



IAFP 2010 Program

All presentations to be held at the Anaheim Convention Center

DSC – Developing Scientist Competitor

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MONDAY MORNING AUGUST 2

- S1** **Microbiological Environmental Testing and Validation: Leading-edge Issues for Low-moisture Foods**
Ballroom A
- Sponsored by ILSI North America Technical Committee on Food Microbiology*
Organizer: Darinka Djordjevic
Convenors: J. Stan Bailey, Laurie Post and Les Smoot
- 8:30 Continuous/Extended Run Low-moisture Food Processes – Challenges for Environmental Monitoring Strategies – JEAN-LOUIS CORDIER, Operations/Quality Management, Nestlé Nutrition, Vevey, Switzerland
- 9:00 Environmental Sampling Sites Versus Food Contact Surfaces – If, When and Where to Sample (Regulatory Perspective) – DONALD ZINK, Food and Drug Administration, Center for Food Safety and Applied Nutrition, College Park, MD, USA
- 9:30 Environmental Sampling Sites Versus Food Contact Surfaces: If, When and Where to Sample (Industry Perspective) – STEVEN J. GOODFELLOW, Deibel Laboratories, Inc., Gainesville, FL, USA
- 10:00 Break
- 10:30 Validation of Low-moisture Process Cleaning/ Sanitation Strategies – Redefining Validation Where There is a Lack of Defined Limits – MARK A. MOORMAN, Kellogg Company, Battle Creek, MI, USA
- 11:00 Can Environmental Monitoring Coupled with Finished Product Testing Validate Adequacy of Food Safety Control Programs for Continuous Low-moisture Processes? – ROBERT BUCHANAN, University of Maryland, Center for Food Safety and Security Systems, College Park, MD, USA
- 11:30 Panel Discussion

- S2** **Data Deluge, Interacting Players and Complex Networks in Food Sciences – Computational Tools to Tackle Food-related Complexities**
303BCD

Sponsored by the IAFP Foundation

Organizer and Convenor: József Baranyi
Convenor: József Baranyi

- 8:30 Complex Networks Permeating Society and Science – RÉKA ALBERT, Pennsylvania State University, University Park, PA, USA
- 8:50 Revealing Networks of Interactions between Foods and Foodborne Organisms in ComBase – MARK TAMPLIN, Food Safety Centre, Hobart, TAS, Australia
- 9:10 Food Safety Scenarios, Probabilistic Networks and Source Level Inferences – GARY BARKER, Institute of Food Research, Norwich, United Kingdom
- 9:30 Potentials of Network Science in Food Safety and Security – JÓZSEF BARANYI, Institute of Food Research, Norwich, United Kingdom

- S3** **Converging Industry Initiatives on Traceability**
303BCD

Sponsored by the IAFP Foundation

Organizers: Allen Sayler and Rudy Westervelt
Convenors: Allen Sayler and Rudy Westervelt

- 10:30 Advances in Food Traceability Technology – DENNIS HELDMAN, Heldman Associates, Mason, OH, USA
- 11:00 Produce Industry Traceability Mode – DAVID GOMBAS, United Fresh, Washington, D.C., USA
- 11:30 FDA's Perspective and Requirements on Food Ingredient and Additive Traceability – FAYE FELDSTEIN, FDA, Severna Park, MD, USA

S Symposia

RT Roundtable

T Technicals

P Posters

- S4** **Human Pathogens Associated with Edible Plants**
204AB
- Organizers: Jacqueline Fletcher and Donald L. Zink**
Convenor: Kellye Eversole
- 8:30 FDA Perspectives on the Need for Multidisciplinary Approaches to Food Safety – DONALD ZINK, FDA-CFSAN, College Park, MD, USA
- 9:00 Overview of Plant Pathology in Understanding Food Safety – JACQUELINE FLETCHER, Oklahoma State University, National Institute for Microbial Forensics and Food and Agricultural Biosecurity, Stillwater, OK, USA
- 9:30 Plant Pathology Research and Human Pathogens in/on Plants – JERI BARAK, University of Wisconsin, Plant Pathology Dept., Madison, WI, USA
- 10:00 Break
- 10:30 Human Pathogen-Plant Interactions – MARIA BRANDL, USDA-ARS-WRRC, Produce Safety and Microbiology Research Unit, Albany, CA, USA
- 11:00 Grower Perspectives on Food Safety – MELANIE IVEY, The Ohio State University, Plant Pathology Dept., Wooster, OH, USA
- 11:30 Outreach to Growers – Extension and Education for Safer Food – STEVEN KOIKE, University of California, Cooperative Extension Service, Salinas, CA, USA

- S5** **Global Water Shortages – Their Impact on Water Safety and Quality**
204C
- Organizers: Dean C. Davidson and Peter Kennedy**
Convenor: Susan McKnight
- 8:30 Global Water Shortages and Their Impact on the Food Chain – JIM THEBAUT, The Chronicles Group, Inc., Los Angeles, CA, USA
- 9:00 The Impact of Pharmaceuticals on Water Safety and Quality: The USEPA Strategy for Addressing Contaminants of Emerging Concern – OCTAVIA CONERLY, USEPA, Science and Technology, Washington, D.C., USA
- 9:30 Water Reuse and the Impact on Food Safety and Quality – RICHARD ATWATER, Inland Empire Utilities Agency, Fontana, CA, USA

- S6** **Ripple or Tsunami? Riding the Regulatory Wave to Safer Bottled Water and Water Beverages**
204C
- Organizers: Frank Burns, Kathleen Lawlor and Mangesh Palekar**
Convenors: Frank Burns and Kathleen Lawlor
- 10:30 FDA Regulations for Bottled Water and Water Beverages – HENRY KIM, U.S. Food and Drug Administration, College Park, MD, USA

- 11:00 Impact of New FDA Water Regulations on the Bottled Water Industry – BOB HIRST, International Bottled Water Association (IBWA), Alexandria, VA, USA
- 11:30 Formulating Water Beverages for Safety and Stability – WILFREDO OCASIO, The National Food Laboratory, Livermore, CA, USA

- S7** **Government, Academic and Industry Collaborations to Advance the Development and Use of Microbiological Risk Assessments**
201CD

Sponsored by the IAFP Foundation

Organizer: Sherri B. Dennis

Convenor: Sherri B. Dennis

- 8:30 Interagency *Listeria* Retail Risk Assessment – RÉGIS POUILLOT, Food and Drug Administration, College Park, MD, USA
- 9:00 Linking GIS and Risk Assessment: A Collaboration of FDA and NASA – DAVID ORYANG, Food and Drug Administration, College Park, MD, USA
- 9:30 A Web-based Comparative Risk Assessment Tool: iRISK – STEVEN M. GENDEL, Food and Drug Administration, College Park, MD, USA
- 10:00 Break
- 10:30 Building Capacity in Risk Analysis and Food Safety through Partnerships – JULIANA M. RUZANTE, Joint Institute for Food Safety and Applied Nutrition, College Park, MD, USA
- 11:00 Risk Assessment for the Public Health Impact of Highly Pathogenic Avian Influenza Virus in Poultry, Shell Eggs, and Egg Products: A Collaboration of APHIS, FDA and FSIS – DENISE EBLEN, USDA, Food Safety and Inspection Service, Washington, D.C., USA
- 11:30 Use of the *Salmonella* on Almonds Risk Assessment to Guide Food Safety Decisions – RICHARD WHITING, Exponent, Inc., Bowie, MD, USA

- RT1** **Research Needs Roundtable: Retail and Foodservice Food Safety**
201B

Organizer: Donald W. Schaffner

Convenors: Donald W. Schaffner and Brian Nummer

- 8:30 Panel Discussion
- JENNIFER QUINLAN, Drexel University, Philadelphia, PA, USA
- LARRY KOHL, Food Marketing Institute, Arlington, VA, USA
- ANN MARIE MCNAMARA, Jack in the Box, San Diego, CA, USA
- DONALD SCHAFFNER, Rutgers University, New Brunswick, NJ, USA
- KEVIN SMITH, FDA, College Park, MD, USA

T1 Applied Laboratory Methods and Novel Laboratory Methods Technical Session 303A

Convenors: Mark Carter and Purnendu C. Vasavada

- T1-01 8:30 DSC Aspects of Systems Theory in the Analysis of Molecular-biological Based Detection Methods – PETER ROSSMANITH and Martin Wagner, University of Veterinary Medicine Vienna, Christian Doppler Laboratory for Molecular Food Analytics, Vienna, Austria
- T1-02 8:45 Utilization of Evolutionary Model, Bioinformatics and Heuristics for Development of a Multiplex *E. coli* O157:H7 PCR Assay – FRANK R. BURNS and Jim Bono, DuPont, Wilmington, DE, USA
- T1-03 9:00 A Novel Colorimetric Screening Assay for *E. coli* O157:H7 in Raw Ground Beef and Trim Utilizing Simultaneous Capture and *In Situ* Labeling during Automated Re-circulating IMS – Nicole Prentice, John Murray, Paul M. Benton, Katarzyna Brzegowa, Brooke V. Houston, Ian Sheldrake, Michael F. Scott, Christine Aleski and ADRIAN PARTON, MATRIX MicroScience Ltd., Cambridgeshire, United Kingdom
- T1-04 9:15 Sensitive and Rapid Detection of *Escherichia coli* O157:H7 in Food and Water – PEIXUAN ZHU, Shuhong Li, Platte T. Amstutz, Daniel R. Shelton and Cha-Mei Tang, Creatv MicroTech, Inc., Potomac, MD, USA
- T1-05 9:30 Identification of Shiga Toxin-producing *Escherichia coli* on DNA Microarrays by Using a Novel Photo-induced Signal Amplification Method – BEATRIZ QUIÑONES, Ronald P. Haff, Amber W. Taylor and Erica D. Dawson, USDA-ARS, Western Regional Research Center, Produce Safety and Microbiology Research Unit, Albany, CA, USA
- T1-06 9:45 Rapid Identification of *Listeria* Species: Comparison of a Real-time PCR Assay Versus Biochemical Galleries – Nicolas Desroche, Jean Guzzo and PATRICE ARBAULT, BioAdvantage Consulting, Food Safety and Analytical Methods, Orléans, France

