**S1** ICMSF Symposium on International Developments in Food Safety  
*Grapevine C*  
**Organizer:** Leon Gorris  
**Convenor:** Leon Gorris  
8:30 Working with Risk-based Metrics in the Food Industry — LEON G. GORRIS, Unilever, Sharnbrook, Bedford, United Kingdom  
9:00 ICMSF Approach to Determine the Performance of Microbiological Criteria — MARCEL ZWIETERING, Wageningen University, Wageningen, Netherlands  
9:30 Useful Testing in Food Safety Management — KATHERINE M. SWANSON, Ecolab Inc., Mendota Heights, MN, USA  
10:00 Break  
10:30 Meat and Poultry Safety — R. B. TOMPKIN, LaGrange, IL, USA  
11:00 Seafood Safety — JEFFREY M. FARBER, Health Canada, Ottawa, ON, Canada  
11:30 Produce Safety — ROBERT L. BUCHANAN, University of Maryland, College Park, MD, USA  

**RT1** Public Health Decision Making – A Character Building Exercise  
*Grapevine A*  
**Organizers:** Patricia Desmarchelier, Sherri McCarty and Agnes Tan  
**Convenors:** Patricia Desmarchelier, Sherri McCarty and Agnes Tan  
8:30–12:00 See Addendum for details

**S2** Sterilant Gas Decontamination of Food and Environments and Emerging Technology  
*Grapevine B*  
**Organizers:** Joshua Gurtler, Jeffrey Kornacki and Yale Lary  
**Convenors:** Joshua Gurtler, Jeffrey Kornacki and Yale Lary  
8:30 Introduction — JEFFREY L. KORNACKI, Kornacki Microbiology Solutions, Inc., McFarland, WI, USA  
8:35 General Overview of Sterilant Gas Technologies: Pros, Cons, Legal Hurdles and Applications in the Food Industry — BASSAM A. ANNOUS, USDA-ARS-ERRC, Wyndmoor, PA, USA  
9:00 Efficacy of Sterilant Gases to Decontaminate Fruits and Vegetables — JOSEPH FRANK, University of Georgia, Griffin, GA, USA  
9:30 Chlorine Dioxide Gas Decontamination of a Large Facility Contaminated with *Salmonella* Newport — MARK CZARNESKI, ClorDiSys Solutions, Inc., Lebanon, NJ, USA

**RT2** Selling Food Safety to Employees: Creating a Fully Functioning Food Safety Culture in Retail Grocery and Foodservice Operations  
*Grapevine 1-2*  
**Organizers:** Donna Garren, Ann Marie McNamara, Fred Reimers and Sharon Wood  
**Convenors:** Donna Garren, Ann Marie McNamara, Fred Reimers and Sharon Wood  
8:30 Are You “In or Out”? Creating Buy in from the Top Down and Sustaining Momentum — TODD ROSSOW, Publix Super Markets, Inc., Lakeland, FL, USA  
8:50 Technology That Works for You: Using Technology That Can Make Documentation Easy and Accurate (Time/Temp Logs; Labeling; Traceability) — STEPHEN J. KENNEY, Darden Restaurants, Orlando, FL, USA
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11:30 Panel Discussion

S3 Harnessing Irradiation for the Marketplace Today
Grapevine B
Organizer: Craig Henry
Convenor: Craig Henry
10:30 FSIS Approval of Irradiation as a Processing Aid in Beef Slaughter Establishments — DANIEL L. ENGELJOHN, USDA-FSIS, Washington, D.C., USA
10:45 Novel X-Ray Irradiation Technology for the Food Industry — ELLIOT RYSER, Michigan State University, East Lansing, MI, USA
11:00 Industry Adoption of Irradiation in Produce Processing Establishments — MIKE BURRESS, Chiquita Brands International/Fresh Express, Franklin Park, IL, USA
11:15 Directionality of E-beam and Carcass Irradiation and Reducing Pathogens in Produce — ALEJANDRO CASTILLO, Texas A&M University, College Station, TX, USA
11:30 Panel Discussion

S4 Epidemiological Trends of Noroviruses
Grapevine 1-2
Organizers: Doris D’Souza, Lee-Ann Jaykus and Kalmia Kniel
Convenors: Doris D’Souza, Lee-Ann Jaykus and Kalmia Kniel
10:30 Changing Epidemiology of Noroviruses with Emphasis on GII.4 Strains and Recent Issues — ARON J. HALL, CDC, Atlanta, GA, USA
10:50 Current Trends in Cruise Ship-related Norovirus Outbreaks: Addressing Issues of Control — GEORGE VAUGHAN, CDC, Atlanta, GA, USA
11:10 Norovirus in Ready-to-Eat Foods Involved in a Grand Canyon Rafting Trip Outbreak — LEE-ANN JAYKUS, University of North Carolina, Raleigh, NC, USA
11:30 Panel Discussion

T1 Dairy, General Microbiology and Sanitation Technical Session
Grapevine 3-4
Convenor: Renata Jacob and Kathleen Rajkowski
T1-01 Development of a Risk-based Approach for Regulation of Raw Milk Products in New Zealand — SCOTT K. CRERAR, Dianne Schumacher and Sally Hasell, New Zealand Food Safety Authority, New Zealand Standards, Wellington, New Zealand
8:45 Effect of Cooling Rate and Natural Antimicrobials on Growth of Listeria monocytogenes in Cottage Cheese — KATHLEEN A. GLASS and Lindsey M. McDonnell, University of Wisconsin, Food Research Institute, Madison, WI, USA
8:30 Regulatory Reform of Raw Milk Products in New Zealand — SHARON P. WOOD, H-E-B, San Antonio, TX, USA
9:00 Branding Your Food Safety Messages: Using Creative Marketing Strategies for Sharing the Food Safety Message to Both Employees and Customers — GINA R. NICHOLSON, The Kroger Co., Columbus, OH, USA
9:20 Maintaining Food Safety Culture in a Changing Workforce — ANN MARIE MCNAMARA, Jack In The Box, San Diego, CA, USA
9:30 Roundtable Discussion

T1-03 Evaluating the Potential for Translocation of Listeria monocytogenes from Floor Drains to Food Contact Surfaces in the Surrounding Environment Using Listeria innocua as Surrogate — JASDEEP K. SAINI, James Marsden, Daniel Fung and Beth Ann Crozier-Dodson, Kansas State University, Animal Science and Industry, Manhattan, KS, USA
9:00 DSC Populations in America — RENATA JACOB, Valerie A. Roe Food Model — DOMINIC K. BAGENDA, Koji Faculty of Health Sciences, Cardiff, United Kingdom
9:15 Emphasis on GII.4 Strains and Recent Issues — GEORGE VAUGHAN, CDC, Atlanta, GA, USA
9:20 Recovered from Biofilms in a Commercial Shell Egg Processing Facility — MICHAEL T. MUSGROVE, Mark E. Berrang and Karen A. Liljebjelke, USDA-ARS, Athens, GA, USA
9:30 Enterobacteriaceae and Related Organisms
9:45 Sanitizing Efficacy on Sessile and Planktonic Listeria monocytogenes Cells — CRISTINA D. CRUZ, Anthony N. Mutukumira, Fiona McKenzi
9:50 and Graham C. Fletcher, New Zealand Institute for Plant & Food Research, Food & Health, Auckland, New Zealand
10:00 Break

T1-05 Efficiency and Optimization of UV Exposure to Reduce Listeria monocytogenes Contamination on Conveyor Belts Made from Four Different Materials — AMIT MOREY and Manpreet Singh, Auburn University, Dept. of Poultry Science, Auburn, AL, USA
9:30 DSC on Conveyor Belts Made from Four Different Materials — AMIT MOREY and Manpreet Singh, Auburn University, Dept. of Poultry Science, Auburn, AL, USA
10:00 Break

T1-06 Identification of a Unique Food Safety Risk Associated with Retail Markets Serving Asian Populations in America — RENATA JACOB, Valerie L. Darcey, Trish A. Carney and Jennifer J. Quinlan, Drexel University, Dept. of Biology, Philadelphia, PA, USA
9:45

T1-07 Sanitizing Efficacy on Sessile and Planktonic Listeria monocytogenes Cells — CRISTINA D. CRUZ, Anthony N. Mutukumira, Fiona McKenzi
9:50 and Graham C. Fletcher, New Zealand Institute for Plant & Food Research, Food & Health, Auckland, New Zealand
10:00 Break

T1-08 Sanitation Schedules – A New Management Approach — JOHN T. HOLAH and Karen Middleton, Campden BRI, Gloucestershire, United Kingdom
10:45

T1-09 Wholeroom Disinfection: A New Concept in Food Industry Sanitation — ALICJA A. MALINOWSKA, John T. Holah and Karen E. Middleton, Campden BRI, Food Hygiene, Chipping Campden, United Kingdom
11:00

T1-10 The Microbiological Safety of Irradiated Food
11:15 — LOUISE FIELDING, UWIC, Cardiff School of Health Sciences, Cardiff, United Kingdom
11:15

T1-11 Agar Enhances Pediocin Production in Broth and Reduces Degradation in a Soy-seasoned Salmon Roe Food Model — DOMINIC K. BAGENDA, Koji Yamazaki and Yuji Kawai, Hokkaido University, Hakodate, Japan
11:30

T1-12 Effect of Colony Numbers Selected from Plating Media on Salmonella Serogroup Detection from Naturally Contaminated Chicken Carcasses — PAULA J. FEDORKA-CRAY, Nelson A. Cox, L. Jason Richardson, Scott R. Ladely and R. Jeff Buhr, USDA-ARS-RRC, Athens, GA, USA
11:45
P1-01 Accounting for Product Residue Effects when Modeling Bacterial Transfer between Processing Equipment and Meat Products — DANIO T. CAMPOS, Bradley P. Marks, Keith L. Vorst, Lindsey A. Keskinen and Elliott T. Ryser, Michigan State University, Dept. of Biosystems and Agricultural Engineering, East Lansing, MI, USA


P1-03 Dial vs. Digital Instant Read Thermometers: Availability and Accuracy for Consumers — TIFFANI ZEMMER, Sandra McCurdy and Courtney Staszak, University of Idaho, Family Consumer Science, Moscow, ID, USA

P1-04 Toxoplasma in Swine and Cattle — YNES R. ORTEGA and Maria Torres, University of Georgia, CFS, Griffin, GA, USA

P1-05 Evaluation of Fermentation/Drying and High Pressure Processing on Viability of Trichinella spiralis Larvae in Raw Pork and in Genoa Salami — JEFF CALL, Anna C. Porto-Fett, Brad Shoyer, Claudette Psheniski, George Cocoma, John B. Luchansky and Delores Hill, USDA, Wyndmoor, PA, USA

P1-06 Microbiological Quality of Selected Ready-to-Eat Foods in Kampala City, Uganda — CHARLES MUYANJA, Ivan Kiragga and Paul Tusingwire, Makerere University, Food Science and Technology, Kampala, Uganda

P1-07 Applying a Path-dependent Model for Salmonella Thermal Inactivation in Slow-cooked Turkey and Beef Products — MARIA I. TENORIO-BERNAL, Bradley P. Marks and Sara L. Jones, Michigan State University, Biosystems and Agricultural Engineering, East Lansing, MI, USA

P1-08 Behavior of Salmonella spp. in Ground Beef Containing Sodium Lactate and Oregano during and after Heat Treatments — VIJAY K. JUNEJA, Andy Hwang and Mendel Friedman, USDA-ARS-ERRC, Wyndmoor, PA, USA

P1-09 Accuracy of Interval Accumulation-based Tools in Predicting Behavior of Staphylococcus aureus, Salmonella serovars, and Escherichia coli O157:H7 in Pork Products during Single and Repeated Temperature Abuse Periods — Steven C. Ingham, Barbara H. Ingham, Song Yang, Ben Levey, Lisa Fahey, John F. Norback, Melody A. Fanslau, Andre G. Senecal and GREG M. BURNHAM, Natick Soldier Research, Development & Engineering Center, Combat Feeding Directorate, Natick, MA, USA

P1-10 Inactivation Kinetics of a Four-strain Composite of Salmonella Enteritidis and Oranienberg in Commercially-acquired Liquid Egg Yolk — JOSHUA B. GURTLE, Johari S. Jordan, Harry M. Marks, Deana R. Jones and William K. Shaw, United States Dept. of Agriculture, Eastern Regional Research Center, Wyndmoor, PA, USA

P1-11 Evaluation of Microwave Cooking Procedures for Frozen, Raw, Breaded Chicken Products to Ensure Salmonella Inactivation — VAIBHAV AHIRRAO, Danielle A. Perkin, Randall K. Phebus, Douglas Powell and Harshavardhan Thippareddi, Kansas State University, Animal Sciences & Industry, Manhattan, KS, USA

P1-12 Influence of Jamaican Jerk Seasoning Paste on Growth of Natural Bacterial Flora and Salmonella Typhimurium on Raw Chicken Breast Meat — AUBREY F. MENDONCA, Kencis L. Battle, Chido Y. Viaji, Michelle A. Copeland and Lawrence D. Goodridge, Iowa State University, Food Science and Human Nutrition, Ames, IA, USA

P1-13 Reduction in Salmonella Positives and Microbial Counts on Chicken Carcasses Treated with 360 to 1800 ppm Peracetic Acid Using Spectrum™ in the Finishing Chiller to Achieve USDA Category 1 Status — ANGELA THOMPSON, Shibu Abraham and John Rovison, FMC Corporation, Princeton, NJ, USA

P1-14 Inhibition of Growth of Escherichia coli O157:H7 and Salmonella in Ground Beef Using Modified Atmosphere Packaging Systems — MANUEL V. ALVARADO, Angela Laury, Chance Brooks, Alejandro Echeverry and Mindy Brashers, Texas Tech University, Animal and Food Science, Lubbock, TX, USA

