Aerobic Count (AC) to the Health Canada MFHPB-18 Determination of the Aerobic Colony Counts in Foods Reference Method for the Enumeration of Viable Mesophilic Aerobic Bacteria in a Variety of Foods — PATRICK BIRD, James Agin, Benjamin Bastin, Joe Benzinger, Erin Crowley, David Goins, Q Laboratories, Inc., Cincinnati, OH, USA
- P2-183 Investigation of Resonant Mass Measurement for Physiological Analysis of Microorganisms — BYRON BREHM-STECHER, Hyun Jung Kim, Iowa State University, Ames, IA, USA
- Evaluation of the Performance of an Alternative Rapid P2-184 Molecular Detection Assay Based on Loop-mediated Isothermal Amplification (LAMP), Compared to a Reference Official Mexican Method (NOM 210), in Artificially Contaminated Alkaline-treated Corn Meal (Nixtamal) — ILSE GARCÍA, Ismael Espinosa, 3M, Ciudad de Mexico, Mexico
- P2-185 Rapid Detection of *Cronobacter* spp. in Powdered Infant Formula Related Products, Raw Materials, and Environmental Samples Utilizing Loop Mediated Isothermal Amplification (LAMP) and Bioluminescence Detection Technologies — Christina Barnes, Neil Percy, CYNTHIA ZOOK, Lisa Monteroso, Gabriela Lopez, Velasco, 3M Food Safety, St. Paul, MN, USA
- P2-186 Evaluation of the New USDA Neutralizing Buffered Peptone Water Formulation for Poultry Verification Samples — PATRICIA RULE, Stan Bailey, Deborah Briese, Vikrant Dutta, John Mills, Ron Johnson, Jeff Papi, bioMérieux, Inc., Hazelwood, MO, USA
- P2-187 Comparison of Swabbing, Rinsing, and Grinding as Sampling Methods for the Recovery of Indicator Microorganisms on Beef Trimmings — MANSOUR ALNAJRANI, Andrea English, Keelyn Hanlon, Alejandro Echeverry, Mindy Brashears, Texas Tech University, Lubbock, TX, USA
- P2-188 Quantitative Fluorometric Detection of Escherichia coli in Ground Beef Using Genetically Engineered Bacteriophages — ANQI CHEN, Cornell University, Ithaca, NY, USA

- P2-189 Thermo Scientific™ SureTect™ Escherichia coli O157:H7 Assay: NF Validation Using the 7500 Fast PCR Instrument — Emma Scopes, Ana-Maria Leonte, AMANDA MANOLIS, Thermo Fisher Scientific, Austin, TX, USA
- P2-190 Thermo Scientific™ SureTect™ Listeria monocytogenes Assay: NF Validation Using the 7500 Fast PCR Instrument — Emma Scopes, Ana-Maria Leonte, AMANDA MANOLIS, Thermo Fisher Scientific, Austin, TX, USA
- P2-191 Thermo Scientific™ SureTect™ Salmonella Species Assay: NF Validation Using the 7500 Fast PCR Instrument Emma Scopes, Ana-Maria Leonte, AMANDA MANOLIS, Thermo Fisher Scientific, Austin, TX, USA
- P2-192 Detection of E. coli O157:H7 and Salmonella in a Cannabis Simulant Using a Liquid Crystal-based Immunoassay — CURTIS STUMPF, Brian Bullard, Stephanie Kuzenko, Emily Rusnak, Gary Niehaus, Crystal Diagnostics Ltd., Rootstown, OH, USA
- P2-193 Withdrawn
- P2-194 Detection and Survival of Viable But Non-culturable Escherichia coli O157 in Soil — CALLUM HIGHMORE, Charles William Keevil, University of Southampton, Southampton, United Kingdom
- P2-195 Single Marker Detection and Virulence Gene Profiling of STEC in Produce and Associated Farmscape Samples JANNETH PINZON, Kamieko Kayoshi, Jeremy Roland, Adrian Sbodio, Bettina Groschel, William Chaney, Erin Dreyling, Michele Jay-Russell, Trevor Suslow, University of California-Davis, Davis, CA, USA
- P2-196 Simultaneous Enrichment of E. coli O157:H7, Salmonella spp., and Listeria monocytogenes from Environmental Swabs and Detection by Multiplex-qPCR - ASHLEY QUEEN, Kirsten Hirneisen, Venugopal Sathyamoorthy, Atin Datta, Donna Williams-Hill, U.S. Food and Drug Administration, Irvine, CA, USA
- P2-197 A Comparative Evaluation of the GENE-Up Assay for the Detection of Escherichia coli O157:H7 — VIKRANT DUTTA, Mick Bosilevac, Hari Dwivedi, John Mills, Patrice Chablain, Stan Bailey, bioMérieux, Inc., Hazelwood, MO, USA
- P2-198 Development of Sample Preparation Methods to Improve Multiplex PCR Performance for Detection of Escherichia coli on Leafy Vegetables — YUKYUNG CHOI, Jiyoung Lee, Heeyoung Lee, Sanghyun Han, Yohan Yoon, Sookmyung Women's University, Seoul, South Korea
- P2-199 High-resolution Melt Curve PCR Assay for Detection of E. coli O157:H7 in Beef — YUEJIAO LIU, Azlin Mustapha, Prashant Singh, University of Missouri, Columbia, MO, USA
- P2-200 Evaluating the Functional Properties of GFP-labeled Control Strains for Shiga Toxin-producing Escherichia coli (STEC) and Salmonella enterica Assays — MEGAN BUMANN, Ray-Yuan Chuang, Dev Mittar, ATCC, Manassas, VA, USA

- P2-201 Improvement of Modified Buffered Peptone Water with Sodium Pyruvate (mBPWp) Broth by Optimization of Composition Ratio of Supplements for Rapid Detection of Escherichia coli O157:H7— HONG-SEOK KIM, Jung-Whan Chon, Minjung Shin, Dong-Hyeon Kim, Young-Ji Kim, II-Byeong Kang, Dana Jeong, Jin-Hyeong Park, Ho-Seok Chang, Hyun-Woo Lim, Kwang-Young Song, Kun-Ho Seo, Konkuk University, Seoul, South Korea
- P2-202 Comparing Campy-Cefex with Campylobacter jejuni/ Campylobacter coli Chromogenic Plating Medium for Isolating C. jejuni and C. coli from Raw Poultry — PAUL T. NGUYEN, Branislav Basaric, Bill Lionberg, Lawrence Restaino, R & F Laboratories, Downers Grove, IL, USA
- P2-203 Evaluation of Selective Enrichment Media and Chromogenic Media for Salmonella Detection in Raw Shell Egg Contents with a Low Microbial Load SOOKYOUNG LEE, Kwang-Young Song, Jung-Whan Chon, Dong-Hyeon Kim, Kun-Ho Seo, Konkuk University, Seoul, South Korea
- P2-204 Addition of Rifampicin to Bolton Broth to Inhibit Extended-Spectrum Beta-Lactamase-producing Escherichia coli for the Isolation of Campylobacter spp. — KIDON SUNG, Jung-Whan Chon, Young Ji Kim, Young-Jo Kim, Ji Young Jung, Dongryeoul Bae, Saeed Khan, Kun-Ho Seo, U.S. Food and Drug Administration/ NCTR, Jefferson, AR, USA
- P2-205 Comparison of Conventional Culture, Filtration, Realtime PCR, and Digital Droplet PCR Methods for the Isolation of Campylobacter spp. in Fresh Produce — JUNG-WHAN CHON, Ji Young Jung, Kidon Sung, Saeed Khan, U.S. Food and Drug Administration/NCTR, Jefferson, AR, USA
- P2-206 Magnetic Nanoparticles-enhanced Biosensor for the Detection of Campylobacter spp. in Raw Poultry Products — FUR-CHI CHEN, Roger Bridgman, Tennessee State University, Nashville, TN, USA
- P2-207 Same-Day Quantitative Detection of Campylobacter from Boot Swab Rinsates — BENJAMIN PASCAL, Adam Joelsson, Invisible Sentinel, Philadelphia, PA, USA
- P2-208 Detecting Listeria monocytogenes in Mozzarella Cheese with the BAX® System Real-time PCR Assays for Genus Listeria and L. monocytogenes Using 24 LEB Complete Media — NISHA CORRIGAN, Teresa Brodeur, Julie Weller, Andrew Farnum, Pheakdey Ith, Troy Ayers, Qualicon Diagnostics, LLC, A Hygiena Company, Wilmington, DE, USA
- P2-209 Detection of Shiga Toxin-producing Escherichia coli in 25 Gram Samples of All-purpose Flour Using the BAX® System — Julie Weller, ANDREW FARNUM, Pheakdey Ith, Laurie Post, Sue Kelly, Thomas Donohue, Holly Jaeger, Qualicon Diagnostics LLC, A Hygiena Company, Wilmington, DE, USA
- P2-210 Determining Whether Phages are Good Detectives of Salmonella Diversity Using Different Animal Production Systems in Chile as a Model — Dacil Rivera, Christopher Hamilton West, Viviana Toledo, Fernando Dueñas, Rodolfo Tardone, Carla Salazar, Luis López, ANDREA MORENO SWITT, Universidad Andres Bello, Santiago, Chile

P2-211 Genomics of Salmonella Obtained from Irrigation Canals in Central Chile Provides Insights in Plasmids Distribution — ANDREA MORENO SWITT, Joaquin Escobar, Viviana Toledo, Dacil Rivera, Fernando Mardones, Aiko Adell, Magaly Toro, Narjol Gonzalez-Escalona, Jorge Fernandez, Maria Cristina Martinez, Universidad Andres Bello, Santiago, Chile

Dairy

- P2-212 Reducing the Risk of Listeria monocytogenes in Rural Artisan Cheese in Southern Chile through Surveillance and Extension — ANDREA MORENO SWITT, Carla Barria, Randall Singer, Universidad Andres Bello, Santiago, Chile
- P2-213 Prevalence and Antibiotics Resistance of Listeria monocytogenes Isolated from Raw and Traditionally Processed Cow Milk in Ghana — JAMES OWUSU-KWARTENG, Alhassan Wuni, Fortune Akabanda, Lene Jespersen, University for Development Studies, Navrongo, Ghana
- P2-214 Microbial Contamination Levels of Milk and Cheese Produced in Two Korean Small-scale Dairy Farms — II-Byeong Kang, Dong-Hyeon Kim, Hong-Seok Kim, Dana Jeong, Joo-Yean Lee, KUN-HO SEO, Konkuk University, Seoul, South Korea
- P2-215 Population Dynamics of Listeria monocytogenes during Gouda Cheese Manufacture Using Artificially Inoculated, Unpasteurized Milk — JOELLE K. SALAZAR, Sartaj S. Narula, Christina K. Carstens, Arlette Shazer, Kristin M. Schill, Mary Lou Tortorello, U.S. Food and Drug Administration, Bedford Park, IL, USA
- P2-216 The Role of Inter-strain Interactions on the Growth of Matrix-Adapted and Non-Adapted L. monocytogenes Strains on Different Types of Cheeses — MARIA GKEREKOU, Maria Georgoulia, Anastasia Kapetanakou, Eleftherios Drosinos, Panagiotis Skandamis, Agricultural University of Athens, Athens, Greece
- P2-217 New Bioluminescent Alkaline Phosphatase Test for Verification of Milk Pasteurization — Delia Calderon, Paul Meighan, NICOLE FAMILIARI, Hygiena, Camarillo, CA, USA
- P2-218 Bactericidal Effect of Fermented Milk with Cudrania Tricuspidata Leaf Extract and Lactobacillus gasseri Strains — SOOMIN LEE, Nam Su Oh, Kyunga Jang, Yohan Yoon, Sookmyung Women's University, Seoul, South Korea
- P2-219 Acidification Treatments for the Control of Listeria monocytogenes in Model Cheese Brines — Stephanie Barnes, NATHALIA MILLAN-BORRERO, Jeffrey Carbonella, Anthony Micheletti, Dennis D'Amico, University of Connecticut, Storrs, CT, USA
- P2-220 Screening for Genetically Modified Plants (GMO) and Identification of Non-marker Events in Food and Feed - Hans-Henno Doerries, Stefanie Wendrich, OLAF DEGEN, Dr. Ivo Meier-Wiedenbach, Cordt Groenewald, Kornelia Berghof-Jager, BIOTECON Diagnostics, Potsdam, Germany

- P2-221 Psychrotolerance of *Paenibacillus odorifer* is Not Related to Phylogeny — SARAH BENO, Hannibal Brooks, Renato Orsi, David Kent, Jasna Kovac, Kathryn Boor, Martin Wiedmann, Cornell University, Ithaca, NY,
- P2-222 Quantitative Risk Assessment for Shiga Toxinproducing E. coli (STEC) in Producer-Distributor Bulk Milk Sold — ELNA BUYS, Patrick Njage, Victor Ntuli, University of Pretoria, Pretoria, South Africa
- P2-223 Evaluation of a Commingled Raw Milk Screening Method to Detect Tetracyclines at or below U.S. Tolerances — ROBERT SALTER, David Douglas, David Legg, Janine Schwartz, Ryan Sullivan, Charm Sciences, Inc., Lawrence, MA, USA
- P2-224 Thermal Inactivation of Staphylococcus aureus in Liquid Whey — KORI SCHERER, Brandon Wanless, Kathleen Glass, University of Wisconsin-Madison, Madison, WI, USA
- P2-225 Inhibition of Staphylococcus aureus in Whey Treated with Hydrogen Peroxide during Extended Non-refrigerated Storage — BRANDON WANLESS, Kathleen Glass, University of Wisconsin-Madison, Madison, WI, USA

- P2-226 Revolutionary Screening of Residues in Raw Milk Using the Infiniplex for Milk Biochip Array Kit — J. Mahoney, E. Daeseleire, W. Reybroeck, L. Sibanda, M. WALSLEBEN, J. Porter, R.I. McConnell, S.P. FitzGerald, Randox Food Diagnostics, Crumlin, United Kingdom
- P2-227 Modelling the Effect of Acid and Salt Stress on the Survival and Diversity of *Listeria monocytogenes* in a Lactic Soft Cheese Stored at 4°C — THULANI SIBANDA, Elna Buys, Universityof Pretoria, Pretoria, South Africa
- P2-228 Growth Assessment of *Listeria monocytogenes* in Indian Cottage Cheese (Paneer) under Homemade and Industrial Scenario — VARALAKSHMI SUDAGAR, Sarah Leysen, An Vermeulen, Frank Devlieghere, Mieke Uyttendaele, Ghent University, Ghent, Belgium
- P2-229 Effects of Addition of Essential Oils from Origanum vulgare L. and Rosmarinus officinalis L. during the Manufacture of Minas Frescal Cheese on Viability of Starter Bacteria — MARCIANE MAGNANI, Helena Taina Diniz Silva, Evandro Leite de Souza, Federal University of Paraiba, Joao Pessoa, Brazil
- P2-230 Potential of Lactic Acid Bacteria Isolated from Tropical Fruits as Biopreservants in Minas Frescal Cheese - MARCIANE MAGNANI, Whyara Karoline Almeida Costa, Larissa Ramalho Brandão, Estefânia Fernandes Garcia, Marcos Santos Lima, Evandro Leite Souza, Federal University of Paraiba, Joao Pessoa, Brazil

Blue Text - Developing Scientist Competitor

Green Text - Undergraduate Student Competitor



WEDNESDAY POSTERS 10:00 AM - 6:00 PM

P3 Low-water Activity Foods Packaging Produce Microbial Food Spoilage **Antimicrobials Laboratory and Detection Methods** Water

Tampa Convention Center, Exhibit Hall

P3-01 through P3-109 - Authors present 9:00 a.m. - 11:00 a.m.

P3-110 and above – Authors present 1:00 p.m. - 3:00 p.m.

Low-water Activity Foods

- P3-01 Fate of Salmonella and Escherichia coli O157:H7 in Cookie Dough during Storage: Comparison of Isolates from Different Origins — SHUANG WU, Shelli Laskowitz, Soohyoun Ahn, University of Florida, Gainesville, FL, USA
- P3-02 Validation of Enterococcus faecium as a Salmonella Surrogate in Thermal Treatment of Almond Meal - NURUL AHMAD, Hsieh-Chin Tsai, Ian Hildebrandt, Meijun Zspu, Juming Tang, Bradley Marks, Elliot Ryser, Michigan State University, East Lansing, MI, USA
- Evaluation of Dry Transfer in the Removal of Salmon-P3-03 ella from Food Contact Surfaces — SIMAN LIU, Ian Hildebrandt, Stephen Burbick, Nathan Anderson, Elizabeth Grasso-Kelley, Susanne Keller, Illinois Institute of Technology, Bedford Park, IL, USA
- Validation of Baking to Inactivate Salmonella in Model P3-04 High-protein and High-fat Foods — WENQIAN WANG, Nathan Anderson, Shannon Pickens, Ian Hildebrandt, Elizabeth Grasso-Kelley, Institute for Food Safety and Health (IFSH), Bedford Park, IL, USA
- P3-05 Multilaboratory Comparison of Thermal Resistance of Enterococcus faecium and Salmonella enterica in Peanut Butter — IAN HILDEBRANDT, Shannon Pickens, Soon Kiat Lau, Jeyamkondan Subbiah, Nathan Anderson, Bradley Marks, Elizabeth Grasso-Kelley, Michigan State University, East Lansing, MI, USA
- Inactivation of Salmonella spp. and Surrogate Bacteria P3-06 on Cashews and Macadamia Nuts Exposed to Commercial Propylene Oxide Processing Conditions — THOMAS SAUNDERS, Monica Ponder, Robert Williams, Jian Wu, Kim Waterman, Kendall Fogler, Virginia Tech, Blacksburg, VA, USA
- Enterococcus faecium as a Surrogate for Salmonella in P3-07 Thermal Treatment of Nonfat Milk Powder — SHUXIANG LIU, Nurul Ahmad, Jie Xu, Ian Hildebrandt, Elliot Ryser, Meijun Zhu, Bradley Marks, Juming Tang, Washington State University, Pullman, WA, USA
- The Effect of Process Air Velocity, Humidity, and P3-08 Product Moisture on Salmonella Inactivation on Almonds — FRANCISCO GARCÉS-VEGA, Kaitlyn Casulli, Bradley Marks, Michigan State University, East Lansing, MI, USA

- P3-09 Effect of Temperature, Water Activity, and Structure on Salmonella Thermal Resistance in Multiple Wheat Products — RENEE SCHWARTZ, Justine Williams, Pichamon Limcharoenchat, Nicole Hall, Michael James, Bradley Marks, Michigan State University, East Lansing, MI, USA
- P3-10 Direct Comparison of the Modes of Cross-contamination Associated with Salmonella during Almond Processing — JOANNA CARROLL, Quincy Suehr, Philip Steinbrunner, Bradley Marks, Elliot Ryser, Sanghyup Jeong, Michigan State University, East Lansing, MI, USA
- Corn Oil Enhances the Ability to Detect Salmonella P3-11 Montevideo in Spices — NICOLE ADDY, Laura Ewing, Darcy Hanes, Junia Jean-Gilles Beaubrun, U.S. Food and Drug Administration, Laurel, MD, USA
- Effect of Long-term Almond Storage on Survival and P3-12 Resistance of Salmonella to Heat and X-Ray — PHILIP STEINBRUNNER, Pichamon Limcharoenchat, Bradley Marks, Sanghyup Jeong, Michigan State University, East Lansing, MI, USA
- Quantification of Adhesion Force of Salmonella Attached P3-13 to Food Grade Surfaces in Low-moisture Environments — QUINCY SUEHR, Bradley Marks, Elliot Ryser, Sanghyup Jeong, Michigan State University, East Lansing, MI, USA
- Is Enterococcus faecium an Appropriate Surrogate P3-14 for Salmonella in Thermal Process Validation of Cocoa Powder? — HSIEH-CHIN TSAI, Xia Song, Juming Tang, Bradley Marks, Meijun Zhu, Washington State University, Pullman, WA, USA
- P3-15 Almond Surface Components Increase Resistance of Salmonella Enteritidis PT30 Under Low-moisture Environment — HSIEH-CHIN TSAI, Lina Sheng, Meijun Zhu, Washington State University, Pullman, WA, USA
- P3-16 Fate of Listeria monocytogenes in Cocoa Powder during Isothermal Inactivation — HSIEH-CHIN TSAI, Marizela Silva, Juming Tang, Meijun Zhu, Washington State University, Pullman, WA, USA
- P3-17 Assessment of Survival and Virulence of Salmonella in Low-moisture Foods — VICTOR JAYEOLA, Jeffrey Farber, Sophia Kathariou, North Carolina State University, Raleigh, NC, USA
- P3-18 Genetic Diversity, Antimicrobial Resistance, and Virulence Profile of Salmonella Isolated from the Peanut Supply Chain — Aline von Hertwig, Dionisio Amorim Neto, Monique Casas, MARISTELA DA SILVA DO NASCIMENTO, University of Campinas (UNICAMP) Campinas, Brazil
- Evaluation of Choridic Acid Cross-protection in P3-19 Salmonella Typhimurium Submitted to Long-term Desiccation Stress in Peanuts — Flávia Prestes, Karina Bosqui, Ana Paula Pereira, MARISTELA DA SILVA DO NASCIMENTO, University of Campinas (UNICAMP), Campinas, Brazil
- P3-20 Retention of Viability of Salmonella in Sucrose as Affected by Type of Inoculum, Water Activity, and Storage Temperature — DAVID A. MANN, Larry R. Beuchat, Christine A. Kelly, Ynes R. Ortega, University of Georgia, Griffin, GA, USA

- P3-21 Validation of Extrusion Processing as an Inactivation Step for Salmonella in Low-moisture Food — Tushar Verma, JEYAMKONDAN SUBBIAH, Andreia Bianchini, Jayne Stratton, Xinyao Wei, Soon Kiat Lau, Harshavardhan Thippareddi, Nathan Anderson, Kent Eskridge, University of Nebraska-Lincoln, Lincoln, NE,
- P3-22 Evaluation of Methods for Inoculating Powdered Milk and Soy Flour with Salmonella enterica Serovar Typhimurium LT2, Enterococcus faecium, and Cronobacter sakazakii — JUSTIN WIERTZEMA, Christian Borchardt, David Baumler, University of Minnesota, Saint Paul, MN, USA
- Survival of Salmonella spp. and Listeria monocyto-P3-23 genes in Hot Cocoa Drink Mix When Prepared Using Common Reconstitution Methods — ASHLEY CUNNINGHAM, Kari Sweeney, Conagra Brands, Omaha, NE, USA
- P3-24 Influence of Water Activity on Listeria monocytogenes Growth in Brain Heart Infusion Agar — GUIOMAR DENISSE POSADA-IZQUIERDO, Arícia Possas, J.C.C.P. Costa, Fernando Pérez-Rodríguez, Antonio Valero, Rosa Maria Garcia-Gimeno, University of Cordoba, Cordoba, Spain
- Survival of Shiga-toxigenic Escherichia coli in Flour P3-25 Paula Bauer, VALERIE NETTLES, Stuart Gorman, Faith Critzer, University of Tennessee, Knoxville, TN, USA
- P3-26 Effect of Added Water and Steam on the Heat Resistance of Salmonella Enteritidis Phage Type 30 Surrogate, Enterococcus faecium, on Blanched Peanuts, Cashews, Pumpkin Seeds, Red Skin Peanuts, and Walnuts — BUKOLA ONARINDE, Pauline Lovatt, Yunus Khatri, Gerrit Meerdink, University of Lincoln, Lincoln, United Kingdom

Packaging

- P3-27 Antimicrobial Effect of Nanocomposite Films Made of Cloisite 30B-Metal Nanoparticle in Soy Burger - FARANAK BEIGMOHAMMADI, Seyed Hadi Peighambardoust, Seyed Jamaledin Peighambardoust, Islamic Azad University, Kermanshah, Iran, Kermanshah,
- P3-28 The Growth/Survival of Salmonella on Waxberry under Different Storage Temperatures and Package Materials XINGNING XIAO, Wen Wang, Weihuan Fang, Yingchun Fu, Yanbin Li, Zhejiang University, College of Biosystems Engineering and Food Science, Hangzhou, China
- P3-29 A Preliminary Report: Impact of Reusing Jute Bags on Aflatoxin Contamination of Maize — CUI WANG, Feng Xu, Xiaofeng Hu, Ali Pinjari, Jing Ren, Robert Baker, Mars Global Food Safety Center, Beijing, China
- P3-30 Antimicrobial Food Packaging with Olive Leaf Extract — TONY JIN, Yanhong Liu, Lindsay McKeever, U.S. Department of Agriculture-ARS, Eastern Regional Research Center, Wyndmoor, PA, USA
- P3-31 Inactivation of Escherichia coli O157:H7 and Salmonella spp. on Fresh Strawberries by Antimicrobial Washing and Coatings — TONY JIN, Mingming Guo, Joshua Gurtler, U.S. Department of Agriculture-ARS, Eastern Regional Research Center, Wyndmoor, PA, USA

- P3-32 A Novel Bioactive Film Based on Pink Pepper Extract Combined with Modified Atmosphere Packaging Inhibits Spoilage Microorganisms of Atlantic Salmon Fillets — Thais Cardoso Merlo, Mariana Vieira Santana, Caio Cesar de Sousa Ribeiro, Giovana Verginia Barancelli, Patricia Santos Lopes, Cristiana Maria Pedroso Yoshida, ANNA CECILIA VENTURINI, Carmen Josefina Contreras-Castillo, Departamento de Ciências Farmacêuticas, Universidade Federal de São Paulo, Diadema, Brazil
- P3-33 Ultraviolet-activated Titanium Dioxide Nanocomposite Polymer Films: Characterization and Antimicrobial Efficacy against Escherichia coli O157:H7 — JING XIE, Yen-Con Hung, University of Georgia, Griffin, GA, USA

Produce

- P3-34 Cold Plasma Inactivation of Salmonella in Prepackaged, Mixed Salads is Influenced by Cross-contamination Sequence — SARAH HERTRICH, Glenn Boyd, Joseph Sites, Brendan Niemira, U.S. Department of Agriculture-ARS, Wyndmoor, PA, USA
- P3-35 Cucumber Waxing Significantly Enhances the Survival of Salmonella enterica Serovar Newport on the Fruit Surface — MARY THERESA CALLAHAN, Shirley Micallef, University of Maryland, College Park, MD, USA
- The Effect of Pear Firmness on the Transfer of Sal-P3-36 monella during Mechanical Slicing — HAMOUD ALNUGHAYMISHI, Elliot Ryser, Michigan State University, East Lansing, MI, USA
- P3-37 Reduction of Salmonella on the Surface of Green Skin Avocados by Antimicrobial Chemicals in a Pilot Brush Wash System — LIDIA N. VALDÉS, Michelle D. Danyluk, University of Florida, Lake Alfred, FL, USA
- P3-38 Plant-microbe Factors Influencing Salmonella Survival and Growth on Alfalfa Sprouts and Microgreens - ELIZABETH REED, Christina Ferreira, Rebecca Bell, Eric Brown, Jie Zheng, U.S. Food and Drug Administration, College Park, MD, USA
- P3-39 Fate of Salmonella spp. and Listeria monocytogenes on the Surface of Whole Mangoes Stored at Three Temperatures — LORETTA FRIEDRICH, Michelle D. Danyluk, University of Florida, Lake Alfred, FL, USA
- Characterization of a Pathogen Strain Collection to P3-40 Allow for Improved Validation of Sanitizer Efficacy in the Produce Industry — ANNA SOPHIA HARRAND, Veronica Guariglia-Oropeza, Jasna Kovac, Laura Carroll, Martin Wiedmann, Cornell University, Ithaca, NY, USA
- P3-41 Optimization of Time and Temperature of Hot Water Treatment as a Kill Step to Inactivate Salmonella spp. and Escherichia coli O157:H7 in Pecan Processing — KARUNA KHAREL, Achyut Adhikari, Charles Graham, Namrata Karki, Louisiana State University AgCenter, Baton Rouge, LA, USA

- P3-42 Effectiveness of Hot Water and Peroxyacetic Acid Treatment on Inactivation of Inoculated Salmonella spp. on Alfalfa, Clover, and Radish Seeds Intended for Sprout Production — Namrata Karki, KARUNA KHAREL, Jorge Cabezas, Alejandro Arias, Achyut Adhikari, Louisiana State University AgCenter, Baton Rouge, LA, USA
- Assessing the Effectiveness of Sanitizer Spray and P3-43 Brush Roller Treatment on Reducing the Population of a Five-strain Salmonella enterica Cocktail on Mango Surfaces — XINYUE WANG, Michelle D. Danyluk, University of Florida, Lake Alfred, FL, USA
- P3-44 Effect of Curli Expression and Adhesion of Salmonella Newport on Bacterial Transfer during Cucumber Peeling — JIIN JUNG, Donald W. Schaffner, Rutgers University, New Brunswick, NJ, USA
- Rapid Concentration/Detection of Escherichia coli P3-45 O157:H7 and Listeria monocytogenes from Lettuce Wash Waters Generated in Commercial Scale Facilities - RYANN GUSTAFSON, Sonia Magana, Elizabeth Kearns, Daniel Lim, Elliot Ryser, Michigan State University, East Lansing, MI, USA
- P3-46 Prevalence, Persistence, and Transfer of Antimicrobialresistant Microorganisms from Organic Dairy Manure to Leafy Greens — NITYA SARJAPURAM, Maria Albarracin, Siddhartha Thakur, Eduardo Gutierrez, North Carolina State University, Raleigh, NC, USA
- P3-47 Visualizing Pathogen Internalization Pathways in Fresh Tomatoes Using a Confocal Laser Scanning Microscope and a Micro CT — BIN ZHOU, Yaguang Luo, Gary Bauchan, Hao Feng, John Stommel, U.S. Dept. of Agriculture-ARS, Beltsville, MD, USA
- P3-48 Under Field Conditions, Distance is Significantly Associated with the Amount of Escherichia coli That Transfers from Wildlife Feces to Preharvest Lettuce during Foliar Irrigation — DANIEL WELLER, Jasna Kovac, David Kent, Sherry Roof, Jeffrey Tokman, Martin Wiedmann, Cornell University, Ithaca, NY, USA
- P3-49 Survival of Generic Escherichia coli and Listeria spp. Populations in Dairy Compost- and Poultry Litter Compost-amended Soils in the Northeastern United States — MARIE LIMOGES, Deborah Neher, Thomas Weicht, Patricia Millner, Manan Sharma, Catherine Donnelly, University of Vermont, Burlington, VT, USA
- P3-50 The Effect of Soil Management on the Persistence of Escherichia coli and Listeria spp. in Manure-amended Soils in the Northeast United States — PANAGIOTIS LEKKAS, Manan Sharma, Deborah Neher, Thomas Weicht, Patricia Millner, Catherine Donnelly, University of Vermont, Burlington, VT, USA
- P3-51 Low Prevalence of Foodborne Pathogens Found in Produce Grown on Diversified Farms in California — Nora Navarro-Gonzalez, Laura Patterson, Peiman Aminabadi, Alda Pires, Shirley Micallef, Robert Buchanan, MICHELE JAY-RUSSELL, University of California-Davis, Western Center for Food Safety, Davis, CA, USA