- 10:00 Break
- T1-07 10:30 Detection of *Listeria* spp. from Pooled Environmental Swab and Food Samples within 24 Hours Using Pathatrix Automated Re-circulating IMS Linked to Real-time PCR – John Murray, Nicole Prentice, Katarzyna Brzegowa, Paul M. Benton, Brooke V. Houston, Ian Sheldrake, Michael F. Scott, Marcie Van Wart and ADRIAN PARTON, MATRIX MicroScience Inc., Golden, CO, USA
- T1-08 10:45 Combined Thin Agar Layer and Centrifugation plating Method for Enumeration of Injured *Salmonella* – Sangha Han and JULIAN M. COX, University of New South Wales, Faculty of Science, Sydney, NSW, Australia
- T1-09 11:00 Comparison of Vegetable and Animal Peptone-based Culture Media for Detection of *Salmonella* in Poultry – Rakesh Koorapati and JULIAN M. COX, University of New South Wales, Faculty of Science, Sydney, NSW, Australia
- T1-10 11:15 Development of Multi-parametric Tools for the Detection and Identification of Sporeforming Bacteria in the Food Chain – PATRICE CHABLAIN, Florence Postollec, Stephane Bonilla, Daniele Sohier and Sylvie Hallier-Soulier, Pall GeneSystems, R&D, Bruz, France
- T1-11 11:30 Differentiation and Speciation of Vibrios by PCR of 16S-23S rRNA Intergenic Spacer Region – MARIA HOFFMANN, Eric W. Brown, Peter C. Feng, Markus Fischer and Steven R. Monday, U.S. Food and Drug Administration, CFSAN, College Park, MD, USA
- T1-12 11:45 Detection of Low Numbers of Only Viable *Enterobacteriaceae* in Inoculated Pasteurized Milk Using Direct PCR after Ethidium Bromide Monoazide Treatment – FRANK SCHLITT-DITTRICH, Takashi Soejima, Tomoko Yaeshima and Keji Iwatsuki, Morinaga Milk Industry Co., Ltd., Biological Function Research Dept., Kanagawa-Pref., Zama-City, Japan

**MONDAY AFTERNOON
AUGUST 2**

S8 **Less Recognized and Presumptive Pathogens: What Now, What Next?**
Ballroom A

Organizers: Reginald Bennett and Joshua Gurtler
Convenors: Reginald Bennett and Joshua Gurtler

- 1:30 Lesser Recognized Members of the Family *Enterobacteriaceae*, *Arcobacter* and *Helicobacter* – PURNENDU C. VASAVADA, University of Wisconsin-River Falls, River Falls, WI, USA
- 2:00 Lesser Known Foodborne Viruses – KALMIA KNIEL, College of Agriculture and Natural Resources, University of Delaware, Newark, DE, USA
- 2:30 Infrequently Identified Food and Waterborne Parasites – YNES ORTEGA, Center for Food Safety, University of Georgia, Griffin, GA, USA
- 3:00 Break
- 3:30 Mycotoxins in Foods – MARY TRUCKSESS, FDA, College Park, MD, USA
- 4:00 *Mycobacterium avium paratuberculosis*, *Helicobacter pylori* and Other Pathogens Associated with Gastrointestinal Illnesses, IBD and Cancer – SCOTT WELLS, University of Minnesota, St. Paul, MN, USA
- 4:30 Marine and Seafood Toxins – ROBERT DICKEY, Division of Seafood Science, and Technology/ Chemical Hazards Branch, FDA, Wyndmoor, PA, USA

S9 **Buy Local? Addressing the Safety Issues Behind Green Food Trends**
303BCD

Organizers: Kirsten Hirneisen and Laura Strawn
Convenors: Kirsten Hirneisen and Laura Strawn

- 1:30 Living La Vida Locovore: Food Safety Concerns Associated with Emerging Food Trends – BENJAMIN CHAPMAN, Dept. of 4-H Youth Development and Family and Consumer Sciences, North Carolina State University, Raleigh, NC, USA
- 2:00 Bringing Food Safety from Local Farms and Markets to Your Table – PATRICIA MILLNER, USDA-ARS, Beltsville, MD, USA
- 2:30 Comparison of Local/Slow/Organic Food Safety Versus Commercial Food Manufacturing Food Safety – JOAN MENKE-SCHAENZER, ConAgra Foods, Inc., Omaha, NE, USA

S10 **Good Agricultural Practices and the Small Scale Producer: What's Really Going on out There?**
303BCD

Organizers: Rachel McEgan and Laura Strawn
Convenors: Rachel McEgan and Laura Strawn

- 3:30 Understanding the Need and Value of GAPs Implementation to Small Scale Producers – ELIZABETH BIHN, New York State Agricultural Experiment Station, Dept. of Food Science and Technology, Cornell University, Geneva, NY, USA

4:00 Considerations and Challenges of Implementing GAPs by Small Scale Growers – MELISSA MUNDO, Food Safety Coordinator, Duda Farm Fresh Foods, Oxnard, CA, USA

4:30 Tomato GAPs—Mandatory vs. Voluntary: What's the Best Route? – MARTHA ROBERTS, North Florida Research and Education Center, University of Florida, Quincy, FL, USA

S11 **What's Been Keeping You up at Night? – Selected Unanswered Food Safety Questions**
204AB

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Organizer: Lori Ledenbach
Convenor: Purnendu C. Vasavada

- 1:30 Raw Milk – Why are More and More People Drinking It? – RONALD SCHMIDT, University of Florida, Gainesville, FL, USA
- 2:00 What Do We Have to Worry about Next with Viruses? Beyond Norovirus and Hepatitis – LEE-ANN JAYKUS, Food, BioProcessing, and Nutrition Sciences, North Carolina State University, Raleigh, NC, USA
- 2:30 How Did My Well-paid Auditor Miss That? Do I Have to Do Everything Myself? – JOSEPH MEYER, Food Safety, Kellogg Company, Battle Creek, MI, USA
- 3:00 Break
- 3:30 COAs – A Thin Piece of Paper between Me and My Product's Food Safety – Is There a Better Way? – LORALYN LEDENBACH, Food Safety and Microbiology, Kraft Foods, Glenview, IL, USA
- 4:00 How Can I Find Out about What I Don't Know about? Part I – Mining Data on Illnesses of Unknown Etiology – ROBERT TAUXE, CDC, Atlanta, GA, USA
- 4:30 How Can I Find Out about What I Don't Know about? Part II – A Breakthrough Technology – ANDREW BENSON, Applied Genomics and Ecology, University of Nebraska, Lincoln, NE, USA

S12 **Flour Food Safety: The Changing Landscape – *Escherichia coli* O157:H7**
204C

Organizer: Skip Seward
Convenor: Skip Seward

- 1:30 The Microbiology of and Risks from Flour – JOE SHEBUSKI, Cargill, Plymouth, MN, USA
- 2:00 The Transformation of Specifications for Flour and Verification Testing to Ensure Compliance – TIM JACKSON, Nestle, Glendale, CA, USA
- 2:30 One Solution: Manufacturing RTE Flour – BEN WARREN, ConAgra Foods, Omaha, NE, USA

S13 “Ingredient” is a Ten-letter Word for Financial Disaster

201CD

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Organizers: Gloria Swick-Brown and Christina Wilson

Convenors: Gloria Swick-Brown and Christina Wilson

- 1:30 Overview of Foodborne Illnesses Associated with Ingredients – BILL MARLER, Marler Clark LLP PS, Seattle, WA, USA
- 2:00 Case Studies Including PCA Peanuts, Nestlé Cookie Dough, and Ground Beef – ALAN MAXWELL, Weinberg Wheeler Hudgins Gunn and Dial LLC, Atlanta, GA, USA
- 2:30 Causation, Negligence, Breach of Statutory or Regulatory Duties – D. ALAN RUDLIN, Hunton and Williams, Richmond, VA, USA
- 3:00 Break
- 3:30 Risks and Threats Added along with the Ingredients – MADELEINE MCDONOUGH, Shook Hardy and Bacon LLP, Washington, D.C., USA
- 4:00 Apportioning Liability of Ingredients: How Responsible are You? – PAUL KASSIRER, Lester Schwab Katz and Dwyer, LLP, New York, NY, USA
- 4:30 Foodborne Illnesses and Recalls: The Effect on Industry – DAVID HERMAN, Grocery Manufacturers Association, Washington, D.C., USA