P1-15 Heat and Acid Resistance of Escherichia coli Biotype I Used as Surrogates for Escherichia coli O157:H7 and Salmonella in the Validation of Pathogen Interventions in Beef Carcasses — LUZ EDUVÍGIES GARAY-MARTÍNEZ, Alma A. Valenzuela-Morones, Marcela Okhuysen-Valle, Alejandro Castillo and Nanci E. Martínez-Gonzáles, Universidad de Guadalajara, de Microbiología e Inocuidad de Alimentos, Farmacobiología, Guadalajara, Mexico


P1-17 Implementation of Multiple Escherichia coli O157:H7 Antimicrobial Interventions in Very Small Beef Processing Facilities — BEN WILLIAMS, Dennis Burson and Harshavardhan Thippareddi, University of Nebraska, Animal Science, Lincoln, NE, USA

P1-18 Plant Variation in the Validation of a Hot Water Antimicrobial Intervention during Harvesting Beef Carcasses in Small and Very Small Meat Processing Plants — DENNIS E. BURSON, William B. Mikel, Dana J. Hanson, Elizabeth A. Boyle and Melissa C. Newman, University of Nebraska, Animal Science, Lincoln, NE, USA
<table>
<thead>
<tr>
<th>Poster</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>P1-19</td>
<td>Effect of Ozone and Ultraviolet Irradiation Treatments on <em>Listeria monocytogenes</em> Populations in Chill Brines</td>
</tr>
<tr>
<td>P1-20</td>
<td>Addition of <em>Carnobacterium maltaromaticum</em> CB1 to Vacuum-packaged, Sliced Processed Meats Inhibits the Growth of <em>Listeria monocytogenes</em></td>
</tr>
<tr>
<td>P1-21</td>
<td>Modeling Elimination of <em>Listeria monocytogenes</em> from Ready-to-Eat Cooked Meats Using High Pressure Processing</td>
</tr>
<tr>
<td>P1-22</td>
<td>Effectiveness of Fermentation/Drying and Post-process Pressurization on Viability of <em>Listeria monocytogenes</em> and <em>Salmonella</em> spp. in Genoa Salami</td>
</tr>
<tr>
<td>P1-23</td>
<td>Growth of <em>Listeria monocytogenes</em> on Sliced Inoculated Pastrami and Roast Beef during Vacuum-packaged Storage at 4, 7 or 12°C</td>
</tr>
<tr>
<td>P1-24</td>
<td>Microwell Format Detection Method for <em>Campylobacter</em> spp. in Foods Using DNA Hybridization</td>
</tr>
<tr>
<td>P1-25</td>
<td><em>Campylobacter jejuni</em> Detection in Chicken Grow-out Houses by Environmental Sampling Methods</td>
</tr>
<tr>
<td>P1-26</td>
<td>Occurrence of <em>Campylobacter</em> spp. in Beef Carcasses and in Retail Chicken Cuts in São Paulo, Brazil</td>
</tr>
<tr>
<td>P1-27</td>
<td>Cytotoxic Potential of <em>Campylobacter jejuni</em> Isolated from Retail Poultry Samples</td>
</tr>
<tr>
<td>P1-28</td>
<td>Biogenic Amine Production in Yellowfin Tuna (<em>Thunnus albacares</em>) under Controlled Decomposition Conditions</td>
</tr>
<tr>
<td>P1-29</td>
<td>Levels of <em>Vibrio parahaemolyticus</em>, <em>Vibrio vulnificus</em> and <em>Vibrio cholerae</em> in Intestinal Contents of Fish from the United States Gulf Coast</td>
</tr>
<tr>
<td>P1-30</td>
<td>Evaluation of Immunomagnetic Separation (IMS) Coupled with Real-time PCR for Enumeration of <em>Vibrio parahaemolyticus</em> in Spiked Oyster Homogenates</td>
</tr>
<tr>
<td>P1-31</td>
<td>Validation of a PCR Assay for Screening <em>Vibrio</em> in Foods</td>
</tr>
<tr>
<td>P1-32</td>
<td>Comparison of Molecular Detection Methods for <em>Vibrio</em> spp. in Oysters</td>
</tr>
<tr>
<td>P1-33</td>
<td>Heat Inactivation of Enteric Viruses in Soft Shell Clams</td>
</tr>
<tr>
<td>P1-34</td>
<td>Minimum Safe Cooking Temperatures for Eliminating Foodborne Pathogens in Shrimp</td>
</tr>
<tr>
<td>P1-35</td>
<td>Effect of Gamma Irradiation on Inactivation of Foodborne Virus in Oyster</td>
</tr>
<tr>
<td>P1-36</td>
<td>Norovirus Detection and Quantification in Shellfish Samples</td>
</tr>
<tr>
<td>P1-38</td>
<td>Survival of <em>Salmonella</em> spp. during Preparation of Pancakes and Waffles</td>
</tr>
</tbody>
</table>
P1-39 Survival of Salmonella spp. during Preparation of Popcorn — AIKANSH SINGH, Nageswara R. Korasapati and Harshavardhan Thippareddi, University of Nebraska, Food Science and Technology, Lincoln, NE, USA

P1-40 Alternative Cooking Procedures for Large, Intact Meat Products to Achieve Lethality Microbiological Performance Standards — ASHLEY HANEKLAUS, Mayra Marquez-Gonzalez, Lisa M. Lucia, Alejandro Castillo, Margaret D. Hardin, Wesley N. Osburn, Kerri B. Harris and Jeffrey W. Savell, Texas A&M University, Animal Science, College Station, TX, USA

P1-41 Survival and Growth of Salmonella in Salsa and Related Ingredients — LI MA, Guodong Zhang, Peter Gerner-Smidt, William E. Keene, Robert V. Tauxe and Michael P. Doyle, University of Georgia, Griffin, GA, USA

P1-42 PCR-DGGE Analysis of Microbial Communities Associated with Campylobacter spp. on Meat Contact Surfaces in a Pork Processing Facility — BOONEFI TAN, Frances Nattress, Leluq Guan and Lynn McMullen, University of Alberta, Agricultural, Food and Nutritional Sciences, Edmonton, AB, Canada

P1-43 Improved Enrichment of Shigella spp. in Produce — MICHAEL A. GRANT, June H. Wetherington, Keith A. Lampel and Deanne M. Deer, FDA, Pacific Regional Laboratory NorthWest, Bothell, WA, USA

P1-44 Resistance of Listeria monocytogenes to Gamma Irradiation in the Presence of Glucose and NaCl — YOHAN YOON, Gyeongyeol Kim, Won-Bo Shim, Duck-Hwa Chung, Jae-Hun Kim, Ju-Woon Lee and Myung-Woo Byun, Advanced Radiation Technology Institute, Korea Atomic Energy Research Institute, Team for Radiation Food Science & Biotechnology, Jeongeup, Korea, South Korea

P1-45 Effect of Pulsed Light Treatment on Growth and Resistance Behavior of Listeria innocua and Escherichia coli — AARON R. UESUGI, Lillian Hsu and Carmen I. Moraru, Cornell University, Food Science, Ithaca, NY, USA

P1-46 PFGE as a Predictor of Listeria monocytogenes Biofilm Formation — GORDON R. DAVIDSON, Annemarie L. Buchholz, Zhiqiong Yan and Elliot T. Ryser, Michigan State University, Food Science and Human Nutrition, East Lansing, MI, USA

P1-47 Effect of Various Factors on the Formation of Biofilms by Four Strains of Listeria monocytogenes — WLADIR B. VALDERRAMA and Catherine N. Cutter, Pennsylvania State University, Food Science, University Park, PA, USA

P1-48 Characterization of Listeria monocytogenes Isolates of Imported Cheese Contributed to the National PulseNet Database by the FDA from 2001 to 2008 — BABGALEH B. TIMBO, Christine Keys and Karl Klontz, Food and Drug Administration, Center for Food Safety and Applied Nutrition, College Park, MD, USA

P1-49 Viability of Listeria monocytogenes in Biofilms Exposed to Sanitizers, Osmotic Stress and Bacteriocins — Lizziane K. Winkelströter and ELAINE C. DE MARTINIS, Faculdade de Ciências Farmacêuticas de Ribeirão Preto – Universidade de São Paulo, Departamento de Análises Clinicas, Toxicológicas e Bromatológicas, Ribeirão Preto, Brazil

P1-50 Optimizing Sampling Plans for Identifying Sources of Listeria monocytogenes: An Example from a Multi-state Turkey Processing Plant Study — JOSEPH D. EIFERT, Charles Czuprynski, Brien Neudeck, David Kang and Sophia Kathariou, Virginia Tech, Food Science and Technology, Blacksburg, VA, USA

P1-51 Salmonella spp. and Listeria monocytogenes in Minimally Processed Vegetables in São Paulo, Brazil: Incidence and Counts Data for Risk Assessment — ANDERSON S. SANT’ANA, Mariza Langraf, Maria T. Destro and Bernadette Franco, University of São Paulo, Dept. of Food and Experimental Nutrition, São Paulo, Brazil

P1-52 Alternative Sigma Factor σE Regulation is Important for Diverse Environmental Stress Responses in Listeria monocytogenes — TAURAI TASARA, Eveline Raimann, Barbara Schmid and Roger Stephan, University of Zurich, Institute for Food Safety and Hygiene, Zurich, Switzerland

P1-53 Effect of Growth and Recovery Temperatures on Pressure Resistance of Listeria monocytogenes — ADRIENNE E. SHEarer, Huda S. Neetoo and Haiqiang Chen, University of Delaware, Animal and Food Science, Newark, DE, USA

P1-54 Impact of Affinity Purification on the Performance of Antibodies Specific for Listeria spp. and Their Use in a Multiplex Luminex Bead Array for Food Testing — Katelin Mao, Michael Federman, Christopher Baun, George Anderson and JOSHUA LEVIN, KPL, Inc., Gaithersburg, MD, USA

P1-55 Virulence for Mice, Resistance to Synthetic Gastric Fluid and Biofilm Formation of a Strain of Listeria monocytogenes Serotype 4b Isolated from a Listeriosis Outbreak Associated with Hot Dogs — Nancy G. Faith, Jae-Won Kim, Sophia Kathariou, Robert Sahagian, John Luchansky and CHARLES J. CZUPRYNSKI, University of Wisconsin-Madison, Food Research Institute, Madison, WI, USA

P1-56 Genotyping of Listeria monocytogenes Isolated from the Environment and Food Products in a Convenience Food Processing Plant — SIMONA BLATTER, Roger Stephan and Claudio Zweifel, University of Zurich, Institute for Food Safety and Hygiene, Vetsuisse Faculty, Zurich, Switzerland

P1-57 Survival of Desiccated Listeria monocytogenes on Stainless Steel and Transfer to Salmon Products — LISBETH TRUESTRUP HANSEN, Lone Gram and Birte Fonnesbech Vogel, Dalhousie University, Process Engineering and Applied Science, Halifax, NS, Canada

P1-59 Adaptation of the Lateral Flow Immunochromatographic Hand-held System for the Detection of *Staphylococcus enterotoxin B* (SEB or *Staphylococcal enterotoxin C* (SEC) in Commercial Infant Formulas, Baby Foods, Milk and Milk Products — JOYCE M. NJORGE, MaryAnn Principato, Robert L. Jones, Jr. and Thomas Boyle, FDA, Laurel, MD, USA

P1-60 Inactivation of *Escherichia coli* O157:H7, *L. monocytogenes*, *Salmonella enterica* and *Shigella flexneri* on Iceberg Lettuce (*Lactuca sativa*) by X-ray — BARAKAT S. MAHMOUD and Gary R. Bachman, Mississippi State University, Pascagoula, MS, USA

P1-61 Assessing the Use of Specific Cooling Practices to Prevent *Clostridium perfringens* Growth in Refried Beans — DEANN AKINS and Amarat Simonne, University of Florida, Gainesville, FL, USA

P1-62 First Report on *cpe*-positive Type A *Clostridium perfringens* from Food Samples in the State of São Paulo, Brazil — André K. Otuki, Bernadette Dora M. Franco, Mariza Landgraf and MARIA TERESA DESTRO, University of São Paulo, Food and Experimental Nutrition, São Paulo, Brazil

P1-63 Extracellular Protectants Produced by *Clostridium perfringens* Cells at Elevated Temperatures — NORMA L. HEREDIA, Perla Ybarra, Santos Garcia and Carlos Hernandez, Universidad A. De Nuevo Leon, San Nicolás, Mexico

P1-64 Molecular Characterization of Multidrug-resistant *Clostridium difficile* Isolated from Wild Pigs, Production Pigs and Humans — MICHELLE SULLIVAN, Deena Bermudez, Wondwossen Gebreyes and Siddhartha Thakur, NCSU, Population Health and Pathobiology, Raleigh, NC, USA

P1-65 Thermal Resistance of *Yersinia enterocolitica*, *Yersinia pseudotuberculosis*, and *Yersinia pestis* Grown at Two Different Temperatures — MYTHILI KOTAPALLI, Susanne E. Keller and Arlette Shazer, Illinois Institute of Technology, National Center for Food Safety and Technology, Summit-Argo, IL, USA

P1-66 Phenotypic, Genotypic and Serotypic Assessment of Virulence Traits and Antibiotic Susceptibility of *Yersinia enterocolitica* Isolated from US Market Weight Hogs — SAUMYA BHADURI and Irene V. Wesley, Eastern Regional Research Center, Microbial Food Safety Research Unit, Wyndmoor, PA, USA

P1-67 Effect of Cooling Rates on Survival and Growth of *Escherichia coli* O157:H7 in Creamed Cottage Cheese — ERDOGAN CEYLAN, Cynthia Stewart, Patrick Krakar and Benjamin Howard, Silliker Inc., South Holland, IL, USA

P1-68 Pathogen Presence and Levels of Generic *Escherichia coli* during Turned Pile Composting of Broiler Litter — Karen M. Killinger, Achyut Adhikari, KATHERINE WARREN, Andy Bary and Craig Cogger, Washington State University, School of Food Science, Pullman, WA, USA