- P3-52 Microbial Attachment and Die-off Rate on Watermelon Surface in an Agricultural Setting — VIJAY SINGH CHHETRI, Kathryn Fontenot, Ronald Strahan, Karuna Kharel, Namrata Karki, Achyut Adhikari, Louisiana State University AgCenter, Baton Rouge, LA, USA
- P3-53 Effect of Residual Chlorine on the Attachment and Survival of Escherichia coli O157:H7 on Spinach Surface — VIJAY SINGH CHHETRI, Achyut Adhikari, Louisiana State University AgCenter, Baton Rouge, LA, **USA**
- P3-54 Interactions between Salmonella enterica Newport and Plant Pathogenic Fungi of the Genus Fusarium on Melons — ROBERT KORIR, Shirley Micallef, Kathryne Everts, University of Maryland College Park, Salisbury, MD, USA
- P3-55 Evaluating the Recovery of Salmonella from Enriched Inshell Walnuts — ADAM COBERT, Linda J. Harris, University of California-Davis, Davis, CA, USA
- P3-56 Salmonella Serovar Specific Tolerance to Nitric Oxide Stress in Vitro and in the Tomato Phyllosphere - ANGELA FERELLI, Shirley Micallef, University of Maryland, College Park, MD, USA
- Water Stress Limits the Growth of Salmonella on P3-57 the Lettuce Leaf Surface — XINGCHEN LIU, Shirley Micallef, University of Maryland, College Park, MD, USA
- P3-58 Survival of Salmonella spp. and Listeria monocytogenes genes on Pressed Card and Plastic Polyethethylene Board from the Farmers' Market and Validated Commercial Sanitizers to Decontaminate Salmonella spp. and Listeria monocytogenes — KA WANG LI, Lacey Lemonakis, Cangliang Shen, West Virginia University, Morgantown, WV, USA
- P3-59 The Efficacy of Chlorine and Acidified Sodium Chlorite for Disinfection of Seeds Artificially Inoculated with Salmonella as Affected by Treatment Time, Concentration, and Seed Type — ZIJING ZHANG, Yinggun Lei, Mengqi Li, Tong-Jen Fu, Illinois Institute of Technology, Institute for Food Safety and Health, Bedford Park, IL, USA
- P3-60 A Blend of Benzalkonium Chloride, Acetic Acid, and Methyl Paraben Effectively Reduces Escherichia coli O157:H7, Salmonella spp., and Listeria monocytogenes in Produce Wash Water, But Lacks Consistent Efficacy on Romaine and Iceberg Lettuce - NICHOLAS SEVART, Sara Gragg, Matthew Krug, Jacob Jenott, Randall Phebus, Kansas State University, Manhattan, KS, USA
- P3-61 Transfer of Microorganisms from a Dairy Calf Operation to an Adjacent Pistachio Orchard — CHRISTOPHER THEOFEL, Thomas Williams, Eduardo Gutierrez, Gordon Davidson, Michele Jay-Russell, Linda J. Harris, University of California-Davis, Davis, CA, USA
- P3-62 Comparison of Commercial Sanitizer Monitoring Strips - TIAH GHOSTLAW, Amanda Chang, Paola Martinez-Ramos, Amanda Kinchla, University of Massachusetts-Amherst, Amherst, MA, USA

- P3-63 Metagenomics Analysis of Antibiotic-resistance Genes Found on Radish Taproots Grown in Soils Amended with Antibiotic-treated Cattle — GISELLE KRISTI GURON, Monica Ponder, Amy Pruden, Virginia Tech, Blacksburg, VA, USA
- Quantifying Sulfonamide-resistant Bacteria on Lettuce P3-64 Grown in Soils Amended with Manure from Antibiotic-Treated Cattle — GISELLE KRISTI GURON, Monica Ponder, Amy Pruden, Virginia Tech, Blacksburg, VA, USA
- P3-65 Persistence of Non-O157 Shiga-toxigenic Escherichia coli on Fresh Produce Surfaces — Jennifer Green, JITU PATEL, U.S. Department of Agriculture, Beltsville, MD, USA
- Serotypes, Antimicrobial Resistance, and Genetic P3-66 Correlations of Escherichia coli Isolated from Raw Kimchi Ingredients and Fermented Kimchi — YUKYUNG CHOI, Soomin Lee, Hyun Jung Kim, Yohan Yoon, Sookmyung Women's University, Seoul, South Korea
- P3-67 Whole Genome Sequence Analysis of Salmonella Isolates from Alfalfa Seeds Implicated in Sprout Outbreaks — DEENA AWAD, Behzad Imanian, Peichen Liu, Yizhu Yan, Kristin M. Schill, Tong-Jen Fu, U.S. Food and Drug Administration, Division of Food Processing Science and Technology, Bedford Park, IL, USA
- Microbiological Profile and Incidence of Salmonella spp. P3-68 on Cherry Tomato — MARLA LEAL-CERVANTES. Sofia Arvizu-Medrano, Montserrat Hernandez-Iturriaga, Nanci E. Martínez-Gonzáles, Universidad Autónoma de Querétaro, Querétaro, Mexico
- Survival of Salmonella enterica on Mini Cucumbers P3-69 — HUIHUI CHEN, Siyun Wang, University of British Columbia, Vancouver, BC, Canada
- P3-70 Salmonella Transfer Potential during Field-pack Handling of Cantaloupe — RACHEL PFUNTNER, Laura Truitt, Benjamin Chapman, Michelle D. Danyluk, Laura Strawn, Virginia Tech – Eastern Shore AREC, Painter, VA, USA
- P3-71 Ability of the Top Seven Shiga-toxigenic Escherichia coli to Form Biofilms on Polystyrene and Stainless Steel Surfaces and to Survive within Dry Biofilms — Meining Cheng, Emelia Adator, Richard Holley, Tim McAllister, CLAUDIA NARVAEZ, University of Manitoba, Winnipeg, MB, Canada
- Involvement of Surface Structures of Shiga Toxin-P3-72 producing Escherichia coli O157:H7 and O104:H4 in Interactions with Arabidopsis thaliana — HYEIN JANG, Karl Matthews, Rutgers University, New Brunswick, NJ, **USA**
- P3-73 Migration and Growth of Enterohemorrhagic Escherichia coli from Inoculated and Accompanying Contaminated Vegetable Seeds to Sprouts or Seedlings — YUE CUI, Da Liu, Ronald R. Walcott, Jinru Chen, University of Georgia, Griffin, GA, USA
- P3-74 Formation of Disinfection Byproducts in Wash Water and Lettuce by Washing with Sodium Hypochlorite and Peracetic Acid Sanitizers — WAN-NING LEE, Ching-Hua Huang, Georgia Institute of Technology, Atlanta, GA, USA

- P3-75 Comparison of Flume Wash and Single-pass Wash on the Formation of Disinfection Byproducts in Produce Processing — Ching-Hua Huang, WAN-NING LEE, Yaguang Luo, Dave Morris, Georgia Institute of Technology, Atlanta, GA, USA
- P3-76 Efficacy of Peroxyacetic Acid and Other Sanitizers for Ensuring Produce Safety — PRASHANT SINGH, Hang Qi, Yen-Con Hung, University of Georgia, Griffin, GA, **USA**
- P3-77 Efficacy of Peracetic Acid for Inactivation of Foodborne Pathogens in Imazalil Fungicide Solutions Used in Citrus Packinghouses — Setareh G. Shiroodi, ANNE-LAURE MOYNE, Linda J. Harris, University of California-Davis, Davis, CA, USA
- P3-78 Injury and Recovery of Salmonella spp., Escherichia coli O157:H7, and Listeria monocytogenes on Cantaloupe Rind Surfaces after Hydrogen Peroxide and Minimal Thermal Treatment — DIKE UKUKU, Sudarsan Mukhopadhyay, Modesto Olanya, Brendan Niemira, U.S. Department of Agriculture-ARS-ERRC-FSIT, Wyndmoor, PA, USA
- Impact of Organic Practices in the Microbiological P3-79 Quality and Safety of Lettuce in São Paulo, Brazil - DANIELE FERNANDA MAFFEI, Debora Andrade Moreira, Mariza Landgraf, Bernadette DGM Franco, University of São Paulo, São Paulo, Brazil
- P3-80 Survival and Growth of Foodborne Pathogens in Fruit Juice — LINDSEY DEFRAIN, Hamoud Alnughaymishi, Elliot Ryser, Michigan State University, East Lansing, MI, USA
- P3-81 Evaluation of Four Assessment Methods Used to Identify Foodborne Pathogens Prior to the Harvest of Fresh Produce — PAULA RIVADENEIRA, Martha Ruedas, Teresa Reyes, Elene Stefanakos, Robert Buchanan, University of Arizona, Yuma, AZ, USA
- P3-82 Prevalence of Foodborne Pathogens on Small Mixed Crop-Livestock Farms in Arizona — PAULA RIVADENEIRA, Martha Ruedas, Teresa Reves, Elene Stefanakos, Robert Buchanan, University of Arizona, Yuma, AZ, USA
- P3-83 Rotational Grazing of Sheep within Organic Crop Fields: What is an Ideal Waiting Period to Minimize Food Safety Risks? — LAURA PATTERSON, Nora Navarro-Gonzalez, Peiman Aminabadi, Elizabeth Antaki, Michele Jay-Russell, Alda Pires, University of California-Davis, Department of Population Health & Reproduction, Davis, CA, USA
- P3-84 Isolation of Salmonella and Detection of Generic Escherichia coli Populations from South Florida Surface Waters — TRAVIS CHAPIN, Michelle D. Danyluk, University of Florida, Lake Alfred, FL, USA
- P3-85 Application of Cinnamon Oil Nanoemulsion to the Control of Foodborne Bacteria Such as Listeria spp. and Salmonella spp. on Honeydew Melon - SUMIT PAUDEL, Kanika Bhargava, Hari Kotturi, University of Central Oklahoma, Edmond, OK, USA

- P3-86 Differential Growth of Listeria monocytogenes and Salmonella enterica Serovar Typhimurium in Sterile Juice from Fresh-cut Produce — SAMANTHA BOLTEN, Ganyu Gu, Xiangwu Nou, U.S. Department of Agriculture-ARS, Beltsville, MD, USA
- P3-87 Forced Air-Ozone Reactor Combined with Sequential Advanced Oxidative Process to Inactivate Listeria monocytogenes on Apples Destined for Candy Apple Production — KAYLA MURRAY, Fan Wu, Keith Warriner, University of Guelph, Guelph, ON, Canada
- P3-88 Reduction of Escherichia coli O157:H7. Listeria monocytogenes, or Salmonella spp. on Whole Yellow Onions Exposed to Hot Water or Diced Onions Exposed to Lime Juice — Vanessa Lieberman, ETHAN W. MORGAN, Linda J. Harris, University of California-Davis, Davis, CA, USA
- P3-89 Cold Plasma Inactivation of Escherichia coli and Salmonella spp. on Golden Delicious Apples — SIQIN LIU, Agnes Kilonzo-Nthenge, Ankit Patras, Yannam Sudhear, Tennessee State University, Nashville, TN, USA
- P3-90 Influence of Chemical Pretreatment on Wooden Sticks Alone and in Caramel Apples on Listeria monocytogenes Survival — CHRISTINA K. CARSTENS, Joelle K. Salazar, Vriddi M. Bathija, Sartaj S. Narula, Peien Wang, Mary Lou Tortorello, U.S. Food and Drug Administration, Bedford Park, IL, USA
- P3-91 Disinfection of Alfalfa Sprouting Seed Using a Treatment Compliant with Organic Production Requirements - PASCAL DELAQUIS, Susan Bach, Steve Orban, Carmen Wakeling, Siyun Wang, Agriculture and Agri-Food Canada, Summerland, BC, Canada
- P3-92 Practices and Conditions Which Promote Persistence of Listeria monocytogenes on Equipment Surfaces and Transfer to Cantaloupes in the Packing Environment — ESMOND NYARKO, Kalmia Kniel, Bin Zhou, Cheryl East, Eric Handy, Yaguang Luo, Patricia Millner, Manan Sharma, University of Delaware, Newark, DE, USA
- Evaluation of Microbiome Present in Bagged Spring Mix P3-93 Salad — CHAO LIAO, Luxin Wang, Auburn University, Auburn, AL, USA
- P3-94 The Effects of Relative Humidity on Salmonella Biofilm Production, Quorum Sensing, and Subsequent Survival on Tomatoes and Plastic Mulch — JENNIFER TODD-SEARLE, Donald W. Schaffner, Rutgers University, New Brunswick, NJ, USA
- P3-95 Survival of Escherichia coli O157:H7, Salmonella spp., and Listeria monocytogenes on the Skin and Sliced Kiwifruit — JING YUAN, Luxin Wang, Auburn University, Auburn, AL, USA
- Evaluation of Escherichia coli Levels Present in Agri-P3-96 cultural Ponds and Streams — JING YUAN, Amanda Windham, Kenneth Macklin, Stuart Price, Luxin Wang, Auburn University, Auburn, AL, USA
- P3-97 Microbial Community Analysis of Field-grown Produce in Soil Amended with Manure or Compost from Antibiotic Treated Cattle — KENDALL FOGLER, Monica Ponder, Amy Pruden, Giselle Kristi Guron, Leigh Anne Krometis, Cully Hession, Lauren Wind, Kyle Jacobs, Virginia Tech, Blacksburg, VA, USA

- P3-98 Dynamics of Bacterial Community on Spinach during Processing and Storage — GANYU GU, Samantha Bolten, Lan Wang, Steve Rideout, Xiangwu Nou, U.S. Department of Agriculture-ARS, Beltsville, MD, USA
- P3-99 Fate of *Listeria monocytogenes* on Fresh Apples under Different Storage Temperatures — LINA SHENG, Katheryn Edwards, Hsieh-Chin Tsai, Shima Bibi, Ines Hanrahan, Meijun Zhu, Washington State University, Pullman, WA, USA
- P3-100 Survival of Listeria innocua on Fuji Apples under Commercial Cold Storage with or without Ozone Gaseous — LINA SHENG, Ines Hanrahan, Xiaofei Sun, Michael Taylor, Glade Brosi, Meijun Zhu, Washington State University, Pullman, WA, USA
- Survival of Generic E. coli on Gala and Golden P3-101 Delicious Apples Near Harvest with and without the Use of Overhead Cooling Water Applications — Kyu Ho Jeong, INES HANRAHAN, Lauren Walter, Meijun Zhu, Karen M. Killinger, Tree Fruit Research Commission, Wenatchee, WA, USA
- P3-102 Arcobacter Internalization in Fresh Produce: An Emerging Food Safety Issue under Extreme Weather Events — SEUNGJUN LEE, The Ohio State University, Columbus, OH, USA
- P3-103 Cross-contamination by Curli and Non-curli Producing Escherichia coli O157:H7 Mediated by Lettuce Inoculation Location during Washing of Leafy Greens — ANN VEGDAHL, Donald W. Schaffner, Rutgers University, New Brunswick, NJ, USA
- P3-104 E. coli/Salad Interactions GIANNIS KOUKKIDIS, Primrose Freestone, University of Leicester, Leicester, United Kingdom
- P3-105 Microbial Analysis of Produce Purchased from Florida Farmers' Markets — LISA ROTH, Amy Simonne, Lisa House, Soohyoun Ahn, University of Florida, Gainesville, FL, USA
- P3-106 Influence of Ultraviolet-C Light Intensity on Blueberries for Enhanced Food Safety and Extended Shelf Life — AROSHA LOKU UMAGILIYAGE, Ruplal Choudhary, Southern Illinois University, Carbondale, IL, USA
- P3-107 Characterization of *Clostridium difficile* Isolated from Animal Manure and Manure-based Compost — MUTHU DHARMASENA, Xiuping Jiang, Clemson University, Clemson, SC, USA
- P3-108 Changes in the Phyllosphere-associated Bacteria of Leafy Greens Caused by Environmental Factors Such as Solar Radiation — PILAR TRUCHADO, Maria Gil, Ana Allende, CEBAS-CSIC, Espinardo, Spain
- P3-109 Microbial Quality of Irrigated Leafy Green Vegetables in Accra, Ghana — JOYCELYN K. QUANSAH, Angela P.H. Kunadu, Lydia Mosi, Firibu K. Saalia, Jinru Chen, University of Georgia, Griffin, GA, USA

Microbial Food Spoilage

- P3-110 New Culture Media Method, Approved by AOAC and Microval for Rapid and Convenient Detection and Enumeration of Food Spoilage Microorganisms - ANKE HOSSFELD, Renaud Chollet, Lisa John, Celine Marion, Merck KGaA, Darmstadt, Germany
- P3-111 Withdrawn
- P3-112 Withdrawn
- P3-113 Withdrawn
- P3-114 A Study to Assess the Numbers and Prevalence of Bacillus cereus and Its Toxins in Pasteurized Fluid Milk — SALEEMA SALEH-LAKHA, Carlos Leon-Velarde, Shu Chen, Susan Lee, Kelly Shannon, Martha Fabri, Bruce Keown, Gavin Downing, University of Guelph, Guelph, ON, Canada
- P3-115 Evaluation of a Highly Multiplexed, Automated Assay for the Detection of Beer Spoilage Flora — MORGAN WALLACE, Daniela Bocioaga, Kathryn Mix, Stephanie Morse, Kyleen Sorensen, Cristina McGuire, Sarah Kozak, Jessica Pecone. Katherine Sweitzer. Peter Trabold. Gwendolyn Spizz, Rheonix, Ithaca, NY, USA
- P3-116 Health Canada Validation of a Chromogenic Medium for Enumaration of E. coli and other Non-E. coli Coliforms Bacteria in Selected Food Matrices — YANNICK BICHOT, Wendy Lauer, Mike Clark, Christophe Quiring, Bio-Rad, Marnes-la-Coquette, France
- Development of a Monte Carlo Model to Predict Fluid Milk Spoilage by Aerobic Psychrotolerant Sporeformers — ARIEL BUEHLER, Aljosa Trm□i□, Nicole Martin, Kathryn Boor, Martin Wiedmann, Cornell University, Ithaca, NY, USA
- P3-118 Patulin Contamination and Patulin-producing *Penicill*ium spp. in Decayed Apples and Patulin Reduction by Mechanical Removal of Decayed Parts — MIN JUNG, Sung Min Cho, Min Jung Choo, Kyu Ri Lee, Sung-Yong Hong, Soo-Hyun Chung, Korea University, Seoul, South Korea
- P3-119 A Putative Siderophore Locus of *Pseudomonas fragi*: Solving an Iron Problem — TAMSYN STANBOROUGH, P. Scott Chandry, Shane M. Powell, Mark Tamplin, Narelle Fegan, CSIRO Agriculture & Food, Werribee, Australia
- P3-120 Biodegradation of Aflatoxin B, by Edible Mushroom Cultures and Their Cell-free Extracts — MIN JUNG CHOO, Kyu Ri Lee, Sung Min Cho, Min Jung, Sung-Yong Hong, Soo-Hyun Chung, Korea University, Seoul, South Korea
- P3-121 Effects of Various Antioxidants on Natural Spoilage Microflora, Lean Color and Sensory Characteristics of Retail Case-ready Top Sirloin Steaks — BRITTNEY BULLARD, Ifigenia Geornaras, Jennifer Martin, Dale Woerner, Robert Delmore, Keith Belk, Colorado State University, Fort Collins, CO, USA

- P3-122 Influence of Desiccation on Survival and Dry-heat Resistance of Long-term-survival Phase Salmonella Typhimurium and Salmonella PT 30 on Paper Discs and Raw Almonds — FEI WANG, Aubrey Mendonca, Aura Daraba, Yutong Zhang, David Manu, Angela Shaw, Byron Brehm-Stecher, Iowa State University, Ames, IA, USA
- P3-123 Growth of Fungi in Low Oxygen and Intermediate Water Activity Model Systems — ELIZABETH BUERMAN, Randy Worobo, Olga Padilla-Zakour, Cornell University, Ithaca, NY, USA
- P3-124 Detoxification of Aflatoxin B, by Cell-free Extract of Aspergillus oryzae MAO 103 — KYU RI LEE, Sung Min Cho, Sung-Yong Hong, Soo-Hyun Chung, Korea University, Seoul, South Korea
- P3-125 Enumeration and Identification of Spoilage Lactic Acid Bacteria in Chilled Food Products Using 3M™ Petrifilm™ Lactic Acid Bacteria Count Plate — SITI AISHA ABD AZIZ, Su Ann Lee, Teen Teen Chin, Hui Key Lee, Chandraprasad S Rajangan, Lay Ching Chai, ALS Technichem, Shah Alam, Malaysia
- P3-126 Storage-Life and Microflora of Vacuum-packaged Pork Loin Cuts in Relation to Beef from the Same Abattoir — Mohamed K Youssef, Frances Tran, PEIPEI ZHANG, Colin O Gill, Xianqin Yang, Agriculture and Agri-Food Canada, Lacombe, AB, Canada
- P3-127 Variability in Growth Behavior of *Carnobacterium* Isolates in Medium with Low Initial pH — PEIPEI ZHANG, Xiangin Yang, Agriculture and Agri-Food Canada, Lacombe, AB, Canada

Antimicrobials

- P3-128 Anti-listerial Activity of Lactic Acid Bacteria Isolated from Artisanal Cheeses Produced in the State of Minas Gerais (Brazil) — FERNANDA BOVO CAMPAGNOLLO, Larissa Pereira Margalho, Bruna Akie Kamimura, Verônica Ortiz Alvarenga, Vasco A.P. Cadavez, Ursula A. Gonzales-Barron, Anderson Sant'ana, University of Campinas, Campinas, Brazil
- P3-129 Prevalence and Antibiotic Resistance of Bacteria Isolated from Retail Meats in Korea during the Year 2016 — YONG HOON KIM, National Institute of Food and Drug Safety Evaluation, Ministry of Food and Drug Safety, Cheongju, South Korea
- P3-130 Antibacterial and Antioxidant Activity of Oregano Essential Oil on Stability of Low-acid Mayonnaise — IZABELA ALVES GOMES, Érika Fraga de Souza, Flávia dos Santos Gomes, Otniel Freitas-Silva, Janine Passos Lima da Silva, Federal University of the State of Rio de Janeiro, Rio de Janeiro, Brazil
- P3-131 Prevention of Mixed-species Biofilm Formations on Nanoscale Plasma-coated Surfaces — FNU CHENGGEER, Lin Li, John Jones, Meng Chen, Qingsong Yu, Azlin Mustapha, University of Missouri, Columbia, MO, USA
- P3-132 Withdrawn

- P3-133 Antimicrobial Activity of Fruit Extracts and Juice against Various Listeria monocytogenes and Salmonella Strains - Jingyi Du, Yi-Cheng Su, Christina DeWitt, Chengchu (Catherine) Liu, JOVANA KOVACEVIC, Oregon State University, Portland, OR, USA
- P3-134 The Synergistic Effect of the Photosensitizer Curcumin and Ascorbic Acid in Inactivating Listeria monocytogenes and Escherichia coli O157:H7 — JINGWEN GAO, Junhua Han, Karl Matthews, Rutgers University, New Brunswick, NJ, USA
- P3-135 Antimicrobial Effect of Copper-based Surfaces on Environmental Foodborne Pathogens Associated with Meat and Poultry Processing Facilities — ILAN ARVELO-YAGUA, Marcos X. Sanchez-Plata, Sergio Rocha, Patricia Landaida, Luis Armijo, Texas Tech University, Lubbock, TX, USA
- P3-136 Cold Pasteurization of Tender Coconut Water by a Flow through Filter Column Containing Glassbeads Coated with Curcumin Nano-Liposomes — Jim Thomson, Nathalie Becerra-Mora, Punit Kohli, Derek Fisher, Victor Rodov, RUPLAL CHOUDHARY, Southern Illinois University - Carbondale, Carbondale, IL, USA
- P3-137 Antibacterial Characteristics of Anthocyanins Extracted from Wild Blueberries against Foodborne Pathogens - Yujie Zhang, Caihong Wei, Xiaohong Sun, Yingjie Pan, VIVIAN CHI-HUA WU, U.S. Department of Agriculture-ARS-WRRC, Albany, CA, USA
- P3-138 The Effect of Sugar Substrates on the Efficacy of Bacteriocins to Inhibit Listeria monocytogenes - DANIELLE ROBOCON, Michael Gänzle, Lynn McMullen, University of Alberta, Edmonton, AB, Canada
- P3-139 Reduction of Molds and Listeria monocytogenes on Flour Tortilla Utilizing Targeted Directional Microwave Technology — KATHLEEN FERMIN, Don Stull, Andreas Neuber, Kendra Nightingale, Mindy Brashears, Texas Tech University, Lubbock, TX, USA
- Behavior of Listeria monocytogenes on Mortadella P3-140 Formulated Using a Natural, Clean Label Antimicrobial during Extended Storage at 4° or 12°C — JOHN LUCHANSKY, Stephen Campano, Marcus Rieker, Laura Stahler, Lianna McGeary, Bradley Shoyer, Laura Shane, Manuela Osoria, Anna Porto-Fett, U.S. Department of Agriculture-ARS-ERRC, Wyndmoor, PA, USA
- Efficacy of Chlorine Dioxide Gas to Decontaminate P3-141 Fresh Produce Used for In-store and Vendor Juicing Operations — MIKAYLA GOODMAN, Mark Berrang, Judy Harrison, Mark Harrison, University of Georgia, Athens, GA, USA
- P3-142 Development of Antimicrobial Hydrogel Patches to Control Listeria monocytogenes in Foods Consumed Raw — HYEMIN OH, Sejeong Kim, Yohan Yoon, Sookmyung Women's University, Seoul, South Korea
- P3-143 A Cranberry Extract as a Marinade Inhibits Growth of Listeria on Chicken — Archana Vasanthakumar, CHAYAPA TECHATHUVANAN, Margarita Gomez, Ocean Spray Cranberries, Inc., Lakeville-Middleboro, MA, USA

- P3-144 Essential Oils in the Control of Planktonic and Sessile Cells of Staphylococcus aureus — TENILLE RIBEIRO DE SOUZA, Letícia Andrade do Vale, Kalmia Kniel, Roberta Hilsdorf Piccoli, UFLA, Lavras, Brazil
- P3-145 Antimicrobial Ability of Modified Bacterial Cellulose Film - WEI WANG, François Xavier Navigiziki, Polly Liou, Azlin Mustapha, Mengshi Lin, University of Missouri, Columbia, MO, USA
- P3-146 Effect of Acidified Peroxyacetic Acid on the Microbiological and Color Characteristics of Beef Tissue — BRIANNA BRITTON, Kathryn McCullough, Ifigenia Geornaras, Dale Woerner, Robert Delmore, Jennifer Martin, James Reagan, Keith Belk, Colorado State University, Fort Collins, CO, USA
- P3-147 Antimicrobial Activity and Mechanism of Garlic (Allium sativum) Extracts against Aeromonas hydrophila — YOU JIN KIM, In Young Choi, Won Keun Song, Dong Wook Jang, Hae-Yeong Lee, Min-Jeong Lee, Mi-Kyung Park, Kyungpook National University, Daegu, South Korea
- P3-148 Evaluation of Psoraleae semen Extract as a Natural Antimicrobial Agent for Food Application — SEJEONG KIM, Yohan Yoon, Kyoung-Hee Choi, Sookmyung Women's University, Seoul, South Korea
- P3-149 Antioxidant Activity and Influence of Extracts of Citrus Byproducts on Adherence and Invasion of Campylobacter jejuni, as Well as on the Relative Expression of Cadf and Ciab — Norma Heredia, JORGE DÁVILA-AVIÑA, Sandra Castillo, Santos Garcia, Universidad A. de Nuevo Leon, San Nicolas, Mexico
- P3-150 Gaseous Ozone and Low-temperature Treatment for Controlling Growth of Aspergillus parasiticus in Peanuts - JING NI TAN, Cheng-An Hwang, Hsin-I Hsiao, National Taiwan Ocean University, Keelung, Taiwan
- P3-151 Inactivation of Bacteria Using Single Wavelength 405 nm Light — STEPHEN LYON, Sealed Air Corporation, Sturtevant, WI, USA
- P3-152 Antibiotic Resistance of Beneficial Lactic Acid Bacteria Isolated from Smoked Salmon — LUIS NERO. Bernadette DGM Franco, Elisabetta Tome, Svetoslav Todorov, Universidade Federal de Viçosa, Vicosa, Brazil
- Development of Antimicrobial Susceptibility among Microbiota from Hospices in South Africa — JANE NKHEBENYANE, Ryk Lues, Teboho Mokoatsi, Central University of Technology, FS SA, Bloemfontein, South Africa
- Applying N-Halamine Compound to Absorbent Pad for Controlling Spoilage-related Microorganisms in Refrigerated Beef — TIAN REN, Mingyu Qiao, Tung-Shi Huang, Jean Weese, Yung-Hsiang Tsai, Auburn University, Auburn, AL, USA
- P3-155 Carbon Dots' Light-activated Antimicrobial Activities against Bacterial Pathogens - Mohamad Al Awak, Ping Wang, XIULI DONG, Yongan Tang, Ya-Ping Sun, Liju Yang, North Carolina Central University, Durham, NC, USA
- P3-156 Antimicrobial Activity of Kefir against Cronobacter sakazakii and Its Application — DONG-HYEON KIM, Dana Jeong, Il-Byeong Kang, Kwang-Young Song, Hong-Seok Kim, Young-Ji Kim, Hyunsook Kim, Kun-Ho Seo, Konkuk University, Seoul, South Korea