T2 Pathogens, Sanitation and Seafood Technical Session

303A

Convenors: Margaret Hardin and Marcos Sanchez

- T2-01 Variation in Desiccation Tolerance among *Salmonella* Strains – REGINA C. WHITEMARSH, Aaron M. Gnas and Charles W. Kaspar, University of Wisconsin-Madison, Bacteriology, Madison, WI, USA
- T2-02 Effect of Crust Freezing on the Survival of *Escherichia coli* and *Salmonella* Typhimurium in Raw Poultry Products – BYRON D. CHAVES-ELIZONDO, Inyee Y. Han and Paul L. Dawson, Clemson University, Food Science and Human Nutrition, Clemson, SC, USA
- T2-03 Characterization of the *Listeria monocytogenes* Transcriptional Response to Synergistic Growth Inhibition by Potassium Lactate and Sodium Diacetate – MATT STASIEWICZ, Teresa M. Bergholz and Martin Wiedmann, Cornell University, Food Science, Ithaca, NY, USA
- T2-04 High Pressure Inactivation of Noroviruses in Vegetables and Fruits – FANGFEI LOU, Hudaa Neetoo, Haiqiang Chen and Jianrong Li, The Ohio State University, Dept. of Food Science and Technology, Columbus, OH, USA
- T2-05 Phenotypic and Genotypic Characterization of Antimicrobial Resistance in *Salmonella* Serotypes Isolated from Retail Meats in Canada – MUEEN ASLAM, Valerie Bohaychuk, Gary Gensler, Richard Reid-Smith, Brent Avery and Patrick Boerlin, Agriculture and Agri-Food Canada, Lacombe Research Centre, Lacombe, AB, Canada

- T2-06 Comparison of the rfb Cluster in 16 Rare *Salmonella* Serotypes – MATTHEW L. RANIERI, Andrea Moreno Switt, Henk C. den Bakker, Martin Wiedmann, Lavorka Degoricija, Craig A. Cummings, Elena Bolchacova, Greg Govoni and Manohar R. Furtado, Cornell University, Food Science, Ithaca, NY, USA

3:00 Break

- T2-07 Sequences in the *comK* Prophage Junction Fragments Cluster *Listeria monocytogenes* Isolates of Epidemic Clones II, III and the 2008 Canadian Outbreak into Subclones That are Unique to Individual Meat and Poultry Processing Plants – MEI LOK, Yi Chen, Bindhu Verghese, Peter Evans, Sophia Kathariou and Stephen Knabel, Penn State University, Dept. of Food Science, University Park, PA, USA

- T2-08 An ABC Transporter Regulates Biofilm Formation by Controlling the Expression and Modification of Cell Surface Proteins in *Listeria monocytogenes* – Xinna Zhu, Weibing Liu, René Lametsch, Frank M. Aarestrup, Chunlei Shi, Qunxin She, XIANMING SHI and Susanne Knöchel, Dept. of Food Science, School of Agriculture and Biology, Shanghai Jiao Tong University, Shanghai, China

- T2-09 Maximizing Personnel Hygiene, Minimizing Washroom Contamination – John Holah and DEB L. SMITH, Campden BRI, Gloucestershire, United Kingdom

- T2-10 Developing a Fish Starter Culture Fermentation with a Local Nisin-producing Bacterium for Application in Small-scale Artisan Fishery Production in Senegal – MICHEL B. DIOP, Jacqueline Destain, Maïmouna Cisse, Ababacar S. Ndoye and Philippe Thonart, Ministère des Mines, de l'Industrie, de la Transformation Alimentaire des Produits Agricoles et des PME, Direction de la transformation alimentaire, Dakar, Senegal

- T2-11 Characterization of a Fish-specific Monoclonal Antibody – YI-TIEN CHEN and Yun-Hwa Peggy Hsieh, Florida State University, Nutrition, Food, and Exercise Sciences, Tallahassee, FL, USA

- T2-12 Characterization of Food and Clinical *Listeria monocytogenes* Isolates Collected in Portugal – JOANA BARBOSA, Vânia Ferreira, Rui Magalhães, Isabel Santos, Gonçalo Almeida, Paul Gibbs and Paula Teixeira, Escola Superior de Biotecnologia-Universidade Católica Portuguesa, CBQF, Porto, Portugal

T3 Antimicrobial and Microbial Food Spoilage Technical Session

201B

Convenors: Jitu Patel and Manpreet Singh

- T3-01 Prevalence and Distribution of *Salmonella* in Organic and Conventional Broiler Poultry Farms – WALID ALALI, Siddhartha Thakur, Roy D. Berghaus, Michael Martin and Wondwossen A. Gebreyes, University of Georgia, Center for Food Safety, Griffin, GA, USA

- T3-02 1:45 Molecular Surveillance of Multi-antibiotic Resistant *Staphylococcus aureus* and *Salmonella* Isolated from Co-op Rabbit and Poultry Processing Plants in Southeastern USA – LEONARD WILLIAMS and Olasumbo Ajayi, North Carolina A&T State University, Center of Excellence for Post Harvest Technologies, Kannapolis, NC, USA
- T3-03 2:00 Prevalence and Antimicrobial Resistance of *Campylobacter* Isolated from the National Antimicrobial Resistance Monitoring System Retail Meat: 2002–2007 – SHAOHUA ZHAO, Linda English, Jason Abbott, Emily Tong, Niketta Womack, Sharon Friedman and Patrick McDermott, U.S. Food and Drug Administration, Laurel, MD, USA
- T3-04 2:15 DSC The Effect of Heat on the Antimicrobial Efficacy of Cinnamic Aldehyde, Carvacrol, and Eugenol – GRISHMA KOTWAL and Faith J. Critzer, University of Georgia, Food Science and Tech., Griffin, GA, USA
- T3-05 2:30 DSC Cinnamaldehyde Induces Cell Elongation in *Escherichia coli* O157:H7 – Richard A. Holley and VISVALINGAM JEYACHCHANDRAN, University of Manitoba, Food Science, Winnipeg, MB, Canada
- T3-06 2:45 Can Hand Hygiene Regimens Offer Reduced Risk in Food Service Environments? – SARAH EDMONDS, Christopher Fricker and David Macinga, GOJO Industries, Research and Development, Akron, OH, USA
- 3:00 Break
- T3-07 3:30 SaniTwice™: A Hand Hygiene Solution for Reducing Contamination on Heavily Soiled Hands When Water is Unavailable – SARAH EDMONDS, Robert McCormack, Christopher Fricker and David Macinga, GOJO Industries, Research and Development, Akron, OH, USA
- T3-08 3:45 DSC Analysis of Plasmids and Mobile Elements Carrying Antimicrobial Resistance Genes in *Salmonella* Isolates by Whole Genome Sequencing – ANDREA I. MORENO SWITT, Matthew Ranieri, Henk den Bakker, Lovorka Degoricija, Craig A. Cummings, Gregory Govoni, Elena Bolchakova, Manohar Furtado and Martin Wiedmann, Cornell University, Dept. of Food Science, Ithaca, NY, USA
- T3-09 4:00 Considering the Design and Analysis of Efficacy Trials for Antimicrobial Treatments of Raw Meat and Poultry – MARK POWELL, USDA, Washington, D.C., USA
- T3-10 4:15 Evaluation of a Predictive Model for Total Viable and Lactic Acid Bacteria on Refrigerated Vacuum-packed Beef Primals – MARK TAMPLIN, Alison Small, Sheila Peddell, Olivia McQuestin, Bianca Porteus, Danielle O'Callaghan, John Sumner and Ian Jenson, University of Tasmania, Food Safety Centre, Sandy Bay, TAS, Australia
- T3-11 4:30 Inactivation of *Bacillus coagulans* Spores in Tomato Juice by Pressure-assisted Thermal Processing – HOSSEIN DARYAEI, Chelsea Johnson and V.M. (Bala) Balasubramaniam, The Ohio State University, Food Science and Technology, Columbus, OH, USA
- T3-12 4:45 Non-thermal Pasteurization of Almonds and Pistachios with Organic Citrus Bioflavonoid Extracts – PEYMAN FATEMI, Cliff Coles and Yves Methof, Aurora Food Safety Solutions, Pleasanton, CA, USA

3M Presents
Key Trends in 21st Century Food Safety

Monday, August 2
6:30-8:00 p.m.
Anaheim Hilton Pacific Ballroom

Networking, cocktails and hors d'oeuvres immediately following presentation.

Featuring Speaker **Frank Yiannas**, Vice President Food Safety, Walmart

Food safety awareness is at an all time high worldwide as new and emerging threats to the global food supply are recognized. Producers at all levels of the food system have a growing responsibility to ensure that proper food safety practices are followed, thus safeguarding the health of their customers.

Achieving food safety success in this changing environment requires going beyond traditional training, testing, and inspectional approaches to managing risks. It requires a better understanding of today's modern food system, emerging food safety issues, and leading-edge, harmonized prevention strategies.