P1-69 Influence of Modified Atmosphere Packaging (MAP) on *Escherichia coli* O157:H7 Growth, Survival, Shiga-toxin Production and Biofilm Production — WILLIAM E. CHANEY, Alejandro Echeverry, Enusha Karunasena, Chance J. Brooks, Michael SanFrancisco and Mindy M. Brashears, Texas Tech University, Animal and Food Sciences, Lubbock, TX, USA

P1-70 Detection of Sorbitol Utilization, Virulence Genes and Intimin Types of Verotoxin-producing (VTEC) *Escherichia coli* Isolated from Food, and from Veterinary and Clinical Sources — MARJORIE S. FULLERTON, Leonard Williams and Jacqueline Johnson, Alabama A&M University, Huntsville, AL, USA

P1-71 Comparison of Expression of *Escherichia coli* O157:H7 Virulence Factors in Ground Beef and on Fresh-cut Lettuce — MANAN SHARMA, Jitendra R. Patel, Xiangwu Nou, Sean Ferguson, Cheryl Mudd and Michael Donnenberg, USDA-ARS, Environmental Microbial and Food Safety Laboratory, Beltsville, MD, USA


P1-74 Transfer of *Escherichia coli* O157:H7 to Beef Steaks through Needle Tenderization — NIKOS CHORIANOPOULOS, Ifigenia Geornaras, George-John E. Nychas, Keith E. Belk, Gary C. Smith and John N. Sofos, Colorado State University, Dept. of Animal Sciences, Fort Collins, CO, USA

P1-75 Selection and Characterization of Cellulose Deficient Mutants of Shiga Toxin Producing *Escherichia coli* — BYONG KWON YOO, Todd Stewart, Jean Guard-Bouldin, Michael Musgrove, Richard Gast and Jinru Chen, University of Georgia, Food Science & Technology, Griffin, GA, USA

P1-76 Tandem Repeat Stability in *Escherichia coli* O157:H7 is Dependent on the Duration and Type of Environmental Stress — MICHAEL B. COOLEY, USDA-ARS, Produce Safety and Microbiology, Albany, CA, USA

P1-77 Prevalence, Serotypes, and Virulence Genes of Shiga Toxin-producing *Escherichia coli* Isolated from Swiss Raw Milk Cheeses — CLAUDIO ZWEIFEL, Nicole Giezendanner, Sabrina Corti, Gladys Krause, Jürg Danuser and Lothar Beutin, University of Zurich, Institute for Food Safety and Hygiene, Vetsuisse Faculty, Zurich, Switzerland
P1-78  Efficacy of Ethanol as a Disinfectant for Inactivation of Human Noroviruses and Murine Norovirus — GRACE TUNG, Helen Rawsthorne, Carrie Zapka, David Macinga and Lee-Ann Jaykus, North Carolina State University, Dept. of Food, Bioprocessiing and Nutrition Sciences, Raleigh, NC, USA

P1-79  Characterization of the Transferability of Noroviruses between Foods and Representative Surfaces — BLANCA I. ESCUDERO-ABARCA, Helen Rawsthorne and Lee Ann Jaykus, North Carolina State University, Raleigh, NC, USA

P1-80  Hepatitis A Virus Survival during Low Heat Dehydration of Green Onion — DAVID T. LAIRD, K. F. Reineke and Y. C. Shieh, FDA, Summit-Argo, IL, USA

P1-81  Capture of Human Norovirus Using Histo-blood Group Antigens (HBGA) as Binding Ligands — BLANCA I. ESCUDERO-ABARCA, Helen Rawsthorne, Jan Vinje and Lee Ann Jaykus, North Carolina State University, Raleigh, NC, USA

P1-82  Effect of Broad Spectrum Fertilizers on Human Picornaviruses — KYLEIGH GLOSKA, Kirsten A. Hirneisen and Kalmia E. Kniel, University of Delaware, Newark, DE, USA

P1-83  Norovirus: Foodborne or Pandemic Pathogen? — MOSHE S. DREYFUSS, Walden University, Minneapolis, MN, USA

P1-84  Fate of Murine Norovirus-1 during Dairy Manure based Composting — JIE WEI, Yan Jin, Tom Sims and Kalmia E. Kniel, University of Delaware, Animal and Food Sciences, Newark, DE, USA

P1-85  Comparison of Methods for Recovery of Hepatitis A Virus (HAV) from Fresh Produce and Detection of HAV by Real-time RT-PCR and Cell Culture — JI-YEON HYEON, Jae-Hoon Lee, Jeong-Hwan Cheon, Joong-Bok Lee, In-Gyun Hwang, Hyo-Sun Kwak, Yong-Chae Park, Jeong-Su Lee and Kun-Ho Seo, Konkuk University, College of Veterinary Medicine, Dept. of Public Health, Seoul, Korea

P1-86  Prevalence of Vibrio cholerae, V. parahaemolyticus and V. vulnificus in Retail Frozen Shrimp Determined with a Real-time PCR Assay — TIMOTHY R. DAMBAUGH, M. Morgan Wallace, Thilan Wijesekera, Daniel E Delduco, Bridget W. Andaloro and George Tice, DuPont Qualicon, Wilmington, DE, USA

P1-87  Toxin Genes Characterization and Antibiotic Susceptibility Patterns of Emetic-type Bacillus cereus Korean Isolates — JUNG-BEOM KIM, Yong-Bae Park, Ki-Cheol Kim, Hong-Rae Jeong, Dae-Hwan Kim, Jong Bok Lee, Jong Chan Kim and Deog-Hwan Oh, Gyeonggido Institution of Health and Environment, Suwon, Korea, South

P1-88  Identification of Emetic Toxin (Cereulide) Producing Bacillus cereus Isolated from Human Outbreaks and Food in Korea — JAI-MOUNG KIM, Jung-Beom Kim, Jae-Ho Choi, Syed M.E Rahman, Ding Tian, Uranchimeg Purev, Kang-Hyun Choi, Yong-Bae Park and Deog-Hwan Oh, Kangwon National University, Food Science and Biotechnology, Chuncheon, Korea, South

P1-89  Prevalence of MRSA in Food Samples Associated with Foodborne Illness — CHRISTINA J. FERRATO, SHEILA M. COOK, Greg Tyrrell, Bryanne Crago and Marie Louie, Provincial Laboratory for Public Health (Microbiology) Alberta, Calgary, AB, Canada

P1-90  Efficacy of Ovotransferrin against Pathogenic and Spoilage Organisms in Laboratory Broth Medium and a Model Milk System — DEVIN K. DUTILLY, Mohammed Sabreen, David K. Manu, Dong U. Ahn and Aubrey F. Mendonca, Iowa State University, Dept. of Food Science and Human Nutrition, Ames, IA, USA

P1-91  Prevalence of Clostridium difficile within Ontario Pig Farms—The Foodborne Link — Jianxiong Ye, Scott J. Weese, Robert Friendship and KEITH WARRINER, University of Guelph, Food Science, Guelph, ON, Canada

P1-92  Development of Random Genomic DNA Microarray Chip for the Detection of Foodborne Pathogens — JIHYUN BANG, Hoikyung Kim and Jee-Hoon Ryu, Korea University, Graduate School of Life Sciences and Biotechnology, Seoul 136-791, Korea, South

P1-93  Microbiological Safety during Cold Delivery of Food Ingredients Supplied to Elementary School Food Services in Korea — YUN-HWA KIM, Kyung Ryu and Yeon-Kyung Lee, Kyungpook National University, Food Science and Nutrition, Daegu, Korea, South

P1-94  Organizational Factors Influencing Employees to Follow Food Safety Practices — BRITA BALL, Anne Wilcock and May Aung, University of Guelph, Food Science, Guelph, ON, Canada

P1-95  Handwashing Behavior in Foodservice: Development of a Research Instrument — MARGARET BINLEY, Patrarapong Burusnukul, Shelley Harp and Dan Henroid, The Ohio State University, Nutrition and Food Sciences, Logan, UT, USA

P1-96  Implementation and Efficacy of Self Audits, Community Engagement and Food Safety Employee Training in Minneapolis Food Service Establishments — KENDRA K. KAUPPI, G. Fardowza Omar, Claudia Diez, Tim Jenkins, Curt Fernandez and Joellen M. Feirtag, University of Minnesota, Food Services in Korea — YUN-HWA KIM, Kyung Ryu and Yeon-Kyung Lee, Kyungpook National University, Food Science and Nutrition, Daegu, Korea, South

P1-97  Assessing the Training Resource Needs of Retail and Food Service Professionals — ANGELA FRASER, BRIAN A. NUMMER, John Marcy, Richard H. Linton and Donald Schaffner, Utah State University, Nutrition and Food Sciences, Logan, UT, USA

P1-98  Outreach Program to Provide Food Safety Education to Volunteer Food Handlers at Large Church-related Community Food Events — KAREN EVERSTINE, Lou Ann Jopp, Deborah Durkin and Kirk Smith, Minnesota Dept. of Health, Acute Disease Investigation and Control, St. Paul, MN, USA
<table>
<thead>
<tr>
<th>Posters</th>
<th>Title</th>
<th>Authors</th>
</tr>
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<tbody>
<tr>
<td>P1-99</td>
<td>Understanding Food Safety Situation Pertaining to Asian and Hispanic Restaurants</td>
<td>AMARAT SIMONNE and Mark Brennan, University of Florida, Dept. of Family, Youth, and Community Sciences, Gainesville, FL, USA</td>
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<tr>
<td>P1-100</td>
<td>Food Safety Training Priorities for Evacuation Shelters Operated by Faith-based Organizations: An Expert Survey Using Discrete Selections</td>
<td>JUNEHEE KWON, Dojin Ryu, Lisa Zottarelli and Sockju Kwon, Kansas State University, Hospitality Management and Dietsetics, Manhattan, KS, USA</td>
</tr>
<tr>
<td>P1-101</td>
<td>A New Internet Training Course on Current Good Manufacturing Practices (GMPs)</td>
<td>KEN GALL, Doris Hicks, Lori Pivarnik, Debra DeVlieger, Mike Jahncke, Abigail Villalba, Barry Nash, Dave Green, Steve Otwell and Victor Garrido, Cornell University, Stony Brook, NY, USA</td>
</tr>
<tr>
<td>P1-102</td>
<td>Impact of Education on Food Selection, Storage and Handling Practices of Rural Families</td>
<td>MARY H. SCHROEDER, Patricia A. Kendall, Mawill Rodriguez-Marval, John N. Sofos, Jeffrey LeJeune and Lydia C. Medeiros, Colorado State University, Food Science &amp; Nutrition, Fort Collins, CO, USA</td>
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<tr>
<td>P1-103</td>
<td>Content Development for an Educational Workshop on Pre-harvest Food Safety Targeting Beef Feedlot Managers</td>
<td>MARK RUSSELL, Todd M. Brashears, Guy Loneragan, Mark Miller and Mindy Brashears, Texas Tech University, Agricultural Education and Communications, Lubbock, TX, USA</td>
</tr>
<tr>
<td>P1-104</td>
<td>Developing and Implementing a College-level Course in Home Food Preservation</td>
<td>ELIZABETH L. ANDRESS, Elaine M. D’Sa, Judy A. Harrison and Mark A. Harrison, University of Georgia, Foods and Nutrition, Athens, GA, USA</td>
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<td>P1-105</td>
<td>Development and Validation of an Instrument to Assess Food Safety Knowledge and Behavior among Low Income Pregnant Women</td>
<td>Kristen Frey, Robert L. Scharff, Susan Baker, Jeffery LeJeune, John N. Sofos, Lydia C. Medeiros and PATRICIA KENDALL, Colorado State University, Food Science and Human Nutrition, Fort Collins, CO, USA</td>
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<td>P1-106</td>
<td>Assessing the Potential for Cross Contamination in Home Kitchens when Preparing a Meatloaf</td>
<td>SANDRIA GODWIN, Fur-chi Chen and Agnes Kilonzo-Nthenge, Tennessee State University, Family and Consumer Sciences, Nashville, TN, USA</td>
</tr>
<tr>
<td>P1-107</td>
<td>Consumers and Food Recalls: What Does the Public Want to Hear?</td>
<td>WILLIAM K. HALLMAN, Cara L. Cuite, Mary L. Nucci and Neal H. Hooker, Rutgers University, Food Policy Institute, New Brunswick, NJ, USA</td>
</tr>
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<td>P1-108</td>
<td>Education Influences Food Safety Knowledge and Behavior of Pregnant, Low-income English- and Spanish-speaking Women</td>
<td>Robert Scharff, Patricia Kendall, John Sofos, Jeffrey LeJeune, Susan Baker and LYDIA C. MEDEIROS, The Ohio State University, Human Nutrition, Columbus, OH, USA</td>
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<tr>
<td>P1-109</td>
<td>Agrosecurity Awareness Curriculum Design and Training of First Responders to Agricultural and Food Emergencies</td>
<td>JUDY A. HARRISON and Robert D. Hamilton, University of Georgia, Dept. of Foods and Nutrition, Athens, GA, USA</td>
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<tr>
<td>P1-110</td>
<td>Educating Health Care Professionals about <em>Vibrio vulnificus</em> Infection</td>
<td>TORI L. STIVERS, University of Georgia, Marine Extension Service, Peachtree City, GA, USA</td>
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**MONDAY AFTERNOON**

**JULY 13**

**S5** Pathogen and Spoilage Persistence in the Processing Environment and Food Products: Where, Why and How Do We Know

*Grapevine C*

Organizer: ILSI North America
Convenor: Peter Gerner-Smidt

1:30 Microbial Persistence and Factors Affecting It – An Overview — R. B. TOMPKIN, Retired-ConAgra Foods, LaGrange, IL, USA

2:00 *Listeria monocytogenes*: Molecular Ecology and Persistence — KENDRA K. NIGHTINGALE, Dept. of Animal Sciences, Colorado State University, Fort Collins, CO, USA