- P3-157 Isolation and Characterization of a Novel Antimicrobial Exopolysaccharide Produced by *Lactobacillus* Kefiranofaciens DN1 from Kefir — DANA JEONG, Dong-Hyeon Kim, II-Byeong Kang, Hyunsook Kim, Kwang-Young Song, Hong-Seok Kim, Kun-Ho Seo, Konkuk University, Seoul, South Korea
- P3-158 Decay Kinetics of Residual Peracetic Acid and Hydrogen Peroxide on Poultry and Red Meat - RICHARD WALSH, John Hilgren, Deborah Klein, Oriana Leishman, Ecolab Inc., St. Paul, MN, USA
- P3-159 Four Quaternary Ammonium-based Disinfectants Show Limited Efficacy for Inactivation of Human Norovirus GII.4 Sydney — JEREMY FAIRCLOTH, Emma Lepri, Lee-Ann Jaykus, North Carolina State University, Raleigh, NC, USA
- P3-160 Screening Food Microbiota for Novel Antimicrobial Compounds Suitable for Food Preservation — WALAA HUSSEIN, Ahmed Yousef, Ohio State University, Columbus, OH, USA
- P3-161 Plasmid Mediated Colistin Resistance in Food Animal Intestinal Contents Detected by Selective Enrichment - KIMBERLY COOK, Richard Meinersmann, Scott Ladely, Jodie Plumblee, Rachel Whitaker, Kay Williams, Uday Dessai, Eileen Thacker, U.S. Department of Agriculture-ARS, Athens, GA, USA
- P3-162 In Vitro Evaluation of Essential Oils and Plant Extracts as an Alternative to Antibiotic Used in Pork Meat Production — Carmen M. S. Ambrosio, Natalia Y. Ykeda, Severino M. Alencar, Carmen J. C. Castillo, Andrea M. Moreno, EDUARDO M. DA GLORIA, Universidade de São Paulo, Piracicaba - SP, Brazil
- P3-163 Effect of Pimenta Malagueta (Capsicum frutescens) and Red Pepper (Capsicum annuum) Extracts on LuxRI-Type Quorum Sensing-regulated Phenotypes - MILAGROS LISETH CASTILLO RIVERA, Beatriz Ximena Valencia Quecan, Neuza Mariko Aymoto Hassimotto, Uelinton Manoel Pinto, Universidade de São Paulo, São Paulo, Brazil
- P3-164 Antimicrobial Efficacy of Syzygium antisepticum Plant Extract against Staphylococcus aureus and Methicillinresistant S. aureus and Its Application Potential with Cooked Chicken — Wengian Yuan, HYUN GYUN YUK, Hyun-Jung Chung, Korea National University of Transportation, Chungju, South Korea
- P3-165 Inhibition of Bacterial Quorum Sensing (QS) by Organic Extracts of Onion Varieties — BEATRIZ XIMENA VALENCIA QUECAN, Milagros Liseth Castillo Rivera, Neuza Mariko Aymoto Hassimotto, Uelinton Manoel Pinto, Universidade de São Paulo, São Paulo, Brazil

Laboratory and Detection Methods

P3-166 Independent Matrix Validations for the Detection of Salmonella enterica in 375 Gram Samples across Various Product Categories by the Atlas® Salmonella Sen Detection Assay — WILLIAM CHANEY, Benjamin Bastin, Patrick Bird, Joe Benzinger, Erin Dreyling, Roka Bioscience, San Diego, CA, USA

- P3-167 Validation of Individual and Wet Pooled Environmental Sample Analyses in Buffered Peptone Water and Lactose Broth by the Atlas® Salmonella Sen Detection Assay — WILLIAM CHANEY, Benjamin Bastin, Patrick Bird, Joe Benzinger, Ali DeShields, Erin Dreyling, Roka Bioscience, San Diego, CA, USA
- P3-168 Development and Validation of a Novel, Enzyme-based Sample Preparation Step as a Workflow Modification for the Atlas® Listeria Environmental Detection Assay to Mitigate Free Nucleic Acid Detection Originating in Phage-based Processing Aids — WILLIAM CHANEY, Brett Maroni, Tucker Lopez, Kelly Cassutt, Celina Puente, Sarah Verver, Christopher Haney, Roka Bioscience, San Diego, CA, USA
- Development of a Bead-based Flow Cytometry P3-169 Immunoassay for the Simultaneous Detection of Foodborne Bacterial Pathogens in Poultry and Meat Products — CELIA SUAREZ PANTALEON, Alexandre Monteforte, Benoit Granier, Delphine Larose, Cindy Dropet, Nicolas Desroche, Patrice Arbault, Anne-Catherine Huet, Riccardo Marega, Philippe Delahaut, Nathalie Gillard, Unisensor SA, Ougree (Liege), Belgium
- P3-170 Evaluation of Growth Kinetics of Diverse Salmonella in Modified BAM Preenrichment for Shell Eggs MELANIE BUTLER, Anna Laasri, Thomas Hammack, Gina Ryan, U.S. Food and Drug Administration, College Park, MD, USA
- Relative Effectiveness of Lactose Broth and Selected P3-171 Buffered Preenrichment Media for the Detection of Salmonella in Artificially Contaminated Casein-based Powdered Infant Formula — ANDREW JACOBSON, Hua Wang, James Smiley, Melanie Butler, Thomas Hammack, U.S. Food and Drug Administration, College Park, MD, USA
- P3-172 Evaluation of Three Real-time PCR Methods for Detection of Salmonella in Allspice, Cinnamon, and Oregano — XIAOHONG DENG, Aparna Tatavarthy, Laila Ali, Lijun Hu, Thomas Hammack, Guodong Zhang, U.S. Food and Drug Administration, College Park, MD, USA P3-173 Evaluation of Salmonella spp., Salmonella Enteritidis, and Salmonella Typhimurium Real-time PCR Kit Performance in Co-inoculated Poultry, Pork Meat, and Environmental Surface Samples — JANI HOLOPAINEN, Katharine Evans, David Crabtree, Mikko Kauppinen, Thermo Fisher Scientific, Vantaa, Finland
- P3-174 Evaluation of Molecular Salmonella spp., Salmonella Enteritidis, and Salmonella Typhimurium Multiplex Assays Inclusivity and Exclusivity — JANI HOLOPAINEN, Katharine Evans, David Crabtree, Mikko Kauppinen, Thermo Fisher Scientific, Vantaa, Finland
- P3-175 Comparative Study Between 3M™ Molecular Detection Assay 2 - Salmonella and ISO 6579 in Meat and Poultry Products from Thailand — WATCHARA JANWATCHARAGAN, Phumtreemas Srilert, Panida Pisaisawat, Nongnuch Promla, Wanida Mukkana, Saengrawee Jongvanich, Wipa Kongsakul, Janejira Fuangpaiboon, Bureau of Quality Control of Livestock Products, Pathum - Thani, Thailand

- P3-176 Evaluation of a Rapid Isothermal Amplification Method and Two Enrichment Protocols for Salmonella Detection in Frozen Strawberries — JORGE ADRIÁN MUNIZ FLORES, Dalia Lorena Rodríguez Herrera, Julia Perez-Montano, Gustavo González-González, Ma. Ofelia Rodríguez-García, Universidad de Guadalajara, Guadalajara, Mexico
- P3-177 Single-step Enrichment Followed by Real-time PCR Detection of Low Levels of Sub-lethally Injured Salmonella in Low-moisture Ready-to-Eat Foods - SERGIY OLISHEVSKYY, Cathy St-Laurent, Anne Hellmer, Melissa Buzinhani, Michael Giuffre, FoodChek Laboratories Inc., Saint-Hyacinthe, QC, Canada
- P3-178 Rapid Detection of Salmonella in Raw Chicken Breast Using Real-time PCR Combined with Immunomagnetic Separation and Whole Genome Amplification — JI-YEON HYEON, Xiangyu (Sean-U) Deng, University of Georgia, Center for Food Safety, Griffin, GA, USA
- P3-179 An Electrochemical Aptasensor for Rapid Detection of Salmonella Typhimurium in Poultry Based on the Bifunctional Magnetic Nanocomposites — RONGHUI WANG, Meng Xu, Jianhan Lin, Ming Liao, Michael Kidd, Yanbin Li, University of Arkansas, Fayetteville, AR, USA
- P3-180 Validation of a Cultural Method for the Detection and Isolation of Salmonella in Allspice, Cinnamon, and Oregano — GUODONG ZHANG, Laila Ali, Xiaohong Deng, Lijun Hu, Aparna Tatavarthy, Eric Brown, Thomas Hammack, U.S. Food and Drug Administration, College Park, MD, USA
- P3-181 An Impedance Biosensor for Simultaneous Detection of Low Concentration of Salmonella Serogroups in Turkey Ready-to-Eat (RTE) Products — IBRAHEM JASIM, Amjed Abdullah, Zhenyu Shen, Shuping Zhang, Majed El-Dweik, Mahmoud Almasri, University of Missouri Columbia, Columbia, MO, USA
- P3-182 Detection of Low Levels of Salmonella Species in a Variety of Food Matrices Using the Rapidchek Select Salmonella Test Method — MEREDITH SUTZKO, Ann-Christine Allen, Romer Labs, Inc., Newark, DE, USA
- P3-183 Comparative Evaluation of Two Multiplex Real-time Quantitative PCR (qPCR) for Detection of Salmonella spp. and S. Enteritidis in Pooled Egg Preenrichment Samples — GINA RYAN, Melanie Butler, Anna Laasri, Thomas Hammack, U.S. Food and Drug Administration, College Park, MD, USA
- P3-184 Evaluation of Several Elements in the Environmental Sampling of Listeria spp. from Stainless Steel Surface - Ishani Sheth, FENGMIN LI, Hee jin Kwon, Antonie De Jesus, Thomas Hammack, Karen Jinneman, Yi Chen, U.S. Food and Drug Administration, College Park, MD, USA
- P3-185 The Survival and Transmission of Aerosolized Listeria Species — CALVIN WALDRON, Joseph Eifert, Linsey Marr, Andrew Neilson, Robert Williams, Virginia Tech, Blacksburg, VA, USA

- P3-186 Development of a Test Strip-based Method for the Detection of Group B Salmonella in Poultry House Environmental and Raw Poultry Samples — MARK MULDOON, Vera Gonzalez, Randy Bechard, Ann-Christine Allen, Meredith Sutzko, Romer Labs, Inc., Newark, DE, USA
- P3-187 Application of RapidChek® Listeria monocytogenes Test System for the Detection of Listeria monocytogenes in a Variety of Foods and Environmental Surfaces — MARK MULDOON, Gregory Juck, Vera Gonzalez, Meredith Sutzko, Romer Labs, Inc., Newark, DE, USA
- P3-188 Evaluating Alternative Methods for the Detection of Listeria monocytogenes from Medical Nutrition Samples — KATHARINE EVANS, Emma Scopes, David Crabtree, Thermo Fisher Scientific, Basingstoke, United Kingdom
- P3-189 No Influence of Selective Growth Media on the Identification of the Foodborne Pathogens by MALDI-TOF MS — Marian Awad, DANIÈLE SOHIER, Markus Kostrzewa, Bruker Daltonics, Bremen, Germany
- P3-190 Performance Evaluation of 3M™ Molecular Detection Assay 2 for Rapid Detection of Listeria monocytogenes in Brazilian Meat Matrices — VANESSA TSUHAKO, Sandra Heidtmann, Adriana Bovo, Analice Espeleta, 3M Brasil, Sumare, Brazil
- P3-191 Detection of Listeria in Probiotic Cultures— JOSEPHINE D. GREVE, Benjamin S. Shannon, J. David Legan, Covance Food Solutions, Madison, WI, USA
- P3-192 A Comparative Study of Enumeration Methods for Listeria monocytogenes on Naturally Contaminated Ready-to-Eat Foods — JEANINE BOULTER-BITZER, Ontario Ministry of Agriculture, Food and Rural Affairs. Guelph, ON, Canada
- P3-193 Rapid Species-Specific Identification of Listeria Isolates Using Multiplex PCR — BRADLEY ZIEBELL, Kari Sweeney, Deann Akins-Lewenthal, Conagra Brands, Chicago, IL, USA
- P3-194 Real-time Monitoring of Listeria Species and Listeria monocytogenes Using Non-invasive Bioluminescence Growth Media — Brandon Katz, DELIA CALDERON, Paul Meighan, Hygiena, Camarillo, CA, USA
- P3-195 Enrichment Dynamics of Listeria monocytogenes and the Associated Microbiome from Naturally Contaminated Ice Cream Linked to a Listeriosis Outbreak — Elizabeth Reed, James White, Eric Brown, Yi Chen, Andrea Ottesen, PADMINI RAMACHANDRAN, U.S. Food and Drug Administration, College Park, MD, USA
- P3-196 Evaluation of the GENE-UP® Assay for the Co-Detection of Escherichia coli O157:H7 and Salmonella spp. from Raw Ground Chicken — Vikrant Dutta, JOHN MILLS, Deborah Briese, Peter Ladell, Stan Bailey, bioMerieux, Inc., Hazelwood, MO, USA
- P3-197 Evaluation of the GENE-UP® Listeria monocytogenes (LMO) Assay for the Detection of Listeria monocytogenes in Foods — JOHN MILLS, Stan Bailey, Deborah Briese, Vikrant Dutta, Hari Dwivedi, Ron Johnson, bioMerieux, Inc., Hazelwood, MO, USA

- P3-198 EN ISO 16140-2 Validation Study of the GENE-UP® PCR Method for the Detection of Listeria sp. in a Variety of Food and Environmental Samples — Olivier Mathia, Louisiane Giovanetti, FABIENNE HAMON, Patrice Chablain, François Le Nestour, bioMérieux, Grenoble, France
- P3-199 EN ISO 16140-2 Validation Study of the GENE-UP® Salmonella Method in a Variety of Food — Justine Baquet, Cécile Bernez, FABIENNE HAMON, Louisiane Giovanetti, Patrice Chablain, Maryse Ranou, bioMérieux, Grenoble, France
- P3-200 Evaluation of a Method Based on Loop Mediated Isothermal Amplification and Bioluminescence Technology for the Detection of Human Pathogens on Grape Tomatoes — GUSTAVO GONZALEZ GONZALEZ, Lucila Trigueros-Díaz, María Cristina Luquin-Rosas, María del Carmen Tinajero-Arriola, 3M FSD Mexico, Guadalajara, Mexico
- P3-201 Simultaneous Enrichment of Salmonella spp., Escherichia coli O157:H7, and Listeria monocytogenes in Spices and Seafood - KIRSTEN HIRNEISEN, Venugopal Sathyamoorthy, Atin Datta, Richelle Richter, Donna Williams-Hill, U.S. Food and Drug Administration, Irvine, CA, USA
- P3-202 Independent Method Comparison Evaluation of the Biomerieux VIDAS® Listeria monocytogenes Xpress (LMX) to the Health Canada MFHPB-30 Reference Method — PATRICK BIRD, James Agin, Joe Benzinger, Erin Crowley, Alison DeShields, David Goins, Q Laboratories, Inc., Cincinnati, OH, USA
- P3-203 An Independent Evaluation of the GENE-UP Listeria Species Assay for the Detection of Listeria Species in Foods and Environmental Surfaces - PATRICK BIRD, Benjamin Bastin, Joe Benzinger, Erin Crowley, James Agin, David Goins, Q Laboratories, Inc., Cincinnati, OH, USA
- P3-204 An Independent Evaluation of the GENE-UP Listeria monocytogenes Assay for the Detection of Listeria monocytogenes in Foods — PATRICK BIRD, Benjamin Bastin, Joe Benzinger, Erin Crowley, James Agin, David Goins, Q Laboratories, Inc., Cincinnati, OH, USA
- P3-205 An Independent Evaluation of the GENE-UP® EHEC Detection Method for the Detection of Non-O157 Shigatoxin Producing Escherichia coli (STEC) and Escherichia coli O157:H7 in Foods — PATRICK BIRD, Benjamin Bastin, Joe Benzinger, Erin Crowley, James Agin, David Goins, Q Laboratories, Inc., Cincinnati, OH, USA
- P3-206 Independent Evaluation of the Bio-Rad iQ-Check® Salmonella II Kit for the Detection of Salmonella Species in Select Foods and Environmental Surfaces - PATRICK BIRD, Benjamin Bastin, Joe Benzinger, Erin Crowley, James Agin, David Goins, Q Laboratories, Inc., Cincinnati, OH, USA
- P3-207 Validation of the 375 Gram Matrix Extension to Health Canada MFLP-38 Detection of Salmonella Species from All Foods and Environmental Surfaces Using the Bio-Rad iQ-Check® Salmonella II Kit — PATRICK BIRD, Benjamin Bastin, Joe Benzinger, Erin Crowley, James Agin, David Goins, Q Laboratories, Inc., Cincinnati, OH, USA

- P3-208 Comparative Study: Extraction and Detection of Enteric Viruses in Soft Fruit — RACHEL RODRIGUEZ, Katja Schilling, Jacquelina Woods, U.S. Food and Drug Administration, Dauphin Island, AL, USA
- P3-209 Detection of Norovirus in Agricultural Water, Produce, and Hand-rinse Samples from Northern Mexico — JESSICA PRINCE-GUERRA, Anna M. Fabiszewski de Aceituno, Lee-Ann Jaykus, Zachary Marsh, Sharmila Talekar, Faith Bartz, Norma Heredia, Santos Garcia, Juan Leon, Emory University, Atlanta, GA, USA
- P3-210 Comparison of Norovirus Surrogate Recovery Methods from Carpets — DAVID BUCKLEY, Angela Fraser, Guohui Huang, Xiuping Jiang, Clemson University, Clemson, SC, USA
- P3-211 Withdrawn
- P3-212 A Method for the Improved Detection of Aerosolized Influenza Viruses Using Impingers That Incorporate Anion Exchange Resin — JEFFREY CHANDLER, Joshua Schaeffer, Margaret Davidson, Sheryl Magzamen, Alma Perez-Mendez, Stephen Reynolds, Lawrence Goodridge, John Volckens, Alan Franklin, Susan Shriner, Bledar Bisha, U.S. Department of Agriculture-APHIS-WS-NWRC, Fort Collins, CO, USA
- P3-213 Comparison of Bdellovibrio bacterivorous Viability and Predation Efficacy Following Different Delivery Methods and Storage Temperatures — DANIEL UNRUH, Sara Gragg, Kansas State University, Olathe, KS, USA
- P3-214 Development of an In Vitro Assay for the Determination of Pathogenicity of Vibrio vulnificus — JOEY MARCHANT-TAMBONE, Jessica Jones, Paul Gulig, FDA Gulf Coast Seafood Laboratory, DAUPHIN ISLAND, AL, USA
- P3-215 Withdrawn

Water

- P3-216 Zero-valent Iron-Biosand Filtration is Capable of Reducing Antimicrobial and Generic E. coli Concentrations in Unbuffered Conventionally Treated Reclaimed Water: A CONSERVE Project — PRACHI KULKARNI, Greg Raspanti, Anthony Bui, Rhodel Bradshaw, Eric Handy, Cary Coppock, Kalmia Kniel, Manan Sharma, Amir Sapkota, Amy Sapkota, Maryland Institute for Applied Environmental Health, University of Maryland, College Park, MD, USA
- P3-217 Comparison of Two Methods for Enumeration of Total Fecal Coliforms and Generic Escherichia coli, and Their Ability to Predict Pathogen Occurrence in Irrigation Waters — JUSTIN FALARDEAU, Roger Johnson, Siyun Wang, University of British Columbia, Vancouver, BC, Canada
- P3-218 Generic E. coli Levels in Surface and Non-traditional Irrigation Water in the Mid-Atlantic in Relation to FSMA Water Quality Standards: A CONSERVE Study — SARAH ALLARD, Sultana Solaiman, Mary Theresa Callahan, Eric Handy, Cheryl East, Hillary Craddock

- Kelbick, Rianna Murray, Anthony Bui, Joseph Haymaker, Derek Foust, Samantha Gartley, Adam Vanore, Salina Parveen, Fawzy Hashem, Maryam Taabodi, Eric May, Kalmia Kniel, Manan Sharma, S, Maryland Institute for Applied Environmental Health, University of Maryland, College Park, MD, USA
- P3-219 Die-off Rates of Surrogate and Virulent EHEC-STEC Strains from the Surface of Strawberry Plants Vary with Time, Inoculum Dose and Chemical Interventions - Maria Albarracin, Christopher Gunter, Siddhartha Thakur, EDUARDO GUTIERREZ-RODRIGUEZ, North Carolina State University, Raleigh, NC, USA
- P3-220 Screening of Non-traditional Irrigation Water Sources for Shiga Toxin-producing Escherichia coli in the Mid-Atlantic Region of the United States: A CONSERVE Study — JOSEPH HAYMAKER, Fawzy Hashem, Salina Parveen, Eric May, Manan Sharma, Chanelle White, Shirley Micallef, Maryam Taabodi, Amy Sapkota, University of Maryland Eastern Shore, Princess Anne, MD, USA
- P3-221 Evaluation of E. coli and Other Indicators as Predictors of Foodborne Pathogens in Irrigation Water — AMY KAHLER, Candace Miller, Mia Mattioli, Moukaram Tertuliano, Karen Levy, George Vellidis, Vincent Hill, Centers for Disease Control and Prevention, Division of Foodborne, Waterborne and Environmental Diseases, Atlanta, GA, USA
- P3-222 Persistence of *Escherichia coli* on Field-grown Tomatoes Inoculated with Contaminated Water Spray - CHANELLE WHITE, Fawzy Hashem, Patricia Millner, Joseph Haymaker, Annette Kenney, Lorna Graham, University of Maryland Eastern Shore, Princess Anne, MD, USA
- P3-223 Diversity and Fitness of *Listeria* spp. Isolated from Two Watersheds in Nova Scotia, Canada — Amit Ross, Kara Neudorf, LISBETH TRUELSTRUP HANSEN, Technical University of Denmark, Kgs. Lyngby, Denmark
- Evaluation of Listeria monocytogenes Survival and Infectivity in Nontraditional Agricultural Waters - SAMANTHA GARTLEY, Adam Vanore, Shani Craighead, Manan Sharma, Kalmia Kniel, University of Delaware, Newark, DE, USA

- P3-225 Removal of Listeria monocytogenes and Salmonella Typhimurium from Water Using a Filtration System with Surfactated Modified Zeolite — JOSE BRANDAO DELGADO, Ligia Fragallo, Marlene Janes, Louisiana State University, Baton Rouge, LA, USA
- P3-226 Correlation of Salmonella spp. to Generic Escherichia coli in Irrigation Water — MOHAMMED ALHEJAILI, Dorra Djebbi-Simmons, Achyut Adhikari, Marlene Janes, Louisiana State University, Baton Rouge, LA, USA
- Prevalence and Concentration of Salmonella in P3-227 Agricultural Water Used in Pre-harvest Production on the Eastern Shore of Virginia — LAURA TRUITT, Rachel Pfuntner, Jacob McClaskey, Steve Rideout, Laura Strawn, Virginia Tech – Eastern Shore AREC, Painter, VA, USA
- P3-228 Seasonality, Diversity and Indicators of Salmonella Contamination of Environmental Surface Waters of the Virginia Eastern Shore — CHRISTINA M. FERREIRA, Elizabeth Reed, Amir Mokhtari, Yan Luo, Jie Zheng, Rebecca L. Bell, U.S. Food and Drug Administration, College Park, MD, USA
- P3-229 Assessment of Indicator Bacteria and Aeromonas spp. in Surface and Nontraditional Irrigation Water: A Conserve Study — SULTANA SOLAIMAN, Mary Theresa Callahan, Sarah Allard, Eric Handy, Cheryl East, Eric May, Fawzy Hashem, Salina Parveen, Kalmia Kniel, Manan Sharma, Amy Sapkota, Shirley Micallef, University of Maryland, College Park, MD, USA
- Microbial Quality of Tail Water in the California Central P3-230 Coast Salinas Valley — ANNE-LAURE MOYNE, Laura A. Murphy, Michael D. Cahn, Steven T. Koike, Linda J. Harris, University of California-Davis, Davis, CA, USA



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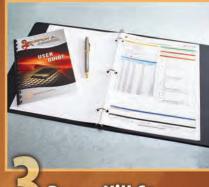
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2002 Darden Restaurants Orlando, Florida 2001 Walt Disney World Company
Lake Buena Vista, Florida

2000 Zep Manufacturing Company Atlanta, Georgia

1999 Caravelle Foods Brampton, Ontario, Canada

1998 Kraft Foods, Inc. Northfield, Illinois

1997 Papetti's of Iowa Food Products, Inc. Lenox, Iowa

1996 Silliker, Inc. Homewood, Illinois

1995 Albertson's Inc. Boise, Idaho

1994 H-E-B Grocery Company San Antonio, Texas



BLACK PEARL

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Panda Restaurant Group, Inc.

FELLOW

Judy Greig Dale Grinstead Vijay Juneja Jeffrey Kornacki Don Schaffner

PRESIDENT'S LIFETIME ACHIEVEMENT

Christine Bruhn

HONORARY LIFE MEMBERSHIP

David Blomquist Maria Teresa Destro Marilyn Lee John Sofos Katie Swanson

HARRY HAVERLAND CITATION

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Santos Garcia

FOOD SAFETY INNOVATION

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INTERNATIONAL LEADERSHIP

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Center for Food Safety Engineering and Department of Food Science Purdue University

FROZEN FOOD FOUNDATION FREEZING RESEARCH

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FOOD SAFETY MAGAZINE DISTINGUISHED SERVICE

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Dane Bernard

MAURICE WEBER LABORATORIAN

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SANITARIAN

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Candace Jacobs

ELMER MARTH EDUCATOR

Sponsored by Nelson-Jameson, Inc.

Judy Harrison

HAROLD BARNUM INDUSTRY

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Michael Roberson

TRAVEL AWARD FOR A FOOD SAFETY PROFESSIONAL IN A COUNTRY WITH A DEVELOPING ECONOMY

Sponsored by IAFP and the IAFP Foundation

Frederick Adzitey Alonzo Gabriel Patrick Njage

TRAVEL AWARD FOR STATE OR PROVINCIAL HEALTH OR AGRICULTURAL DEPARTMENT EMPLOYEES

Sponsored by IAFP and the IAFP Foundation
Ted Gatesy Michael Perry

STUDENT TRAVEL SCHOLARSHIP

Sponsored by IAFP and the IAFP Foundation

Makala Bach Stephanie Barnes Sarah Beno Sarah Cope Hillary Kelbick Dorothy Dupree Shuxiang Liu Giannis Koukkidis **Itumeleng Matle** Rianna Murray Eugene Niyonzima Rodney Owusu-Darko Hao Pang Laura Patterson Kristen Saniga Nicholas Sevart Aswathi Soni Constanza Vergara Sophie Tongyu Wu Xingning Xiao

PEANUT PROUD STUDENT SCHOLARSHIP

Sponsored by Peanut Proud Yagmur Yegin

J. MAC GEOPFERT DEVELOPING SCIENTISTS

Sponsored by the IAFP Foundation

To be determined

UNDERGRADUATE STUDENT COMPETITION

Sponsored by the IAFP Foundation

To be determined

SAMUEL J. CRUMBINE

Sponsored by the Conference for Food Protection, in cooperation with American Academy of Sanitarians, American Public Health Association, Association of Food & Drug Officials, Food Marketing Institute, Foodservice Packaging Institute, International Association for Food Protection, National Association of County and City Health Officials, National Environmental Health Association, and NSF International

> Boulder County Public Health Boulder, Colorado

Kansas City Health Department Kansas City, Missouri

About the Award Recipients



Black Pearl Award

Panda Restaurant Group, Inc.

Rosemead, California



Panda Restaurant Group, Inc. (PRG), the world leader in Asian dining experiences and parent company of Panda Inn, Panda Express and Hibachi-San, is dedicated to becoming a world leader in people development. Whether through sharing good food with guests or providing opportunities for professional and personal growth with associates, all are embraced in a genuine family environment that is uniquely Panda.

Panda's culture is guided by our mission and values with Food Safety as our number one priority. Panda's Food Safety and Quality Assurance team mission is: To Deliver Peace of Mind by Maintaining Exceptional Food Safety and Quality Standards in Support of our People, Guest and Financial Goals.

Through the leadership of its founders, Andrew and Peggy Cherng, Panda has elevated the standards and expectations of restaurant operations

by bringing food safety to the forefront of our values. Today, Panda is proud to be America's largest family-owned Chinese restaurant, with more than 30,000 associates and serving countless guests in more than 1,900 restaurants around the world.

Sponsored by











Fellow Award



Judy D. Greig Guelph, Ontario, Canada

Judy D. Greig is a recipient of the 2017 IAFP Fellow Award. Ms. Greig is an Epidemiologist with the Public Health Agency of Canada, National Microbiology Laboratory, at Guelph, Ontario, where her projects include attribution of foodborne disease, systematic and scoping reviews of public health issues and knowledge translation.

Since joining IAFP in 2000, Ms. Greig has served on the Black Pearl Selection Committee; both the Food Protection Trends (FPT) and the Journal of Food Protection (JFP) Management Committees; the Foundation Committee; and currently serves on the FPT Editorial Board. She joined the Committee on the Control of Foodborne Illness in 2000, and has served as Vice-Chair since 2007. During her tenure, the Committee has authored eleven papers describing the role of the infected food handler; updated both the Procedures to Investigate Foodborne Illness and Procedures to Investigate Waterborne Illness manuals; and organized multiple symposia. She received the IAFP Harry Haverland Citation Award in 2012.

While a member of the IAFP Affiliate, the Ontario Food Protection Association (OFPA), from 2000-2011, Ms. Greig served on the Student Awards Committee; as Co-Editor of the OFPA award-winning newsletter (2001–2006); organized numerous technical sessions; and served as President in 2010. She received the OFPA Award of Merit in 2002 and the IAFP Award of Merit in 2005.

Ms. Greig has given more than 70 oral or poster presentations and has authored numerous peer-reviewed publications. She has guest lectured at the University of Guelph in its Master's in Food Safety and Quality Assurance Program and at Ryerson University in its School of Occupational and Public Health in Toronto. Ms. Greig is a registered nurse and, over 19 years, has practiced in three Canadian provinces. She received her B.Sc., specializing in Microbiology, from the University of Waterloo in Ontario, and her M.Sc. in Epidemiology from the University of Guelph.