Join us for this unique and entertaining perspective on key trends affecting the future of food safety.

Visit us at Booth #101.

TUESDAY MORNING AUGUST 3

S14 National Institute of Food and Agriculture Showcase *Ballroom A*

Organizer: Isabel Walls
Convenors: Damanna Rao and Jan Singleton

- 8:30 Overview of National Institute of Food and Agriculture Food Safety – Related Programs and Activities — ISABEL WALLS, National Institute of Food and Agriculture, USDA, Washington, D.C., USA
- 9:00 Example of Research Program Funded by NIFA. Understanding Foodborne Viruses: The Results of 15 Years of USDA CSREES Funding — LEE-ANN JAYKUS, Dept. of Food, Bioprocessing and Nutrition Sciences, North Carolina State University, Raleigh, NC, USA
- 9:30 Example of Education Program Funded by NIFA. Development of Education Programs for Susceptible Populations and Their Caregivers — LYDIA MEDEIROS, Dept. of Human Nutrition, The Ohio State University, Columbus, OH, USA
- 10:00 Example of Extension Program Funded by NIFA. Good Agricultural Practices: A Successful Extension/ Outreach Program — BOB GRAVANI, Dept. of Food Science, Cornell University, Ithaca, NY, USA

S15 Risk-based Design of Microbiologically Safe Foods *303BCD*

Organizer: Niteen Sawant
Convenor: Martin Cole

- 8:30 Risk Assessment Approaches to Setting Thermal Processes in Food Manufacture — TIM JACKSON, Nestlé North America, Glendale, CA, USA
- 9:00 Practical Application of a Risk-based Approach for Reduction of Thermal Processes for Wet Soup Products — ALEJANDRO AMEZQUITA, Safety and Environmental Assurance Centre, Unilever, Bedford, United Kingdom
- 9:30 NCFST/FDA White Paper on FSO Application for Low-acid Canned Foods (An Alternative to the 12D Concept) — NATHAN ANDERSON, Division of Food Processing Science and Technology, NCFST/FDA, Washington, D.C., USA

S16 Significance and Detection of STEC or Non-O157:H7 *Escherichia coli* *303BCD*

Sponsored by the IAFF Foundation

Organizer: Michael Brodsky
Convenors: Michael Brodsky and Beatriz Quinones

- 10:30 The Epidemiology of Shiga Toxin-producing *Escherichia coli* as Human Pathogens — PINA FRATAMICO, ARS-USDA, Atlanta, GA, USA

- 10:45 Development of Novel Methods for the Detection of STEC — CHRISTINE ROZAND, Global R&D Industry, bioMérieux Industry, Marcy L'Etoile, France
- 10:55 Canada's VTEC Research Network — ALEX GILL, Bureau of Microbial Standards, Health Canada, Ottawa, ON, Canada
- 11:05 STEC in the EU — STEFANO MORABITO, Dipartimento di Sanita Pubblica Veterinaria e Sicurezza Alimentare, Istituto Superiore di sanita, Roma, Italy
- 11:20 Transport and Persistence of Shiga Toxin-producing *Escherichia coli* at Produce Production Locations — MICHAEL COOLEY, Western Regional Research Center, USDA, Albany, CA, USA
- 11:35 Panel Discussion — JEFF FARBER, Bureau of Microbial Standards, Health Canada, Ottawa, ON, Canada

S17 The *Salmonella* Smorgasbord: The Problem with Too Many Choices *204AB*

Organizers: Paula Fedorka-Cray and Roger Cook
Convenors: Paula Fedorka-Cray and Roger Cook

- 8:30 Niche Displacement: Can You Really Find a Renter? — PAULA FEDORKA-CRAY, USDA-ARS-BEAR, Athens, GA, USA
- 9:00 Country Specific Serotypes: Why Some *Salmonella* Never Seem to Travel — JULIAN COX, The University of New South Wales, Sydney, NSW, Australia
- 9:30 The Slugfest — Why Some *Salmonella* Outcompete Others — JASON RICHARDSON, Coca Cola, Atlanta, GA, USA
- 10:00 Break
- 10:30 *Salmonella* — A Regulatory Challenge for Industry? — BOB REINHARD, Sara Lee Corporation, Downer's Grove, IL, USA
- 11:00 A Blast from the Past? Why We Need to Build a Better Host — SHAWN BEARSON, USDA-ARS-NADC, Ames, IA, USA
- 11:30 Give It Your Best Shot: The Chemical Control Conundrum — MARK BERRANG, USDA-ARS-BEAR, Athens, GA, USA

S18 European Concept on Hygiene Monitoring in the Food Supply Chain — 'Farm to Fork' Concept in Practice *204C*

Organizer: Helmut Steinkamp
Convenor: Helmut Steinkamp

- 8:30 European Food Safety Standards — HELMUT STEINKAMP, Food Safety, German Institute of Food Technology, Quakenbrück, Germany
- 9:00 Monitoring of Food Safety in Practice — EBERHARD HAUNHORST, Lower Saxony State Office for Consumer Protection and Food Safety, Oldenburg, Germany

9:30 Zoonosis Control in Primary Production and in the Food Chain – GUENTER KLEIN, Institute for Food Quality and Food Safety, University of Veterinary Medicine Hannover, Hannover, Germany

S19 International Food Safety Policies
204C

Organizer: Jeff Richardson
Convenor: Jeff Richardson

- 10:30 A Global Retailer's Perspective of International Product Safety – Practical Approaches to Address Supply Chain Challenges – JAMES BALL, Delhaize Group, Brussels, Belgium
- 10:45 The Impact of International Safety Policies on Trade – MOHAMMED RAWASHDEH, Jordan Food and Drug Administration, Amman, Jordan
- 11:00 Effective Testing Management for Handling Global Product Safety Requirements – FLORIAN HEUPEL, Eurofins, Nantes, France
- 11:15 Comparative Global Product Safety Obligations – The Pathway to Harmonization – KEES AELBERS, PepsiCo, Amsterdam, The Netherlands
- 11:30 Utilizing Technology to Assure Global Product Safety – Reducing the Cost of Quality – WILLIAM PAPPAS, Alliance One International, Morrisville, NC, USA
- 11:45 Gauging the Effectiveness of Our Global Product Safety System – Our Next Steps – TERRY STILLMAN, Alliance One International, Morrisville, NC, USA

S20 Food Packaging Technology: Opportunities and Challenges That Enhance Food Safety
201CD

Sponsored by the IAFP Foundation

Organizers: Darinka Djordjevic, Anthony Flood and Linda Leake
Convenors: Darinka Djordjevic, Anthony Flood and Linda Leake

- 8:30 Food Packaging Technology: A Brief Overview of the Advancements That Have Impacted Food Safety – JOSEPH HOTCHKISS, School of Packaging, Michigan State University, East Lansing, MI, USA
- 9:00 Identification of Possible Endocrine Disruptors in Food Packaging Materials – FORREST BAYER, The Coca-Cola Company, Atlanta, GA, USA
- 9:30 Regulatory Process to Ensure the Safety of Food Packaging Materials – MICHELLE TWAROSKI, Food Packaging Division, U.S. Food and Drug Administration, College Park, MD, USA
- 10:00 Break
- 10:30 What Lies Ahead: A Look into Nanotechnology for Food Packaging Applications – ROBERT BRACKETT, Grocery Manufacturers Association, Washington, D.C., USA
- 11:00 Putting Chemical Risks in Perspective for Consumers – CARL WINTER, Dept. of Food Science and Technology, University of California - Davis, Davis, CA, USA

T4 Produce Technical Session
303A

Convenors: Michelle Danyluk and Trevor Suslow

- T4-01 8:30 Field Assessment of Surface Contamination and Systemic Transference of an Attenuated *Salmonella* Typhimurium to Melon Fruit from Controlled Contamination of Irrigation Water – TREVOR SUSLOW, Adrian Sbodio, Alejandro Tomás-Callejas, Francisco López-Gálvez and Sharyn Maeda, University of California-Davis, Plant Sciences, Davis, CA, USA
- T4-02 8:45 DSC Tracking an *Escherichia coli* O157:H7 Contaminated Batch of Leafy Greens through a Commercial Processing Line – ANNEMARIE L. BUCHHOLZ, Gordon R. Davidson, Rudolph E. Sloup, Bradley P. Marks, Ewen C. Todd and Elliot T. Ryser, Michigan State University, Food Science and Human Nutrition, East Lansing, MI, USA
- T4-03 9:00 Recovery of *Escherichia coli* O157:H7 from Inoculated Spinach Fields as Affected by Inoculum Dose, Plant Material and Environmental Conditions – EDUARDO GUTIÉRREZ-RODRÍGUEZ, Steven Koike, Michael Cahn and Trevor Suslow, University of California-Davis, Plant Science, Davis, CA, USA
- T4-04 9:15 DSC Molecular Ecology of *Listeria* spp., *Salmonella*, *Escherichia coli* O157:H7, and Non-O157 Shiga Toxin-producing *E. coli* in Northern Colorado Wilderness Areas – CHRISTINA AHLSTROM, Clyde Manuel, Kelly Horgan, Martin Wiedmann and Kendra Nightingale, Colorado State University, Animal Science, Fort Collins, CO, USA
- T4-05 9:30 Development of a Simple Method to Detect Coliphages in Fresh Produce as Evidence of Fecal Contamination – CHOI-IOK R. WONG and Fu-Chih Hsu, Scientific Methods Inc., Granger, IN, USA
- T4-06 9:45 DSC Internalization of Murine Norovirus-1 to Romaine Lettuce – JIE WEI, Yan Jin, Tom Sims and Kalmia E. Kniel, University of Delaware, Animal and Food Sciences, Newark, DE, USA
- 10:00 Break
- T4-07 10:30 DSC Hydroponic Internalization of Enteric Viruses into Green Onions and Spinach – KIRSTEN A. HIRNEISEN and Kalmia E. Kniel, University of Delaware, Animal and Food Science, Newark, DE, USA
- T4-08 10:45 Controlled Environment Assessment of Preharvest Internalization and Transference of *Salmonella* into Melon Vines from Irrigation Water Using a Tube Nucleation Assay – CAROL B. D'LIMA, Kin H. Tan and Trevor V. Suslow, University of California-Davis, Davis, CA, USA
- T4-09 11:00 The Effect of Total Organic Carbon Content and Repeated Irrigation on the Persistence of *Escherichia coli* O157:H7 on Baby Spinach – DAVID T. INGRAM, Cheryl Mudd, Sean Ferguson, Dallas Hoover, Kalmia E. Kniel and Manan Sharma, USDA-ARS, Environmental Microbial and Food Safety Laboratory, Beltsville, MD, USA