2:30 *Salmonella* Persistence in Primary Production: The Example of Tomato-associated *Salmonella* in Virginia — THOMAS A. HILL, FDA, College Park, MD, USA

3:00 Break

3:30 The Role of Pathogen Persistence in Foodborne Disease Outbreak — ROBERT TAUXE, CDC, Atlanta, GA, USA

4:00 Persistence of Spoilage Microorganisms — SUSAN M. FREUND, Kraft Foods, Glenview, IL, USA

4:30 Regulatory Implications of Persistence in the Processing Environment, the Product, and Primary Production — DON L. ZINK, CFSAN, FDA, College Park, MD, USA

**Special The War on Water: Cleaning for Processors of Low A Food**

*Grapevine A*

Organizer: Dale Grinstead
Convenor: Dale Grinstead

1:30 Do’s and Don’ts of Evicting Unwanted Residents – Getting Rid of *Salmonella, Listeria*, and Other Bad Characters from Dry Clean Environments — JEFF KORNACKI, Kornacki Microbiology Solutions, McFarland, WI, USA

2:00 Validation of Allergen Removal — JOE STOUT, Kraft Foods, Inc., Glenview, IL, USA

2:30 Dry Cleaning of Powders Products — PHIL WOLFF, USDA, Washington, D.C., USA

3:00 Break

3:30 Dry Cleaning in Bakers and Cereal Processing — SUZANNE TORTORELLI, Campbell's Soup, Camden, NJ, USA and KELLY STEVENS, General Mills, Minneapolis, MN, USA

4:00 Dry Cleaning in Peanut/Nut Operations — LINDA HARRIS, University of California-Davis, Davis, CA, USA

4:30 Panel Discussion

**S6** Zapped! Optimizing the Consumer Experience of Microwave Cooking through Labeling, Infrared Thermography, and Validation

*Grapevine D*

Organizers: Joan Menke-Schaenzer and Steve Vlock
Convenors: Joan Menke-Schaenzer and Steve Vlock

1:30 Tangible Progress on Microwave Food Safety: Voluntary Labeling of Wattage on Microwave Ovens and Food Product Directions — JULIE ZIMMERMAN, Target Owned Brand Foods, Minneapolis, MN, USA

2:00 Thermal Imaging for Microwave Heating – An Aid to Optimizing and Validating Microwave Products — GREG HOOPER, Department of Food Manufacturing Technologies, Campden BRI, England, UK

2:30 Creating a Microwave Validation Lab – Factors to Consider — STEVE VLOCK, ConAgra Foods, Omaha, NE, USA

3:00 The Frozen Food Industry’s Response to Microwave Oven Safety — ROBERT L. GARFIELD, American Frozen Food Institute, McLean, VA, USA

**S7** *Listeria monocytogenes* Controls from Local to Global – Are They Working?

*Grapevine D*

Sponsored by the IAFP Foundation
Organizer: Yvonne Chan
Convenors: Yvonne Chan and Jessica Corron

3:30 *Listeria* Prevention Practices at Small Farmstead Operations — LISBETH MEUNIER-GODDIK, Oregon State University, Corvallis, OR, USA

3:50 Overview of FDA Draft Document Guidelines for the Control of *Listeria monocytogenes* in Refrigerated or Frozen Ready-to-Eat Foods — MARY LOSIKOFF, CFSAN-FDA, College Park, MD, USA

4:10 New *Listeria* CFIS Controls and Health Canada Policy — JEFFREY M. FARBER, Health Canada, Ottawa, ON, Canada

4:30 Codex *Listeria* Standards for Ready-to-Eat Foods — MARTIN B. COLE, Illinois Institute for Technology, Summit-Argo, IL, USA

**S8** The Effect of Climate Change on Food Availability and Safety

*Grapevine B*

Organizers: Judy Greig, Sherri McGarry and Ewen Todd
Convenors: Judy Greig, Sherri McGarry and Ewen Todd

1:30 Overview: the Effects of Climate Change on Food Safety – RENATA CLARK, Food and Agriculture Organization, Rome, Italy

2:00 Effects of Climate Change on Bacterial Pathogens — ANGELO DEPAOLA, FDA, Dauphin Island, LA, USA

Program Book — 9
2:30 How We Expect More Harmful Algal Blooms – STEPHANIE MOORE, School of Oceanography, University of Washington, Seattle, WA, USA

3:00 Our Food Plants – How Hotter and Wetter Conditions Produce Mycotoxins and Fungal Growth – MARK A. MOORMAN, Kellogg Company, Battle Creek, MI, USA

S9 Tracking and Tracing Technologies – Do You Know Where Your Steak and Tomatoes Come From?
Grapevine B
Organizers: Judy Greig, Gale Prince and Ewen Todd
Convenors: Judy Greig, Gale Prince and Ewen Todd

3:30 Learning from Traceability Technologies — GALE PRINCE, Retired, Cincinnati, OH, USA

3:50 RFID and Barcodes – Using Electronic Universal Tracking Systems – Global Trade Item Numbers — STEVE ARENS, GTIN Industry, Princeton Pike Corporate Center, Lawrenceville, NJ, USA

4:10 Outbreaks Involving Produce – Early Detection and the Challenges It Presents to Traceability — DAN VACHÉ, United Fresh Produce Association, Redmond, WA, USA

4:30 Panel Discussion

S10 International Food Protection Issues: Overview and Global Commodity Trade
Grapevine 1-2
Organizers: Jeffrey Farber, Kathleen Lawlor, Mangesh Palekar and Isabel Walls
Convenors: Kathleen Lawlor and Isabel Walls

1:30 Overview of International Food Protection Issues — PETER K. BEN EMBAREK, WHO, Geneva, Switzerland

2:00 Global Harmonization of Standards — FRANK YIANNAS, Walmart, Bentonville, AR, USA

2:30 Global Ingredient Supply Chain Risk Assessment — LARRY KEENER, International Product Safety Consultants, Seattle, WA, USA

3:00 Break

3:30 Specifications, Authenticity, and Quality Expectations — MALUWA BEHRINGER, Kraft Foods, Inc., Glenview, IL, USA

4:00 Role of Brokers in Procuring Ingredients and Ensuring Food Safety — JOHN FERREIRO, Ferreiro & Company, Coral Gables, FL, USA

4:30 Food Protection Regulatory Tools: International Approaches and Future Needs — ROBERT L. BUCHANAN, University of Maryland, College Park, MD, USA

T2 Antimicrobial, Seafood, and Non-microbial Food Safety Technical Session
Grapevine 3-4
Convenors: Alex Brandt and Paw Dalgaard

T2-01 Inactivation of Listeria monocytogenes on Hams by Lauric Arginate Shortly after Vacuum-packaging — PETER J. TAORMINA and Warren Dorsa, John Morrell & Co., Cincinnati, OH, USA

T2-02 Short-term Bacteriocidal Efficacy of Lauric Arginate toward Listeria monocytogenes Present on the Surface of Frankfurters — PETER J. TAORMINA and Warren Dorsa, John Morrell & Co., Cincinnati, OH, USA

T2-03 In vitro Inhibition of Listeria monocytogenes

2:00 Exposed to Octanoic Acid and Acidic Calcium Sulfate Alone and in Combination — ALEX L. BRANDT, Margaret D. Hardin, Alejandro Castillo, Kerri B. Harris, Jimmy T. Keeton and T. Matthew Taylor, Texas A&M University, Dept. of Animal Science, College Station, TX, USA

T2-04 The Effect of Gaseous Ozone on the Survival of Surface Attached Environmental Listeria monocytogenes Serotype 1/2a — REBECCA BROWN, Louise M. Fielding and Arthur Tatham, UWIC, Cardiff School of Health Sciences, Cardiff, United Kingdom

T2-05 Contrast in the Antibiotic-resistance Profiles of Campylobacter Isolates Originating from Different Poultry Production Facilities (Broiler Breeder Hens, Broilers, and Leghorn Hens) in the Same Geographical Region — PAULA J. FEDORKA-CRAY, L. Jason Richardson, Jodie R. Plumblee, Nelson A. Cox and R. Jeff Buhr, USDA-ARS-RRC, Athens, GA, USA

T2-06 Inactivation of Surface-attached and Tissue Infiltrated Escherichia coli O157:H7 on Lettuce and Spinach Using Allyl Isothiocyanate, Carvacrol and Cinnamaldehyde in Vapor Phase — MOHAMMAD M. OBAIDAT and Joe F. Frank, University of Georgia, Food Science, Athens, GA, USA

T2-07 Withdrawn

T2-08 SaniTwice™: A Hand Hygiene Solution for Food Handlers when Water is Unavailable — Sarah L. Edmonds, Cara A. Bondi, Robert McCormack, David R. Macinga, James W. Arbogast, Jim Mann and MICHAEL J. DOLAN, GOJO Industries, Inc., Akron, OH, USA

T2-09 Interaction between Histamine-producing Bacteria and Prediction of Biogenic Amine Formation in Seafood — PAW DALGAARD, Lise Jakobsen and Jette Emborg, Technical University of Denmark, Kongens Lyngby, Denmark

T2-10 Use of Edible Coatings Containing Organic Salts to Control Listeria monocytogenes on Cold-smoked Salmon Slices and Fillets — HUDAA S. NEETOY, Mu Ye and Haiqiang Chen, University of Delaware, Animal and Food Sciences, Newark, DE, USA
T2-11  Science-based Retail Food Process Development — OSCAR P. SNYDER, Hospitality Institute of Technology & Management, St. Paul, MN, USA

T2-12  Incidence of Melamine in Milk Powder and Infant Formula Sold on the East African Market — DAGMAR SCHODER, Abdoulla Zangana and Benedict Lema, University of Veterinary Medicine, Dept. of Veterinary Public Health, Vienna, Austria

T3  Applied Laboratory Methods Technical Session

**Grapevine 5-6**

**Convenors: Shu Chen and Feifei Han**

T3-01  Comparison of Different Pre-enrichment Strategies for the Recovery of *Salmonella* from Internally Contaminated Red Round Tomatoes — MINDI D. RUSSELL, Andrew P. Jacobson and Thomas S. Hammack, FDA/CFSAN, College Park, MD, USA

T3-02  Rapid Detection of *Salmonella* Typhimurium from Spiked Lettuce and Tomatoes Using Real-time Reverse Transcriptase-polymerase Chain Reaction — NATHAN MILLER, P. Michael Davidson and Doris H. D’Souza, University of Tennessee, Food Science & Technology, Knoxville, TN, USA

T3-03  Development of Quantitative Real-time PCR Method for the Detection and Characterization of Toxigenic *Clostridium difficile* — DEENA BERMUDEZ and Siddhartha Thakur, NCSU, Population Health and Pathobiology, Raleigh, NC, USA

T3-04  ISO 16140 Validation of a Real-time PCR Method for the Simultaneous Detection of *Escherichia coli* O157:H7 and *Salmonella* spp. in Beef in 10 Hours — PATRICE CHABLAIN and Sylvie Hallier-Soulier, Pall GeneSystems, Bruz, France

T3-05  Independent Laboratory Evaluation of a Real-time PCR Test for Detection of *Listeria* spp. in Selected Foods from a Single Primary Enrichment — LESLIE K. THOMPSON, Brian Kupski, Jeanette Franklin, Ken Williams and Stephanie Sowell, Silliker, Inc., Food Science Center, South Holland, IL, USA

T3-06  Statistical Data Analysis of Real-time PCR Results Derived from Single Copy Amplification — PETER DSC ROSSMANITH and Martin Wagner, University of Veterinary Medicine Vienna, Dept. of Veterinary Public Health and Food Science, Vienna, Austria

3:00  Break

T3-07  Evaluation of Multiple-locus Variable Number of Tandem Repeat Analysis (MLVA) to Subtype *Listeria monocytogenes* Directly in Food Samples — SHU CHEN, Jiping Li and Joseph Odumeru, University of Guelph, Laboratory Services, Guelph, ON, Canada

T3-08  A Real-time Loop-mediated Isothermal Amplification Assay for the Detection and Quantification of *Vibrio vulnificus* — FEIFEI HAN and Beilei Ge, Louisiana State University, Dept. of Food Science, Baton Rouge, LA, USA

T3-09  Inactivation of Shiga Toxin from *Escherichia coli* O157:H7 by Food-compatible Plant Compounds — BEATRIZ QUINONES, Shane Massey, Mendel Friedman, Michelle S. Swimley and Ken Teter, USDA-ARS-WRRC, Produce Safety and Microbiology, Albany, CA, USA

T3-10  Effect of Pre-treatment and Post-treatment of Centrifugal Ultrafiltration Device on the Recovery of F-RNA Coliphage MS2 — TINEKE H. JONES and Michael W. Johns, Agriculture and Agri-Food Canada, Lacombe, AB, Canada

T3-11  Evaluation of VIDAS® Recombinant Phage Protein Technology for Detection of *Escherichia coli* O157:H7 in Produce and Spent Irrigation Water — LESLIE K. THOMPSON, Brian Kupski, Ken Williams, Stephanie Sowell, Ronita Greene and Patrick Schreiber, Silliker, Inc., Food Science Center, South Holland, IL, USA

T3-12  Phenotype Independent Target Concentration for Detection of Pathogenic Bacteria in Meats — FRANK R. BURNS and Lois C. Fleck, DuPont Qualicon, Wilmington, DE, USA
S11 Foodborne Disease Outbreak Update: *Campylobacter* in Fresh Peas; *Salmonella Schwarzengrund* in Pet Food; *Salmonella Saintpaul* in Tomatoes/Peppers
Grapevine C

Sponsored by the IAFP Foundation
Organizer: Jack Guzewich
Convenor: Jack Guzewich

8:30 *Salmonella Schwarzengrund* in Pet Food Outbreak — CASEY BARTON BEHRAVESH, CDC, Atlanta, GA, USA

9:00 FDA Investigation and Response to the Pet Food Outbreak — DANIEL MCCHESNEY, FDA, Rockville, MD, USA