Vijay K. Juneja Wyndmoor, Pennsylvania

Dr. Vijay Juneja is a recipient of the 2017 IAFP Fellow Award. Dr. Juneja is a Lead Scientist of a research project on Predictive Microbiology at the Eastern Regional Research Center at the U.S. Department of Agriculture's (USDA) Agricultural Research Service (ARS) in Wyndmoor, Pennsylvania. He is among the world's leading authorities in food safety research, developing a nationally and internationally recognized research program on foodborne pathogens, with emphasis on microbiological safety of minimally processed foods and predictive microbiology. His research program has been highly productive, generating more than 300 publications with more than 170 peer-reviewed journal articles; nine books; and 45 book chapters, with ten included in the Encyclopedia of Food Microbiology.

An IAFP Member since 2000, Dr. Juneja currently serves on the Editorial Board for the Journal of Food Protection (JFP). He is also Chair of the JFP Management Committee and President of the IAFP Affiliate, the Indian Association for Food Protection in North America. Dr. Juneja also served on the IAFP Program Committee. He is the recipient of the Harry Haverland Citation Award, the GMA Food Safety Award, and the Maurice Weber Laboratorian Award.

Dr. Juneja also serves on the editorial boards for Foodborne Pathogens & Disease, International Journal of Food Microbiology, and Frontiers in Microbiology. He served as a Co-Editor of the International Journal of Food Microbiology until December 2011 and as an Associate Editor for both the Food Microbiology Section and the Journal of Food Science from 2002–2007. He currently serves as an Editor of LWT-Food Science and Technology.

Dr. Juneja received his Ph.D. in Food Technology and Science from the University of Tennessee in Knoxville.

Fellow Award



Dale A. Grinstead Racine. Wisconsin

Dr. Dale A. Grinstead is a recipient of the 2017 IAFP Fellow Award. Dr. Grinstead is a Senior Food Safety Technology Fellow in the Sealed Air Core Research & Development (R&D) group in Racine, Wisconsin. His responsibilities include providing technical input and guidance on Sealed Air's global food safety programs; new product development; representing Sealed Air in the area of food safety to technical societies and trade associations; and assisting customers with food safety issues and microbiological concerns. Dr. Grinstead also leads the Sealed Air Microbiology Technical Center of Excellence.

A Food Microbiologist (who usually just introduces himself as a "Food Safety Nerd") with 23 years of industrial R&D experience, Dr. Grinstead joined Unilever Research in 1994, where he led the group doing clinical testing for antimicrobial hand washes. While there, he also worked extensively with the FDA CEDR on the monograph to regulate antimicrobial personal care products. In 1998, Dr. Grinstead joined DiverseyLever R&D, developing hygiene products and systems for food processing facilities. In 2005, he began working on hygiene and food safety systems focused on the food service and food retail industries.

Dr. Grinstead has been an active Member of IAFP for nearly 24 years. Throughout his Membership, he has served as Chair of the Hygiene and Sanitation PDG, was a member of the Nominating Committee and various award committees, and a member of the Program Committee from 2014–2017. He currently serves on the Editorial Board for Food Protection Trends. Dr. Grinstead is also very active in the Conference for Food Protection, where he has served on Council III several times and as a committee member or co-chair continuously since 2008.

Dr. Grinstead received his B.S. in Microbiology and M.S. in Food Science from Iowa State University and his Ph.D. in Food Technology from Clemson University. He also conducted a post-doctoral study at the University of Tennessee in Knoxville.



Jeffrey L. Kornacki Madison, Wisconsin

Dr. Jeffrey L. Kornacki is a recipient of the 2017 IAFP Fellow Award. Dr. Kornacki is President and Senior Technical Director of Kornacki Microbiology Solutions, Inc. in Madison, Wisconsin. Prior to this, he was a faculty member at the University of Georgia, Athens, in the Department of Food Science.

Throughout his extensive career, Dr. Kornacki has assisted numerous companies in the midst of U.S. FDA and USDA product recalls and conducted more than 850 troubleshootingrelated plant visits across a vast assortment of food processing industries. He remains an adjunct faculty member at the University of Georgia.

Dr. Kornacki has been solving food microbiology issues since obtaining his B.S. in Bacteriology from the University of Wisconsin – Madison. His M.S. and Ph.D. thesis research addressed contamination concerns with dairy product manufacturing. He has co-authored a patent on ultra-filtered milk cheese production during the four years he worked for Schreiber Foods as a research scientist. Twelve subsequent years were spent at Silliker Laboratories (now Merieux NutriSciences) as a microbiological troubleshooter, conducting technical writing/editing, and in laboratory management.

An active Member of IAFP since 1979, Dr. Kornacki received the IAFP Sanitarian Award in 2010, has served as Chair of the Food and Hygiene Professional Development Group (PDG). and has been a member on numerous PDGs. He has published on a wide variety of food microbiology topics and is Editor/Co-Editor and co-author of several books, including Principles of Microbiological Troubleshooting in the Industrial Food Processing Environment (Springer, 2010); The Microbiological Safety of Low Water Activity Foods and Spices (Springer, 2014); and Foodborne Pathogens: Virulence Factors and Host Susceptibility (Springer, 2017).

Dr. Kornacki also served as co-chair of the NACMCF subcommittee on Microbiological Criteria as Indicators of Process Control or Insanitary Conditions from 2013–2015 and is current Co-Editor and Chief of the 18th edition of Standard Methods for the Examination of Dairy *Products*, presently under development.

Dr. Kornacki remains an active microbiological troubleshooter in the food industry.

Fellow Award



Donald W. Schaffner New Brunswick, New Jersey

Dr. Donald W. Schaffner is a recipient of the 2017 IAFP Fellow Award. Dr. Schaffner is Distinguished Professor and Extension Specialist in Food Science at Rutgers University – The State University of New Jersey in New Brunswick, New Jersey. His research interests include quantitative microbial risk assessment and predictive food microbiology, having published more than 150 peer-reviewed papers on these and other topics.

Dr. Schaffner has served on a variety of national and international expert committees, including service to the U.S. National Academy of Sciences, the World Health Organization, and the Food and Agriculture Organization of the United Nations. He is active in several scientific associations, including the Institute of Food Technologists (IFT), the Society for Risk Analysis (SRA), and the American Society for Microbiology (ASM). Dr. Schaffner was elected a Fellow of IFT in 2010, a Fellow of the American Academy of Microbiology in 2014, and is an Editor for the ASM journal, Applied and Environmental Microbiology.

Dr. Schaffner has been an active Member of IAFP for 16 years, serving as President in 2013–2014. He currently serves on the Editorial Boards for both the Journal of Food Protection and Food Protection Trends. Throughout his IAFP career, he has also been a member on numerous award selection committees, and is a member of several Professional Development Groups. He was Delegate for the IAFP Affiliate, the Metropolitan Association for Food Protection (now the New Jersey Association for Food Protection). He received the IAFP Elmer Marth Educator Award in 2009.

Dr. Schaffner holds a B.S. in Food Science from Cornell University and an M.S. and Ph.D. in Food Science and Technology from the University of Georgia. He co-hosts "Food Safety Talk," a podcast on microbial food safety for professionals and the public.

President's I fetime Achievement Award



Christine M. Bruhn Davis, California

Dr. Christine M. Bruhn is the recipient of the 2017 IAFP President's Lifetime Achievement Award. This award is given at the discretion of the Association President to recognize an individual who has made a lasting impact on "Advancing Food Safety Worldwide" through a lifetime of professional achievement in food protection. Dr. Bruhn is retired from the University of California - Davis, where she was Director for the Center of Consumer Research.

Throughout her professional career, Dr. Bruhn developed an internationally recognized and influential food safety program. She pioneered research on consumer attitudes toward new technologies such as food irradiation, high-pressure processing, and genetic engineering. Her work revealed consumers' handling practices related to meat, poultry, produce, and nuts. She developed educational programs that documented changes in knowledge and behavior, and helped develop a physician's educational program on food allergies, as well as a booklet for the food-allergic individual.

Science communication has been a priority in Dr. Bruhn's career. She has appeared on network TV, including CBS, NBC, ABC, CNN and Fox programs; has been heard on National Public Radio; and is an information source for USA Today, Associated Press, Wall Street Journal, and others. Dr. Bruhn served as a food safety and risk communication expert on the first U.S. Food and Drug Administration (U.S. FDA) Risk Communication Advisory Committee where, based on the committee's recommendations, the Administration developed a Strategic Plan for Risk Communications and a template to communicate during a food recall.

Dr. Bruhn has been an IAFP Member since 1995. She presented the Ivan Parkin lecture at the 1998 IAFP Annual Meeting and received the Elmer Marth Educator Award in 2005, the Fellow Award in 2012, and Honorary Life Membership in 2015. Dr. Bruhn was also the first recipient of the IAFP J. Mac Geopfert Developing Scientist Award in 1986. Her accomplishments have also been recognized by the University of California with the Award of Distinction. In addition, she is a Fellow of both IFT and the Institute of Food Science and Technology in the United Kingdom.

Dr. Bruhn's career of research and science-based communication is a model of professional leadership. Her research was cited when the USDA Dietary Guidelines first included food safety. She has also consulted with the World Health Organization, Pan American Health Organization, and others.

Honorary Life Nembership Award



David Blomquist Hastings, Minnesota

Mr. David Blomquist is a recipient of the 2017 IAFP Honorary Life Membership Award. Mr. Blomquist joined the Klenzade Division of Ecolab as a Quality Management Consultant in 1989. He worked for Ecolab for nearly 27 years, retiring at the end of 2016. He traveled to nearly 1,000 plants helping to resolve cleaning and sanitation issues. In addition, he provided support to the North American Ecolab Sales force, answering questions for thousands of dairy, food and beverage plants every year.

Mr. Blomquist grew up on a dairy farm near Almelund, Minnesota, north of the Minneapolis/ St. Paul metro. He graduated from the University of Minnesota in the Department of Food Science and Industries in St. Paul in 1972.

After graduation, Mr. Blomquist and his new wife, Cindy, worked in the Peace Corps in Casablanca, Morocco at *le Laboratoire d'Analyses et de Recherches Chimique*, where he served as a chemist for the Moroccan equivalent of the U.S. Food and Drug Administration (FDA) testing lab. Upon his return to the U.S., he worked as a quality control supervisor at Dalbo Cheese in Dalbo, Minnesota, and as a microbiologist at Tony's Pizza Service in Salina, Kansas. Mr. Blomquist also held other positions at Tony's (part of Schwan's Sales Enterprises), including Quality Assurance (QA) Director and QA Manager of the Marshall Operations. He was also Vice President of QA and Research & Development at Sunstate Dairy in Tampa, Florida.

Mr. Blomquist joined IAFP in 1992. He was a member and past chair of the Dairy Professional Development Group (PDG) and the Sanitation and Hygiene PDG, and is currently a member other PDGs, including the Sanitary Design PDG. He is a frequent presenter at IAFP and other technical symposia. Mr. Blomquist received the IAFP Sanitarian Award in 2013. In 2014, he was one of several Members who established the IAFP Affiliate, the Minnesota Food Protection Association. He served as its first president and watched the organization grow to more than 100 members in its first few years. Mr. Blomquist remains an active member of the Affiliate.



Maria Teresa Destro São Paulo, Brazil

Dr. Maria Teresa Destro is a recipient of the 2017 IAFP Honorary Life Membership Award. Dr. Destro serves as Scientific Affairs Director for bioMérieux in São Paulo, Brazil, after more than 25 years as a researcher and professor of Food Microbiology in the Department of Food and Experimental Nutrition at the University of São Paulo (USP), Brazil. In her current position, she continues to educate people in food safety and works with various Latin American countries, helping spread food safety awareness.

Dr. Destro joined IAFP in 1994 and has served on various committees and Professional Development Groups (PDGs), including as a current member of both the Meat and Poultry Safety and Quality PDG and the International Food Protection Issues PDG. Together with Dr. Mariza Landgraf, Dr. Destro helped establish the Brazil Association for Food Protection (BAFP), IAFP's first South American Affiliate, serving as its Delegate for several terms. As Delegate, she also served as Affiliate Council Secretary and Chair (2005–2007), where she was provided the opportunity to join the IAFP Executive Board as the first non-North American Member.

In 2011, Dr. Destro served as one of the original organizers for the first IAFP Latin American Symposium on Food Safety and has since been involved in IAFP's Local Arrangements Steering Committee for this highly successful meeting. Dr. Destro has also acted as an ambassador for IAFP in various Latin American countries, always committed to spreading the IAFP objective: Advancing Food Safety Worldwide.

Honorary Life Nembership Award



Marilyn B. Lee Toronto, Canada

Professor Emeritus Marilyn B. Lee is a recipient of the 2017 IAFP Honorary Life Membership Award. Now retired, Dr. Lee taught public health in the School of Occupational and Public Health at Ryerson University in Toronto, Canada for more than 25 years, training a generation of Canadian Public Health Inspectors with her enthusiastic, informative, and practical lectures.

Dr. Lee obtained a degree in Zoology from the University of Massachusetts and an M.S. in Pathobiology from Johns Hopkins University, School of Hygiene and Public Health, specializing in Parasitology. She pursued her interest in Public Health by attending Ryerson University, receiving a Certificate in Public Health Inspection.

Dr. Lee's professional experience includes working for six years in the field as a Certified Public Health Inspector in Guelph, Ontario, in a generalized program of food and water safety, public health education, and infection control. Throughout her career, she has served on numerous committees in Canada and the U.S., including the Advisory Council on Drinking Water Quality and Treatment Standards (appointed by the Minister of the Environment, Ontario), and the Joint Committee on Drinking Water Treatment Devices of the National Sanitation Foundation. In 2003, Dr. Lee chaired the Advisory Committee to evaluate the "Dine-Safe" program (Food Premises Inspection and Disclosure Program) for Toronto Public Health.

Dr. Lee has conducted and published research throughout her career, with an interest in preventing foodborne outbreaks in institutional settings such as schools, daycare centers, hospitals, and nursing homes. In addition, she coordinated the preparation of the third edition of Procedures to Investigate Waterborne Illness, which was published in 2016 by IAFP.

An IAFP Member for 25 years, Dr. Lee served on the Board of Directors of the IAFP Affiliate, the Ontario Food Protection Association, for eight years and was the membership director for a term.



John N. Sofos Fort Collins, Colorado

Dr. John N. Sofos is a recipient of the 2017 IAFP Honorary Life Membership Award. Dr. Sofos is a University Distinguished Professor Emeritus at Colorado State University (CSU) in Ft. Collins, Colorado, retiring in 2015, after 35 years of service. During his tenure, he served on 103 graduate committees (65 M.S.; 38 Ph.D.; 48 international; 61 as Chair or Co-Chair). Dr. Sofos worked with 38 Research Associates and Visiting Scholars. He taught courses in Food Processing, Food Microbiology, Food Fermentations, Food Biotechnology, Meat Safety, HACCP, and Advanced Food Science. His research interests include ecology, detection, resistance, and control of bacterial pathogens.

Dr. Sofos has authored/co-authored 324 refereed papers, 10 books, 72 book chapters, 462 abstracts, and 380 miscellaneous publications, and has presented 210 invited lectures worldwide. An IAFP Member since 1975, Dr. Sofos served as scientific Co-Editor for the Journal of Food Protection for nearly 18 years. Throughout his distinguished career, he has received the IAFP Fellow Award, the Elmer Marth Educator Award, the GMA Food Safety Award, the Harry Haverland Citation Award, the President's Lifetime Achievement Award, the Maurice Weber Laboratorian Award, and the President's Recognition Award.

Dr. Sofos is also a Fellow of the American Academy of Microbiology; the Institute of Food Technologists: the American Society of Animal Science (ASAS); and the American Meat Science Association (AMSA). He has received Distinguished Research Awards from AMSA and ASAS. Other honors received include the USDA Secretary's Superior Service Award; the NAMPA (North American Meat Processors Association) Educator Award; the CSU Alumni Distinguished Faculty Award; and the College of Agricultural Sciences Distinguished Career Award.

In addition, Dr. Sofos has served on the U.S. National Advisory Committee on Microbiological Criteria for Foods (NACMCF); the Biological Hazards Panel (Chair) of the European Food Safety Authority; and as President of the Council of the Agricultural University of Athens, Greece.

Honorary Life Nembership Award



Katherine M.J. Swanson Mendota Heights, Minnesota

Katherine M.J. Swanson (Katie) is a recipient of the 2017 IAFP Honorary Life Membership Award. Dr. Swanson is a food safety consultant with more than 40 years of food safety experience.

Dr. Swanson has delivered more than 150 invited presentations around the globe, many at IAFP affiliated meetings. She is currently Curriculum Development Program Manager for the Food Safety Preventive Controls Alliance, which developed the FDA-recognized standardized curriculum for Preventive Controls for Human Food regulations. Dr. Swanson also served as Executive Editor for the 2nd edition of the Sprout Safety Alliance's FDA-recognized training curriculum.

Dr. Swanson served as IAFP President 2012–2013, joining IAFP in 1979 as a Student Member and in 1980 as a Member. She served on the Journal of Food Protection Editorial Board for 12 years, on the Food Protection Trends Editorial Board for three years, and on numerous IAFP Award Selection Committees and organizing committees for meetings outside the U.S. Dr. Swanson received the IAFP Fellow Award in 2015 and the GMA Food Safety Award in 2003.

Most of Dr. Swanson's career was in industry, working for The Pillsbury Company, General Mills, Ecolab, and briefly for 3M and Cornell University. She is secretary of the International Commission on Microbiological Specifications for Foods (ICMSF), an IFT Fellow, and served on the National Advisory Committee on Microbiological Criteria for Foods (NACMCF) and the National Academies of Science Committees.

Dr. Swanson earned her B.S. in dietetics at the University of Delaware in Newark, her M.S. and Ph.D. in food science at the University of Minnesota in Minneapolis/St. Paul, and enjoys eating safe food around the globe.



LAFP2018 CALL FOR AWARD NOMINATIONS Deadline Date: February 20, 2018



WATCH OUR WEB SITE FOR ADDITIONAL INFORMATION

www.foodprotection.org







Harry Haverland Citation Award



J. Santos Garcia A. Neuvo Leon, Mexico

Sponsored by



Dr. J. Santos Garcia A. is this year's recipient of the Harry Haverland Citation Award. This award honors Dr. Garcia for his many years of dedication and devotion to the Association's ideals and objectives. Dr. Garcia is Professor at the Universidad Autonoma de Nuevo Leon in Mexico, where he received his bachelor's in Microbiology and a D.Sc. in Medical Microbiology. He has also been a visiting scientist at the University of Massachusetts and at the National Animal Disease Center with the U.S. Department of Agriculture (USDA).

For more than two decades, Dr. Garcia has conducted annual workshops on rapid diagnostic methods of foodborne pathogens and developed training programs in food protection. Since 1993, he has organized the Annual International Congress on Food Safety in various cities around Mexico, including the 5th IAFP Latin American Symposium on Food Safety in Cancun in 2016, which was attended by delegates from 22 countries, contributing significantly to the improvement of food protection and international networking. Many experts in different countries from academic institutions or the industry have recognized Dr. Garcia's international influence and have collaborated with him to address emerging food safety issues resulting from the globalization of the food supply.

Dr. Garcia served as President of the Mexican Association of Food Science from 2013–2015. He has served on committees and editorial boards of Food Biotechnology, Microbiological Discovery, and other journals. As a member of the Strategy Group of the Institute of Food Technologists, the Mexican Academy of Sciences, the Advisory Committee of the International Foundation for Science and other organizations, Dr. Garcia has promoted food safety at international levels. He has co-authored or co-edited seven books for food safety professionals, in addition to serving as advisor for 12 doctoral, 31 master's and 21 bachelor's of science students.

Dr. Garcia has been an active IAFP Member since 1994. He is the Past President of the IAFP Affiliate, the Mexico Association for Food Protection. He served on the Journal of Food Protection (JFP) Management Committee and currently serves on the Editorial Board of JFP.

Dr. Garcia was awarded the IAFP International Leadership Award in 2013.

Food Safety Innovation Award



Novolyze Orliénas, France

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Novolyze is the recipient of the 2017 Food Safety Innovation Award for its development and commercialization of pre-packaged bacterial surrogate inocula that significantly streamline and decrease uncertainty during process/intervention validation work.

Headquartered in Orliénas, France, Novolyze designs and supplies disruptive products and services for the food safety industry. SurroNov™ is its range of dry-stabilized and ready-to-use surrogate microorganism preparations for process validations. SurroNov™ products are non-pathogenic microorganisms that mimic the behavior of a target pathogen like Salmonella. In-plant process validations using SurroNov™ surrogates is one of the easiest, safest, and fastest ways to validate a kill step and ensure compliance with FSMA Preventive Controls for Human Food. SurroNov™ surrogates are produced in industrial quantities following strict procedures that ensure the homogeneity and quality of its products. Subsequently, SurroNov™ surrogates are formulated with food grade ingredients to stabilize them, while ensuring initial inoculation levels and their thermal behaviors

Novolyze specializes in the qualification and production of stabilized, readyto-use surrogate microorganisms and validation kits. Its team of experts assists at multiple stages of a validation project, from the microbiological risk assessment of a food product; complete TDT studies to determine the heat resistance of a bacteria in a product for a food process; and temperature distribution studies to the production of proprietary surrogates for preventive control validations.

International eadership Award



George-John Nychas Athens. Greece

Sponsored by



The 2017 International Leadership Award goes to Dr. George-John Nychas for his dedication to the high ideals and objectives of IAFP and his promotion of the Association's mission in countries outside of the U.S. and Canada. Dr. Nychas is Director of the Laboratory of Microbiology and Biotechnology of Foods at the Agricultural University in Athens, Greece, where he has taught Food Microbiology and Food Safety since 1994.

Dr. Nychas has been actively involved with food safety and consumer protection issues throughout his food safety career, serving as President of the Greek Food Authority; as a member of the Biohazard group of the European Food Safety Authority (EFSA); as an expert in Predictive Modelling/Quantitative Risk Assessment (QRA); as a member of the Advisory Forum of EFSA; and as a member of the "Food Safety Panel - Prevention & Control of BSE/TSE & other Biological Hazards" of the European Parliament.

Dr. Nychas is a member of the pool of scientific advisors on risk assessment for the Directorate-General for Health and Food Safety (DG SANTE), and was nominated Chairman of the Scientific Working Group in Food Safety of the European Technological Platform. He has been involved in a wide range of activities, with a focus on fostering international collaboration, including transatlantic collaboration between the EU and U.S. in food safety achieved through European Research programs in which he coordinated and/or participated that dealt with microbial physiology of pathogenic and spoilage organisms in different biotic or abiotic environments.

Dr. Nychas has authored 217 publications and has approximately 8,400 citations.

A Food Safety Award



Center for Food Safety Engineering and the **Department of Food Science** Purdue University West Lafayette, Indiana

Sponsored by



The recipient of the 2017 GMA Food Safety Award is the Center for Food Safety Engineering (CFSE) and the Department of Food Science at Purdue University in West Lafayette, Indiana. The faculty members of CFSE and the Department of Food Science have an impressive history of outstanding contributions to the field of food safety, encompassing significant advances in technologies for sample preparation and detection of foodborne pathogens, top undergraduate and graduate educational and research programs, and impactful far-reaching educational and outreach activities in food protection.

CFSE was established in 2000 as a partnership between Purdue University and USDA-ARS for developing new knowledge, technologies, and systems for detection and prevention of chemical and microbial contamination of foods while training the next generation of food safety scientists and engineers. CFSE technologies have been widely published and presented (with more than 250 peer-reviewed publications and more than 1,000 presentations taking place at national and international scientific meetings), and have been licensed and/or have led to startup companies.

Dr. Lisa Mauer has been Center Director since 2011. While CFSE is a researchfocused center, CFSE investigators have a much greater role in the university and in food safety. Dr. Mauer and four other CFSE lead investigators (Drs. Bruce Applegate, Arun Bhunia, Amanda Deering, and Haley Oliver) are faculty members in the Department of Food Science and responsible for a variety of food safety-related courses, workshops, and other outreach programs and international programs, including capacity building for under-developed countries.

Since 2000, more than 550 undergraduates, 142 M.S. students, and 117 Ph.D. students have matriculated from the Purdue Department of Food Science.

Freezing Research Award



Mark A. Harrison Athens, Georgia

Sponsored by



Dr. Mark A. Harrison is the recipient of the 2017 Frozen Food Foundation Freezing Research Award. This award honors an individual, group or organization for pre-eminence and outstanding contributions to research that impacts food safety attributes of freezing.

Dr. Harrison is a Josiah Meigs Distinguished Teaching Professor, Graduate Coordinator, and Researcher in the Department of Food Science and Technology at the University of Georgia in Athens. His research involves investigations into the occurrence and survival of bacterial pathogens in fresh and processed food and the shelf-life extension of these foods. Current projects include investigations on factors contributing to Listeria monocytogenes persistence in processing facilities focusing on ready-to-eat frozen food facilities.

In addition to his research, Dr. Harrison teaches courses in Food Microbiology, Foodborne Pathogens and Toxins; Governmental Regulations of Food Safety and Quality; Advanced Food Microbiology; and several courses in the UGA Online Master of Food Technology Program. He has been recognized repeatedly by the university and professional societies for his teaching efforts. Dr. Harrison has directed 19 Ph.D. students and 39 M.S. students and is currently the major professor of two M.S. students and one Ph.D. student. He has more than 120 journal publications, eight book chapters, and has made more than 190 presentations at professional meetings. His involvement in externally funded research grants has exceeded \$7 million.

Dr. Harrison has been a member of the Scientific Advisory Council of the American Frozen Food Institute (AFFI) since 2007. In this role, he has provided input on the development of funding proposals put forth by the institute and has reviewed projects supported by the institute. He has also participated in discussions related to scientific issues of interest to the institute and has co-taught an AFFI-sponsored webinar on Microbial Spoilage of Foods, focused on issues related to food spoilage and the role freezing can play in reducing spoilage problems while enhancing the food supply.

An IAFP Member since 1978, Dr. Harrison currently serves on the Journal of Food Protection (JFP) Editorial Board. He is a past member of the JFP Management Committee. He received the Elmer Marth Educator Award in 2012.

Food Safety Magazine Distinguished Service Award



Reginald Bennett College Park, Maryland

Reginald Bennett is a recipient of the 2017 Food Safety Magazine Distinguished Service Award. This award honors individuals who best exemplify the characteristics of a dedicated food safety professional who has made a significant impact on food safety. The honored are recognized by members of the profession for their collective works in promoting and advancing science-based solutions for food safety issues.

Mr. Bennett is Senior Policy Analyst in the Office of Regulatory Science of CFSAN at the U.S. Food and Drug Administration (FDA) in College Park, Maryland. His career in microbiological research and policy has spanned more than 54 years. He began his career in 1956 as a medical bacteriologist at Presbyterian Hospital in Pittsburgh, Pennsylvania. Mr. Bennett joined the FDA in 1960 as a microbiologist in the Microbiology Division. From this point, he rose through the ranks as Acting Chief in the Food and Cosmetic Microbiology Branch, to Chief in the Microbial Methods, Development Branch, and to his current position in the Office of Regulatory Science.

Foremost among Mr. Bennett's scientific contributions are his "methods development for the serological identification of heat-altered staphylococcal enterotoxin in canned foods" and "for development of methods to detect heat-altered staphylococcal enterotoxin and their use in assuring food safety of canned foods."

Mr. Bennett has received numerous awards throughout his career, including the International Association for Food Protection's (IAFP) President's Lifetime Achievement Award in 2004. He is a Fellow of the American Academy of Microbiology, Fellow of the AOAC International, and a member of the American Society for Microbiology, the Institute of Food Technologists, and IAFP.

Mr. Bennett received his M.Sc. in Microbiology from the University of Pittsburgh.



Dane Bernard Arnold, Maryland

Dane Bernard is a recipient of the 2017 Food Safety Magazine Distinguished Service Award. Mr. Bernard is currently the Managing Director of Bold Bear Safety in Arnold, Maryland. Until 2014, Mr. Bernard served as Vice President of Food Safety and Quality Assurance at Keystone Foods, where he was responsible for global programs on Hazard Analysis Critical Control Points (HACCP) and food safety. Prior to joining Keystone, he was Vice President of Food Safety for the National Food Processors Association, where he had worked since 1973.

A registered specialist in food, dairy and sanitation microbiology with the American Academy of Microbiology, Mr. Bernard has done extensive testing of food processing systems, supervised research in many areas of food safety, and has authored/co-authored several technical articles. He has been an instructor and lecturer on principles and applications of HACCP and has assisted in formulating HACCP plans for the U.S. food industry.

Mr. Bernard has been an invited expert to five International Consultations sponsored by the Food and Agriculture Organization (FAO) and the World Health Organization (WHO), dealing with certain aspects of HACCP, risk analysis and other food safety issues. A 44-year Member of IAFP, Mr. Bernard presented the John H. Silliker Lecture at IAFP 2013. He received the IAFP Honorary Life Membership Award in 2015 and the IAFP Harold Barnum Industry Award in 1996.

Mr. Bernard received his M.Sc. in Food Microbiology from the University of Maryland – College Park.

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Maurice Weber Laboratorian Award



Arun K. Bhunia West Lafayette, Indiana

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Dr. Arun K. Bhunia is the 2017 recipient of the Maurice Weber Laboratorian Award. This award recognizes an IAFP Member for dedicated and exceptional contributions in the laboratory, and commitment to the development and/or application of innovative and practical analytical approaches in support of food safety.

Dr. Bhunia is Professor of Food Microbiology in the Department of Food Science at Purdue University in West Lafayette, Indiana, which is also affiliated with the Department of Comparative Pathobiology and the Microbiology Training Group of Purdue's Life Sciences Program.

Dr. Bhunia's research contributions include the development of biosensor-based platforms for rapid foodborne pathogen detection; understanding the mechanism of pathogen interaction with the host gut; and probiotic vaccine against enteric pathogens. He has co-authored more than 166 research publications and two text books (Fundamental Food Microbiology and Foodborne Microbial Pathogens). Over his 22-year academic career, he has mentored 32 graduate students and 16 postdoctoral scientists. Their professional and personal success brings him the greatest joy and reward that is unparalleled to any recognitions received.