- T4-10 11:15 Effect of Modified Atmosphere on Persistence and Virulence Expression of *Escherichia coli* O157:H7 on Shredded Lettuce – Sudesna Lakshman, Sean Ferguson, David T. Ingram, Jitendra R. Patel, Yaguang Luo and MANAN SHARMA, USDA-ARS, Environmental Microbial and Food Safety Laboratory, Beltsville, MD, USA
- T4-11 11:30 Inactivation of *Escherichia coli* O157:H7 on Spinach and Parsley Using Low-energy X-ray Irradiation – SCOTT R. MOOSEKIAN, Sanghyup Jeong, Bradley P. Marks and Elliot T. Ryser, Michigan State University, Food Science and Human Nutrition, East Lansing, MI, USA
- T4-12 11:45 Inactivation of *Salmonella* on Tomato Surfaces Using Gaseous Chlorine Dioxide Treatment – BASSAM A. ANNOUS, Angela Burke and Joseph E. Sites, U.S. Dept. of Agriculture, ARS-ERRC, Food Safety Intervention Technologies, Wyndmoor, PA, USA

T5 Meat and Poultry Technical Session 201B

**Convenors: Randall Phebus
and Harshavardhan Thippareddi**

- T5-01 8:30 Time-temperature Dependent Growth Patterns of *Salmonella* spp. in a Model Food System with Natural Microflora – AMIT MOREY, Shelly R. McKeen and Manpreet Singh, Auburn University, Dept. of Poultry Science, Auburn, AL, USA
- T5-02 8:45 Analysis of ALLRTE and RTE001 Sampling Results for *Salmonella* Species, Calendar Years 2005–2008 – Kristina E. Barlow, Stephen W. Mamber, TIM B. MOHR and Evelyne Mbandi, USDA-FSIS, Washington, D.C., USA
- T5-03 9:00 Molecular Characterization and Serotyping of *Salmonella* Isolated from the Shell Egg Processing Environment – MICHAEL MUSGROVE, Karen L. Liljebjelke, Kimberly D. Ingram and Arthur Hinton, USDA-ARS, Egg Safety and Quality Research Unit, Athens, GA, USA
- T5-04 9:15 Persistent and Sporadic *Listeria monocytogenes* Strains in Fermented Meat Sausage Processors – DSC VÂNIA FERREIRA, Joana Barbosa, Kitiya Vongkamjan, Andrea Moreno Switt, Tim Hogg, Paul Gibbs, Paula Teixeira and Martin Wiedmann, Escola Superior de Biotecnologia, CBQF, Porto, Portugal
- T5-05 9:30 Impact of Chlorine and Temperature on *Listeria monocytogenes* Survival Growth Behavior on Ready-to-Eat Meats – SHIOWSHUH SHEEN, Cheng-An Hwang and Vijay Juneja, USDA-ARS-ERRC, Wyndmoor, PA, USA
- T5-06 9:45 Comparison of Data from FSIS Routine and Intensified Sampling Programs for *Listeria monocytogenes* from Ready-to-Eat Establishments – KRISTINA E. BARLOW, Stephen W. Mamber, Evelyne Mbandi and Tim B. Mohr, USDA-FSIS, Washington, D.C., USA
- 10:00 Break
- T5-07 10:30 Comparison of a Novel Sample Collection Device and Cellulose Sponge for the Collection of *Escherichia coli* from Beef Carcasses – KEVIN CHURCH, Jared G. Maughan, Kelly M. Tesar and Amanda S. Vos, Microbial-Vac Systems, Inc., Jerome, ID, USA
- T5-08 10:45 Three Sampling Methods to Recover Bacterial Populations on Beef Trimmings in Commercial Settings – MICHAEL DE LA ZERDA, Mansour Samadpour and Mohammad Koohmaraie, IEH Laboratories and Consulting Group, Meat Division, Lake Forest Park, WA, USA
- T5-09 11:00 Prevalence of *Clostridium difficile* in Various Types of Ground Meat and Poultry Products – Jeff Bussey, Clarissa Sugeng, Jeffrey M. Farber and JOHN AUSTIN, Health Canada, Bureau of Microbial Hazards, Ottawa, ON, Canada
- T5-10 11:15 The Control of *Salmonella* Typhimurium in Poultry: From Vaccination to Specific Immunotherapy – Anthony Pavic, Peter Groves and JULIAN M. COX, University of New South Wales, Faculty of Science, Sydney, NSW, Australia
- T5-11 11:30 Enhanced Recovery of *Campylobacter jejuni* from Chick Paper under Hatchery Incubation Conditions – Jeremy W. Chenu, Anthony Pavic and JULIAN M. COX, University of New South Wales, Faculty of Science, Sydney, NSW, Australia
- T5-12 11:45 Validation of a High Throughput DNA Extraction and Real-time PCR Detection of *Escherichia coli* O157:H7, *Salmonella* spp., *Listeria monocytogenes* and *Listeria* spp. – WENDY LAUER and Jean-Philippe Tourniaire, Bio-Rad Laboratories, Hercules, CA, USA

**TUESDAY AFTERNOON
AUGUST 3**

**IAFP Business Meeting • 12:15 p.m. - 1:00 p.m.
204C**

- Welcome and Introduction
LeeAnn Jaykus, President-Elect
- Moment of Silence
Vickie Lewandowski, President
- Call to Order
Vickie Lewandowski, President
- Minutes of the 2009 Business Meeting
Vickie Lewandowski, President
- President's Report
Vickie Lewandowski, President
- Report of Committees
Tellers, *Linda Harris*
JFP Management, Margaret Hardin
FPT Management, Julian Cox
Foundation, *Gale Prince*
- Report of the Affiliate Council
Dan Erickson, Affiliate Council Chairperson
- Report of the Executive Director
David Tharp, Executive Director
- Unfinished Business
- New Business
- Adjournment
Vickie Lewandowski, President

**S21 The Emergence of Non-culture Diagnostics and Their Impact on Global Foodborne Disease Surveillance
Ballroom A**

Sponsored by ILSI North America Technical Committee on Food Microbiology
Convenor: Bala Swaminathan

- 1:30 Introduction to the Symposium – MARGUERITE NEILL, Division of Infection Diseases, Brown Medical School and Memorial Hospital of Rhode Island, Pawtucket, RI, USA
- 2:00 Challenges and Opportunities for Effective National and Global Foodborne Disease Surveillance – ANDREA ELLIS, Dept. of Food Safety, Zoonoses and Foodborne Diseases, World Health Organization, Geneva, Switzerland
- 2:30 Challenges in Surveillance and Investigation of Foodborne Diseases – TIMOTHY F. JONES, Tennessee Dept. of Health, Nashville, TN, USA
- 3:00 Break
- 3:30 The Emergence of Non-culture Diagnostics and Their Impact on Global Foodborne Disease Surveillance – JOHN BESSER, Centers for Disease Control and Prevention, Enteric Diseases Laboratory Branch, Atlanta, GA, USA

4:00 CholDiNet – A Global Effort to Enhance Laboratory Capacity and Coordinate Laboratory Response to Cholera and Diarrheal Diseases – G. BALAKRISHNAIR, National Institute of Cholera and Enteric Diseases, Beliaghata, India