9:30 Epidemiologic and Environmental Investigation: *Campylobacter* in Fresh Peas — TRACIE GARDNER, Alaska Dept. of Health and Social Services, Anchorage, AK, USA

10:00 Break

10:30 Laboratory Investigation: *Campylobacter* in Fresh Peas — COLLETTE FITZGERALD, CDC, Atlanta, GA, USA

11:00 *Salmonella Saintpaul* in Tomatoes/Peppers: Epidemiology Lessons Learned — IAN WILLIAMS, CDC, Atlanta, GA, USA

11:30 *Salmonella Saintpaul* in Tomatoes/Peppers: Environmental Investigation Lessons Learned — SHERRI A. MCGARRY, FDA, College Park, MD, USA

S12 Attribution of Foodborne Illness/Disease
Grapevine D

Sponsored by ILSI North America Technical Committee on Food Microbiology
Organizer: ILSI North America
Convenor: Peter Gerner-Smidt

8:30 Burden of Foodborne Illness in the United States — FREDERICK J. ANGULO, CDC, Atlanta, GA, USA

9:00 Attributing Foodborne Illness to Specific Sources – The Danish Experience — SARA M. PIRES, Dept. of Microbiology and Risk Assessment, National Food Institute/Technical University of Denmark, Soborg, Denmark

9:30 Attribution of Foodborne Illnesses, Hospitalizations, and Deaths to Food Commodities in the United States Using Outbreak Data — TRACY AYERS, CDC, Atlanta, GA, USA

10:00 Break

10:30 American Attribution Effort Using the Danish Model — CARL M. SCHROEDER, FSIS, USDA, Washington, D.C., USA

11:00 Attribution of Foodborne Illness – The Industry Perspective — ROBERT E. BRACKETT, Grocery Manufacturers Association, Washington, D.C., USA

11:30 Panel Discussion

S13 Best Practices for Cleaning and Validation
Grapevine A

Organizer: Ken Davenport, T. J. Fu and Lauren Jackson
Convenors: Christopher Griffith and Purnendu Vasavada

8:30 The Importance and Management of Cleaning Programmes — CHRISTOPHER J. GRIFFITH, University of Wales, Cardiff, United Kingdom

9:00 What is Clean and How to Get There — DALE GRINSTEAD, Johnson Diversey, Sturtevan, WI, USA

9:30 Keys to Successful Cleaning Verification Program Using ATP — KEN DAVENPORT, 3M, St. Paul, MN, USA

10:00 Break

10:30 Allergen Cleaning Overview — MARK A. DOMANICO, Kellogg, Battle Creek, MI, USA

11:00 Dry Cleaning Methods for Allergen Control — JOE STOUT, Kraft, Northfield, IL, USA

11:30 Surface Allergen Testing Methods — LAUREN JACKSON, National Center for Food Safety and Technology, FDA, Summit-Argo, IL, USA

S14 Enhancing Oyster Safety through *Vibrio* Control Plans
Grapevine B

Organizers: Angelo dePaola and Marlene Janes
Convenors: Stephenie Drake and Marlene Janes

8:30 Perspective from Retailers: Have They Met Regulations for *Vibrio vulnificus* and *Vibrio parahaemolyticus* — PETER HIBBARD, RL Suncoast Division, Darden Restaurants Inc., Orlando, FL, USA

8:50 Perspective from State Regulators and How It Will Affect International Trade — MARYANNE GUICHARD, Division of Environmental Health, Dept. of Health, Tumwater, WA, USA

9:10 How We Got Here with Regulations of *Vibrio vulnificus* and *Vibrio parahaemolyticus* and Risk Calculator — ANGELO DEPAOLA, FDA Gulf Coast Seafood Laboratory, Dauphin Island, AL, USA

9:30 Prospective from Harveister/Processor — MIKE VOISIN, Motivated Seafoods, Houma, LA, USA

S15 Less Recognized and Underappreciated Foodborne Pathogens – No Crystal Ball for the Next Big Bug
Grapevine 1-2

Sponsored by the IAFP Foundation
Organizers: Joshua Kurtler, Jeffrey Kornacki, Elliot Ryser and Manan Sharma
Convenors: Joshua Kurtler, Jeffrey Kornacki, Elliot Ryser and Manan Sharma

8:30 Overview of Emerging, Obscure and Less-well Recognized Foodborne Pathogens: Should We Lose Sleep? — ROBERT TAUXE, CDC, Atlanta, GA, USA
9:00 Some Reclusive Gram-positive Spore Formers (Less Recognized Bacillus and Clostridium) — ERIC A. JOHNSON, Dept. of Bacteriology, University of Wisconsin, Madison, WI, USA

9:30 Don't Forget the Little Folks: Lesser Known Foodborne Viruses and Parasites — KALMIA E. KNIEL, University of Delaware, Newark, DE, USA

10:00 Break

10:30 Potpourri of Peculiar Pathogens Following Natural Disasters — MARK D. SOBESEY, Dept. of Environmental Sciences and Engineering, University of North Carolina-Chapel Hill, Chapel Hill, NC, USA

11:00 Mycobacterium avium subsp. paratuberculosis: Implications for Your Intestines — MICHAEL T. COLLINS, School of Veterinary Medicine, University of Wisconsin, Madison, WI, USA

11:30 Technologies to Identify Potential Foodborne Pathogens: The Use of Metagenomics and Pyrosequencing in Food Matrices — SURESH D. PILLAI, Texas A&M University, College Station, TX, USA

T4 Education and Novel Laboratory Methods Technical Session
Grapevine 3-4

Convenors: Junehee Kwon and Chayapa Techathuvanan


T4-02 Using Stakeholder Input to Define Knowledge Areas Needed for a Curriculum in Food Protection and Food Defense — ABBEY NUTSCH, Richard Linton, David McSwane, Kelly Getty, Dirk Maier, Justin Kastner, Curtis Kastner, William Field and Clifford Racz, Kansas State University, Food Science Institute, Manhattan, KS, USA

T4-03 Self-reported Adoption of Food Safety Habits after Completing a Certified Food Manager Course: Does Education, Years of Foodservice Experience or Job Responsibility Make a Difference? — Jenna Anding, REBECCA DITTMAR and Chris Boleman, Texas A&M University, College Station, TX, USA

T4-04 The Economic Cost of Health Losses from Foodborne Illness — ROBERT SCHARFF and Lydia Medeiros, Ohio State University, Consumer Sciences, Columbus, OH, USA

T4-05 Food Safety Training Need Assessment for Independent Ethnic Restaurants: Review of Health Inspection Data in Kansas — JUNEHEE KWON, Kevin R. Roberts, Carol W. Shanklin, Pei Liu and Wen S. F. Yen, Kansas State University, Hospitality Management and Dietetics, Manhattan, KS, USA

T4-06 Application of Ionic Liquids for Separation and Concentration of Foodborne Pathogens from Food for Subsequent Molecular or Cultural Quantification Methods — PATRICK MESTER, Barbara Röder, Eva Mayr, Stephan Huehn, Martin Wagner and Peter Rossmanith, University of Veterinary Medicine Vienna, Dept. of Veterinary Public Health and Food Science, Vienna, Austria

10:00 Break

T4-07 A Novel, Automated, Large Volume Re-circulating IMS Sample Processing Device for Rapid Isolation of Specific Pathogens from Pre-enriched Pooled Food Samples — Nicole Prentice, John Murray, Katarzyna Brzezowa, Paul M. Benton, Brooke V. Houston, Michael F. Scott, Christine M. Aleski, Marcie Van Vart and ADRIAN PARTON, MATRIX MicroScience Ltd., Cambridgeshire, United Kingdom

T4-08 Evaluation of PremiTest Salmonella for Rapid Serotyping of Salmonella Strains Isolated from Broiler Farms in Southern Brazil — Joao Paulo Zuffo, PRISCILLA KARINA V. KOERICH, Alceu Marafon and Ron van Santen, Perdigao Agroindustrial S.A., Laboratorio Patologia Animal, Videira, Brazil

T4-09 Efficient Method for Developing Group-specific Primers for Feed Inspection, with Eight Examples of Species/Breed Group — NAOKI SHINODA, Takashi Onodera and Katsuaki Sugira, Food and Agricultural Materials Inspection Center, Fertilizer and Feed Inspection, Saitama-shi, Japan

T4-10 Comparison of Reverse-transcriptase Loop mediated Isothermal Amplification (RT-LAMP) to RT-PCR and Cultural Methods for the Detection of Salmonella Typhimurium in Pork — CHAYAPA TECHATHUVANAN, Frances A. Draughon and Doris H. D’Souza, University of Tennessee, Food Science & Technology, Knoxville, TN, USA

T5 Produce Technical Session
Grapevine 5-6

Convenors: Annemarie Buchholz and Jie Wei

T5-01 Internalization of Escherichia coli O157:H7 in Spinach Cultivated in Soil and Hydroponic Media — MANAN SHARMA, David T. Ingram, Jitendra R. Patel, Patricia D. Millner, Xiaolin Wang, Anne Hull and Michael Donnenberg, Environmental Microbial and Food Safety Laboratory, USDA-ARS, Beltsville, MD, USA

T5-02 Attachment of Salmonella spp. to Intact and Cut Produce Surfaces — JITU PATEL, Katherine Hopkins and Ernie Paroczay, USDA-ARS, Beltsville, MD, USA

T5-03 Effect of Fresh Produce Crop Residue on the Survival of Escherichia coli O157:H7 in Soil — XIANGW NOU, Patricia Millner, Jitu Patel, Manan Sharma and David Ingram, USDA-ARS BARC, EMFLS, Beltsville, MD, USA

16 — IAFP 2009 Program
POSTERS 10:00 a.m. – 6:00 p.m.

P2 Risk Assessment, Novel Laboratory Methods, Toxicology, Beverages and Water, Sanitation, and Microbial Spoilage Poster Session

Exhibit Hall

Authors with Even-numbered Posters present 10:00 a.m. – 12:00 p.m.
Authors with Odd-numbered Posters present 3:00 p.m. – 5:00 p.m.

Convenors: Gerardo Guzman-Gomez and Ravirajsinh Jadeja

P2-01 Establishing and Improving Process Variation in Quantitative Microbiology with Statistical Process Control Charting — LINDA M. SMOOT, Peter Lowe, Stefano Colombo and David Evanson, Silliker, Inc., Columbus, OH, USA

P2-02 Evaluation of (TA10) Pathogenic Bacterial Multiplex PCR Detection System for Various Food Samples — SUSUMU KAWASAKI, Naoko Horikoshi, Kazuko Takeshita, Takashi Sameshima, Kaori Kusano, Ritsuko Arai, Yasuhiro Fujita and Shinichi Kawamoto, National Food Research Institute, Japan, Food Hygiene Team, Tsukuba, Japan

P2-03 A Versatile Internal Control for DNA and RNA Real-time PCR Assays — DEANNE M. DEER, Narjol Gonzalez-Escalona, Yi Chen and Keith A. Lampel, FDA-CFSAN, College Park, MD, USA

P2-04 Comparison of 3M™ Petrifilm™ Aerobic Count Plate Results for Raw and Processed Meat Samples after 24 Versus 48-h Incubation — Roseane Machado, CRISTINA F. ABREU, Renata Lima and Adriana Tassinari, 3M Brazil, Microbiology, Sumaré, Brazil

P2-05 Evaluation of Three Methods to Recover Pathogens and Pathogen Surrogates from Whole Muscle Beef Jerky during Drying — SARAH DIERSCHKE, Barbara Ingham and Steve Ingham, University of Wisconsin, Food Science, Madison, WI, USA

P2-06 Evaluation of a Real-time PCR Assay for Detection of Listeria monocytogenes in Combination with New Sample Preparation and Data Analysis Software — ROBERT S. TEBBS, Priya Balachandran, Lily Wong, Paolo Vatta, Maxim G. Brevnov, Manohar R. Furtado and Olga V. Petrauskene, Applied Biosystems, Foster City, CA, USA


P2-09 A New “Next Day” Method for Detection of Listeria monocytogenes in Food — Jean-Michel Pradel, Damien Cote, Vincent Remy and JEAN-LOUIS R. PITTE, bioMérieux, R&D, Marcy L’Etoile, France

P2-10 Rapid and Simultaneous Detection of Salmonella spp. and Listeria monocytogenes in a Poultry Processing Plant by Multiplex-PCR — GERARDO GUZMAN-GOMEZ, Miguel A. Aylas-Valdivinos, Theodor Duifhuis-Rivera and Jorge Galindo-García, Universidad de Guadalajara, Departamento de Producción Animal, CUCBA, Zapopan, Mexico
### P2-11
**Comparison of Two Polymerase Chain Reaction (PCR) Kits and an Immunoassay against ISO 6579 for the Detection of *Salmonella* in Foods** — Rebecca A. Green, Christopher L. Baylis and ROY P. BETTS, Campden BRI, Microbiology, Chipping Campden, United Kingdom

### P2-12
**Comparison of a Standard Culture Method and a Real-time PCR Assay for Detection of *Salmonella* in Foods with Different Levels of Background Flora (Boiled Pork and Broccoli Sprouts)** — JI-YEON HYEON, Jae-Hoon Lee, Jeong-Hwan Cheon, In-Gyun Hwang, Hyo-Sun Kwak and Kun-Ho Seo, Konkuk University, College of Veterinary Medicine, Dept. of Public Health, Seoul, Korea, South

### P2-13
**Washing and Enrichment of Jalapeño Peppers Using Small Volumes of Non-selective Broth Facilitates Rapid Cytometric Detection of *Salmonella* Saintpaul** — BLEDAR BISHA and TSUYOSHI YAMAMOTO, New Mexico State University, Food Safety Laboratory, Las Cruces, NM, USA

### P2-14
**Evaluation of PCR Detection of *Salmonella* in Alfalfa Sprouts and Spent Irrigation Water Collected during Sprouting of Naturally Contaminated Seeds** — NICOLE D. MAKs and JONH-JEN Fu, National Center for Food Safety and Technology/Illinois Institute of Technology, Summit-Argo, IL, USA