Dr. Bhunia's professional activities include service on the National Advisory Committee on Microbiological Criteria for Foods (2013–2017); the Fulbright Specialist Roster (2016–2021), and as an advisory member for the NASA Forum on Next Generation Microbiology Food Requirements for Spaceflight (2012). Dr. Bhunia received the 2003 Purdue Agriculture Research Award; the 2009 Institute of Food Technologist's Research & Development Award; and the 2013 Purdue University College of Agriculture Outstanding Graduate Educator Award.

An IAFP Member since 2008, Dr. Bhunia currently serves on the Journal of Food Protection (JFP) Editorial Board. He received his B.V.Sc. in India, his Ph.D. from the University of Wyoming in Laramie, and conducted postdoctoral training at the University of Arkansas in Fayetteville.

Larry Beuchat Young Researcher Award



Xiaonan Lu Vancouver, British Columbia, Canada

Sponsored by



Dr. Xiaonan Lu is the 2017 recipient of the Larry Beuchat Young Researcher Award, which recognizes a young researcher who has shown outstanding ability and professional promise in the early years of their career.

Dr. Lu is Associate Professor of Food Science on the faculty of Land and Food Systems at the University of British Columbia (UBC) in Vancouver. His university lab works on developing innovative and rapid sensing, instrumentation systems and molecular-based detection and sequencing methods for ensuring food safety and preventing food bioterrorism. He received his B.S. in Food Science from Ocean University of China and his Ph.D. in Food Science from Washington State University. He was a Postdoctoral Fellow in the College of Veterinary Medicine at Washington State University before joining UBC in 2013 as Assistant Professor and Director of the UBC Food Safety Engineering Centre.

Among the awards Dr. Lu has received are the UBC Peter Wall Scholar, the Young Scientist Excellence Award from the International Union of Food Science and Technology, and the Young Scientist Travel Award from the Agricultural and Food Chemistry Division of the American Chemical Society.

Dr. Lu currently serves on several journal editorial boards, including Applied and Environmental Microbiology; Journal of Food Science; and Food and Agricultural Immunology. He is the author of more than 70 papers published in peer-reviewed journals as well as one book, Sensing Techniques for Food Safety and Quality Control (Royal Society of Chemistry), and several book

Dr. Lu joined IAFP in 2011.

Swen C.D. Todd Control of Foodborne Illness Award



Frank L. Bryan Lithonia, Georgia

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Dr. Frank L. Bryan is the recipient of the Ewen C.D. Todd Control of Foodborne Illness Award. New this year, this award recognizes an individual for dedicated and exceptional contributions to the reduction of risks of foodborne illness. Now retired, Dr. Bryan was President of Food Safety Consultation and Training, conducting hazard analyses and developing Hazard Analysis Critical Control Point (HACCP) systems for foodservice chains and food establishments. He has participated in several expert committees of the World Health Organization and conducted hazard analyses of street-vended foods, foods prepared in food establishments and in homes with babies and children with diarrhea in developing countries.

Dr. Bryan was a scientist director and Captain in the Commissioned Corps of the U.S. Public Health Service (PHS) at the Centers for Disease Control and Prevention and received the PHS Meritorious Service Medal for "significant contributions to prevention and control of foodborne diseases through applied research and through the training of health professionals around the world."

Dr. Bryan has conducted research on Salmonella associated with turkeys and turkey products, and hazard analyses of various types of foods and foodservice establishments. He was a member and Secretary of the International Commission on Microbiological Specifications for Foods; Chair of the IAFP Committee on Communicable Diseases Affecting Man; Vice President of the World Association of Veterinary Food Hygienists, and a member of two National Research Council committees on food concerns. Throughout his extensive career, he taught, developed and/or directed more than 500 training courses and has authored more than 270 professional publications.

Dr. Bryan has been an IAFP Member since 1952. He received the IAFP Fellow Award in 1998, Honorary Life Membership Award in 1997, and the Harry Haverland Citation Award in 1991. He has a Ph.D. in Bacteriology and Food Science from Iowa State University and served in the Medical Service Corps of the U.S. Army.

Sanitarian Award



Candace A. Jacobs Olympia, Washington



The 2017 Sanitarian Award goes to Dr. Candace A. Jacobs. The Sanitarian Award honors an IAFP Member for dedication and exceptional service to the profession of the sanitarian, serving the public and the food industry. Dr. Jacobs is the Assistant Director of the Food Safety and Consumer Services Division of the Washington Department of Agriculture (WSDA) in Olympia, a position she has held since April 2015, as well as from 1994-2000. During the interim, she worked in food safety/regulatory/environmental affairs/quality assurance positions in the food industry.

Throughout her extensive career, Dr. Jacobs has worked for The Coca-Cola Company, H-E-B Grocery, Campbell Soup, Niagara Bottling, Starbucks, and Chobani Yogurt. She also held positions as a policy analyst for WSDA, as the State Toxicologist for the Nebraska Department of Health, and as a clinical veterinarian in Wyoming and California. Her Air Force career includes active duty as a research veterinarian for the U.S. Navy, and reserve duty as a public health officer for the U.S. Air Force. She retired as a Colonel in the Biomedical Services Corp.

Dr. Jacobs joined IAFP in 2014. She received her D.V.M. from Oklahoma State University, her M.P.H. from San Diego State University, and her B.S. from the University of Arkansas. She is board certified in Veterinary Preventive Medicine.

Elmer Marth Educator Award



Judy A. Harrison Athens, Georgia

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Dr. Judy A. Harrison is the 2017 recipient of the IAFP Elmer Marth Educator Award, which recognizes an IAFP Member for dedicated and exceptional contributions to the profession of educator.

Dr. Harrison is a Professor in the Department of Foods and Nutrition at the University of Georgia (UGA) in Athens. She obtained her B.S. in Secondary Education - Biology from Tennessee Technological University in Cookeville; her M.S. in Food Science and Technology from the University of Tennessee in Knoxville; and her Ph.D. in Nutrition from the University of Georgia.

Dr. Harrison's appointment is 100% outreach at the University of Georgia, where she was named a Walter Bernard Hill Fellow for distinguished achievement in public service and outreach. As a food safety specialist for UGA Cooperative Extension, she has provided 25 years of food safety education for a variety of audiences across the food system. She has developed, implemented, and evaluated food safety education for child care providers; school nutrition and restaurant personnel; food business personnel; farmers; farmers' market managers; adult consumers; and youth audiences from kindergarteners to high schoolers.

Dr. Harrison has developed educational curriculum packages that have been used nationally and internationally. Her educational programs have been recognized with awards from the media industry, three food safety awards from the National Extension Association for Family and Consumer Sciences, and the 2016 NSF International Food Safety Leadership Award for Training and Education. Dr. Harrison has served as a major professor and on committees for graduate students, and has supervised food safety experiences for dietetic interns and practicum students. She serves on the Board of Directors for the Partnership for Food Safety Education, which has provided her the opportunity to be involved in helping develop food safety education materials for audiences nationwide.

Dr. Harrison has been a Member of IAFP since 1992 and currently serves on the Editorial Boards for the Journal of Food Protection and Food Protection Trends. She is also a Member of the IAFP Affiliate, the Georgia Association for Food Protection.

Harold Barnum Industry Award



Michael Roberson Lakeland, Florida

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As the recipient of the 2017 Harold Barnum Industry Award, Michael Roberson is being honored for his dedication and exceptional service to IAFP, the public, and the food industry. Mr. Roberson is Director of Corporate Quality Assurance for Publix Super Markets, Inc. in Lakeland, Florida, where he started in 2005, and currently manages a team that leads food safety, brand integrity, and compliance programs for the company. In 2009, he testified before Congress at a hearing entitled, "Keeping America's Families Safe: Reforming the Food Safety System." In 2016, Mr. Roberson helped develop "The Story of Your Dinner" with the Partnership for Food Safety Education.

Mr. Roberson has been an IAFP Member since 2001, and is an active member of the Association of Food and Drug Officials and the Food Marketing Institute. He is a Certified Food Scientist with the Institute of Food Technologists and serves on the Executive Board with the Conference for Food Protection. Mr. Roberson chairs the Board of Advisors for the Center for Food Safety at the University of Georgia in Athens, and is a lead instructor for Preventive Controls for Human Foods and the Foreign Supplier Verification Program.

A native of Memphis, Tennessee, Mr. Roberson received his bachelor's degree in Microbiology from Mississippi State University and his master's degree in Food Safety from Michigan State University.

Travel Award for a Food Safety Professional in a Country with a Developing Economy



Frederick Adzitev Tamale, Ghana

Dr. Frederick Adzitey is a recipient of the 2017 IAFP Travel Award. Dr. Adzitey is a senior lecturer with the Department of Animal Science at the University for Development Studies (UDS) in Tamale, Ghana. He holds a B.Sc. in Agriculture Technology, an M.Sc. in Meat Science and Technology, and a Ph.D. in Food Safety.

Dr. Adzitey's research focuses on isolation, antibiotic resistance, and molecular characterization of foodborne and waterborne pathogens. He also researches the use of local plant resources to control foodborne and waterborne pathogens and to develop healthy meat products. He has more than 50 peer-reviewed publications in national and international journals.

Dr. Adzitey is a current member of TWAS (The World Academy of Sciences) Young Affiliate and the Ghana Young Academy. Throughout his career, he has received numerous awards, including the Early Career Researcher Award from The Royal Society to attend the Commonwealth Science Conference (2017); a grant from the International Committee for Food Microbiology and Hygiene to attend its 25th International Conference on One Health Meets Food Microbiology (2016); a bursary from EU FP7 Project Animal Change to attend a training workshop on Livestock and Climatic Change (2015); a bursary from Wellcome Trust to attend a training workshop on Molecular Approaches to Clinical Microbiology in Africa (2014); and a Travel Fellowship from The Wellcome Trust and H3ABioNet to attend the International Society for Computational Biology African Society for Bioinformatics and Computational Biology Conference on Bioinformatics (2013). Other awards received include the Maurice Ingram Award as the best student on the M.Sc. Meat Science and Technology Course (2007/2008) and the Sanggar Sanjung Award for excellent achievement in category of journal publication for 2012 and 2013 during his Ph.D.

Dr. Adzitey was a recipient of the IAFP Student Travel Scholarship in 2012.



Travel Award for a Food Safety Professional in a Country with a Developing Economy



Alonzo A. Gabriel Quezon City. The Philippines

Dr. Alonzo A. Gabriel is the recipient of the 2017 Travel Award. Dr. Gabriel is a Professor of Food Science and Technology and the Principal Investigator of the Laboratory of Food Microbiology and Hygiene in the Department of Food Science and Nutrition at the College of Home Economics at the University of the Philippines Diliman Campus in Quezon City. Dr. Gabriel teaches undergraduate and graduate courses in General and Food Microbiology, Sterilization Processes, and Fruits and Vegetable Processing. His research interests include Hurdle Food Technology, microbial stress exposures and stress adaptation to food and processing environments, and traditional and emerging food processing technologies. Dr. Gabriel's recent works in predictive model building involve the simultaneous estimation of pathogen inactivation, and nutritional and color degradation in heat-treated fruit juices, for a more comprehensive control of safety and quality.

Aside from his teaching and research activities, Dr. Gabriel actively works with local and national government offices in the Philippines, non-government organizations, consumer groups, and food industry stakeholders for Food Security and Protection information dissemination. He served as a co-leader of the Philippine Food Defense Team under the direct order of the Philippine Department of Agriculture, which drafted the Philippine National Standard on Food Defense Guidance for Food Industry. He is currently working with the Philippine Department of Science and Technology for the harmonization of nationwide Food Safety Training Materials.

Dr. Gabriel holds a Ph.D. in Biofunctional Science and Technology with specialization in Food Microbiology and Hygiene from Hiroshima University in Japan. For his contributions to Food Science and Technology, Dr. Gabriel received the International Life Sciences Institute (ILSI) Malaspina International Scholar Travel Grant (2017); the Japan International Award for Young Agricultural Researchers (2016); the International Union of Food Science and Technology (IUFoST) Young Scientist Excellence Award (2013); and the Southeast Asian Regional Center for Graduate Study and Research in Agriculture (SEARCA) Professorial Chair (2012).



Patrick Njage Nairobi, Kenya

Dr. Patrick Njage is a recipient of the 2017 IAFP Travel Award. Dr. Njage is a lecturer at the University of Nairobi in Kenya and is currently on research stay at the Technical University of Denmark. His research interests include quantitative microbial risk analysis, molecular epidemiology of foodborne pathogens focusing on pathogenicity, antimicrobial resistance genetic elements and antimicrobial resistance gene flow in foods. His current research focuses on the use of next generation sequencing data for microbial risk assessment.

Dr. Njage completed his Ph.D. from the Swiss Federal Institute of Technology in Zurich (ETH-Zurich) and the University of Nairobi (2007-2010) in food microbiology and biotechnology under the Swiss Government Excellence Scholarships for Foreign Scholars. He completed a Post-doctoral Fellowship at ETH–Zurich and subsequently at the University of Pretoria under funding by Vice-Chancellor's Grant-University of Pretoria, National Research Foundation (South Africa), Global Academy of Science (TWAS) (2013–2015). Dr. Njage has also completed several non-degree specialized courses in food microbiology, food safety, quality management and risk analysis from various institutions including ETH-Zurich; Ghent University (Belgium); Technical University of Denmark; the University of Glasgow; the Chinese Academy of Sciences; the University of Hasselt; and Wageningen UR (Netherlands).

Dr. Njage received the 2014 International Union of Food Science and Technology (IUFoST) Young Scientist award during the 17th IUFoST Congress in Montreal, Canada. He was also inducted as an inaugural member of the International Academy of Food Science and Technology's Early Career Scientists Section during IUFoST 2016 Congress in Dublin, Ireland.

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Travel Award for State or Provincial Health or Agricultural Department Employees



Ted GatesyEast Lansing, Michigan

Ted Gatesy is a recipient of the 2017 IAFP Travel Award. Mr. Gatesy is the Microbiology Section Manager for the Michigan Department of Agriculture and Rural Development's (MDARD) Geagley Laboratory in East Lansing, Michigan. He earned both his B.S. in Microbiology and Public Health and M.S. in Food Safety from Michigan State University in East Lansing.

Mr. Gatesy oversees ISO17025 accreditation for the Food Safety Microbiology Laboratory and the FDA Certified Dairy Laboratory. He serves as a laboratory representative on the MDARD Rapid Response Team and as a laboratory liaison for MDARD's Emergency Management Team. He is also the Principle Investigator for the Food and Drug Administration (FDA) Food Emergency Response Network (FERN) Cooperative Agreement Program.

Mr. Gatesy works closely with the FDA Genome Trakr program to implement Whole Genome Sequencing of foodborne pathogens. He also works with MDARD regulatory officials, environmental health staff, and epidemiologists on foodborne outbreaks and surveillance sample testing. He leads the MDARD Food Assurance Program, Michigan's continuation of the former U.S. Department of Agriculture Microbiological Data Program, testing fresh produce for pathogens.

Mr. Gatesy received the IAFP Travel Award in 2014. He is grateful and excited to attend IAFP 2017 in Tampa, Florida.



Michael Perry Saratoga Springs, New York

Michael Perry is a recipient of the 2017 IAFP Travel Award. Mr. Perry is the Supervisor of the Biodefense Laboratory (BDL) at the New York State Department of Health (NYSDOH) – Wadsworth Center in Saratoga. He earned his B.S. in Chemistry from Siena College in 2006, an M.S. in Chemistry and Chemical Biology from Rensselaer Polytechnic Institute in 2008, and an M.S. in Education from the University at Albany in 2010.

Mr. Perry began his career at the NYSDOH in 2009 as a Research Scientist. His time is dedicated to public health laboratory service, training, and advancing food testing capabilities. Mr. Perry is the lead scientist on several collaborations with federal agencies, including CDC, FDA, DHS, and USDA. As the Wadsworth Center's lead scientist for the Food Emergency Response Network (FERN), he has focused his efforts on assay development for bacterial and toxin identification in foods where he has submitted several multi-laboratory validations for the detection of biothreat agents. Most recently, he optimized/transitioned a CDC-developed assay capable of detecting *Clostridium botulinum* neurotoxin to the Bruker MALDI Biotyper. This transition has greatly increased testing capabilities while reducing testing costs and reporting times.

During his tenure with NYSDOH and FERN, Mr. Perry has taught courses focused on foodborne pathogens/toxins, food defense, agroterrorism, spectrometry/emerging technologies, and dissemination.

Mr. Perry is grateful for the opportunity to attend and present at IAFP 2017.



Student Travel Scholarship Award



Makala Bach University of Wisconsin -Madison Madison, Wisconsin

Makala Bach is an undergraduate pursuing a bachelor's in Food Science at the University of Wisconsin — Madison. Starting out a psychology major, she eventually discovered her path to food science and eventually to food safety.

Spending part of the summer as a student in the Summer Scholar Program at the university's Food Research Institute, Ms. Bach had the opportunity to do a solo research project studying the growth of Staphylococcus aureus on the surface of bone-in ham and its potential to produce toxin. Albeit a lengthy sampling schedule, she quickly fell in love with research and its ability to

Summer ended with a month-long solo experience on an organic farm in Ecuador. At Ms. Bach's suggestion, the volunteers from the farm toured a local, small-scale yogurt company that had been damaged by an earthquake — a vastly different experience from the massive modern dairy production plants she was used to seeing. This was enough to convince her to apply her newfound food safety passion by working in developing countries, helping to set up and establish food safety protocols in areas that are often overlooked. She plans to pursue a master's degree in Microbiology after graduation next spring.

Ms. Bach is incredibly honored to be a recipient of the 2017 Student Travel Scholarship Award. She hopes get the most out of her time at IAFP 2017, seeing it as an invaluable learning experience that cannot be replicated in a classroom setting. From first-hand information on upand-coming food safety issues to networking with food microbiologists from six continents, the experiences at IAFP 2017 align with everything she wishes to accomplish in her future career.



Stephanie Barnes University of Connecticut Storrs, Connecticut

Stephanie Barnes is a Ph.D. candidate in the Department of Animal Science at the University of Connecticut in Storrs, working under the direction of Dr. Dennis D'Amico. Ms. Barnes received her bachelor of science in Agriculture in Food Science from the University of Georgia (UGA) in 2013.

Her undergraduate research investigated the efficacy of several produce washes against Salmonella and Listeria on fruits and vegetables, as well as Salmonella survival in low-water activity systems. Ms. Barnes continued her work in low-water activity foods during her master's research under the direction of Dr. Joseph Frank by investigating the influence of sugar on Salmonella survival in whey protein powders. She earned her M.S. in Food Science from UGA in 2015. Through her work with whey protein, she became interested in dairy product quality and safety. Her dissertation research focuses on identifying and developing antimicrobial strategies, including clean label approaches, to control pathogens and spoilage microorganisms in milk and fresh cheese. This work includes investigating the impact of antimicrobial controls on pathogen virulence.

Ms. Barnes plans to continue pursuing her passion in food microbiology and fermentation through research, teaching, and public engagement. She hopes to work closely with community members and producers in geographically restricted areas to develop effective strategies and educational programs to improve food safety.

Ms. Barnes is very humbled and honored to be chosen as a recipient of the IAFP Student Travel Scholarship. She looks forward to using this opportunity to learn about current food safety research, share her work with the IAFP community, and develop professional relationships with new colleagues.





Sarah Beno Cornell University Ithaca. New York

Sarah Beno is a Ph.D. candidate at Cornell University in Ithaca, New York, working with Dr. Martin Wiedmann. Ms. Beno studies Gram-positive bacteria that impact the dairy industry and partners with Cornell Dairy Extension to provide workshops to industry members. Partnering with the Dairy Extension team has given her extensive practice in science communication.

In addition to presentations, Ms. Beno developed and validated environmental pathogen monitoring programs for nine small cheese processing facilities. Other research includes the analysis of spoilage organisms' abilities to survive and grow at refrigeration temperatures in fluid milk, using skim milk broth as a model.

Ms. Beno received a B.S. in Biology and a B.A. in Chemistry from Meredith College in Raleigh, North Carolina, in 2013. As an undergraduate, she studied *Tylosema esculentum*, an African legume, which inspired her to complete international food safety work in East Africa as a graduate student. In Kenya and Rwanda, she assisted orange-fleshed sweet potato processors to implement food safety measures in their facilities.

Ms. Beno is honored to receive an IAFP Student Travel Scholarship to attend IAFP 2017 in Tampa, Florida. She has enjoyed attending past IAFP Annual Meetings and looks forward to presenting her research to other food safety professionals and learning the most recent developments in food protection.



Sarah Cope East Carolina University Greenville, North Carolina

Sarah Cope is a recent graduate of East Carolina University in Greenville, North Carolina. She received her B.S. in Family and Consumer Sciences Secondary Education, where she completed her student teaching internship and received her teaching license. Ms. Cope currently works for Dr. Benjamin Chapman at North Carolina State University in Raleigh in the Department of Agriculture and Human Sciences, where she also conducted research during the past three years as an undergraduate. Her current research interests are food safety and human behavior and their ties to Cooperative Extension education and outreach.

During her time at North Carolina State University, Ms. Cope created and implemented surveys, conducted research, assisted with graduate student projects, designed and produced Extension fact sheets, and assisted with training and education for Extension outreach programs. Her most recent research project consisted of a review of mug cake recipes on social media (i.e., Pinterest) and research objectives on the safety of various recipes related to recent bacterial outbreaks from ingredients (flour, eggs, and peanut butter) and the variables associated with preparation and cooking.

Ms. Cope plans to pursue her master's degree at North Carolina State University in Agriculture and Extension Education, with a focus on food safety and human behavior. She hopes to obtain a position as an Extension Agent, positively impacting people's lives and their communities. Her goal is to improve their well-being and lifestyles through her knowledge about food safety, agriculture, farming, risk assessment, behavior analysis, and other related topics.

Ms. Cope is extremely honored and grateful to be a recipient of the IAFP Student Travel Scholarship Award. She looks forward to presenting the results of her recent research at this distinguished conference and is appreciative of the opportunity to network with professionals and fellow students in the field, gain knowledge on a variety of topics surrounding food safety, and build her future career in food safety.





Dorothy Dupree University of Georgia Athens, Georgia

Dorothy Dupree is an M.S. candidate at the University of Georgia (UGA), Athens, in the Department of Foods and Nutrition. Ms. Dupree's interest in food safety piqued when she took a food safety and sanitation class taught by Dr. Elizabeth L. Andress during her last semester of undergraduate coursework. Thus, Ms. Dupree decided to continue at UGA to complete her graduate degree under Dr. Andress. As part of her graduate program, she has also had the opportunity to conduct thesis research at North Carolina State University under the direction of Dr. Fred Breidt in the Food Safety and Foodborne Disease Prevention research program. Specifically, she assessed survival of E. coli O157:H7 and Lactobacillus species in cucumber juice with varied salt treatments.

In addition to her research endeavors, Ms. Dupree is also completing supervised practice as part of UGA's dietetic internship program. Upon program completion, she will be eligible to sit for the registration examination for dietitians. She believes dietitians play a critical role in consumer education, not just for nutrition but food safety as well. One of her professional mantras is, "A food can't be nutritious if it is not first safe." This commitment to educating consumers and other nutrition professionals stems from her supervised practice under Dr. Judy A. Harrison, Extension Foods Specialist at UGA, who has developed multiple food safety education campaigns ranging from handwashing to produce safety for farmers.

Ms. Dupree plans to pursue a career in the foodservice industry, as she enjoys quality assurance and regulatory compliance avenues, but is also open to serving as director or coordinator in a K-12 foodservice setting. She is grateful to have been awarded a Student Travel Scholarship to attend IAFP 2017 and looks forward to discussing her research and internship experiences with the attendees.



Hillary Kelbick University of Maryland College Park, Maryland

Hillary A.C. Kelbick is a Ph.D. candidate in Toxicology and Environmental Health Science at the University of Maryland in College Park, working under the direction of Dr. Amy Sapkota and Dr. Paul Turner. She completed her B.S. in Biology at Pennsylvania State University and her M.P.H. in Epidemiology at the University of Michigan.

For her doctoral research, Ms. Kelbick is investigating the microbial quality of non-traditional irrigation water sources, specifically surface water and treated wastewater, and the persistence of antibiotics in small-scale wastewater treatment setups. Understanding the quality of these water sources contributes to determining their suitability for agricultural usage and an overall understanding of environmental conditions. Her work, which will take place in the U.S. and Israel, is relevant to water-stressed or isolated communities around the world.

Additionally, Ms. Kelbick engages in food safety work through her capacity as a graduate mentor for an undergraduate public health outreach team that works in Ethiopia. Through her collaborative efforts with both Ethiopian and American colleagues, she contributes to helping reduce diarrhea and malnutrition by encouraging urban agriculture practices that take into account food safety principles such as composting manure before use as fertilizer.

Ms. Kelbick is honored to be a recipient of the IAFP Student Travel Scholarship. She hopes to use this experience to learn about cutting-edge research in food safety, discuss current research with others in the field, and build her professional network in food safety.





Giannis Koukkidis University of Leicester Leicester, United Kingdom

Giannis Koukkidis is a Ph.D. candidate in the Department of Infection, Immunity and Inflammation at the University of Leicester in the United Kingdom, working with Dr. Primrose Freestone. After completion of his undergraduate degree in Biological Sciences, Mr. Koukkidis continued his master's degree in Infection and Immunity, where he began examining the interactions of salad leaf tissues with enteropathogens, the topic that became his Ph.D. subject.

Throughout his doctoral studies, Mr. Koukkidis has attended several conferences across Europe on fresh produce and food safety. His research results about Salmonella and salad interactions were published by a leading food microbiology journal. Its importance on food safety and fresh produce were also covered by major news agencies all over the world, including the BBC, Reuters, and CBS.

After completing his Ph.D., Mr. Koukkidis wishes to expand his portfolio with a post-doctoral placement in his current area, examining foodborne pathogens' relationship with fresh produce. He hopes to work directly with the agricultural industries involved in salad growing and packaging and novel treatments which are capable of preventing pathogen attachment to fresh produce. Ultimately, his goal is to follow a career in improving food quality.

Mr. Koukkidis is extremely grateful to receive the 2017 Student Travel Scholarship. He believes this opportunity will help him develop future collaborations, as well as strengthen those which formed at IAFP's European Symposium on Food Safety in both Cardiff, Wales and Athens, Greece. This incredible experience will certainly broaden his horizons in research by coming in contact with so many different ideas, opinions, and useful suggestions about his Ph.D. project and food safety in general.



Shuxiang Liu Pullman, Washington

Shuxiang Liu is a doctoral candidate in the Department of Biological Systems Engineering at Washington State University in Pullman, working under the direction of Dr. Juming Tang. Ms. Liu received her B.Eng. in Food Quality and Safety, and M.Eng. in Food Science and Engineering from Sichuan Agricultural University in Ya'an, China, where she researched a non-destructive method to quantify edible oil quality in the deep frying process using dielectric properties. She received a four-year doctoral fellowship from China Scholarship Council and joined Dr. Tang's group in the fall of 2013.

Ms. Liu's current research is part of a five-year USDA-NIFA CAP project in collaboration with universities, institutes and the U.S. FDA to provide scientific data for enhancing lowmoisture food safety. Her thesis involves evaluating Salmonella surrogate microorganisms in various food matrices for thermal pasteurization. She is also studying how water activity at treatment temperature influences thermal resistances of microorganisms in various low-moisture foods. Ms. Liu's goal is to improve the understanding of Salmonella in lowmoisture foods, and benefit the industry through developing and validating efficient thermal pasteurization technologies for low-moisture foods.

Ms. Liu is honored to be one of the recipients of the 2017 Student Travel Scholarship Washington State University Award. She will be presenting results from her most recent findings to the IAFP community in both a technical presentation and poster session. She looks forward to networking with food safety professionals at this meeting and gaining knowledge from researchers in various fields for food protection.





Itumeleng Matle University of South Africa Pretoria, Gauteng, South Africa

Itumeleng Matle is a Ph.D. candidate in the Food Safety Program at the University of South Africa in Pretoria under the direction of Professor Khanyisile Mbatha and Dr. Evelyn Madoroba. Mr. Matle received his master's of technology in Environmental Health from Central University of Technology in South Africa in 2016 and his bachelor's of technology in Veterinary Technology from Tshwane University of Technology in South Africa in 2012.

Mr. Matle's current research is based on molecular characterization and antimicrobial resistance profiles of Listeria monocytogenes isolated from meat and meat products in South Africa, a novel project in the area that will help determine national prevalence of L. monocytogenes in meat and meat products from abattoirs, processing plants, and retail outlets using whole genome sequencing. The aspect of the study will contribute to additional skills for young researchers and create a database of whole genome sequences of L. monocytogenes from food products in South Africa.

Throughout his doctoral studies, Mr. Matle has attended several national and international conferences on food safety and food microbiology. He is extremely grateful to receive the Student Travel Scholarship to attend IAFP 2017 and is excited to have the opportunity to share his current research work while gaining additional knowledge on microbiological food safety.



Rianna Murray University of Maryland College Park, Maryland

Rianna Murray is a Ph.D. candidate in the Environmental Health and Toxicology Program at the Maryland Institute for Applied Environmental Health, located in the School of Public Health at the University of Maryland in College Park. After completing her B.Sc. with a double major in Biochemistry and Chemistry at the University of the West Indies in Jamaica, Ms. Murray discovered her passion for food and water safety while working in quality assurance at a beverage manufacturing company in her home country of Trinidad and Tobago. She then pursued an M.P.H. at the University of Maryland and, upon completion, transitioned into the Ph.D. program.

Ms. Murray's role at the intersection between public health and food safety provides a unique lens for her research. Her current research combines her interests in both food and water safety and investigates potential associations between private wells as drinking water sources and the incidence of foodborne illness in Maryland. She hopes to develop a comprehensive understanding of the role that animal agriculture may play in the water quality of private wells, including the prevalence of foodborne pathogens, using water sampled from private homeowner wells. Ms. Murray is also part of a multi-state collaborative effort, Project CONSERVE, which seeks to determine the sustainable on-farm solutions needed to enable agricultural producers to conserve groundwater through the safe use of emerging nontraditional water sources.

Ms. Murray is very honored to receive the IAFP Student Travel Scholarship and is excited to interact with colleagues in food safety, as well as share her research with leading experts in the field. She believes that IAFP 2017 will provide her with invaluable professional development opportunities, and that the experiences gained at this meeting will be instrumental in helping her to embark upon a successful career in food safety.