4:30 Panel Discussion

**S22 Food and Food Environment Test Considerations in View of Changing Regulations
303BCD**

Organizer: Jeffrey Kornacki
Convenors: Jenny Scott and Jeffrey Kornacki

- 1:30 New and Emerging Food Safety Regulations Related to Testing, Records Access and the Food Registry – DON ZINK, Food and Drug Administration, College Park, MD, USA
- 2:00 The Importance of Science-based Environmental Testing Programs – MARK MOORMAN, Kellogg's, Battle Creek, MI, USA
- 2:30 How New and Anticipated Regulations Will Impact Industry Testing Programs – JOHN LEMKER, K & L Gates, Chicago, IL, USA
- 3:00 To Test or Not to Test — ROBERT BRACKETT, Grocery Manufacturers Association, Washington, D.C., USA
- 3:30 Indicator Organisms, Assays and Their Usefulness – TIM FRIER, Cargill, Minnetonka, MN, USA
- 4:00 Practical Uses of a Molecular Assay Approach for *Listeria*-like Organisms in Food Processing Plant Environments – MASI RAJIBI, ABC Research, Gainesville, FL, USA
- 4:30 An Indicator Approach to Enteric Contamination of At-risk Foods – JEFFREY KORNACKI, Kornacki Microbiology Solutions, Inc., McFarland, WI, USA

**S23 Way Before the Fork: Impact of Pre-harvest Management Programs and Supply Chain Influences on the Control of Shiga Toxin-producing *Escherichia coli* Contamination in Beef
204AB**

Sponsored by Pall GeneSystems and the IAFP Foundation
Organizer: Linda Leake
Convenors: Michelle Rossman and Manpreet Singh

- 1:30 Risk Assessment of *E. coli* O157:H7 and Other STEC on the Farm – JAMES DICKSON, Dept. of Animal Science and Interdepartmental Program in Microbiology, Iowa State University, Ames, IA, USA
- 2:00 What's Working and What's Not Working to Reduce STEC Contamination of Beef with Pre-harvest Management Practices and Knowledge Gaps – GUY H. LONERAGAN, West Texas A&M University, Canyon, TX, USA
- 2:30 Global Perspective on Pre-harvest Food Safety to Minimize the Risk of STEC Contamination of Beef Products – STUART REID, Veterinary Medicine, University of Glasgow, Glasgow, United Kingdom

- 3:00 Break
- 3:30 Control Strategies Aimed at Reducing the Prevalence of *E. coli* O157:H7 in Cattle Feces – DAVID SMITH, University of Nebraska-Lincoln, Lincoln, NE, USA
- 4:00 Lessons Learned from the Evaluation of Pre-harvest Food Safety Programs to Minimize the Risk of STEC Contamination in Meat, in Some French Operations – PATRICE ARBAULT, BioAdvantage Consulting, Orlenas, France
- 4:30 Impact of *E. coli* O157:H7 on Public Health and the Possible Impact of Pre-harvest Control Programs in Cattle Operations in Decreasing Human Infections – PATRICIA M. GRIFFIN, Centers for Disease Control and Prevention, National Center for Emerging and Zoonotic Infectious Diseases, Atlanta, GA, USA

S24 **Advances in Detection Technologies to Address Food Safety and Food Defense Needs**
204C

Sponsored by the IAFP Foundation

Organizers: Arun Bhunia and Linda Leake
Convenors: Arun Bhunia and Linda Leake

- 1:30 Evanescent Wave-based Sensor for Biothreat Agents and Toxins – ALEXANDER SIMONIAN, National Science Foundation, Biosensing and Bioengineering/CBET, Arlington, VA, USA
- 2:00 Sensor Technologies for Pathogens and Toxins – DANIEL V. LIM, University of South Florida, Advanced Biosensors Laboratory, Tampa, FL, USA
- 2:30 Preparation and Multiplexed Analysis of Bacterial and Toxic Targets in Spiked Food Samples – CHRIS R. TAITT, Naval Research Institute, Center for Bio/Molecular Science and Engineering, Washington, D.C., USA
- 3:00 Break
- 3:30 Cell-based Assays and Light Scattering Sensors for Toxins and Pathogens – ARUN BUNIA, Purdue University, Dept. of Food Science, West Lafayette, IN, USA
- 4:00 DNA/RNA and Bacteriophage-based Molecular Sensor Technologies – BRUCE APPLGATE, Purdue University, Dept. of Food Science, West Lafayette, IN, USA

S25 **Human Noroviruses: Attribution, Transmission and Control**
201CD

Organizers: Kalmia Kniel, Marlene Janes, Stephen Grove, Larry Cohen and Doris D’Souza
Convenors: Doris D’Souza and Stephen Grove

- 1:30 Foodborne Attribution of Noroviruses – JUDY GREIG, Public Health Agency of Canada, Guelph, ON, Canada
- 2:00 Integrated Monitoring and Control of Foodborne Viruses in European Food Supply Chains – NIGEL COOK, CSL, York, United Kingdom

- 2:30 Transfer and Control of Enteric Viruses on the Farm – CRISTOBAL CHAIDEZ, CIAD, Culiacan, Mexico
- 3:00 Break
- 3:30 Norovirus Cross-contamination during Food Service Procedures Used in the Preparation of Fresh Produce – ALVIN LEE, National Center for Food Safety and Technology, Chicago, IL, USA
- 4:00 How Much Does Person-to-Person Transfer of Enteric Viruses Contribute to Outbreaks – MOSHE DREYFUSS, FSIS, Washington, D.C., USA
- 4:30 The Impact of Sanitizers, Hand Transmission, and Produce Washing – JAMES ARBOGAST, GOJO Industries, Akron, OH, USA

T6 **Produce and Communication Outreach and Education Technical Session**
303A

Convenors: Kalmia Kniel and Manan Sharma

- T6-01 1:30 Pathogen Presence and Indicator Organism Levels during Turned Pile Composting of Broiler Litter and Aerated, Static Pile Composting of Mixed Feedstocks – ACHYUT ADHIKARI, Andy Bary, Craig Cogger and Karen Killinger, Washington State University, Food Science, Pullman, WA, USA
- T6-02 1:45 Produce Microbial Quality is Associated with Surface Microbial Contamination in Packing Sheds: An Assessment of Risk Factors for Produce Contamination – JUAN LEON, Elizabeth C. Ailes, Kizee A. Etienne, Lynette M. Johnston, Lee-Ann Jaykus and Christine L. Moe, Emory University, Hubert Dept. of Global Health, Atlanta, GA, USA
- T6-03 2:00 Attachment, Persistence and Infectivity of *Cryptosporidium parvum* Oocysts in Fresh Produce – DUMITRU MACARISIN, Monica Santin, Gary Bauchan and Ronald Fayer, USDA-ARS, Environmental Microbial and Food Safety Laboratory, Beltsville, MD, USA
- T6-04 2:15 Efficacy of Commercial Produce Sanitizers against *Escherichia coli* O157:H7 in a Pilot-scale Leafy Green Processing Line – GORDON R. DAVIDSON, Annemarie L. Buchholz, Paul J. Sirmeyer, Ewen C. Todd and Elliot T. Ryser, Michigan State University, Food Science and Human Nutrition, East Lansing, MI, USA
- T6-05 2:30 Enhanced Removal of Noroviruses from Fresh Fruits and Vegetables by Combination of Surfactants and Sanitizer – ASHLEY PREDMORE, Claire Herbert and Jianrong Li, The Ohio State University, Dept. of Food Science and Technology, Columbus, OH, USA
- T6-06 2:45 Columbus Public Health: 2009 Samuel J. Crumbine Consumer Protection Award Recipient – CHRISTINA R. WILSON, Columbus Public Health, Columbus, OH, USA
- 3:00 Break
- T6-07 3:30 Modifying the Behavior of Food Employees Using Educational Materials and Methods Designed for Oral Culture Learners – Alan M. Tart and JOANN PITTMAN, FDA, Office of Regulatory Affairs, Atlanta, GA, USA
- T6-08 3:45 Applying GFSI Recognized Management Systems to the Peanut Industry – A Case Study – John G. Surak, Patrick Archer, TATIANA A. LORCA, Rena Pierami and Rhonda Starling, EcoSure (A Division of Ecolab Inc.), St. Paul, MN, USA

T6-09 4:00 The Economic Cost of Foodborne Illness from Contaminated Produce in the USA – ROBERT SCHARFF, The Ohio State University, Consumer Sciences, Columbus, OH, USA

T6-10 4:15 DSC Assessing Vegetable Producers' Beliefs Regarding Food Safety Issues – MELANIE L. LEWIS IVEY, Jeffrey T. LeJeune and Sally A. Miller, The Ohio State University, Plant Pathology, Wooster, OH, USA

T6-11 4:30 The Knowledge and Behavior of Parents of Young Children Concerning Domestic Food Safety – LOUISE FIELDING and Aoife O'Gorman, UWIC, Cardiff School of Health Sciences, Cardiff, United Kingdom

T6-12 4:45 Examining Consumers' Perceptions of Nanotechnology for Food Safety: A Baseline Study – MARY NUCCI and William K. Hallman, Rutgers, the State University of NJ, Food Policy Institute, New Brunswick, NJ, USA

T7 Risk Assessment and Epidemiology
Technical Session
201B

Convenor: David Ingram

T7-01 1:30 DSC Application of Kinetic Models to Describe Heat Inactivation of Selected New Zealand Isolates of *Campylobacter jejuni* – ALI M. AL-SAKKAF, Goeff Jones and John Mawson, Massey University, Institute of Food, Nutrition and Human Health, Palmerston North, New Zealand