### P2-15
**Comparison of Commercial RNA Extraction Kits for Preparation of DNA-free Total RNA from *Salmonella* Cells** — NARJOL GONZALEZ-ESCALONA and Benedicta Asamoah, CFSAN/FDA, College Park, MD, USA

### P2-16
**Assessment of Rapid Pathogen Detection Kits for *Salmonella* on Melons for Test to Release Programs** — PAULA MARTINS DE FREITAS, Carol D’Lima and Trevor Susslow, University of California, Plant Sciences, Davis, CA, USA

### P2-17

### P2-18
**A Comparative Evaluation of the VIDAS® Easy *Salmonella* Assay for the Detection of *Salmonella* in Food and Poultry Rinse** — ERIN S. CROWLEY, Patrick Bird, Marianne Torontali, Katherine Goetz, James Agin, David Goins, Ray Turnley and Ronald Johnson, Q Laboratories, Inc., Microbiology R&D, Cincinnati, OH, USA

### P2-19
**Compositing Produce Rinse Samples for Increased Throughput for Real-time PCR Detection and Recovery of *Salmonella* and *Escherichia coli* O157:H7 in Artificially Contaminated Produce** — STEPHEN D. WEAGANT, Ken J. YOSHITOMI, Karen C. JINNEMAN, CHONG-MING CHENG, RUBEN ZAPATA, PAUL BROWNING and WILLIS M. FEDIO, New Mexico State University, Food Safety Laboratory, Las Cruces, NM, USA

### P2-20
**Testing for *Salmonella* and *E. coli* O157:H7 from a Single 8-h Enrichment** — XUAN PENG, Morgan Wallace, Dawn Fallon, Bridget Andaloro, Lois Fleck, Lihong Wu, Dan Delduco and George Tice DuPont Qualicon, R&D, Wilmington, DE, USA

### P2-21

### P2-22
**Detection of *Escherichia coli* O157:H7 in Alfalfa Sprouts by Real-time PCR Combined with Immunomagnetic Separation with and without an Acid Treatment** — RUBEN ZAPATA, KAREN C. JINNEMAN, KEN J. YOSHITOMI, STEPHEN D. WEAGANT, PAUL BROWNING and WILLIS M. FEDIO, New Mexico State University, Food Safety Laboratory, Las Cruces, NM, USA

### P2-23
**Development and Characterization of Monoclonal Antibody Specific for *Escherichia coli* O157:H7** — HEE J. RYU, Won B. SHIM, Jung S. Kim, Kyeongyole Kim, Namsoo Kim, Yong J. Cho and DUCK H. CHUNG, Gyeongsang National University, Division of Applied Life Science (BK 21 program), Jinju, South Korea

### P2-24
**RapidChek® SELECT™ *E. coli* O157 Test System for the Detection of *Escherichia coli* O157 in Meat Products** — MEREDITH SUTZKO and ANNE-PASCALE Le FOLL, Strategic Diagnostics, Newark, DE, USA

### P2-25
**Validation of the Reveal® 8-hour and 20-hour Methods for Detection of *Escherichia coli* O157:H7 in 375-g Beef Samples** — SUSAN ALLES, JUSTINA KENNEDY, ALICIA RIDER, MICHAEL WENDORF and MARK A. MOZOLA, Neogen Corporation, Lansing, MI, USA

### P2-26
**A New Immunoassay Method for the Simultaneous Detection of *Escherichia coli* O26, *Escherichia coli* O111 and *Escherichia coli* O157:H7** — CECILE SAUVAN, JEAN-Michel PRADEL, CHRISTINE AGUILLON and JEAN-LOUIS R. PITTEt, bioMérieux, R&D, Marcy l’Etoile, France

### P2-27
**Prevalence of Shiga-toxin Producing *Escherichia coli* (STEC) in Edible By-products of Cattle Using Multiplex Real-time PCR** — JAE-HOON LEE, JI-YeON HYEON, Jeong-Hwan Cheon, Kwang-Young Song, Hyo-Sun Kwak, In-Gyun Hwang and Kun-Ho Seo, Konkuk University, College of Veterinary Medicine, Dept. of Public Health, Gwangjin-gu, Korea, South

### P2-28
**Reclassification of ATCC® 49444™ from *Staphylococcus aureus* to *Staphylococcus pseudintermedius*** — KIMBERLY J. RAMSEY, Erin C. CLEVELAND, MARILYN M. MCKEE and BRIAN J. BECK, ATCC, Bacteriology, Manassas, VA, USA
P2-29 Evaluation of the TEMPO® STA Method for the Enumeration of Staphylococcus aureus in Foods — JOHN C. MILLS, Judith Colón-Reveles, Ronald Johnson and Gregory Devulder, bioMérieux, Inc., Hazelwood, MO, USA


P2-31 Comparison of Conventional Culture Method and Real-time PCR for Detection of Staphylococcus aureus in Foods — JAE-HOON LEE, Ji-Yeon Hyeon, Jeong-Hwan Cheon, Yun-Gyeong Kim, Kwang-Young Song, In-Gyun Hwang, Hyo-Sun Kwak and Kun-Ho Seo, Konkuk University, College of Veterinary Medicine, Dept. of Public Health, Gwangjin-gu, Korea, South

P2-32 A toxR-based Loop-mediated Isothermal Amplification Assay for Detecting Vibrio parahe- molyticus — SIY CHEN and Beilei Ge, Louisiana State University, Dept. of Food Science, Baton Rouge, LA, USA

P2-33 Rapid Detection of Vibrio vulnificus in Oysters with Immunomagnetic Separation Real-time PCR Assay — RAVIRAJSINH P. JADEJA, Janet Simonson and Marlene Janes, Louisiana State University, Food Science, Baton Rouge, LA, USA

P2-34 Rapid Capture and Detection of Model Viruses from Large Volumes of Water — TRAVIS STEINER and Lawrence Goodridge, Colorado State University, Animal Science, Fort Collins, CO, USA

P2-35 Evaluation of Repetitive Extragenic Palindromic Sequence-based PCR Typing of Bacillus Species — SARITA RAENGPRADUB and Jacob K. Cannon, Food Science Center, Silliker, Inc., South Holland, IL, USA

P2-36 New Simplified Short Protocol for Rapid Detection of Cronobacter spp. in Powdered Infant Formula, Ingredients and Environmental Samples — ANTOINE VIMONT and Carol Iversen, UCD, Dublin, Ireland

P2-37 Isolation of Yellow-pigmented Enterobacteriaceae from Japanese Style Box-lunch and Misidentification as Enterobacter sakazakii by Several Identification Kits — YUKI KONAGAYA, Nobumasa Tanaka, Sayaka Ito, Satoko Kobashi, Kyoko Sakuma, Takateru Ishimori and Hiroshi Urakami, Niigata University of Pharmacy and Applied Life Sciences, Food Sciences, Niigata-shi, Japan

P2-38 DNA Aptamers with Binding Specificity for Campylobacter jejuni: Application to Pre-analytical Sample Processing — HARI PRAKASH DWIVEDI, Ronald D. Smiley and Lee-Ann Jaykus, North Carolina State University, Raleigh, NC, USA

P2-39 Comparison of Real-time PCR and Conventional Culture Method for Detection of Campylobacter jejuni in Ground Beef and Vegetable Salad — JEONG HWAN CHEON, Ji-Teon Hyeon, Jae-Hoon Lee, Kwang-Young Song, Jong Seok Park, Seok Heo, Se Wook Oh and Kun Ho Seo, Konkuk University, College of Veterinary Medicine, Seoul, Korea, South

P2-40 Immunomagnetic Concentration and Real-time RT-PCR Detection of Norovirus — SOPHIE ROY, Solange E. Ngazoa, Andre Darveau and Julie Jean, Universite Laval, Institute of Nutraceuticals and Functional Foods, Quebec, QC, Canada

P2-41 Rapid Automated Method for the Detection of Yeast and Molds in Cultured Dairy Products — RUTH F. EDEN and Roger Brideau, BioLumix Inc., Ann Arbor, MI, USA

P2-42 Comparison of BACARA™ Agar, a New Chromo- genic Medium, and MYP Agar for the Enumeration of Bacillus cereus in Food Samples — JEROME THEPAUT and Helene Soriano, AES CHEMUNEX, Microbiology R&D Dept., Combourg, France

P2-43 Comparison Study to Demonstrate the Equiva- lence of the SimPlate Total Campylobacter-CI Method to the Reference Culture Method for the Enumeration of Total Campylobacter jejuni and Campylobacter coli in Food — Philip T. Feldsine, Mandeep Kaur and ANDREW H. LIENAU, BioControl Systems Inc., Bellevue, WA, USA


P2-45 Detection of Shiga Toxin-producing Escherichia coli (STEC) with the Assurance GDS for STEC assay — Philip T. Feldsine, Andrew H. Lienau, Markus T. Jucker and DAVID E. KERR, BioControl Systems Inc., Bellevue, WA, USA

P2-46 Development of a Scorpion™ Probe-based Real-time PCR Assay for Genus Salmonella — DANIEL DEMARCO and Stephen Varkey, DuPont Qualicon, Wilmington, DE, USA

P2-47 Monitoring Cryptic Growth of Escherichia coli at 6°C by Transfer to 37°C — VISVALINGAM JAYACHANDRAN, Colin O. Gill and Richard A. Holley, University of Manitoba, Food Science, Winnipeg, MB, Canada

P2-48 Development of a New ComBase-derived Database of Microbial Responses to Food Environments: Microbial Responses Viewer (MRV) — SHIGE KOSEKI, National Food Research Institute, Tsukuba, Japan

P2-49 Generic Modeling Approach for Quantitative Microbial Risk Assessment — THOMAS OSCAR, USDA-ARS, Princess Anne, MD, USA