Eugène Niyonzima University of Liège -Gembloux Agro Bio-Tech Gembloux, Belgium

Eugène Niyonzima is a Ph.D candidate in the laboratory of Agro-food Quality and Safety at the University of Liège - Gembloux Agro Bio-Tech in Gembloux, Belgium, under the supervision of Professor Marianne Sindic and Professor Anastase Kimonyo. Mr. Niyonzima holds an M.Sc. in Food Quality and Safety from Cheikh Anta Diop University in Dakar, Senegar, and a bachelor's in Veterinary Medicine from the International School of Sciences and Veterinary Medicine in Dakar,

Mr. Niyonzima's current research work is aimed at assessing the risk of human salmonellosis associated with the consumption of meat-based meals in Rwanda and the determination of the efficacy of different mitigation scenarios along the meat chain through a quantitative microbiological risk assessment model. The findings from this research will contribute to reducing the prevalence of Salmonella in Rwandan meat products and the burden of human salmonellosis in the population.

Mr. Niyonzima is extremely honored and grateful to receive the IAFP Student Travel Scholarship. He hopes to use the experience gained at IAFP 2017 to enhance his knowledge in the current and emerging issues in food safety and to establish research networks with food safety professionals in order to grow his research career in food safety.



Rodney Owusu-Darko University of Pretoria Pretoria, South Africa

Rodney Owusu-Darko is a Ph.D. candidate in the Department of Food Science at the University of Pretoria in South Africa, under the supervision of Professor Elna Buys at the University of Pretoria and Professor Silvia Dias de Oliveira from Pontifícia Universidade Católica in Brazil. He received his B.Sc. (with honors) in Nutrition and Food Science from the University of Ghana, Legon, and his M.Sc. in Food Biotechnology from the University of Strathclyde in Glasgow, Scotland.

Mr. Owusu-Darko's current research focuses on using Next-Generation Sequencing to identify and characterize spore-forming Bacillus species, especially of importance to the dairy industry. His specific interest is in heat resistance and the various mobile genetic elements that confer heat resistance to spore formers. Mr. Owusu-Darko's research also focuses on the thermal inactivation of these spore formers, and he hopes to shed light on the emergence of subspecies heat resistance among spore-forming Bacillus species. He is also interested in the use of interdisciplinary approaches in solving the emerging issues of heat and antimicrobial resistance in the food industry.

As part of his Ph.D. studies, Mr. Owusu-Darko has delivered several oral and poster presentations at conferences and is involved in teaching introductory food science and advanced microbiology courses at the undergraduate level.

Mr. Owusu-Darko is extremely honored to receive an IAFP Student Travel Scholarship. He looks forward to presenting his work, networking with scientists, and networking with potential international collaborators, all of which will help him embark on a successful research career in food safety and quality.





Hao Pang University of Maryland College Park, Maryland

Hao Pang is a Ph.D. candidate in the Department of Nutrition and Food Science at the University of Maryland in College Park, under the guidance of Dr. Abani Pradhan.

Prior to his doctoral studies, Mr. Pang completed his B.S. in Food Science and Engineering at Nanjing Agricultural University in China and received his M.S. in Food Science from the University of Maryland. His master's research focused on the development of quantitative microbial risk assessment for E. coli O157:H7 in fresh-cut lettuce.

Mr. Pang is very interested in the application of different statistical and mathematical approaches for food safety research. His dissertation research focuses on the development of predictive models to identify risk factors and predict the presence and population dynamics of pathogens in produce during pre-harvest production under different weather conditions, geographic regions, and farming systems. Results of his research will provide growers information and data to make informed food safety decisions to reduce the risk of produce preharvest contamination.

Mr. Pang has been attending and presenting his research at every IAFP Annual Meeting since 2013. He is extremely honored to receive this year's Student Travel Scholarship and is excited to share his research. He looks forward to networking with food safety professionals from around the globe and expanding his understanding on emerging and recurring food safety issues.



Laura Patterson University of California -Davis Davis, California

Laura Patterson is a Ph.D. Epidemiology candidate at the University of California – Davis (UC - Davis) in Davis. She works under the guidance of Dr. Alda Pires, Assistant Specialist in Cooperative Extension, Urban Agriculture & Food Safety; and Dr. Michele Jay-Russell, Western Center for Food Safety, UC - Davis. She received her undergraduate degree from Grinnell College in Grinnell, Iowa.

Ms. Patterson's former career positions range from small-scale farmer to non-profit database administrator, and her interest in zoonotic diseases coalesced while managing a goat dairy during a Q fever outbreak. As a former farmer, she brings a unique perspective to the field of food safety. Her background in agriculture informs her projects and career goals, including her aspiration to work as a cooperative extension specialist, providing science-based information to farmers to keep food safe in a pre-harvest environment.

Ms. Patterson's current research focuses on evaluating risk factors, farm management practices, and surveillance methods to detect and prevent the transmission of foodborne pathogens and zoonotic diseases on small-scale diversified farms. Her thesis involves assessing the prevalence of foodborne pathogens, risk factors, and contamination indicators on diversified farms that integrate livestock and crop production. An additional thesis project focuses on the wildlife-livestock interface and its impacts on small-scale farms in California.

Along with her IAFP Membership, Ms. Patterson is also a member of the Center for Animal Disease Modeling and Surveillance (CADMS) at UC - Davis. She is extremely honored to receive the 2017 IAFP Student Travel Scholarship and is hoping to connect with other food safety researchers to receive feedback and share her work.





Kristen Saniga North Carolina State University Raleigh, North Carolina

Kristen Saniga is a master's candidate in Food Science at North Carolina State University in Raleigh, working under the direction of Dr. Clint Stevenson. Ms. Saniga's research interests include improving food safety education and behavior within the food industry. She completed her undergraduate degree in Food Science with a minor in Microbiology from North Carolina State University in 2016, during which time she served as an undergraduate research assistant for three years studying food safety education and recruitment.

During her undergraduate studies, Ms. Saniga became interested in food safety education and behaviors through her work developing foodborne illness outbreak case studies for an introductory food safety class and performing an ethnographic study to assess the food safety culture of a nationwide processing company. Her thesis involves assessing food safety training interventions within the food industry and studying the relationship between food safety culture and training. Her goal is to develop a tool that can be used by industry to assess their food safety culture and training programs.

Ms. Saniga is grateful to be a recipient of the Student Travel Scholarship Award and is excited to have the opportunity to share her current research with the Annual Meeting attendees. She hopes to use this experience to interact with food safety professionals, learn more about current issues and progress in the field, and continue to grow her professional network.



Nicholas Sevart Kansas State University Manhattan, Kansas

Nicholas J. Sevart is a Ph.D. candidate studying food safety at Kansas State University (K-State) in Manhattan. He first enrolled at K-State in 2007 as a Food Science major, where he learned how basic science and technology concepts converge to address applied science issues. He finished his undergraduate studies in 2011 and decided to continue his graduate degree in Food Science at the university.

Mr. Sevart was awarded an assistantship from Dr. Randall Phebus under a U.S. Department of Agriculture - National Institute of Food and Agriculture (USDA-NIFA) Coordinated Agricultural Project (CAP) grant. This grant is focused on Shiga toxin-producing Escherichia coli (STEC) in the beef system. Mr. Sevart serves as the student representative on the Stakeholder Advisory Board for the grant, which is comprised of beef safety executives from large beef processors, feed cattle producers, technology companies, and regulatory officials.

Mr. Sevart's research for his dissertation involves evaluating the efficacy of antimicrobials applied electrostatically to control STEC in beef, which could provide the beef industry with several impactful advantages compared to commonly used intervention strategies. His research is conducted at the K-State Biosecurity Research Institute utilizing commercial size beef processing equipment, which provides the advantage of conducting large-scale studies that represent the entire carcass to retail product conversion process - making findings directly applicable to the industry.

While his dissertation research is directly related to beef safety, Mr. Sevart has been assigned leadership roles investigating pathogen control strategies in produce, bakery products, seeds and grains, and pet foods. He has also had the opportunity to teach, develop, and implement HACCP programs for large and small food processors.

Mr. Sevart is honored to receive a 2017 IAFP Student Travel Scholarship. He looks forward to presenting his recently completed research, while interacting with top food safety professionals from around the world.





Aswathi Soni University of Otago Dunedin, Otago, New Zealand

Aswathi Soni is a Ph.D. candidate in the Department of Food Science at the University of Otago in Dunedin, Otago, New Zealand, working under the supervision of Professor Phil Bremer, Professor Indrawati Oey and Mr. Pat Silcock. Ms. Soni's research interests are food safety and the use of pulse electric field processing (PEF) for the inactivation of foodborne spore-forming pathogenic bacteria.

Ms. Soni's research involves understanding the use of different hurdles for reducing the resistance of Bacillus spores to inactivation by PEF. She intends to use new insights gained with her doctorate toward developing regimes for longer shelf stability in food products. She has a great passion for teaching and intends to continue her career in food safety along with teaching. To date, she has published a review paper and submitted a research paper from her doctoral work and is working toward improvising teaching, as well as research-based skills.

Ms. Soni completed her bachelor's and master's in Biotechnology from Annamalai University in India in 2008 and worked as a lecturer at Barkatullah University in India for three years. She also served as an International English Language Testing System (IELTS) trainer and as an independent lead for online content development (Biotechnology) with MRCC solutions, a software company in India, for three years.

Ms. Soni is extremely grateful to receive the IAFP Student Travel Scholarship, which she believes is a great opportunity to share her research findings and receive feedback to expand her research path in applied food safety.

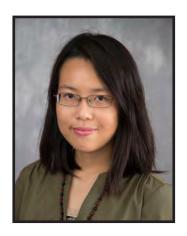


Constanza Vergara University of Chile Santiago, Chile

Constanza Vergara is a Ph.D. candidate in the Veterinary and Agricultural Science Program at the University of Chile in Santiago. Her current research is focused on foodborne disease and antimicrobial resistance and its weight on public health using quantitative risk assessment as an approach to the development of better public policies in her native country of Chile.

After completing her undergraduate degree in veterinary medicine (with honors) from the University of Chile, Ms. Vergara became attracted to the field of food microbiology and quality assurance standards, earning several diplomas in this area. She worked with small agricultural and food producers to help enhance the quality and safety of their products and programs. She served as a research assistant in the Bromatology Department on the Veterinary Faculty of Complutense University in Spain, working with biofilms formation related to the food industry process. Ms. Vergara currently works at the Chilean Food Safety Agency as a veterinary advisor and in the technical international cooperation area, where she participates in projects related to food safety and antimicrobial resistance.

Ms. Vergara is truly pleased that IAFP has opened the door for students outside of the U.S. to experience the Association's Annual Meeting. This doorway allows students to gain immediate knowledge, establish relationships, and further their careers in the food safety field. She is grateful to the Selection Committee for this scholarship and extremely honored to have been selected.



Sophie Tongyu Wu Purdue University West Lafayette, Indiana

Sophie Tongyu Wu is a Ph.D. candidate in the Food Science Program at Purdue University in West Lafayette, Indiana. Ms. Wu works with Dr. Haley F. Oliver on facility designs, management practices, cleaning, and sanitizing frequency in retail produce environments affecting Listeria monocytogenes prevalence. She has developed and implemented a comprehensive 111-question survey in 30 retail produce departments across seven U.S. states that participated in concurrent monthly environmental sampling. The results of her study will shed light on potential intervention strategies for effective *L. monocytogenes* control.

Ms. Wu has been looking for daily life application of science. After graduating from the University of Wisconsin – Madison with a B.S. in Biology, she decided to combine her interests in social study and humanity with scientific research. Science and literature have always been inseparable twins for Ms. Wu. She has published one poem and one essay in the literary journal Illumination in 2013 and 2014, respectively. In 2015, her published poem was adapted into a short film, she being the playwright. Currently, she is working as a fiction reviewer at Sycamore Review. To contemplate and study humanity, both scientifically and literally, has given Ms. Wu unique vision.

IAFP 2017 is the first major food safety conference attended by Ms. Wu, made possible by receiving this travel scholarship. She looks forward to presenting her work, as well as meeting with fellow colleagues to explore resources and opportunities.



Xingning Xiao **Zhejiang University** Hangzhou, China

Xingning Xiao is a Ph.D. candidate in Biosystems Engineering at Zhejiang University in Hangzhou, China, working under the guidance of Professor Yanbin Li. Ms. Xiao received her B.S. in Agricultural Engineering from Sichuan Agricultural University in 2014. Her current research focuses on microbial cross-contamination and quantitative microbial risk assessment for food safety.

During her doctoral studies, Ms. Xiao has been involved in several research projects, including modeling the cross-contamination of Vibrio parahaemolyticus in the shrimp peeling process, investigating the growth/survival of Salmonella on waxberry under different storage temperatures and package materials, and conducting a quantitative microbial risk assessment of Salmonella throughout the poultry supply chain. She has not only conducted laboratory experiments, but also visited several seafood and poultry processing plants to learn the real practices in industries and collect samples.

Ms. Xiao has presented the results of her research at food safety meetings, including IAFP 2016 and the Microrisk 2016 Workshop in China; submitted a manuscript to Food Research International for publication; and filed a Chinese innovation patent application. In addition, she has participated in many food safety activities in China, including conferences on food science and workshops on risk analysis.

Ms. Xiao is extremely grateful to receive the IAFP Student Travel Scholarship. She is excited to have this opportunity to present her current research to attendees and communicate directly with scientists, researchers, industry professionals, and government regulators, who can help further her success throughout her food safety career.



Peanut Proud Student Scholarship Award

The Peanut Proud Student Scholarship Award provides a \$2,000 academic scholarship and travel funding for a U.S. student in the field of food microbiology – and specifically in the area of peanuts and peanut butter food safety – to attend the Annual Meeting. Peanut Proud is a nonprofit industry organization based in Georgia.



Yagmur Yegin Texas A&M University College Station, Texas

Sponsored by



Yagmur Yegin is currently working towards her Ph.D. in the Department of Nutrition and Food Science at Texas A&M University in College Station, Texas. Mrs. Yegin is also a Manufacturing Reliability Engineering Intern at Kellogg Company in Cincinnati, Ohio. Her research interests are focused on various fields, including nanotechnology applications in food safety, controlled release of active ingredients in food systems, synthesis and characterization of antimicrobial nanoparticles, effect of surface chemistry and topography on bacterial attachment, and ease of removal of biofilms from surfaces.

Mrs. Yegin has been conducting experimental research to obtain fundamental understanding of attachment mechanisms of foodborne pathogens onto abiotic and biotic surfaces. She has been developing materials to prevent attachment of foodborne pathogens via hydrophobic modification of surfaces. This work will be beneficial in the prevention of diseases originating from the attachment and contamination of pathogens on surfaces such as gloves, kitchen utensils, and food-contact surfaces, with a great potential to be used on peanut and related food products. In addition to working on the attachment mechanisms, Mrs. Yegin has synthesized essential oil-loaded polymeric nanoparticles to inhibit pathogen growth over a prolonged time by using the controlled release properties of nanoparticles.

Mrs. Yegin holds a B.S. in Food Engineering from Celal Bayar University in Turkey, and an M.S. in Biological and Agricultural Engineering from Texas A&M University, A passionate Ph.D. student, she is focused on public health and the safety of consumer products, leading to her decision to pursue a career in an interdisciplinary field on food safety and helping solving issues related to bacterial contamination on food surfaces.

Mrs. Yegin is honored to be the recipient of the 2017 Peanut Proud Student Scholarship Award.





Apply to Attend IAFP 2018

(Deadline Date: Feb. 20, 2018)

Watch our Web site later this year to apply for the IAFP Student Travel Scholarship Award. Don't miss this opportunity to take part in the world's leading food safety conference.

For more details, visit the IAFP Web site at www.foodprotection.org





IAFP'S EUROPEAN SYMPOSIUM 2018 CALL FOR SUBMISSIONS

October 3 - Symposia and Workshops

January 16 - Technical and Poster Abstract Submissions

Questions regarding submissions can be directed to Tamara Ford Phone: +1 515.276.3344 or +1 800.369.6337 E-mail: tford@foodprotection.org





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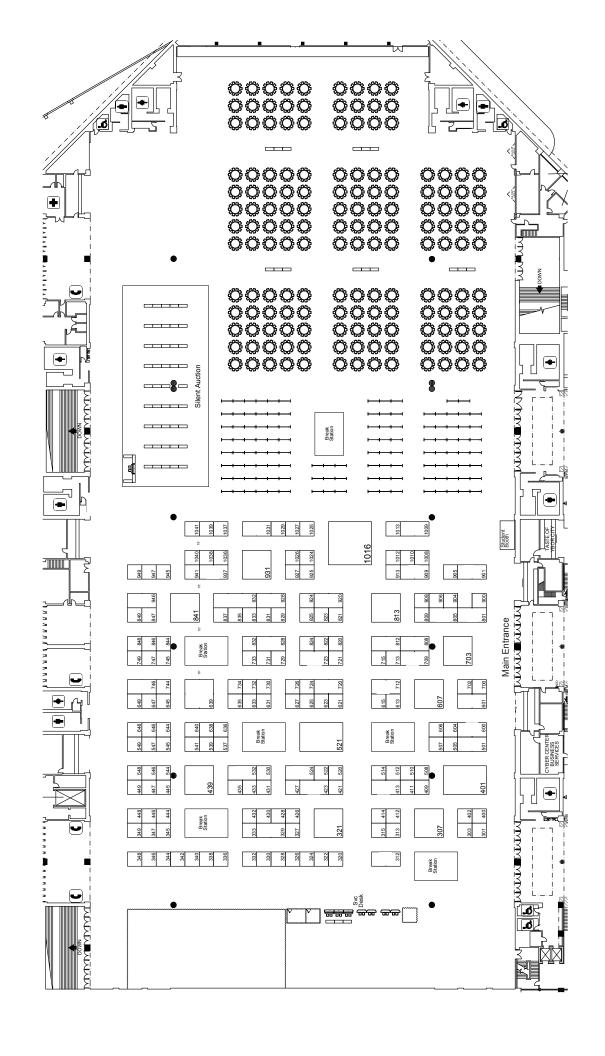
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MEET OUR EXPERTS AT BOOTH #640





(As of June 6, 2017)

3-A Sanitary Standards, Inc.	638	Feel Good, Inc.	330	NSI Lab Solutions	621
3M Food Safety	401	FlexXray	1012	Ocean Optics, Inc.	409
A2LA	326	Food Protection and Defense Institute	623	OCEASOFT	431
AEMTEK, Inc.	820	Food Quality & Safety Magazine	539	Orkin	905
AirClean Systems	937	Food Safety Magazine	524	Pall Corporation	639
Alchemy Systems	1008	Food Safety Net Services	307	Partnership for Food Safety Education	947
Alliance Bio Expertise	1036	Food Safety News	1039	Pittcon 2018	747
Allpha Biosciences, Inc.	720	Food Safety Summit	849	PolySkope Labs	444
American Proficiency Institute	702	FoodCheck Systems Inc.	549	PRESTODIAG	328
Applied Maths, Inc.	1013	GFSI-The Consumer Goods Forum	832	PrimusLabs	544
Applied Matris, Inc. Arizona/California Leafy Greens Marketing	1013	Global ID Group	729	Procter & Gamble Professional	649
Agreement	1037	GMA Science and Education Foundation	530	PureLine	700
Art's Way Scientific, Inc.	715	Grocery Manufacturers Association	332		744
ASI Food Safety	900	Guardian Ozone	945	Puritan Medical Products Company, LLC Q Laboratories, Inc.	904
Association of Food and Drug Officials	1025	Hardy Diagnostics	423	QA Line, LLC	606
Association of rood and Brug Officials Atlantium Technologies	402	Heateflex Corporation	824	QualiTru Sampling Systems	428
Autoscribe Informatics Inc.	633	HiMedia Laboratories Pvt. Ltd.	831	Quality Assurance & Food Safety Magazine	724
BCN Research Laboratories, Inc.	303	Hollison	746	R & F Products	508
· · · · · · · · · · · · · · · · · · ·	522	Hygiena	607	Randox Food Diagnostics	906
Bia Diagnostics	927	IEH Laboratories and Consulting Group	413	•	726
BioFront Technologies	421	IFPTI	1029	Reading Thermal Remco Products Corp.	321
Bioionix, Inc. BIOLYPH LLC	712		512	Rentokil Steritech	1010
	1016	The Industrial Fumigant Company, LLC.	433	ReposiTrak	925
bioMerieux, Inc.	647	InnovaPrep Institute for Food Safety and Health (IFSH)	433 1027	RGF Enivronmental Group, Inc., Food Safety	327
Bioo Scientific, a PerkinElmer Company Bio-Rad Laboratories	703	FSPCA	1027	Division	321
Bioscience International, Inc.	345	Intelex	846	Rheonix Food & Beverage	1009
Bird • B • Gone	445	International Association for Food Protection		RizePoint	721
BluLine Solutions	848	International Association for Food	ruyei	Rochester Midland Corporation-Food Safety	520
Boekel Scientific	427		oit Hall	Division	320
Bruker Corporation	932	International Food & Meat Topics	835	Roka Bioscience	521
Cedarlane	941	International Food & Weat Topics Interscience Laboratories Inc.	901	Romer Labs	600
CERTUS	928	Invisible Sentinel	631	Royalty Roofing	432
Charles River	644	ITW Pro Brands	645	RQA, Inc.	1024
Charm Sciences Inc.	805	Kikkoman Biochemifa Company	823	Safe Food Alliance	646
Check Points	301	Labplas	913	SafetyChain Software	745
Chemstar Corporation	312	LexaGene LexaGene	648	Sample6	505
Cherney Microbiological Services, Ltd.	733	Log 10, LLC	615	Sani Station	447
Chihon Biotechnology Co., Ltd.	342	Maxxam Analytics	340	Sealed Air Diversey Care	507
Clean-Logix	545	MediaBox by Microbiology International	924	Selective Micro Technologies, LLC	338
ClorDiSys Solutions, Inc.	801	Mérieux Nutrisciences	931	Seward Limited	541
Cold Jet	749	Meritech	709	SGS	640
Contec, Inc.	1026	METER Group, Inc., USA	813	Shenzhen Bioeasy Biotechnology Co., Ltd.	333
Cooper-Atkins Corporation	604	Michigan State University Online Master	313	Sika Industrial Flooring	613
COPAN Diagnostics, Inc.	1031	of Science in Food Safety	0.0	Solus Scientific Solutions Ltd.	909
Copesan Specialists in Pest Solutions	546	Micro Essential Laboratory	908	Springer Nature	411
Corning Incorporated	636	Microbac Laboratories, Inc.	426	SQFI (Safe Quality Food Institute)	734
CosmosID	713	Microbiologics	635	STEC CAP Grant	329
Covance Inc.	532	Microbiologique (formerly Pi Biologique)	414	Sterilex Corporation	601
CRC Press, Taylor & Francis Group	844	Microbiology International	920	STOP Foodborne Illness	430
Crystal Diagnostics	324	Micrology Laboratories LLC	1041	Synbiosis	344
CultureMediaConcepts	825	Midland Scientific, Inc.	446	TandD US, LLC.	435
Decon7 Systems	837	MilliporeSigma	841	Thermo Fisher Scientific	439
Deibel Laboratories of FL Inc.	537	MXNS Digital Solutions	514	Timestrip	847
Detectamet Detectable Products Inc.	400	National Registry of Food Safety	1038	U.S. Pharmacopeia	809
Donaldson Company, Inc.	320	Professionals		USDA National Agricultural Library Food	822
Eagle Protect PBC	949	NatureSeal, Inc.	829	Safety Research Information Office	
Ecolab	1040	Nelson-Jameson, Inc.	501	Varcode	730
Emport LLC	732	Neogen Corporation	723	VM Products	336
EMSL Analytical, Inc.	322	NoroCORE (USDA-NIFA Food Virology	821	Weber Scientific	812
Eppendorf	315	Collaborative)		Whirl-Pak	510
Eurofins GeneScan Technologies	731	Northland Laboratories	625	World Bioproducts	627
Eurofins Scientific	828	Novolyze	808	Wyss Institute at Harvard	547
Extreme Microbial Technologies	946	NSF International	412	Xema	833
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Exhibitors - Alphabetical <u>listing</u>

(As of June 6, 2017)

Exhibitors by Booth	N	lumber
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Check Points	301	Food Quality & Safety Magazine	539	USDA National Agricultural Library Food	822
BCN Research Laboratories, Inc.	303	Seward Limited	541	Safety Research Information Office	022
Food Safety Net Services	307	PrimusLabs	544	Kikkoman Biochemifa Company	823
Chemstar Corporation	312	Clean-Logix	545	Heateflex Corporation	824
Michigan State University Online Master	313	Copesan Specialists in Pest Solutions	546	CultureMediaConcepts	825
of Science in Food Safety	010	Wyss Institute at Harvard	547	Eurofins Scientific	828
Eppendorf	315	FoodChek Systems Inc.	549	NatureSeal, Inc.	829
Donaldson Company, Inc.	320	Romer Labs	600	HiMedia Laboratories Pvt. Ltd.	831
Remco Products Corp.	321	Sterilex Corporation	601	GFSI-The Consumer Goods Forum	832
EMSL Analytical, Inc.	322	Cooper-Atkins Corporation	604	Xema	833
Crystal Diagnostics	324	QA Line, LLC	606	International Food & Meat Topics	835
A2LA	326	Hygiena	607	Decon7 Systems	837
RGF Enivronmental Group, Inc., Food Safety	327	Sika Industrial Flooring	613	MilliporeSigma	841
Division		Log 10, LLC	615	CRC Press, Taylor & Francis Group	844
PRESTODIAG	328	NSI Lab Solutions	621	Intelex	846
STEC CAP Grant	329	Food Protection and Defense Institute	623	Timestrip	847
Feel Good, Inc.	330	Northland Laboratories	625	BluLine Solutions	848
Grocery Manufacturers Association	332	World Bioproducts	627	Food Safety Summit	849
Shenzhen Bioeasy Biotechnology Co., Ltd.	333	Invisible Sentinel	631	ASI Food Safety	900
VM Products	336	Autoscribe Informatics Inc.	633	Interscience Laboratories Inc.	901
Selective Micro Technologies, LLC	338	Microbiologics	635	Q Laboratories, Inc.	904
Maxxam Analytics	340	Corning Incorporated	636	Orkin	905
Chihon Biotechnology Co., Ltd.	342	3-A Sanitary Standards, Inc.	638	Randox Food Diagnostics	906
Synbiosis	344	Pall Corporation	639	Micro Essential Laboratory	908
Bioscience International, Inc.	345	SGS	640	Solus Scientific Solutions Ltd.	909
Detectamet Detectable Products Inc.	400	Charles River	644	Labplas	913
3M Food Safety	401	ITW Pro Brands	645	Microbiology International	920
Atlantium Technologies	402	Safe Food Alliance	646	MediaBox by Microbiology International	924
Ocean Optics, Inc.	409	Bioo Scientific, a PerkinElmer Company	647	ReposiTrak	925
Springer Nature	411	LexaGene	648	BioFront Technologies	927
NSF International	412	Procter & Gamble Professional	649	CERTUS	928
IEH Laboratories and Consulting Group	413	PureLine	700	Mérieux Nutrisciences	931
Microbiologique (formerly Pi Biologique)	414	American Proficiency Institute	702	Bruker Corporation	932
Bioionix, Inc.	421	Bio-Rad Laboratories	703	AirClean Systems	937
Hardy Diagnostics	423	Meritech	709	Cedarlane	941
Microbac Laboratories, Inc.	426	BIOLYPH LLC	712	Guardian Ozone	945
Boekel Scientific	427	CosmosID	713		
QualiTru Sampling Systems	428	Art's Way Scientific, Inc.	715	Extreme Microbial Technologies	946 947
STOP Foodborne Illness	430	Alpha Biosciences, Inc.	720	Partnership for Food Safety Education	
OCEASOFT	431	RizePoint	721	Eagle Protect PBC	949 1008
Royalty Roofing	432	Neogen Corporation	723	Alchemy Systems	
InnovaPrep	433	Quality Assurance & Food Safety Magazine	724	Rheonix Food & Beverage	1009
TandD US, LLC.	435	Reading Thermal	726	Rentokil Steritech	1010
Thermo Fisher Scientific	439	Global ID Group	729	FlexXray	1012
PolySkope Labs	444	Varcode	730	Applied Maths, Inc.	1013
Bird • B • Gone	445	Eurofins GeneScan Technologies	731	bioMerieux, Inc.	1016
Midland Scientific, Inc.	446	Emport LLC	732	RQA, Inc.	1024 1025
Sani Station	447	Cherney Microbiological Services, Ltd.	733	Association of Food and Drug Officials	1025
Nelson-Jameson, Inc.	501	SQFI (Safe Quality Food Institute)	734	Contec, Inc.	1020
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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

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www.arizonaleafygreens.org

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The Association of Food and Drug Officials (AFDO), established is 1896, successfully fosters uniformity in the adoption and enforcement of food, drug, medical devices, cosmetics and product safety laws, rules, and regulations. AFDO is an international, non-profit professional organization consisting of state, federal and local regulatory officials as members, with industry representatives participating as associate members. AFDO is a mechanism for advancing regulatory program standards that will help to advance a national integrated food safety

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BCN Research Labs is a full-service microbiology laboratory. It offers an extensive selection of microbiological and mycological tests, training and auditing programs. It specializes in food and beverage spoilage with a strong background in heat-resistant molds (HRM), Alicyclobacillus (ACB), preservative resistant and xerophilic yeast and molds as well as in pathogen contamination, shelf-life, and challenge studies. BCN Labs' staff is proficient in bacteria, yeast, and mold identifications using molecular and traditional identification techniques. BCN Labs is certified by the U.S. EPA for microbiological testing of drinking water, is ISO 17025 accredited, and is a WBENC certified women-owned company.

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Cherney Microbiological Services, Ltd. 733
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Phone: +1 920.406.8300 Fax: +1 920.407.0070
www.cherneymicro.com

Cherney Microbiological Services, Ltd. is an ISO 17025 and 17043 accredited testing laboratory and proficiency program provider that provides partnerships for companies by mitigating risk through proactive testing approaches, continual improvement and focus on quality. The greatest asset we provide to customers is the expertise to support their testing programs. Microbiological & Analytical Testing, Nutritional Analysis, Training Programs and Consulting are all a part of our capabilities to deliver solutions for you. Headquartered in Green Bay, Wisconsin, Cherney has a second ISO 17025 accredited facility in Clovis, New Mexico.