T7-02 1:45 Modeling the Survival and Growth of *Salmonella* on Chicken Skin Stored at 4 to 12°C – THOMAS P. OSCAR, USDA-ARS, Princess Anne, MD, USA

T7-03 2:00 FSIS *Escherichia coli* O157:H7 Beef Establishment Risk-assessment Project – James L. Withee, Eric D. Ebel, W. T. Disney, Dare Akingbade, Michael S. Williams, Wayne D. Schlosser, Nathan J. Bauer, Janell R. Kause, John M. Hicks, William K. Shaw, Jennifer Webb and DENISE R. EBLEN, USDA-FSIS, Washington, D.C., USA

T7-04 2:15 Predictive Modeling for *Listeria monocytogenes* Transfer during Slicing of Delicatessen Meats – KEITH VORST, Lindsey Keskinen, Gary Burgess, Jeff Danes and Elliot Ryser, Cal Poly State University, Industrial Technology and Packaging, San Luis Obispo, CA, USA

T7-05 2:30 DSC Evaluating the Factors Important in Norovirus Transmission in Foodservice Systems – DI LI and Donald Schaffner, Rutgers University, Food Science, New Brunswick, NJ, USA

T7-06 2:45 Network Science Methods to Analyze Food Import Export Networks – JÓZSEF BARANYI, Mária M. Ercsey-Ravasz, Zoltán Toroczka and Zoltán Lakner, Institute of Food Research, Computational Microbiology, Norwich, United Kingdom

3:00 Break

T7-07 3:30 Sources and Settings: Contaminated Food Vehicles and the Settings of Foodborne Disease Outbreaks – DANA COLE, Karen Herman and Barbara Mahon, CDC, Enteric Diseases Epidemiology Branch, Atlanta, GA, USA

T7-08 3:45 The Potential for Cross-contamination of Foods through Improper Storage in Home Refrigerators – SANDRIA GODWIN, Fur-chi Chen, Richard Stone, Edgar Chambers and Delores Chambers, Tennessee State University, Family and Consumer Sciences, Nashville, TN, USA

T7-09 4:00 A Mathematical Survival Model for *Escherichia coli* O157:H7 and *Staphylococcus aureus* on Stainless Steel Surfaces – FERNANDO PEREZ RODRIGUEZ, Antonio Valero, Elena Carrasco, Ewen Todd, Guiomar Denisse Posada Izquierdo, Andrés Morales Rueda, Rosa Maria Garcia-Gimeno and Gonzalo Zurera, University of Cordoba, Dpto Bromatología y Tecnología Alimentos, Cordoba, Spain

T7-10 4:15 The Value and Challenges of Providing Sound, Effective and Timely Risk-based Scientific Advice for International Food Safety Standard Setting – Sarah M. Cahill and MARIA DE LOURDES COSTARRICA, Food and Agriculture Organization of the United Nations, Nutrition and Consumer Protection Division, Rome, Italy

T7-11 4:30 Modeling Logistics in Quantitative Microbial Risk Assessment for Salad Bars – Seth-Oscar Tromp, Hajo Rijgersberg and EELCO FRANZ, RIVM – Centre for Infectious Disease Control, Laboratory for Zoonoses and Environmental Microbiology, Bilthoven, The Netherlands

bioMérieux's
9th Annual Scientific Symposium

Tuesday, August 3, 2010 • Anaheim, CA – Hilton Anaheim

Validation and Verification of Laboratory Methods
Industry Needs and Regulatory Expectations

WELCOME AND INTRODUCTION:

Alexandre Mérieux Corporate Vice President, bioMérieux Industry

SCIENTIFIC PANEL AND DISCUSSION:

What are validated and verified methods and why do we need them?

Michael Brodsky • Brodsky Consultants

FDA expectations for industry food laboratory methods validations

Todd Bozicevich • Director Laboratory Operations Branch • U.S. FDA

FSIS expectations for industry food laboratory methods validations

Victor Cook • Microbiology Division, Office of Public Health • USDA/FSIS

Experiences of an Independent Auditor of Food Laboratories

Brad Stawick • Independent Auditor • Stawick Laboratory Management

Challenges of Meeting Regulatory Requirements in
Different Countries—Experiences of a Global Food Company

Matilda Freund • Sr. Director • WW Food Safety, Kraft Foods

PROGRAM MODERATOR: Michael Brodsky

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to REGISTER



WEDNESDAY MORNING

AUGUST 4

S26 Global Issues and Impact of Gluten Allergy and Celiac Disease

Ballroom A

Sponsored by Elisa Systems Pty, Ltd. and the IAFP Foundation

Organizers: Vanessa Teter and Anthony Flood

Convenors: Patrice Arbault and Linda Leake

- 8:30 Celiac Disease vs. Wheat Allergy: What are We Talking About? – SUZANNE TEUBER, University of California-Davis, Davis School of Medicine, Allergy and Immunology, Davis, CA, USA
- 9:00 The Analytical Toolbox for Gluten Measurement in Foodstuffs – SAMUEL GODEFROY, Health Canada, Ottawa, ON, Canada
- 9:30 Gluten Detection and Assurance of Gluten-free Status – STEVE TAYLOR, FARRP, University of Nebraska, Lincoln, NE, USA
- 10:00 Break
- 10:30 FDA's Gluten-free Food Labeling Rulemaking – RHONDA KANE, Food Labeling and Standards, FDA, College Park, MD, USA
- 11:00 Gluten-free Foods – From Regulation to Risk Management: An EU Perspective – ROLAND POMES, Cereal Science, International Association for Cereal Science and Technology, Vienna, Austria
- 11:30 Challenges of Gluten Risk Management by the Food Industry – GLENN BLACK, GMA, Science Operations, Washington, D.C., USA

S27 Food Safety in Developing Countries

303BCD

Sponsored by the IAFP Foundation

Organizer: Ewen Todd

Convenor: Judy Greig

- 8:30 Food Safety in the United Arab Emirates and Dubai – BOBBY KRISHNA, Dubai Municipality, Food Safety Unit, UAB, United Arab Emirates
- 9:00 Food Safety Issues in Egypt – CAMERON SMOAK, Georgia Dept. of Agriculture, Madison, GA, USA
- 10:00 Food Safety Challenges for the New Indian Food Safety Authority – SHRI VIJAY, Food Safety and Standards Authority of India, Administration and Finance, New Delhi, India
- 10:30 From Food Control to Food Safety Management in Latin America – An Historic Overview – FERNANDO QUEVEDO, San Marcos National University, Lima, Peru
- 11:00 Food Safety Issues in China – PETER BEN EMBAREK, World Health Organization, Dept. of Food Safety, Zoonoses and Foodborne Illness, Beijing, China

S28 Foodborne Disease Outbreak Update

204AB

Organizer: Jack Guzewich

Convenor: Jack Guzewich

- 8:30 Multi-state Outbreak of *Salmonella* Rissen Associated with Ground White Pepper – The Epi Investigation – JEFFERY HIGA, Colorado Dept. of Public Health and Environment, Communicable Diseases, Denver, CO, USA
- 9:00 Multi-state Outbreak of *Salmonella* Rissen Associated with Ground White Pepper – The Environmental Investigation – MAHA HAJMEER, California Dept. of Public Health, Food and Drug Branch, Sacramento, CA, USA
- 9:30 Multi-drug Resistant *Salmonella* in Ground Beef Outbreaks – SHAUN COSGROVE, Colorado Dept. of Public Health and Environment, Communicable Diseases, Denver, CO, USA
- 10:00 Break
- 10:30 FSIS Investigation of Multidrug-resistant *Salmonella* Outbreak – SCOTT SEYS, USDA-FSIS, Office of Public Health, Minneapolis, MN, USA
- 11:00 Epidemiologic Investigation of *E. coli* O157:H7 in Cookie Dough – MARK SOTIR, Centers for Disease Control and Prevention, Outbreak Response and Prevention Branch, Atlanta, GA, USA
- 11:30 Company Investigation of the Cookie Dough Outbreak – TIMOTHY JACKSON, Nestle, Glendale, CA, USA

S29 Maintaining Consumer Market Continuity during Animal Disease Outbreaks

204C

Organizers: Timothy Clouse

and Todd McAloon

Convenor: Todd McAloon

- 8:30 Development of the Secure Egg Supply Plan – TODD MCALOON, Cargill Animal Protein, Minneapolis, MN, USA
- 9:00 Risk Assessment Process and Animal Food/Movement – TIMOTHY CLOUSE, USDA CEAH, Fort Collins, CO, USA
- 9:30 The FAST Eggs Plan: Protecting Poultry Health, Public Health, and the Food Supply – DARRELL TRAMPEL, Iowa State University, Ames, IA, USA
- 10:00 Break
- 10:30 Government's Role to Contain Disease, Maintain Trade and Protect Health – JON ZACK, USDA APHIS, Riverdale, MD, USA
- 11:00 Industry's Role to Contain Disease, Protect Health and Maintain Consumer Confidence – HOWARD MAGWIRE, United Egg Producers, Washington, D.C., USA
- 11:30 Industry, Government and Academia Collaboration to Achieve Common Goals – WILLIAM HUESTON, University of Minnesota, St. Paul, MN, USA