P2-50 Risk Ranking Tool for Prioritizing Commodity and Pathogen Combinations for Risk Assessment of Fresh Produce — MAREN E. ANDERSON, Lee-Ann Jaykus, Stephen Beaulieu and Sherri Dennis, RTI, International, Environmental, Health and Safety Division, Research Triangle Park, NC, USA
| P2-51 | Validation of Growth Predictive Model for *Staphylococcus aureus* in Ready-to-Eat Foods — KYUNG AH KANG, Kyung Yoon Kwon, Gun Young Lee, In Gyun Hwang, Hyo Sun Kwak and Ki Sun Yoon, Kyunghee Univ., Food and Nutrition, Seoul, Korea, South |
| P2-52 | Predictive Modeling for Growth of *Staphylococcus aureus* on Steamed Soybean Sprouts with Seasoning in School Foodservice Operations — JUNG HWA CHOI, Kyung Ryu, Gyung Jin Bahk and Tong Kyung Kwak, Yonsei University, Food and Nutrition, Seoul, Korea, South |
| P2-53 | Simulation of Factors Important in Norovirus Transmission in Foodservice Systems — DI LI and Donald W. Schaffner, Rutgers University, Ecology, Evolution & Natural Resources, New Brunswick, NJ, USA |
| P2-54 | A Quantitative Risk Assessment Model for *Staphylococcus aureus* in Non-thermal Processed Japanese Foods — HYO-MIN NANG, Seung-won Jung, Seung-ju Lee and Kwang-geun Lee, Dongguk University, Food Science and Technology, Seoul, Korea, South |
| P2-55 | An Evaluation of Food Safety Practices and Customer Perception of Food Safety Standards within Farmers’ Markets in the UK — JACKIE J. EVANS and David C. Lloyd, University of Wales Institute Cardiff, School of Health Sciences, Cardiff, United Kingdom |
| P2-56 | Microbiological Assessment for Development of GAP Model for Soybean Farms — MINJII NAM, Kyeongyeol Kim, Won B. Shim, Yohan Yoon and Duck H. Chung, Gyeongsang National University, Division of Applied Life Science (BK 21 program), Jinju, Korea, South |
| P2-57 | Microbial Analysis to Establish Good Agricultural Practice in Agricultural Products Processing Center for Perilla Leaves — KYEONGYEOLE KIM, Minji Nam, Won B. Shim, Yohan Yoon and Duck H. Chung, Gyeongsang National University, Division of Applied Life Science (BK 21 program), Jinju, Korea, South |
| P2-58 | Comparison of Transfer Rate for *Listeria monocytogenes* on Workers’ Hands and Pork Meat in Pork Processing — GYUNG-JIN BAHK, Deog-Hwan Oh and Chong-Hae Hong, Kunsan National University, Dept. of Food and Nutrition, Gunsan, Korea, South |
| P2-59 | Microbiological Evaluation of Representative Vegetable Dishes in Korea — HYO-MIN NANG, Seung-won Jung, Seung-ju Lee and Kwang-geun Lee, Dongguk University, Food Science and Technology, Seoul, Korea, South |
| P2-60 | Food Safety Knowledge and Behavior of Food Handlers and Assessment of Food Service Premises at UAE University Boy Hostels — AISHA ABUSHELAIBI, Iyad Sadeq and Abdulkader Wasees, United Arab Emirates University, Sharjah, United Arab Emirates |
| P2-61 | Analysis of Microbial Populations Present on Checkstand Conveyor Belts in Grocery Stores — ZHINONG YAN, Susan Vanderploeg and Barry Whitman, Mol Industries, Grand Rapids, MI, USA |
| P2-62 | Frequency of *Salmonella* spp. in Five Commercial Brands of Chicken Eggs Using a Combined Method of Enrichment and Nested-PCR — GERARDO GUZMÁN-GOMEZ, Miguel A. Ayala-Valdovinos, Elisa Cabrera-Diaz, Julia A. Pérez-Montaño and Sandra L. Ruiz-Quezada, Universidad de Guadalajara, Departamento de Farmacobiología, CUCEI, Guadalajara, Mexico |
| P2-63 | Efficiency of Commonly Available Sanitizers and Household Compounds against *Listeria monocytogenes* Biofilms on Food Contact Surfaces with/without Exposure to Nutrients — Sachi Parikh, PATRICIA KENDALL, Hau Yang, Ifigenia Geornaras, Lydia C. Medeiros and John N. Sofos, Colorado State University, Food Science and Human Nutrition, Fort Collins, CO, USA |
| P2-64 | Evaluating Consumer Preparation of Burgers through Video Analysis — HO S. PHANG and Christine M. Bruhn, University of California, Davis, Food Science and Technology, Davis, CA, USA |
| P2-65 | Repeatability Study of ATP Hygiene Monitoring Systems in Sixty-six Food and Beverage Manufacturing Sites in the United States — KEN DAVENPORT, Lisa Ruiz, Amanda Rife and Enrique Morales, 3M Microbiology, St. Paul, MN, USA |
| P2-66 | Removal Effects of Electrolyzed Water against Bacterial Biofilms — KYU-DUCK CHOI, Yaru Quan, Dong-Hwa Chung and Il-Shik Shin, Kangnung National University, Faculty of Marine Bioscience and Technology, Gangneung City, Korea, South |
| P2-67 | Control of *Listeria monocytogenes* on Contact and Non-contact Surfaces by Electrostatic Spraying of Quaternary — ANDREA E. DOW, Christine Alvarado, Mindy Brashears and Pawan Takhar, Texas Tech University, Animal and Food Sciences, Lubbock, TX, USA |
| P2-68 | Reduction of *Salmonella* on Five Different Conveyor Belts during Continuous Spray Sanitizing — ZHINONG YAN, Gordon Davidson, Matthew Steele and Elliot T. Ryser, Michigan State University, East Lansing, MI, USA |
| P2-69 | Decontamination of Red Radish Seeds Artificially Contaminated with *Listeria monocytogenes* — SOYUN JUN and Yeon-Kyung Lee, Kyungpook National University, Food Science & Nutrition, Daegu, Korea, South |
| P2-70 | Protective Effect of *Salicornia herbacea* L. on Acrolein-induced Cytotoxicity Using Human Carcinoma Cells in Vitro — JOON-KYOUNG LEE, Tong Kyung Kwak, Yonsei University, Food and Nutrition, Seoul, Korea, South |
| P2-71 | Establishment and Validation of an Analytical Method for Detection of Zearalenone in Medical Herbs by HPLC — NEEMA KASSIM, Kyeongyeol Kim, Liu Qing, Won B. Shim and Duck H. Chung, Gyeongsang National University, Division of Applied Life Science (BK 21 program), Jinju, Korea, South |
| P2-72 | Study on Control of *Aspergillus* spp. and Aflatoxin B1 in Feed by Gamma Irradiation — BO R. NAM, Won B. Shim, Kyeongyeol Kim, Jae H. Kim, Ju W. Lee, Myung W. Byun and Duck H. Chung, Gyeongsang National University, Division of Applied Life Science (BK 21 program), Jinju, Korea, South
| P2-73 | Comparing the Effectiveness of Vortex™ and Hydrogen Peroxide to Inactivate Bacillus Species Spores Embedded in Food Matrices on Various Food Contact Surfaces — LEI WANG, Claudia Rodriguez, Bharat Aluri, Kerri C. Cooper, Shantala Rani Pamarthi, Peter J. Slade and Alvin Lee, Illinois Institute of Technology, NCFST, Summit Argo, IL, USA
| P2-74 | Barriers to Contamination by Food Workers — EWEN TODD, Judy D. Greig, Charles A. Bartleson and Barry S. Michaels, Michigan State University, Advertising, Public Relations, and Retailing, East Lansing, MI, USA
| P2-75 | Acid Resistance of Biofilm and Planktonic *Lactobacilli* — HIROMI KUBOTA, Shouko Senda, Asako Yoshizumi, Tatsuki Wada, Yutaka Yawata, Hajime Tokuda, Hiroo Uchiyama and Nobuhiko Nomura, Kao Corporation, Safety Science Research Laboratories, Haga, Japan
| P2-76 | Phosphine Fumigation for *Salmonella* Enteritidis Control in Black Pepper (*Piper nigrum*) in Grains — MARIA FERNANDA P. CASTRO, Ana Carolina Rezende, Eliane Benato, Regina Furlani, Silvia Valentini and Silvia Tfouni, Instituto de Tecnologia de Alimentos, Campinas, Brazil
| P2-77 | Adiafood Solution for Pathogen Detection in Less Than 24 Hours — Emmanuel Bertrand, Christian Matte, RICHARD ANTONELLI and Jérôme Thepault, AES Chemunex, Bruz Cedex, France
| P2-78 | Withdrawn
| P2-79 | Removal of Potentially Allergenic Residues from Stainless Steel Surfaces — RENEE M. GOODRICH SCHNEIDER, Yael Spektor, Keith Schneider and Paul Winniczuk, University of Florida, Food Science and Human Nutrition, Gainesville, FL, USA
| P2-80 | Building ISO 22000 Compliant Food Safety Systems — JEFFERY L. CAWLEY, Northwest Analytical, Portland, OR, USA
| P2-81 | Denaturation / Renaturation Kinetics of Staphylococcal Enterotoxin in an Acidulated Food Matrix — REGINALD W. BENNETT and Jennifer M. Hait, Food & Drug Administration, Division of Microbiology, College Park, MD, USA
| P2-82 | Rapid Testing of Non-dairy and Mixed Dairy Beverages Using the 3M Microbial Luminescence System (MLS, formerly Cogent) — KEN DAVENPORT, 3M Microbiology, St. Paul, MN, USA
| P2-83 | Quantitative Risk Assessment for *Salmonella* in Raw, Frozen Chicken Products — SILVIA A. DOMINGUEZ-RISCO and Donald W. Schaffner, Rutgers University, Food Science, New Brunswick, NJ, USA
| P2-84 | Thermal and Chemical Inactivation of Ricin in Orange Juice — NA WANG, Francisco Diez-Gonzalez, Theodore Labuza and Timothy Blasius, University of Minnesota, Food Science and Nutrition, St. Paul, MN, USA
| P2-86 | Determination of Walnut Content in Foods and Environmental Swabs by Enzyme Immunoassay — Warren S. Higgs, Adrian Rogers, Jacqui Couot and RICHARD FIELDER, Tepnel Research Products & Services, Deeside, United Kingdom
| P2-87 | Optimizing Sample Preparation Methods, Monitoring and Risk Assessment of Ethyl Carbamate in Traditional Korean Fermented Foods Using Gas Chromatography/Mass Spectrometry (GC/MS) — HYO SHIN LIM and Kwang Geun Lee, Dongguk University, Food Science and Technology, Seoul, Korea, South
| P2-88 | Comparison of Allergen-specific (ELISA) and Non-specific (Visual Inspection, ATP Swabs, Total Protein Swabs) Methods for the Detection of Soy-based Food Residues — LAUREN JACKSON and Fadwa Al-Taher, Food and Drug Administration, National Center for Food Safety and Technology, Summit-Argo, IL, USA
| P2-89 | Detection and Identification of Psychrotrophic *Clostridium* spp. from Spoiled Vacuum-packaged Fresh Beef — LINDA HO and Lynn M. McMullen, University of Alberta, Agricultural, Food and Nutritional Science, Edmonton, AB, Canada
| P2-90 | Immuno Assay-based Test for the Detection and Quantitation of Soy Protein Contamination of Food Commodities — MOHAMED M. ABOUZIED, Michael E. Sarzynski and Stephen L. Taylor, Neogen Corporation, R & D, Lansing, MI, USA
| P2-91 | A Sensitive, Rapid ELISA Test for the Detection and Quantitation of T-2 and HT-2 Toxins in Grain Commodities — MOHAMED M. ABOUZIED and Aaron M. Walsh, Neogen Corporation, Lansing, MI, USA
| P2-92 | Comparative Study of the Soleri™ Yeast and Mold Test System and Direct Plating for Semi-Quantitative Determination of Yeast and Mold in Foods — Susan Alles, Nabina Shrestha, Amanda Ellsworth, Alicia Rider, Debra Foti, JAKE KNICKERBOCKER and Mark A. Mozola, Neogen Corporation, Lansing, MI, USA
| P2-93 | Isotachophoretic Method for the Concentration and Purification of Proteins and Nucleic Acids from Food Matrices — Alex Proescher and CHARLES YOUNG, JHUAPL, National Security and Technology, Laurel, MD, USA

P2-95 Microbial Contamination of Date Rutab Collected from the Markets of Al-Hofuf City in the Kingdom of Saudi Arabia — SIDDIG H. HAMAD, Farag A. Saleh and Mutlag M. Al. Otaibi, King Faisal University, Food and Nutrition Sciences, Hofuf, Saudi Arabia

P2-96 Evaluation of a Rapid Molecular Subtyping Method for Predicting Salmonella Serotypes — SARITA RAENGPRADUB, Jacob K. Cannon and Mark W. Carter, Food Science Center, Silliker, Inc., South Holland, IL, USA

P2-97 Immunomagnetic Separation of Listeria monocytogenes Using Nanosized Beads — DAMIRA A. KANAYEVA, Ronghui Wang and Yanbin Li, University of Arkansas, Cell and Molecular Biology Program, Fayetteville, AR, USA

P2-98 Susceptibility to Enterobacter sakazakii Changes with Increasing Age in Neonatal Mice — ARENA N. RICHARDSON, Elizabeth A. Pollak, Denita Williams, Kwaku Agyekum and Mary Alice Smith, University of Georgia, Environmental Health Science, Athens, GA, USA


P2-100 Isolation and Identification of Gas-producing Yeasts from Maraschino Cherries — YINFA ZHANG, Lei Zhang, Annemarie L. Buchholz and Elliot T. Ryser, Michigan State University, Food Science and Human Nutrition, East Lansing, MI, USA

P2-101 Parent Attitudes and Self-reported Handling of Powdered Milk Formula: Implications for Microbiological Safety and Education — ELIZABETH C. REDMOND and Christopher J. Griffith, University of Wales Institute Cardiff, Cardiff School of Health Sciences, Cardiff, United Kingdom

P2-102 Food Safety Auditing: An Evaluation of Auditor Variability between High and Low Risk Products — DAVID C. LLOYD, University of Wales Institute, Cardiff, Cardiff, United Kingdom

P2-103 Detection of VOCs in Spoiling Pork Using Field Asymmetric Ion Mobility Spectrometry — TODD H. SCHROCK, University of Tennessee, Food Science, Knoxville, TN, USA

P2-104 Antimicrobial Potential of Thirty-two Natural Compounds against Common Juice Spoilage Microorganisms (Saccharomyces cerevisiae, Zygosaccharomyces bailii, Z. bisporus) — JULIE MCKINNEY, Renee Boyer and Joseph Marcy, Virginia Tech, Food Science, Blacksburg, VA, USA

P2-105 Evaluation of Four Membrane Filter Materials for Use with 3M™ Petrifilm™ E. coli Coliform Count Plates to Enumerate Escherichia coli in Water Samples — ROBERT S. DONOFRIO, Amy Harrison, Robin Beckhno, DeAnn L. Benesh and Cynthia Zook, NSF International Microbiology, Ann Arbor, MI, USA

P2-106 Efficacy of Supercritical Carbon Dioxide for Inactivating Lactobacillus plantarum in Apple Cider — HYUN-GYUN YUK, David J. Geveke and Howard Q. Zhang, USDA-ARS-ERRC, Food Safety Intervention Technologies Unit, Wyndmoor, PA, USA

P2-107 DNA Microarray for the Characterization and Typing of Salmonella: A New Tool for Risk Analysis — STEPHAN HUJHEN, Cornelia Bunge, Beatriz Guerra, Reiner Helmhut and Burkhard Malorny, University of Veterinary Medicine Vienna, Dept. of Veterinary Public Health and Food Science, Wien, Austria

P2-108 Internal and Independent Laboratory Validation of PCR Assays for Detection of L. monocytogenes from Both Food and Stainless Steel Surfaces — STEPHEN VARKEY, Dawn Fallon, Daniel DeMarco and Robert Jechoreck, DuPont, Wilmington, DE, USA

P2-109 Development of Multiplex PCR Analysis for Detection of Major Peanut (ARA H 1), Hazelnut (COR A 1) and Almond (PRU DU 2.02) Allergens in Food Products — EVA RENCOVA and Zora Hubalkova, Veterinary Research Institute, Analytical Biotechnology, Brno, Czech Republic

P2-110 Prevalence of Bacillus cereus in Fried Rice Dishes and Its Exposure Assessment from Chinese-style Restaurants in Korea — HYE-JA CHANG, Bo-ra Han, Ji-hye Lee, Eun-seon Go, Jun Kim, Gang-gweon Lee and Tong-kyung K. Yum, Dankook University, Food Science and Nutrition, Gyeonggido, Korea

P2-111 Validation of a PCR Assay for Screening Yeast and Mold for Fungal Threshold Level Testing — JOANNE RUEBL, Morgan Wallace, Lois Fleck, Bridget Andaloro, George Tice and Frank Burns, Chernen Microbiological Services, Green Bay, WI, USA