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CRC Press, Taylor & Francis Group 844 6000 Broken Sound Pkwy. NW, Suite 300 Boca Raton, FL 33487, USA Phone: +1 561.994.0555 Fax: +1 561.998.2559 www.crcpress.com

CRC Press is a premier publisher of scientific and technical content, reaching around the globe to collect essential reference material and the latest advances in food quality and safety to make them available to researchers, academics, professionals, and students. CRC Press products include world-class references, handbooks, and textbooks as well as the award-winning netBASE eBook collections. Visit our booth and get limited-time convention discounts of 20% on all titles. CRC Press is a member of Taylor & Francis Group, an informa business.

Crystal Diagnostic 510 Compton St., Suite 106 Broomfield, CO 80020, USA Phone: +1 720.351.4855 www.crystaldiagnostics.com

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Crystal Diagnostics is a food pathogen platform company. Our CDx platform is among the fastest, most accurate, and least expensive food testing platforms commercially available. Our unique detection methods utilize liquid crystal biosensors to amplify the targeted signal and reduce background noise. The CDx holds AOAC accreditations for E. coli O157, STECs, Salmonella, and Listeria for numerous matrices. New targets are being developed on a regular basis. Stop by our booth and see how Crystal Diagnostics can support your food safety efforts.

CultureMediaConcepts 970 E Orangethorpe Ave. Anaheim, CA 92801, USA Phone: +1 714.773.1726

Fax: +1 714.773.1793

www.culturemediaconcepts.com

CultureMediaConcepts® is an independent manufacturer of culture media and reagents utilized in Microbiological testing. Screening for indicator organisms, environmental monitoring, or testing for foodborne

pathogens require specified culture media formulations recommended by the methodology used, the manufacturer of the testing platform, or a governing agency. We specialize in formatting culture media formulations for your specific needs. Our SampleReady™ line of Prepared Dehydrated Culture Media, offers a RTU format that will eliminate steps of preparing your media and save you hours to results.

Decon7 Systems 8541 E Anderson Drive, Suite 106 Scottsdale, AZ 85255, USA Phone: +1 480.339.2858 www.decon7.com

D7 is a proprietary blend of ordinary household substances that aggressively hunts and destroys bacteria and viruses in agricultural live harvest and food processing facilities. Validated by multiple third party organizations, D7 is a proven antimicrobial disinfectant that will enhance and maximize the effectiveness of your biosecurity program.

Ordinary Substances • Patented Formula • Unrivaled Results Once blended, the D7 solution becomes an unrivaled antimicrobial disinfectant of bacteria and viruses, delivering a seven log kill rate, the highest rate measurable. We partner with our customers and focus on the food processing and related verticals; including, Protein, Seafood, Fruits and Vegetables and Dairy. Visit us to learn more about our extraordinary solutions.

Deibel Laboratories of FL Inc. P.O. Box 1056 Osprey, FL 34229-1056, USA Phone: +1 224.465.5515 www.deibellabs.com

Fax: +1 941.924.6541

Fax: +1 480.339.2859

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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 forty 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 sized clientele.

Detectamet Detectable Products Inc. 5111 Glen Alden Drive Richmond, VA 23231, USA Phone: +1 804.303.1983 www.detectamet.com

Fax: +1 804.303.6971

Detectamet Inc. is now the North American distribution centre in Richmond, actively delivering the world's leading range of products that are fully metal and X-ray detectable and are magnetically extractable. They reduce the risks of physical contamination of food. The company's special plastic is 'visible' to detection systems used in the food industry. It has been approved for contact with food in compliance with U.S. and EU standards. Products range from pens to ear plugs, to gloves and hair nets, to scrapers and mixer blades and much more. Auditors, inspectors and grocery retailers recognize that Detectamet products make an important contribution to successful HACCP management systems.

Donaldson Company, Inc. 320 P.O. Box 1299 Minneapolis, MN 55440, USA Phone: +1 800.543.3634 Fax: +1 952.885.4791 www.donaldsonprocessfilters.com

The Process Filtration Division of Donaldson Company, Inc. is a leading worldwide provider of process filtration, providing filtration for sterile air, liquids, and steam used in the food and beverage processing and aseptic packaging, inks, paints, coatings, pharmaceuticals, and other processing industries. Donaldson is committed to protecting people and processes using leading filtration technology, providing quality products and prompt customer service.

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Eagle Protect PBC 3079 Harrison Ave., Suite 214 South Lake Tahoe, CA 96150, USA Phone: +1 510.205.0623 www.eagleprotect.com

You know what is in your food – but do you know what is touching it? Eagle Protect PBC, a Certified BCorp, supplies responsibly sourced and sustainable focused Disposable Gloves and clothing to the U.S. food sector - manufacturing, processing, and food service. Brand reputation assurance through regular audits carried out by Eagle Staff (not third party) and Child Labor Free Certification provide a transparent and public supply chain. Eagle works with companies that care enough about their products, staff, and customers to make sure they are using safe, reliable, and clean disposable supplies. Protection for a Busy, Dirty World!

Ecolab 1 Ecolab Place St. Paul, MN 55102, USA Phone: +1 651.250.4469 www.ecolab.com

A trusted partner at more than one million customer locations, Ecolab (ECL) is the global leader in water, hygiene, and energy technologies and services that protect people and vital resources. With 2016 sales of \$13 billion and 48,000 associates, Ecolab delivers comprehensive solutions and on-site service to promote safe food, maintain clean environments, optimize water and energy use, and improve operational efficiencies for customers in the food, healthcare, energy, hospitality, and industrial markets in more than 170 countries around the world.

Emport LLC 4327 Butler St., Floor 2 Pittsburgh, PA 15201, USA Phone: +1 412.447.1888 www.emportllc.com

Emport LLC specializes in food safety and quality assurance kits that combine user-friendly design with rigorous scientific standards. Our core focus is rapid tests for detecting traces of gluten and other allergens. Kits include GlutenTox Pro, AOAC-PTM certified for detecting as little as 5 ppm gluten in foods and environments; and AlerTox Sticks, for checking foods and surfaces for trace amounts of peanut, almond, hazelnut, soy, fish, casein, egg, and more. Friendly, fast service and leading technology help us live up to our motto: More safe food, more happy people.

EMSL Analytical, Inc. 200 Route 130 North Cinnaminson, NJ 08077, USA Phone: +1 800.220.3675 www.emsl.com

Fax: +1 856.786.5974

EMSL Analytical's network of over 40 laboratories and service centers has been providing quality analytical services since 1981. Our food laboratory capabilities include: microbiology analysis, nutritional analysis, various food chemistry analysis, allergens, toxins, and adulteration analysis. EMSL's Food Testing Division laboratories are located in over 13 of our locations conveniently located across North America. Our Food Chemistry and Nutritional Analysis testing is done at our National Headquarters in Cinnaminson, New Jersey.

Eppendorf 102 Motor Pkwy. Hauppauge, NY 11788, USA Phone: +1 800.645.3050 www.eppendorf.com

Eppendorf is a leading life science company that develops and sells instruments, consumables, and services for liquid, sample, and cell handling in laboratories worldwide. The brand Eppendorf stands for premium products and services, comprehensive solutions and sincere advice and support. The broad portfolio covers a variety of applications and biological materials ensuring efficient laboratory processes and reliable results. Eppendorf sets laboratory standards in research but also for laboratories performing process analysis, production and quality assurance including the field of food and beverage. Eppendorf offers pipettes, centrifuges, thermal cyclers, mixers, shakers, automated liquid handlers, spectrophotometers, consumables and services such as calibration.

Eurofins GeneScan Technologies Engesserstrasse 4 Freiburg, D-79108, Germany

Eurofins Scientific 2200 Rittenhouse St., #175 Des Moines, IA 50321, USA Phone: +1 515.265.1461 www.eurofinsus.com/food

Eurofins Scientific is an international group of laboratories operating 310 sites in 39 countries and providing a comprehensive range of analytical testing services drawing on the latest developments in biotechnology. The Eurofins Group specializes in delivering analytical testing and advisory services to clients from a wide range of industries including the pharmaceutical, food and environmental sectors. With a portfolio of over 130,000 reliable analytical methods and performing more than 150 million assays per year to establish the safety, composition, authenticity, origin, traceability, identity and purity of biological substances, the Eurofins Group is now the leading global provider of bioanalytical services.

Extreme Microbial Technologies 11125 Yankee, Suite B Dayton, OH 45458, USA Phone: +1 844.885.0088 www.extrememicrobial.com

Extreme Microbial Technologies is the innovative air and surface purification company. Using our patented 6 Step Total Solution we are able to clean and sanitize EVERY surface and the air CONTINUOUSLY. We can also monitor living bacteria and mold in real time, giving instant results. No wait! We can reduce up to 99.9% of bacteria, mold, and viruses ensuring your indoor space is always clean, even when occupied.

Feel Good, Inc. 1460 Gemini Blvd., #8 Orlando, FL 32837, USA Phone: +1 407.986.3351 www.feelgoodinc.org

Feel Good, Inc. provides portable TENS (transcutaneous electrical nerve stimulation) units offering wide variety of benefits, including alleviating back, nerve and diabetic pain and migraines. Our units can also improve circulation, sleep patterns and have been shown to decrease the use of pain relievers that can cause negative side effects.

FlexXray 3751 New York Ave., #130 Arlington, TX 76014, USA Phone: +1 817.453.3539

www.flexxray.com

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FlexXray is the leader in Inspection and Recovery Services dedicated to serving food companies. We X-Ray finished food products for all types of contaminants, which we can see down to 0.8 mm or even smaller. We are able to achieve this by using medical grade X-Ray technology, developed in house, running at very slow speeds. Metal, plastic, gasket material, glass, stones, and bone are a few of the items our customers ask us to inspect for.

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Currently, we are helping over 360 customers salvage product instead of simply throwing it away. This helps save some larger companies millions of dollars a year.

623 **Food Protection and Defense Institute** 1954 Buford Ave., Suite R285, LES Bldg. St. Paul, MN 55108, USA Phone: +1 612.626.6406 Fax: +1 612.624.3229 www.foodprotection.umn.edu

The Food Protection and Defense Institute (FPDI), was officially launched as a Homeland Security Center of Excellence in July 2004 at the University of Minnesota. Developed as a multidisciplinary and actionoriented research consortium, FPDI addresses the vulnerability of the nation's food system. FPDI takes a comprehensive, farm-to-table view of the food system, encompassing all aspects from primary production through transportation and food processing to retail and food service.

Food Quality & Safety Magazine 111 River St. Hoboken, NJ 07030-5774, USA Phone: +1 480.419.1851 www.foodqualityandsafety.com

Food Quality & Safety's mission is to advise all levels of quality and safety decision makers in food manufacturing, food service/retail, and regulatory and research institutions on strategic and tactical approaches required in a rapidly changing food market by examining current products, technologies, and philosophies.

Food Safety Magazine 524 1945 W Mountain St. Glendale, CA 91201, USA Phone: +1 818.842.4777 Fax: +1 818.955.9504 www.foodsafetymagazine.com

Food Safety Magazine is a bimonthly publication that serves the informational needs of food safety/quality professionals worldwide. Issues feature contributions from food and beverage industry leaders who discuss the regulatory environment, technologies, trends, and management strategies essential when applying science-based solutions to assure food safety and quality. Food Safety Magazine also produces Food Safety Connect – an online marketplace for food safety solutions (www.foodsafetyconnect.com). Food Safety Connect presents reliable, useful information in an easy-to-use interactive format that helps users find products and services. Visit our booth to begin your free subscription and learn about Food Safety Connect.

Food Safety Net Services 199 W Rhapsody San Antonio, TX 78216, USA Phone: +1 210.308.0675 www.fsns.com

of experts from the full stakeholder spectrum, across industry and international organizations to governments and academia. GFSI is powered by The Consumer Goods Forum (CGF), a global industry network working to support Better Lives Through Better Business.

Food Safety Net Services (FSNS), headquartered in San Antonio, Texas, is a national network of ISO 17025 accredited testing laboratories open 24/7, 365 days a year. FSNS provides expert technical resources that assist companies with implementing food safety and quality programs that deliver critical information needed to continually improve process controls. Additional services include GFSI, SQF and PAACO, approved auditing and certification capabilities. For more information, visit FSNS.com.

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Food Safety News 14117 West 61st St. Shawnee, KS 66216, USA Phone: +1 913.205.3791 www.foodsafetynews.com Global ID Group serves the food industry with a market-leading portfolio of testing, training, certification and software services. At this year's IAFP show we will be showcasing HorizonScan, a powerful online database that contains over 85,000 records of global food safety and authenticity incidents affecting over 530 commodities from nearly 16,000 suppliers in over 180 countries. Customizable e-alerts and a user-friendly interface allow food safety professionals to identify and prioritize potential supply chain threats and research supplier histories as part of their food safety and FSMA compliance programs. Global ID is the exclusive North American distributor for HorizonScan. www.globalhorizonscan.com.

Food Safety News is the only daily publication that reports exclusively on food safety issues. We are the first to talk with the most important people behind breaking news. We bring our readers the kind of old-fashioned, in-depth journalism that many people thought didn't exist anymore.

GMA Science and Education Foundation 530 1350 I St. NW, Suite 300 Washington, D.C. 20005, USA Phone: +1 202.639.5900 Fax: +1 202.639.5932 www.gmaonline.org/sef

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The GMA Science and Education Foundation (SEF) is a 501(c) (3) non-profit foundation that supports and funds cutting-edge research, best-in-class education and state-of-the-art technical training programs in support of the food and CPG industries both domestically and internationally. Through the SEF, the global food industry is able to leverage technologies and processes with the technical expertise provided by GMA scientist and expert consultants to achieve timely results and solutions.

Food Safety Summit 155 N Pfingsten Road, Suite 205 Deerfield, IL 60015, USA Phone: +1 847.405.4000 www.foodsafetysummit.com

Grocery Manufacturers Association 1350 I St. NW, Suite 300 Washington, D.C. 20005, USA Phone: +1 202.639.5977 www.gmaonline.org

The Food Safety Summit is a solutions-based conference and expo designed to meet the educational and informational needs of the entire food industry including growers, processors, retailers, distributors, foodservice operators, regulators and academia. The Summit provides 4 days of comprehensive education, certification and training courses, to learn from subject matter experts and exchange ideas; an expansive Exhibit Hall packed with leading industry solutions providers; and exclusive networking events to help you make meaningful industry connections. Join us for a celebration of our 20th year of the Annual Food Safety Summit, May 7–10, 2018 at the Donald E. Stephens Convention Center in Rosemont, IL.

Grocery Manufacturers Association (GMA) is the trade organization representing the world's leading food, beverage and consumer products companies and associated partners. The U.S. food, beverage and consumer packaged goods industry has facilities in 30,000 communities, generates \$1 trillion in sales annually, contributes \$415 billion in added value to the economy every year and is the single largest U.S. manufacturing industry with 1.7 million manufacturing workers. Founded in 1908, GMA has a primary focus on product safety, science-based public policies and industry initiatives that seek to empower people with the tools and information they need to make informed choices and lead healthier lives.

GFSI – The Consumer Goods Forum 22-24-Rue du Gouverneur General Eboue Issy les Moulineaux, 92130, France Phone: +33 182.00.9577 www.theconsumergoodsforum.com

Economically motivated adulteration (EMA) is an established threat to grocery manufacturers. GMA and Battelle have partnered to provide EMAlert, a secure, comprehensive and intuitive software tool that enables food manufacturers to rapidly analyze and understand EMA vulnerabilities. EMAlert produces quantitative vulnerability results, allowing for the prioritization of mitigation efforts associated with EMA threats.

The Global Food Safety Initiative (GFSI) brings together key actors of the food ecosystem to collaboratively drive continuous improvement in food safety management systems around the world. With a vision of safe food for consumers everywhere, food industry leaders created GFSI in 2000 to reduce food safety risks and inefficiencies while building trust throughout the supply chain. The GFSI community is composed

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Guardian Ozone 2971 Oxbow Circle, Suite A Cocoa, FL 32926, USA Phone: +1 321.631.4580 www.guardianozone.com

Guardian Ozone's science and engineering approach is revolutionizing food safety and sanitation for the food industry. As an ISO9001 registered manufacturer and UL 508A listed panel shop, all Guardian systems are designed and built entirely in the USA to the highest industrial standards. Guardian Ozone is confident in its ability to meet or exceed our customers' expectations for their most challenging ozone process needs. Contact us to learn more about our capabilities and solutions.

Hardy Diagnostics 1430 W McCoy Lane Santa Maria, CA 93455, USA Phone: +1 800.266.2222 www.hardydiagnostics.com

You can choose from a complete selection of over 8,000 microbiology and laboratory products including Crystal Diagnostics' AOAC approved CDx Xpress Reader, Compact Dry, Dilu-Loks, and many more. Shipments are delivered quickly, usually the next day due to Hardy Diagnostics' extensive network of nine distribution centers across the U.S. You can also be rest assured knowing that your supplies are manufactured in an ISO-certified factory.

Heateflex Corporation 405 E Santa Clara St. Arcadia, CA 91006, USA Phone: +1 626.599.8566 www.heateflex.com

Since 1974, Heateflex Corporation has led the way in providing ultra-pure heating equipment to the semiconductor, life science, food and beverage, and other industries requiring precision heating. Offering a broad range of customizable, high-purity equipment for heating and cooling fluids, including chemical heaters, deionized water heaters, gas heaters, steam heaters, and heat exchangers.

The company's recently-introduced Demeter™ media preparation system is used for pathogens testing in food labs, and can increase lab throughput in the media preparation process by up to 7 times. Demeter is engineered for accuracy, traceability, and sterility, and with a LIMS interface, improves recordkeeping for regulatory compliance.

HiMedia Laboratories Pvt. Ltd. A-516 Swastik Disha Business Park, via adhani Industrial Estate Mumbai, 400 086, India Phone: 484.734.4401 Fax: 484.734.4402

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

Hollison, LLC 2800 Warehouse Road Owensboro, KY 42301, USA Phone: +1 270.713.0274 www.hollison.com

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Fax: +1 626.599.9567

Hollison is a high-tech food safety company focused on the detection of and protection from pathogens in human and pet food, ingredient sources and environments.

Hollison's proprietary technology – the TrueSampler™ and DuraSampler™ – has mastered the accuracy of continuous food sampling to ensure no pathogens are present in the product and environment. Hollison has also developed and distributes natural and safe probiotic blends – one that can be applied to food, and PROTECT™, which is used in office and industrial spaces to protect against pathogens.

Hygiena 941 Avenida Acaso Camarillo, CA 93012, USA Phone: +1 805.388.8007 www.hygiena.com

Hygiena delivers rapid microbial detection and monitoring solutions to improve food safety. Hygiena's EnSURE™ monitoring system collects, analyzes, and reports data from multiple quality indicators, including ATP, and indicator organisms like TVC, Coliform, E. coli and Listeria. The company's BAX® System, previously from DuPont Diagnostics, uses PCR technology to identify pathogens in food ingredients, finished products, and production environments. Hygiena utilizes advanced technologies and patented designs to provide industry-leading microorganism detection, allergen tests, environmental collection devices, and more. Hygiena is committed to providing customers with high-quality innovative technologies that are easy-to-use and reliable, backed by excellent customer service and support.

IEH Laboratories and Consulting Group 15300 Bothell Way NE Lake Forest Park, WA 98155, USA Phone: +1 800.491.7745 www.iehinc.com

Fax: +1 206.306.8883

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IEH Laboratories and Consulting Group delivers comprehensive laboratory support services, encompassing all aspects of microbiology and chemistry analysis, process validation, HACCP development and recall/outbreak assistance. Our national network of over 100 ISO/IEC-17025-accredited laboratories addresses quality and safety concerns throughout production and processing, enabling food, nutriceutical and pharmaceutical manufacturers to release products with confidence.

49 W Michigan Ave., Suite 300 Battle Creek, MI 49017, USA Phone: +1 269.441.4504

www.ifpti.org

IFPTI builds competency-based solutions for public- and privatesector food protection professionals. This translates to custom-designed learning organized around curriculum frameworks aligned with specific workforce competencies. Simply put, for any food protection or safety challenge anywhere in the world, IFPTI has the expertise, leadership, and systems in place to help solve them.

Blue Text - IAFP Sustaining Member

The Industrial Fumigant Company, LLC.

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International Association for Food Protection

Phone: +1 800.369.6337 Fax: +1 515.276.8655

www.foodprotection.org

IAFP provides food safety professionals worldwide with a forum to exchange information on protecting the food supply. This is achieved through two monthly journals; the *Journal of Food Protection* and *Food Protection Trends*, an online newsletter titled the *IAFP Report* and through an Annual Meeting in North America where research topics on food safety issues are presented. IAFP also holds a three-day symposium in Europe each year and a separate, annual international symposium in addition to supporting food safety events in Dubai and China. Membership information can be obtained at our booth or visit our Web site at www.foodprotection.org.

industries since 1937. IFC has developed a market-leading reputation for providing consistent, reliable and high quality service to our clients. We maintain this reputation by focusing our efforts on sustaining the highest standards of quality, safety, honesty and integrity in all areas of our business.

IFC is a national provider of pest management and sanitation

have gained comes from working directly with the food and commodity

solutions exclusive to the food industry. The knowledge and expertise we

business.

InnovaPrep 433

132 East Main St. Drexel, MO 64742, USA Phone: +1 816.619.3375

Fax: +1 816.619.3375

Fax: +1 913.782.6299

www.innovaprep.com

InnovaPrep provides tools for highly efficient collection, concentration, and recovery of biological particles from air and liquid samples. These technologies have application with any analysis method where increased sensitivity is needed. InnovaPrep's flagship product, the Concentrating Pipette, is a rapid automated bio concentrator – enabling effortless sample prep and concentration of biological particles from liquid samples. Fields of application include, but are not limited to, food, drug, and water safety; biodefense; diagnostic research; and industrial and environmental monitoring.

Institute for Food Safety and Health (IFSH) FSPCA 1027 6502 S. Archer Road Bedford Park, IL 60501, USA Phone: +1 708.563.8152

www.iit.edu/ifsh

Illinois Institute of Technology's Institute for Food Safety and Health (IFSH) is an applied research institute that provides stakeholders the opportunity to develop and exchange knowledge, experience, and expertise to address issues in food safety, food defense, and nutrition. IFSH's collaborative research model helps stakeholders define and design innovative and practical approaches to solving challenges in food industry operations. IFSH is also home to the FDA CFSAN Division of Food Processing Science and Technology.

Intelex 846

70 University Ave. Toronto, ON M5J 2M4, Canada Phone: +1 416.646.2716

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With more than 1,000 clients and one million users, Intelex Technologies is a global leader in Environmental, Health, Safety, and Quality (EHSQ) management software. Since 1992, our scalable webbased software has helped clients around the world and across all industries improve operational performance, mitigate organization-wide risk, and ensure sustained compliance with internationally accepted standards and regulatory requirements. We do this by providing a user-friendly experience that simplifies and centralizes EHSQ data collection and processes, while making it easier than ever before to identify and report on the insights and metrics that generate meaningful business results.

International Association for Food Protection — Exhibit Hall Student PDG

6200 Aurora Ave., Suite 200W Des Moines, IA 50322-2864, USA

Phone: +1 800.369.6337 Fax: +1 515.276.8655

www.foodprotection.org

Welcome, students, to IAFP 2017! 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.

International Food & Meat Topics

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Foyer

P.O. Box 4

Driffield, East Yorkshire YO25 9DJ, United Kingdom

Phone: +44.1377.241724 Fax: +44.1377.253640

www.positiveaction.co.uk

International Food & Meat Topics is a global magazine that focuses on all aspects of food and meat safety in production and processing. It carries regular features on laboratory testing and relevant research. Its editorial covers subjects as diverse as Campylobacter, HACCP, food safety, labelling and shelf life, and foreign body detection. Its targeted readership is QA/QC managers in food and meat production and processing plants, food testing laboratories, and responsible food safety professionals.

Interscience Laboratories Inc. 32 Cummings Park Woburn, MA 01801, USA Phone: +1 781 937 0007

Phone: +1 781.937.0007 Fax: +1 781.937.0017

www.interscience.com

Interscience has been a global designer, manufacturer, and supplier of solutions for quick and safe microbiological analyses for more than 30 years. Please stop by our booth to view our complete product line, including the DiluFlow® gravimetric dilutor, the FlexiPump® dispensing pump, the silent BagMixer® 400 SW lab blender, the easy Spiral Dilute dilutor and spiral plater, and the new Scan 4000 automatic colony counter.

Invisible Sentinel 3711 Market St., Suite 910 Philadelphia, PA 19104, USA Phone: +1 267.969.6004 www.invisiblesentinel.com

LexaGene 100 Cummings Center, Suite P-207 Beverly, MA 01915, USA

Phone: +1 650.200.8771 www.lexagene.com

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Fax: +1 267.969.6004

Fax: +81 3.5521.5498

Invisible Sentinel, a global molecular solutions company, is dedicated to providing first-in-class microbial detection tools. The Company's core technology, Veriflow®, is a patented, game-changing platform that integrates molecular diagnostics, antibody design, and immunoassays. Veriflow® technology is currently applied across multiple industries including food safety and beverage quality. The Company is exploring solutions in other industries, such as healthcare, veterinary services, biodefense, and environmental testing. Each solution requires specific design elements, but retains the inherent advantages of Veriflow®, technology: simplicity, accessibility, and affordability. For more information, visit www.invisiblesentinel.com.

LexaGene is developing an instrument that makes pathogen detection super easy. It is designed for use in food packaging plants by individuals with no knowledge of microbiology. The instrument purifies the DNA and RNA from liquid samples and performs 22 PCR tests for pathogens and indicator species - all within ~ 1 hr. Such a quick turnaround time will provide food safety officers with the necessary information to determine whether their products can be shipped immediately or may be contaminated. In addition, the instrument is well suited for finding the source of a contamination within a single work shift.

Log10, LLC 2402 Sykes Blvd. Ponca City, OK 74601, USA Phone: +1 580.304.7953 www.log10.com

4647 Hugh Howell Road Tucker, GA 30084, USA

ITW Pro Brands

Phone: +1 770.243.8800 Fax: +1 770.243.8961

www.itwprofessionalbrands.com

ITW Pro Brands manufactures LPS, the leading food-grade MRO chemical brand that developed the innovative technology, DETEX. All DETEX components are metal detectable to help reduce the risk of foreign object contamination during food and beverage processing. With a wide range of NSF certified cleaners/degreasers, lubricants, and penetrants,

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Kikkoman Biochemifa Company 2-1-1, Nishi-Shinbashi, Minato-ku Tokyo, 105-0003, Japan Phone: +81 3.5521.5492

biochemifa.kikkoman.co.jp/e/

Sainte-Julie, QC J3E 1Z6, Canada

The mission of Log10, LLC is to support the food industry with comprehensive services pertaining to microbial safety and quality of food. Our focus is on microorganisms that cause human illness or food spoilage, and competing beneficial bacteria that prevent, reduce or eliminate these hazards. Log10[®] manufactures the Pre-Liminate[™] brand of dry probiotic powders that are proven to prevent or eliminate Salmonella, Listeria and Clostridium from food and environmental surfaces. Other services include expert professional consulting, research, testing, and training support to the food industry relative to the manufacture and delivery of safe, highquality food products.

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Kikkoman Biochemifa Company, one of the subsidiaries of the Kikkoman Corporation, has been developing innovative enzymes and functional materials which are currently used in various industries. Moreover, we offer a broad range of hygiene-related assay and detection instruments, including ATP+ADP+AMP (A3 Method) rapid hygiene monitoring system which is an ADP detectable new product and also offer Histamine Test kit which is a rapid colorimetric enzyme assay system for its quantitative analysis in raw fish, frozen fish or canned tuna. With an emphasis on "Speed, Safety, and Simplicity," these products satisfy a wide range of needs for assuring food product safety.

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Rochester Midland Corporation - Food Safety Division 520 155 Paragon Drive Rochester, NY 14624, USA Phone: +1 585.336.2200 Fax: +1 585.336.2357 www.rochestermidland.com

Rochester Midland Corporation provides a HACCP-based food safety program that offers sanitation solutions to food and beverage manufacturers. Our BrandGuard Program® is made up of seven steps which are all critical components of a consultative and effective food safety program. Built into each step are the environmental, social and financial legs of sustainability. With our 120+ years of experience, we have formed long-term partnerships with our customers to provide them with the integrated solutions that will protect their business financially.

Roka Bioscience 521 20 Independence Ave., 4th Floor Warren, NJ 07059, USA Phone: +1 855.765.2246 Fax: +1 908.604.2008 www.rokabio.com

Roka Bioscience is a molecular diagnostics company focused on developing and commercializing advanced testing solutions for the food safety testing market. Our Atlas Detection Assays incorporate our advanced molecular technologies and are performed on our "samplein, result-out" Atlas System that automates all aspects of molecular diagnostic testing on a single, integrated platform. The Atlas System and Detection Assays are designed to provide our customers with accurate and rapid test results with reduced labor costs and improved laboratory efficiencies. For more information, visit www.rokabio.com.

Romer Labs 600 130 Sandy Drive Newark, DE 19713, USA Phone: +1 302.650.9217 Fax: +1 302.781.6378 www.romerlabs.com

Romer Labs® is a leading provider of diagnostic test solutions for the food industry. We specialize in Analytical Services and Rapid Test Kits for the detection of food pathogens, food allergens, mycotoxins, drug residues, and GMOs. Our broad range of innovative tests and services

play a pivotal role in integrated food safety management programs. Our fundamental objective at Romer Labs® is to provide cost-effective, validated products and services for "Making the World's Food Safer."

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Fax: +1 812.523.7553

Sample6 is making food safer by delivering two powerful tools to the food industry, Sample6 DETECT™ and Sample6 CONTROL™. Sample6 DETECT is an enrichment-free, on-site, in-shift pathogen diagnostic. This advancement paired with powerful analytics from Sample6 CONTROL will shift food safety from reaction to prevention, which is the primary goal of the FSMA and HACCP initiatives in the U.S. Food processors from meat, seafood, dairy, produce, and dry goods have already partnered with Sample6 in order to integrate these revolutionary products into their plants. For more information, please visit www.sample6.com.