S30 **A Practical Approach to Risk Communication: Engaging Stakeholders and the Public**
201B

Sponsored by the IAFP Foundation

Organizer: Anthony Flood

Convenor: Jeffrey Farber

- 8:30 Principles and Best Practices in Risk Communication: An Overview – ANDY BENSON, International Food Information Council, Washington, D.C., USA
- 9:00 Risk Communication in Europe: Guidelines for Risk Communication – JEAN KENNEDY, European Food Information Council, Brussels, Belgium
- 9:30 Risk Communication Case Studies on Acrylamide and Other Food Components – CARL WINTER, University of California-Davis, Dept. of Food Science and Technology, Davis, CA, USA
- 10:00 Break
- 10:30 Communicating Food Risks in SE Asia: A Case Study – PETER BEN EMBAREK, World Health Organization, Dept. of Food Safety, Zoonoses and Foodborne Illness, Beijing, China
- 11:00 Risk Communication for South American Audiences – GENARO W. GARCIA, Centro Panamericano de Fiebre Aftosa, Health Surveillance and Disease Management, São Bento, Brazil
- 11:30 Risk Communication: The U.S. FDA Perspective – MARJORIE DAVIDSON, U.S. Food and Drug Administration, Center for Food Safety and Applied Nutrition, College Park, MD, USA

S31 **Setting the Science-based Agenda for Co-management of Watershed Quality and Produce Safety**
201CD

Organizers: Elizabeth Bihn, Michelle Danyluk and Trevor Suslow

Convenors: Elizabeth Bihn, Michelle Danyluk and Trevor Suslow

- 8:30 Overview of Challenges in Co-management; Impacts on the Ground – CHRISTINA FISHER, The Nature Conservancy, Arlington, VA, USA
- 9:00 Role of Non-crop Vegetation and Run-off Management in Watershed Quality – DANIEL MOUNTJOY, USDA, Natural Resources Conservation Service, Salinas, CA, USA
- 9:30 Role of Wildlife as Vectors of Foodborne Pathogens; Exposing Myth and Denial – MICHELLE JAY-RUSSELL, University of California-Davis, Western Institute for Food Safety and Security, Davis, CA, USA
- 10:00 Break
- 10:30 Application of Microbial Source Tracking to Co-management at a Regional Scale – JEFFERY LEJEUNE, The Ohio State University, Dept. of Veterinary Preventive Medicine, Wooster, OH, USA
- 11:00 Building a Database for Integrated Assessments of Co-management – MICHAEL BATZ, University of Florida, Emerging Pathogens Institute, Gainesville, FL, USA
- 11:30 Current, Emerging, and Hidden Safety Standards; Will Science Play a Role? – TIM YORK, Markon Cooperative, Salinas, CA, USA

WEDNESDAY AFTERNOON
AUGUST 4

S32 Bacterial Toxins: A Past or an Emerging Issue for Food and Beverage Safety?

Ballroom A

Sponsored by Pall GeneSystems and the IAFP Foundation

Organizers: Frank Burns and Purnendu C. Vasavada

Convenors: Patrice Arbault and Julian Cox

- 1:30 A Brief Introduction to the Bacterial Toxins – PATRICE ARBAULT, Food Safety and Analytical Methods, BioAdvantage Consulting, Orléans, France
- 1:35 Staphylococcal Enterotoxins – An Underestimated Threat? – SANDRA TALLENT, FDA, Division of Microbiology, College Park, MD, USA
- 2:05 *Bacillus* – A Two-faced Toxigenic Foodborne Foe – JULIAN COX, University of New South Wales, Faculty of Science, Sydney, NSW, Australia
- 2:35 Atypical EPEC – A Growing Public Concern – STEFANO MORABITO, Istituto Superiore di Sanità, Rome, Italy
- 3:05 Botulinum Toxins – A Rising Threat in Our Meals? – ERIC JOHNSON, University of Wisconsin-Madison, Dept. of Bacteriology – Food Research Institute, Madison, WI, USA

S33 Tools for Predictive Microbiology and Microbial Risk Assessment

303BCD

Sponsored by the IAFP Foundation

Organizers: Leon Gorris and Vijay Juneja

Convenors: Leon Gorris and Vijay Juneja

- 1:30 An Update on USDA Predictive Microbiology Information Portal, Pathogen Modeling Program and Combase – VIJAY JUNEJA, USDA, Wyndmoor, PA, USA
- 2:00 Emerging Decision Support Tools for Food Safety in the U.S. – LEE-ANN JAYKUS, North Carolina State University, Dept. of Food, Bioprocessing and Nutrition Sciences, Raleigh, NC, USA
- 2:30 FAO/WHO Risk Assessment Tools – SARAH CAHILL, FAO, Rome, Italy
- 3:00 Prioritizing Foodborne Risks Using Risk Ranger for Risk Profiling – PANAGIOTIS N. SKANDAMIS, Agricultural University of Athens, Dept. of Food Science and Technology, Athens, Greece

S34 WHO's Epidemiological Approach to Estimating Foodborne Diseases – WHO FERG

204AB

Sponsored by the IAFP Foundation

Organizers: Frederick Angulo, Aamir Fazil, Tine Hald and Fumiko Kasuga

Convenors: Frederick Angulo and Fumiko Kasuga

- 1:30 What is WHO FERG and Why Estimate the Global Burden of Foodborne Diseases? – CLAUDIA STEIN, World Health Organization, Food Safety and Zoonoses, Geneva, Switzerland

- 2:00 DALYs and More Than DALYs – ARIE HAVELAAR, RIVM, Bilthoven, The Netherlands
- 2:30 What Can Food Safety Experts Expect from and Do for WHO FERG? – Policy Maker – DANIEL ENGELJOHN, USDA OPPD FSIS, Washington D.C., USA
- 3:00 What Can Food Safety Experts Expect from and Do for WHO FERG? – Industry – VANESSA CRANFORD, Walt Disney Inc., Buena Vista, FL, USA

S35 New Definitions in Imported Seafood Safety

204C

Organizers: Kathleen Rajkowski and Barbara Blakistone

Convenor: Kathleen Rajkowski

- 1:30 Statistics of Seafood Imports in the USA, the EU and Canada – BARBARA BLAKISTONE, National Fisheries Institute, McLean, VA, USA
- 1:50 EU Concerns with Imports and How Europe is Assuring Seafood Safety for Its Consumers – PETER BEN EMBAREK, World Health Organization, Beijing, China
- 2:10 How Darden Restaurants Assures the Safety of Its Seafood – ANA HOOPER, Darden Restaurants, Winter Spring, FL, USA
- 2:30 Inter-agency Cooperation Initiatives with FDA and the Standardization Programs NOAA Monitors on Seafood Safety – STEVE WILSON, NOAA, Washington, D.C., USA
- 2:50 FDA's Progress on Safety of Imported Seafood and Food Safety Legislation and Seafood – DON KRAEMER, Food and Drug Administration, Washington, D.C., USA

S36 Risk Benefit Analysis of Food Production and Consumption

201B

Sponsored by the IAFP Foundation

Organizer: Cristina Tirado-von der Pahlen

Convenor: Cristina Tirado-von der Pahlen

- 1:30 Introduction to Risk Benefit Analysis of Food Consumption and Production on Human Health and/ or Environmental Health – CRISTINA TIRADO-VON DER PAHLEN, University of California-Los Angeles, School of Public Health, Los Angeles, CA, USA
- 2:00 Health Risk and Benefit Assessment of Food Consumption on Health – International Approach – KAZUKO FUKUSHIMA, Food Safety, WHO, Geneva, Switzerland
- 2:30 Development of an Approach for the Risk Benefit Analysis of Foods and Food Component – BERNARD BOTTEX, EFSA, Scientific Committee, Parma, Italy
- 3:00 Risk Benefit Analysis: Results of the ILSI-BRAFO Case Studies – STÉPHANE VIDRY, ILSI Europe, Brussels, Belgium

S37

Issues in the Production and Manufacture of Nuts and Nut-containing Products: Nuts to You

201CD

Organizers: Susanne Keller and Linda Leake

Convenors: Susanne Keller and Linda Leake

- 1:30 Sanitation Practices for Nut Processes – MATILDA FREUND, Kraft Foods Global, Global Food Safety and Microbiology, Glenview, IL, USA
- 2:00 Microbiological Issues Associated with Nuts – LINDA J. HARRIS, University of California-Davis, Dept. of Food Science and Technology, Davis, CA, USA
- 2:30 Mycotoxin Issues Associated with Nuts – DOJIN RYU, Texas Women’s University, Nutrition and Food Sciences, Denton, TX, USA

- 3:00 New National and International Regulations Relative to Nuts, and Current Technologies Associated with Nut Processing to Comply with Regulations – TIM BIRMINGHAM, Almond Board of California, Quality Assurance/Industry Services, Modesto, CA, USA

CLOSING SESSION

4:00 p.m. – 4:45 p.m.

John H. Silliker Lecture – *Ballroom A*

Understanding Foodborne Microorganisms, A Matter of Perspective, Robert L. Buchanan, PH.D., Director and Professor, Center for Food Safety and Security Systems, College of Agriculture and Natural Resources, University of Maryland, College Park, Maryland