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Diversey Care: The well-being of people everywhere depends on a sustainable world. Sealed Air's Diversey Caredivision offers solutions for infection prevention, kitchen hygiene, fabric care, building care, and consulting. Our solutions protect brands, deliver efficiency, and improve performance for our partners in health care, food service, retail, hospitality and facility services. Our leading expertise integrates product systems, equipment, tools and services into innovative solutions that reduce water and energy usage and increase productivity. By delivering superior results, we help create profitable, sustainable enterprises for a cleaner, healthier future.

Selective Micro Technologies, LLC 6200 Avery Road, Suite A Dublin, OH 43016, USA Phone: +1 855.256.8299 Fax: +1 614.467.3559 www.selectivemicro.com

Selective Micro Technologies provides 99.9% pure chlorine dioxide for your food safety needs. Our patented membrane technology allows you to simply add water, generate, and use on site. Our products are EPAregistered food contact sanitizers, disinfectants, and deodorizers, as well as FDA-approved food contact notifications 445, 645, and 1578 which allows direct applications of antimicrobial rinse to most products without need for a potable rinse. So, our product can be used to sanitizer/disinfect food processing equipment/facilities, or applied directly to the food itself. Plus, our products are OMRI registered, and NSF certified!

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Seward manufactures the world's leading range of Stomacher® paddle blenders used in sample preparation for microbiological analysis. For accurate results, choose the best in sample preparation.

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RQA is the global leader in providing quality assurance and food safety solutions to the food industry, including Retail Quality Audits, Counterfeit Investigation, Consumer Complaint Retrieval, Product Retrieval and Recall Services. With our Crisis Planning & Management and RQA's Food Forensics™ contaminant investigation services, we offer the most comprehensive quality and risk management support available. Whether you need to assess your product quality and market conditions at retail, retrieve consumer complaint or competitive samples, perform vulnerability assessments as part of your Food Defense Plan development, optimize your Crisis Management capabilities, or even execute a product recall, RQA can help.

Safe Food Alliance 646 710 Striker Ave. Sacramento, CA 95834, USA Phone: +1 916.561.5900 www.safefoodalliance.com

Safe Food Alliance is a technical service organization focused on addressing the needs of the food industry with a special emphasis on California's specialty crops. With rapidly growing expectations from regulators, consumers, and retail outlets, we help companies become more proactive in their approach to food safety practices. Safe Food Alliance offers technical services to growers, packers, processors and food manufacturers to aid in their efforts to maintain the highest standards in food safety.

SafetyChain Software 711 Grand Ave., Suite 290 San Rafael, CA 94901, USA Phone: +1 888.235.7540 www.safetychain.com

SafetyChain Software is the leading provider of food safety and quality management solutions that help companies reduce risk and control costs, while ensuring compliance and audit readiness. SafetyChain's suite of management solutions - Supplier Compliance,

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SGS is the world's leading inspection, verification, testing, and certification company. We are recognized as the global benchmark for quality and integrity. With more than 90,000 employees, we operate a network of more than 2,000 offices and laboratories around the world. SGS offers a wide range of solutions covering the entire food supply chain from primary production and manufacturing to retailing and hospitality. With a comprehensive range of independent inspection, testing, training, certification, and consultancy services specific for the food sector, we help companies worldwide to monitor and validate safety, quality, and sustainability. Recognized as the global benchmark for quality and integrity, we provide competitive advantage, drive sustainability, and deliver trust.

Shenzhen Bioeasy Biotechnology Co., Ltd. NO. 2-1, 1st Liuxian St., Xin'an Road Baoan Shenzhen, Guangdong Province 518101, China

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www.bioeasy.com

Bioeasy-as members of IAFP and AOAC, we are dedicated to the supply of food safety rapid test solution, offering reliable, accurate, fast and affordable detection solutions to the global food industry, assist the food company and enforcement department improve their food safety control! The products we offer include the drug residues rapid test for milk/beef/pork/poultry/seafood; Quantitative/Qualitative rapid test kit for Mycotoxins; illegal additive and pesticides rapid test kits, etc.; Thanks to our strong R&D capabilities, we also supply customized solutions for our clients. Most of our tests have been validated in EU or by AOAC-RI.

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www.solusscientific.com

Solus provides tools which protect the reputation of thousands and the health of millions all over the world, by the production of pathogen detection systems designed specifically for the food safety industry. Our products have been developed in our state-of-the-art laboratory and are manufactured in our UK production facility. These tests, when used in conjunction with automation, provide an extremely productive method for the detection of Salmonella or Listeria. They have AOAC and AFNOR approval and are implemented by testing laboratories worldwide.

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SQFI (Safe Quality Food Institute) 2345 Crystal Drive, Suite 800 Arlington, VA 22202, USA Phone: +1 202.220.0660 www.sqfi.com

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The Safe Quality Food (SQF) program is recognized by retailers and foodservice providers around the world as a rigorous, credible food safety management system. It is the only certification system recognized by the Global Food Safety Initiative (GFSI) that offers certificates for primary production, food manufacturing, distribution and agent/broker management. This enables suppliers to assure their customers that food has been produced, processed, prepared and handled according to the highest possible standards, at all levels of the supply chain. Additionally as a division of the Food Marketing Institute (FMI), the SQF program incorporates continual retailer feedback about consumer concerns. This information is passed on to SQF certified suppliers, keeping them a step ahead of their competitors.

STEC CAP Grant 329 1880 N 42nd St., University of Nebraska Lincoln, NE 68583, USA Phone: +1 402.472.8564 Fax: +1 402.472.8564 www.stecbeefsafety.org

Shiga-toxin producing Escherichia coli (STEC) are a serious threat to the food supply and to public health. Most outbreaks are caused by ingestion of contaminated food or direct contact with fecal material from cattle or water and other ruminants. A \$25 million grant coordinated through USDA NIFA was awarded to the University of Nebraska, with a team of 50+ investigators from some 15+ institutions/research partners. The team will share their findings on how STEC contamination and outbreaks occur and spread through the beef production/processing chain, and how science/technology and education/outreach can best be used to better inform food safety professionals and consumers and mitigate STEC risks.

Sterilex Corporation 111 Lake Front Drive Hunt Valley, MD 21030, USA Phone: +1 443.541.8800 www.sterilex.com

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Fax: +1 443.541.8803

Sterilex develops proprietary, sanitation technologies designed to remove biofilm, provide high level disinfection, and enhance sanitation. Sterilex award-winning products are considered a best practice for the control of harmful organisms such as Listeria, E. coli and Salmonella on a wide variety of food contact and environmental surfaces. Sterilex products are used in a variety of sanitation applications including foaming

2017 Exhibitors

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STOP Foodborne Illness 430
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Chicago, IL 60640, USA
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www.stopfoodborneillness.org

STOP Foodborne Illness is a national nonprofit public health organization dedicated to the prevention of illness and death from foodborne pathogens by:

- · Advocating for sound public policy
- · Building public awareness
- Assisting those impacted by foodborne illness

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Phone: +1 800.686.4407 Fax: +1 301.631.3977

http://synbiosis.com

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T&D Corporation 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 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. T&D Corporation, the world's leading supplier of wireless data loggers, and has been engaged in the design, development and manufacture of high reliability, high quality electronic measurement systems since 1986.

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Thermo Fisher Scientific is the world leader in serving science. Our mission is to enable our customers to make the world healthier, cleaner and safer. Through our Thermo Scientific and Applied Biosystems brands, we offer complete solutions for each step of your microbiological foodsafety testing workflow with market-leading molecular instrumentation, sample preparation capability, and PCR technology for food pathogen detection, meat speciation and GMOs. Positioned to meet your changing needs, we can help you to remain adaptive, responsive, and competitive. To find out more stop by Booth #439, visit www.thermofisher.com/food microsolutions or join our blog at www.thermofisher.com/examiningfood.

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the global food supply chain.

USP improves global health through public standards and related programs to help ensure the quality and safety of medicines and foods. USP's Food Program is a global resource for food integrity and safety solutions including science-based standards, tools, and services, such as the Food Chemicals Codex, reference materials, the Food Fraud Database and food fraud mitigation consulting to improve confidence in

USDA National Agricultural Library Food Safety Research
Information Office
10301 Baltimore Ave., Room 108-H
Beltsville, MD 20705, USA
Phone: +1 301.504.5515
www.nal.usda.gov/fsrio

The Food Safety Research Information Office (FSRIO) supports the research community by collecting, organizing & disseminating food safety information in accordance with the Agricultural Research, Extension, and Education Reform Act of 1998. Our mission is to provide the food safety research community and general public with information on publicly and privately funded food safety research. FSRIO works to assist the federal government and private research entities in the assessment of food safety research needs and priorities, and to prevent unintended duplication of food safety research.

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Varcode is a global cold chain innovator. Our FreshCode™ technology is a low cost and easy-to-implement solution that revolutionizes cold chain monitoring. FreshCode combines patented labels with software for smartphones/barcode scanners plus a cloud-based management and reporting system. The result is a new and cost-effective way to ensure the safety of meats, seafood, produce, vaccines, and many other temperature-sensitive products.

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	Actionable Results – Instant feedback and instructions,			
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VM Products has developed and manufactured high quality, innovative products for the professional pest management industry since 2003. We are continually developing new and more advanced products to stay ahead of the ever-changing market conditions and to utilize the very latest in technology.

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And NEW: AllergenControl™ Lateral Flow Device (LFD) Detection Kits. These kits have many unique benefits, including kits that are available for either environmental surface tests or food product tests. Buy only what you need. Available in packs of 10 or 25. Added security of Competitive line to prevent false negatives. Wide range of kits available for specificity. Overall, 44 kits are available. Many other products are on display.

Whirl-Pak 901 Janesville Ave.

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Phone: +1 800.558.9595 www.whirl-pak.com

Manufacturer of Whirl-Pak sterile laboratory sample bags for transporting and processing samples for QA testing, product analysis, and other laboratory applications. Manufactured in the USA since 1959, Whirl-Pak is the global leader sterile laboratory sampling bags.

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World Bioproducts is dedicated to producing innovative, high quality environmental sample collection products to support food safety testing while providing world class service and support to our customers. The EZ Reach™ Sponge Sampler and PUR-Blue™ Swab Sampler are designed to address the specific challenges of recovering microorganisms from the food processing environment. Both are available with our D/E Neutralizing Broth as specified by FDA BAM and USDA FSIS as well as our proprietary HiCap™ Neutralizing Broth, proven to more effectively neutralize residual sanitizers than traditional media such, as Letheen broth and Neutralizing Buffer, to provide a more accurate assessment of surface quality. Visit our booth to learn what's new in the world of environmental sampling.

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The Xema Corporate Group is providing antibodies and immunoassays for food, agriculture and environmental testing.

Our major products include Xema line of rapid tests for water quality, and detection of traces of human blood and urine, alcohol in beverage, pork meat and fat, and most important food allergens (fish, egg, milk, nut, soy, nuts, spices). Xema also manufactures ELISA kits for laboratory use for detection of food constituents, allergens, contaminants, and control of environment. At IAFP 2017, Xema shows innovative tests for detection of rat tissue components and fungal antigens applicable for sanitary control in food storage and catering premises.







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October 3 – Symposia and Workshops

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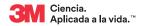






















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Policy on Commercialism

for Annual Meeting Presentations

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 (here-after 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 SUBMIS-**SIONS 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

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.

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.

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.

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.

IAFP Workshops

Friday, July 7, 2017

Validating Pasteurization Processes for Low-moisture Products

Workshop Instructors

Nathan Anderson, U.S. Food and Drug Administration, Bedford Park, IL Elizabeth Grasso-Kelley, Illinois Institute of Technology, Bedford Park, IL Susanne Keller, U.S. Food and Drug Administration, Bedford Park, IL Lisa Lucore, Shearer's Snacks, Massillon, OH Bradley Marks, Michigan State University, East Lansing, MI Harshavardhan Thippareddi, University of Georgia, Athens, GA

Workshop Organizers

Nathan Anderson, U.S. Food and Drug Administration, Bedford Park, IL Bradley Marks, Michigan State University, East Lansing, MI

FSMA Preventive Controls Rules ultimately will require all food processors to validate processes for the reduction of Salmonella in low-moisture food ingredients/products. However, very few programs educate, train, or prepare individuals to deal with the unique challenges associated with pasteurizing lowmoisture products, such as dynamic water activity during processing, and the resulting impact on Salmonella heat resistance. Individuals being assigned these responsibilities in the industry typically have educational backgrounds that include training in traditional thermal processing (e.g., in low-acid canned foods). However, such training/background has significant gaps, relative to unique attributes of low-moisture foods, in terms of both engineering and microbiological principles.

This workshop is designed to fill that gap, at a very critical time for the industry. Experts from industry, academia, and government will lead participants through a systematic approach to preparing for, designing, and carrying out a low-moisture process validation. The workshop will include interactive case studies and hands-on participation. Upon completion of this workshop, participants should be able to: describe regulatory expectations for process validations, explain critical factors affecting Salmonella resistance to lethal treatments, outline a general process for conducting a low-moisture pasteurization validation, identify key variables to measure/control/report, and evaluate process efficacy based on the use of non-pathogenic surrogate data and/or inactivation models applied to product time-temperaturemoisture data.

Friday, July 7 and Saturday, July 8, 2017

Characterization and Identification of Spoilage-causing Fungi: A Hands-on Workshop

Workshop Instructors

Emilia Rico-Munoz, BCN Research Laboratories, Inc., Rockford, TN Rob Samson, CBS-KNAW Fungal Biodiversity Centre, Utrecht, The Netherlands

David Pincus, bioMerieux, Inc., Chesterfield, MO Frank Burns, DuPont Central Research & Development, Media, PA

Workshop Organizer

Emilia Rico-Munoz, BCN Research Laboratories, Inc., Rockford, TN

Mitigating the risks of yeasts and mold contamination remains a constant battle within certain segments of the food and beverage industry. Molds and yeasts cause significant food spoilage losses and mycotoxigenic molds pose significant food safety/regulatory hazards. Fungal identification is a scientific challenge requiring both art and technical expertise. There are a limited number of scientists who understand and have developed the art of fungal identification to a sound science. This workshop provides attendees a unique opportunity to interact first-hand with a group of experts, learning the best practices for isolating different fungi as well as the basics of classical identification methods. This workshop will also cover current molecular methods that are used to identify yeast and mold.

Developing Environmental Monitoring Programs for Small and Midsize Processors

Workshop Instructors

Jeremy Adler, Ecolab, Ault, CO

James Dickson, Iowa State University Food Microbiology Group, Ames, IA

Douglas Marshall, Eurofins Scientific Inc., Fort Collins, CO Gregory Siragusa, Eurofins Microbiology, New Berlin, WI Purnendu Vasavada, University of Wisconsin-River Falls, River Falls, WI

Workshop Organizer

Douglas Marshall, Eurofins Scientific Inc., Fort Collins, CO

This previously well-subscribed workshop using established academic and industrial experts will give small and midsize produce, spice, condiment, bakery, and ingredient suppliers the tools necessary to address four food safety issues in the processing environment: (1) finding spoilage microorganisms in the environment

IAFP Workshops

before they affect product, (2) finding allergens in the environment before they affect product, (3) finding pathogens in the environment before they contaminate product, and (4) assessing effectiveness of cleaning, sanitation, and employee hygiene practices. The first speaker will discuss regulatory perspectives, customer expectations, and characteristics of microbial and chemical contaminants. The second will present an analytical methods overview. The third will discuss data interpretation and source tracking. The last presenter will address remedial sanitation practices. A practical breakout session will include information on how to collect samples, tools for collection, and sample handling. The workshop will conclude with another breakout session where attendees will work through a case study. Attendees will receive a workbook and two easy-to-use Environmental Monitoring Program guides, one on pathogens and one on allergens.

Saturday, July 8, 2017

Next Generation Sequencing – A Tutorial and Hands-on Workshop to Help Understand This Emerging Technology

Workshop Instructors

Peter Cook, Texas Tech University, Lubbock, TX Henk den bakker, Texas Tech University, Lubbock, TX Zachary Geurin, NSF International, Ann Arbor, MI Maria Hoffmann, U.S. Food and Drug Administration, College Park, MD Jesse Miller, NSF International, Ann Arbor, MI Eric Stevens, FDA-CFSAN-ORS-DM, College Park, MD

Workshop Organizer

Jesse Miller, NSF International, Ann Arbor, MI

Next Generation Sequencing (NGS) has taken the Front Stage as a tool to understand the environment around us. It is being used globally to track outbreak strains of bacteria, monitor microbial communities and understand changes in populations of organisms based on temporal and forced stimuli. NGS is more complex than past methodologies (such as PFGE) and has more components that need to be understood. What IS NGS? What is the science behind the technology? How do I perform an experiment? How do I analyze my data? What do the data mean? This workshop seeks to shed light on NGS so that the newest person to this field can understand what NGS is and what it can be. We will provide sessions on the technology, data analysis and using the data to make strain comparisons. We will also provide an introductory sample data set for attendees to work on in-session and then discuss the results from the hands-on session.

Saturday, July 8, 2017

Drying Technologies: Strategies for Managing Pathogen and Allergen Risks

Workshop Instructors

Tim Adams, The Kellogg Company, Battle Creek, MI Cynthia Apodaca, Mercer Processing, Inc., Modesto, CA John Brandquist, PGP International, Woodland, CA Rocelle Clavero, The Kellogg Company, Battle Creek, MI Tim Frier, Merieux NutriSciences, Maple Grove, MN Bradley Marks, Michigan State University, East Lansing, MI Kevin Lovett, Mercer Processing, Modesto, CA

Workshop Organizer

Rocelle Clavero, The Kellogg Company, Battle Creek, MI

Drying is the most widely employed process operation that extends the shelf life of a product for long periods of time. Dried materials/dry ingredients are microbiologically shelf stable due to its low-moisture content/low-water activity. A number of foodborne outbreaks however, have implicated low moisture foods as a vector of salmonellosis. Root cause analyses have generally pointed towards possible recontamination after a lethal step due to faulty equipment design/facility layout, failure to identify high risk areas and practices during production, and inadequate sanitation procedures and practices. This workshop is designed to provide a better understanding of major drying technologies employed in the food industry - spray drying, freeze drying, vacuum drying, solar drying, etc. Effectiveness of microbial inactivation and influence of food matrix to deliver the target lethality will be discussed. Instructors will present equipment design challenges that can influence cleaning efficacy and contribute to the risk of microbial and allergen contamination. A key learning in this workshop will be identification of areas interior and exterior to the equipment that will require inspection and monitoring to prevent/avoid occurrence of potential microbial and chemical hazards. Knowledge in cleaning processes used in dry environments is suggested.

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1922 St. Paul, MN

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1925 Indianapolis, IN

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1929 Memphis, TN

1930 Cleveland, OH

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1932 Detroit, MI

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1934 Boston, MA

1935 Milwaukee, WI

1936 Atlantic City, NJ

1937 Louisville, KY

1938 Cleveland, OH

1939 Jacksonville, FL

1940 New York, NY

1941 Tulsa, OK

1942 St. Louis, MO

1943 Cancelled

1944 Chicago, IL

1945 Cancelled

1946 Atlantic City, NJ

1947 Milwaukee, WI

1948 Philadelphia, PA

1949 Columbus, OH

1950 Atlantic City, NJ

1951 Glenwood Springs, CO

1952 Milwaukee, WI

1953 East Lansing, MI

1954 Atlantic City, NJ

1955 Augusta, GA

1956 Seattle, WA

1957 Louisville, KY

1958 New York, NY

1959 Glenwood Springs, CO

1960 Chicago, IL

1961 Des Moines, IA

1962 Philadelphia, PA

1963 Toronto, Ontario

1964 Portland, OR

1965 Hartford, CT

1966 Minneapolis, MN

1967 Miami Beach, FL

1968 St. Louis, MO

1969 Louisville, KY

1970 Cedar Rapids, IA

1971 San Diego, CA

1972 Milwaukee, WI

1973 Rochester, NY

1974 St. Petersburg, FL

1975 Toronto, Ontario

1976 Arlington Heights, IL

1370 Armington neights,

1977 Sioux City, IA

1978 Kansas City, MO

1979 Orlando, FL

1980 Milwaukee, WI

1981 Spokane, WA

1982 Louisville, KY

1983 St. Louis, MO

1984 Edmonton, Alberta

1985 Nashville, TN

1986 Minneapolis, MN

1987 Anaheim, CA

1988 Tampa, FL

1989 Kansas City, MO

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1993 Atlanta, GA

1994 San Antonio, TX

1995 Pittsburgh, PA

1996 Seattle, WA

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1997 Orlando, FL 1998 Nashville, TN

1330 Nasiiville, IIV

1999 Dearborn, MI 2000 Atlanta, GA

2001 Minneapolis, MN

2001 Willingapons, N

2002 San Diego, CA

2003 New Orleans, LA

2004 Phoenix, AZ

2005 Baltimore, MD

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2006 Calgary, Alberta

2007 Lake Buena Vista, FL

2008 Columbus, OH

2009 Grapevine, TX

2010 Anaheim, CA

2011 Milwaukee, WI

2012 Providence, RI

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2013 Charlotte, NC

2014 Indianapolis, IN

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2016 St. Louis, MO

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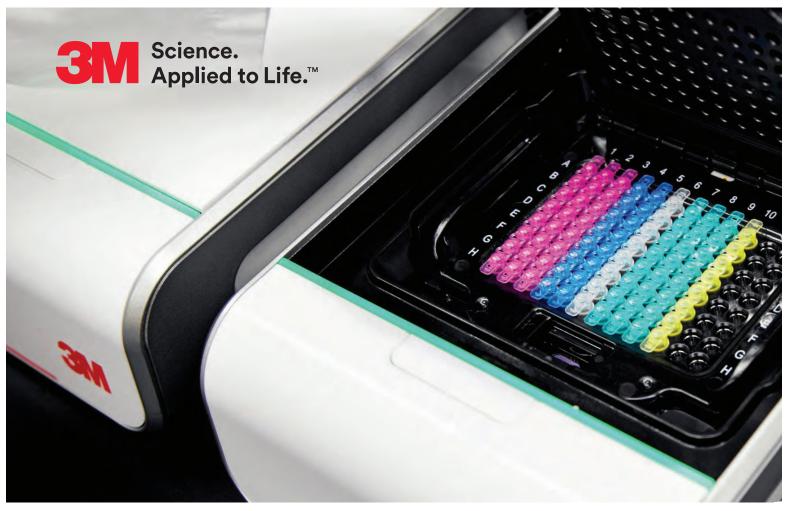
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Most-cited Research Publication Award

1st Place

Economic Burden from Health Losses Due to Foodborne Illness in the United States Robert L. Scharff Published January 2012

2nd Place

Annual Cost of Illness and Quality-Adjusted Life Year Losses in the United States Due to 14 Foodborne Pathogens Sandra Hoffmann, Michael B. Batz and J. Glenn Morris, Jr. Published July 2012

3rd Place

Ranking the Disease Burden
of 14 Pathogens in Food Sources
in the United States Using Attribution
Data from Outbreak Investigations
and Expert Elicitation
Michael B. Batz, Sandra Hoffmann
and J. Glenn Morris, Jr.
Published July 2012

Most-cited Review Publication Award

1st Place

Outbreak of Shiga Toxin-producing Escherichia coli (STEC) 0104:H4 Infection in Germany Causes a Paradigm Shift with Regard to Human Pathogenicity of STEC Strains

Lothar Beutin and Annett Martin

Published February 2012

2017 Journal of Food Protection Most-downloaded Publication Award

This award recognizes the *JFP* publication that was the most-downloaded in 2016 based upon data from the *Journal of Food Protection* Web site.

1st Place

Low-water Activity Foods: Increased Concern as Vehicles of Foodborne Pathogens
Larry R. Beuchat, Evangelia Komitopoulou, Harry Beckers, Roy P. Betts,
François Bourdichon, Séamus Fanning, Han M. Joosten and Benno H. Ter Kuile
Published January 2013

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Anes, João, University College Dublin (T5-08*)

Annous, Bassam, U.S. Department of Agriculture-ARS-ERRC (T9-10*)

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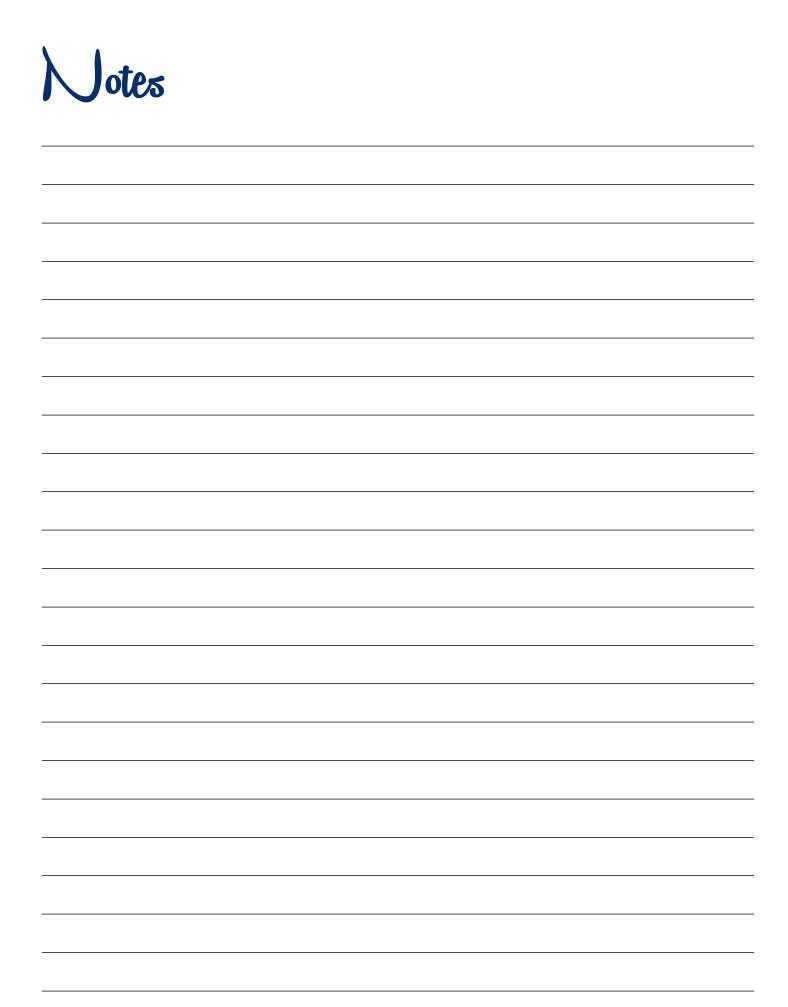
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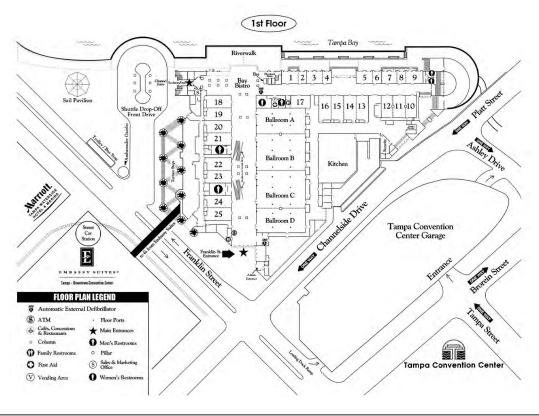
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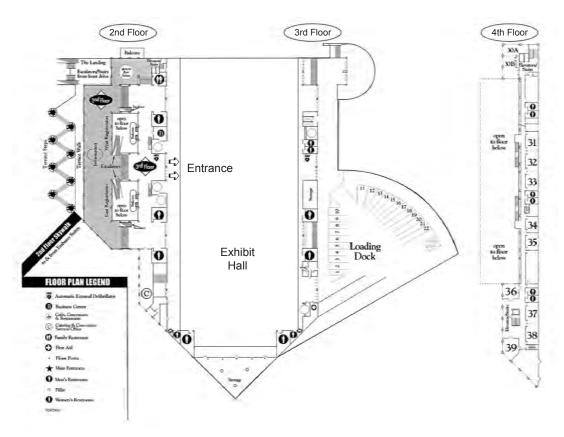
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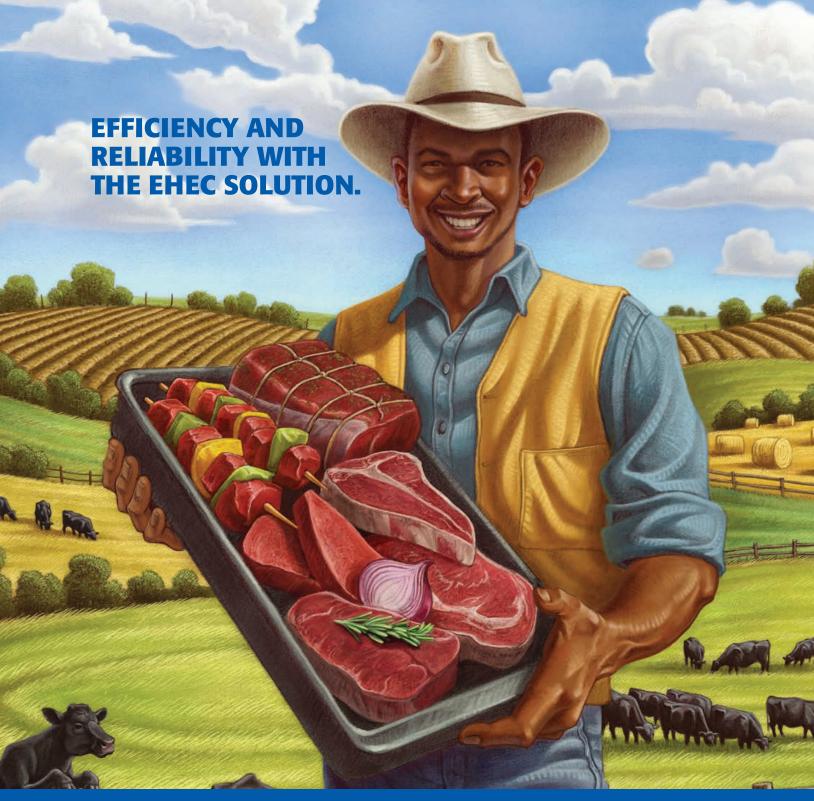
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