P2-112 Microbiological Quality of Water Samples from Hidalgo, Queretaro and Mexico State — MIROSLAVA SANCHEZ MENDOZA, M. Elizabeth Castelazo- Padilla, Verónica Hernández-Cervantes, M. Elena Gil-Recasens, M. Dolores Ramírez-Hernández and Mireya Albores Bernal, Lab State of Public Health, Pachuca, Mexico
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<th>Poster No.</th>
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<th>Authors</th>
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<tr>
<td>P2-113</td>
<td>Simultaneous Separation and Detection of Multiple Foodborne Pathogens Using Magnetic Nanobeads and Quantum Dots — HONG WANG, Michael F. Slavik and Yanbin Li, University of Arkansas, Poultry Science, Fayetteville, AR, USA</td>
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<td>P2-114</td>
<td>Rapid Detection of Viable <em>Escherichia coli</em> O157:H7 by Immunomagnetic Separation and Light Scattering Spectroscopy — JUAN LEON, Satish Deshpande and Lawrence D. Goodridge, Colorado State University, Fort Collins, CO, USA</td>
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<td>P2-115</td>
<td>Validation of a PCR Assay for Screening <em>Listeria</em> spp. in Foods and Environmental Sponges — MORGAN WALLACE, Bridget Andaloro, George Tice and Joanne Ruebl, DuPont Qualicon, Wilmington, DE, USA</td>
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<td>P2-116</td>
<td>Establishment of Enzyme Linked Immunosorbent Assay (ELISA) for Aflatoxin B1 Detection in Red Pepper Powder in South Korea — WON-BO SHIM, Neema Kassim and Duck-Hwa Chung, Gyeongsang National University, Jinju, Korea, South</td>
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<td>P2-117</td>
<td>Study on Control of <em>Penicillium</em> spp. and Ochratoxin A in Feed by Electron-Beam Irradiation — KYEONGYEOL KIM, Won-Bo Shim, Bo-Ram Nam, Jae-Hun Kim, Ju-Woon Lee, Myung-Woo Byun and Duck-Hwa Chung, Gyeongsang National University, Division of Applied Life Science, Jinju, Korea, South</td>
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<td>P2-118</td>
<td>One-step Immunochromatographic Strip Test for Multianalysis of Ochratoxin A and Zearalenone — WON-BO SHIM and Duck-Hwa Chung, Gyeongsang National University, Division of Applied Life Science, Jinju, Korea, South</td>
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<tr>
<td>P2-119</td>
<td>Validation of Enzyme-linked Fluorescent Assay for Detection of <em>Escherichia coli</em> O157:H7 in Ground and Trim Beef Samples — WENDY MADUFF and Wendy Warren-Serna, Food Safety Net Services, San Antonio, TX, USA</td>
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TUESDAY AFTERNOON
JULY 14

IAFP Business Meeting • 12:15 p.m. – 1:00 p.m.
Grapevine 1-2

- Welcome and Introduction
  Vickie Lewandowski, President-Elect
- Moment of Silence
  Stan Bailey, President
- Call to Order
  Stan Bailey, President
- Minutes of the 2008 Business Meeting
  Stan Bailey, President
- President’s Report
  Stan Bailey, President
- Report of Committees
  Tellers, Larry Cohen
  JFP Management, Mark Harrison
  FPT Management, Julian Cox
  Foundation, Gale Prince
- Report of the Affiliate Council
  Roger Cook, Affiliate Council Chairperson
- Report of the Executive Director
  David Tharp, Executive Director
- Unfinished Business
- New Business
- Adjournment
  Stan Bailey, President

S17 Food Safety Challenges Impacting Global Food Trade
Grapevine D

Organizers: Alessandra Chiareli, Maria Teresa Destro, Emilio Esteban, Deon Mahoney, Suely Nakashima and Caroline Smith DeWaal
Convenors: Caroline Smith DeWaal and Alessandra Chiareli

1:30 International Approaches to Managing the Safety of Food in Global Trade — EMILIO ESTEBAN, USDA, Alameda, CA, USA
2:00 Managing the Safety of Food Imports for Dubai — BOBBY KRISHNA, Dubai Municipality, Dubai, United Arab Emirates
2:30 Progress Made Since Last Pepper Outbreak: Rebuilding Confidence in Food Safety of Fresh Produce from Mexico — ALEJANDRO CASTILLO, Texas A&M University, College Station, TX, USA
3:00 Break
3:30 The Experience of an Exporter in Complying with Multiple National Requirements – A Food Processor Perspective — SUELY M. NAKASHIMA, Sadia, São Paulo, Brazil
4:00 Comparative Review of Contemporary Food Safety Problems and Cultural Perspectives across Three World Regions — CAROLINE SMITH DEWAAL, Center for Science in the Public Interest, Washington, D.C., USA
4:30 Panel Discussion

S16 Facing a Persistent Challenge: Salmonella Control in Low-moisture Foods
Grapevine C

Sponsored by the IAFP Foundation
Organizers: Yuhuan Chen and Timothy Freier
Convenors: Mark Moorman and Laurie Post

1:30 Practical Industry Approaches to Moisture Control and Equipment Design — TIMOTHY FREIER, Cargill, Minneapolis, MN, USA
2:00 Practical Verification, Environmental Monitoring, Product Testing and What to Do with a Positive Result — LES SMOOT, Nestle, Dublin, OH, USA
2:30 Panel Discussion, Comments from the Audience and Q&As (Speakers, Members of the GMA Task Force and Other Invited Experts) — JEFF BANKS, Cadbury, London, United Kingdom
3:00 Break
3:30 Update on the Latest Salmonella Outbreaks Associated with Low-moisture Products and Unique Aspects of Epidemiologic Investigations — IAN WILLIAMS, CDC, Atlanta, GA, USA
4:00 An Overview of Salmonella in Low-moisture Products: A Worldwide Problem in Human and Pet Foods — JENNY SCOTT, Grocery Manufacturers Association, Washington, D.C., USA

S18 Looking for Thresholds: A Multi-disciplinary Key Events Approach
Grapevine A

Organizers: Tong-Jen Fu, Beth Julien and Mary Alice Smith
Convenors: Mary Alice Smith and Richard Whiting

1:30 Introduction to the Key Events Dose-response Framework (KEDRF) — ROBERT L. BUCHANAN, University of Maryland, College Park, MD, USA
2:00 Introduction to the Key Events Dose-response Framework (KEDRF) — MARY ALICE SMITH, University of Georgia, Griffin, GA, USA
2:30 Potential for Application of the Key Events Dose-response Framework (KEDRF) to Pathogenic Microorganisms — RICHARD C. WHITING, Exponent, Bowie, MD, USA
3:00 Break
3:30 Potential for Application of the Key Events Dose-response Framework (KEDRF) to Foodborne Allergens — STEVEN GENDEL, CFSAN, FDA, Summit Agro, IL, USA
4:00 Panel Discussion
Round Up Your Pathogen Plan: Enrichment, Sample Preparation and the Legal and Social Perspectives

Grapevine B

Sponsored by the IAFP Foundation
Organizers: Vanessa Cranford, Mark Carter and Jingkun Li
Convenors: Vanessa Cranford, Mark Carter and Jingkun Li

1:30 New Technologies and Media Products for Rapid Enrichment of Pathogens in Foods — JINGKUN LI, Siemens, Hockessin, DE, USA

2:00 A New Trend of Industry Practice: Compositing and Reduced Media Volume – Its Use and Impact on Enrichment and Rapid Detection of Escherichia coli O157 and Salmonella — MARK W. CARTER, Silliker, Inc., Homewood, IL, USA

2:30 Extraction, Concentration and Purification: The “Middle Man” to Enrichment and Detection — BYRON F. BREHM-STECHER, Iowa State University, Ames, IA, USA

3:00 Break

3:30 Rounding Them All Together: Phenotype/Genotype Independent Target Concentration — LEE-ANN JAYKUS, North Carolina State University, Raleigh, NC, USA

4:00 To Test or Not to Test: Why or Why Not to Implement a Food Safety Microbiological Testing Plan from Legal and Social Perspectives — CRAIG K. HARRIS, Michigan State University, East Lansing, MI, USA

4:30 Panel Discussion

Environmental Reservoirs of Major and Emerging Foodborne Pathogens

Grapevine 1-2

Sponsored by the IAFP Foundation
Organizers: Paula Fedorka-Cray and Wondwossen Gebreyes
Convenors: Paula Fedorka-Cray and Wondwossen Gebreyes

1:30 Reservoirs of Methicillin-resistant Staphylococcus aureus (MRSA) and Other Staphylococci (MRS) — WONDWOSSEN A. GEBREYES, The Ohio State University, Columbus, OH, USA

2:00 Antibiotic Resistant Commensal Bacteria in Foods and Hosts — HUA H. WANG, The Ohio State University, Columbus, OH, USA

2:30 Waterborne Pathogens Associated with Food Animal Production Systems — MARK D. SOBSEY, University of North-Carolina-Chapel Hill, Chapel Hill, NC, USA

Integrating Epidemiology and Microbiology to Solve Complex Food Safety Problems

Grapevine 1-2

Organizers: Richard Isaacson and Mary Torrence
Convenors: Richard Isaacson and Mary Torrence

3:30 The Use of Modeling and Spatial Analysis in Foodborne Pathogens — RANDY SINGER, University of Minnesota, College of Veterinary Medicine, St. Paul, MN, USA

4:00 The Use of Epidemiologic Tools in Sampling, Testing, and Food Safety Studies — IAN GARDNER, University of California-Davis, College of Veterinary Medicine, Davis, CA, USA

4:30 Ecology in Pathogenic Vibrio Species in Gulf Coast Oysters: Results of a Two-year Longitudinal Study — LEE-ANN JAYKUS, University of North Carolina, Raleigh, NC, USA

Meat and Poultry and Epidemiology Technical Session

Grapevine 3-4

Convenors: Amrita Pathania and Cangliang Shen

T6-01 Food Commodities Associated with Salmonella Enteritidis Outbreaks 1998–2007 — ALEJANDRO PÉREZ, Tracy Ayers, Ian Williams, and David Swerdlow, Centers for Disease Control and Prevention and US Food and Drug Administration, Atlanta, GA, USA

T6-02 Withdrawn

T6-03 Exploring Historical Canadian Foodborne Outbreak Datasets for Human Illness Attribution — JUDY D. GREIG, Andre Ravel, Carol Tinga, Ewen Todd, Grant Campbell, Mike Cassidy, Barbara Marshall and Frank Pollari, Public Health Agency of Canada, Laboratory for Foodborne Zoonoses, Guelph, ON, Canada

T6-04 Enumeration of Campylobacter on Chickens at Processing and Retail: An Explanation of Regional Differences in Incidence of Campylobacter Observed in Foodnet Sites — Mary Patrick, PRIYA KADAM, Reem Ghoneim, Hugh Maguire, Kirsten Larson, Trisha McDonald, Craig Braymen, Suzanne Solghan, Henrietta D. Hardin, Hannah Gould, Fred Angulo and James Rodgers, Centers for Disease Control and Prevention, Enteric Diseases Epidemiology Branch, Atlanta, GA, USA

T6-05 Reduction in Pathogen Reduction/Hazard Analysis Critical Control Point (PR/HACCP) Salmonella Positives at United States Food Safety and Inspection Service (FSIS)-regulated Broiler and Turkey Establishments — PRIYA KADAM, Patty Bennett, Denise R. Eblen and Gurinder Saini, USDA-FSIS, Washington, D.C., USA

T6-06 Prevalence of Salmonella Species on Marinated Chicken Skin — AMRITA PATHANIA, Manpreet Singh and Shelly R. McKee, Auburn University, Poultry Science, Auburn, AL, USA

T6-07 The FSIS Routine Risk-based Listeria monocytogenes (RLm) Sampling Program — KRISTINA E.BARLOW, Stephen W. Mamber, Evelyne Mbandi, Paul Uhler and David LaBarre, FSIS, USDA, Washington, D.C., USA

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<th>Session</th>
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<tr>
<td>T6-09</td>
<td>Thermal Inactivation of <em>Escherichia coli</em> O157:H7 in Nonintact Beef Steaks of Different Thickness by Different Cooking Methods and Equipment — CANGLIANG SHEN, Jeremy M. Adler, Ifigenia Geornaras, Keith E. Belk, Gary C. Smith and John N. Sofos, Colorado State University, Dept. of Animal Sciences, Fort Collins, CO, USA</td>
<td>4:00</td>
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<td>T6-10</td>
<td>Ability of Chemically Softened Water to Rinse Bacteria from the Skin of Processed Broiler — ARTHUR HINTON and Ronald A. Holser, USDA-ARS-RRC, Athens, GA, USA</td>
<td>4:15</td>
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<tr>
<td>T6-11</td>
<td>Same Day Detection of <em>Escherichia coli</em> O157:H7 in Large Samplings (3.75 kg) of Fresh or Frozen Raw Ground Beef Using Post Growth Sample Pooling, Re-circulating IMS and Real-time PCR — John Murray, Nicole Prentice, Brooke V. Houston, Paul M. Benton, Katarzyna Brzegowa, Marcie Van Wart, Christine M. Aleski, Michael F. Scott and ADRIAN PARTON, MATRIX MicroScience Ltd., Cambridgeshire, United Kingdom</td>
<td>4:30</td>
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<td>T6-12</td>
<td>Use of Dual Electromagnetic Radiation Technology to Reduce <em>Salmonella</em> and <em>Listeria monocytogenes</em> Risk on Cooked and Packaged Meat Products — RONG MURPHY, Brandon Beard, John Marcy, Mark Berrang, Travis Selby, Brian Krueger and Clint Billman, FPTI, Inc., Fayetteville, AR, USA</td>
<td>4:45</td>
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WEDNESDAY TAB
S22  Third Party Certification Systems: Can It Make Our Food Safer?
Grapevine C
Organizer: Dennis Gaalswyk
Convenors: Dennis Gaalswyk and Allen Sayler
8:30  Value of Certified Third Party Audit Systems to Food Processors — CRAIG W. HENRY, GMA/FPA, Washington, D.C., USA
9:00  Federal Government Views on Third Party Certification Systems for Food — DAVID ATCHISON, Dept. of Health and Human Services, Washington, D.C., USA
9:30  Third Party Auditor Perspective of Certification Systems — RENA M. PIERAMI, Silliker, Inc., Homewood, IL, USA
10:00 Break
10:30 Value of Certified Third Party Audit Systems to the Retail Food Industry — FRANK YIANNAS, Walmart, Bentonville, AR, USA
11:00 Overview of the Global Food Safety Initiative (GFSI) Third Party Auditing Systems — DONNA M. GARREN, National Restaurant Association, Washington, D.C., USA
11:30 Panel Discussion

S24  Emerging Chemical Hazards in Food
Grapevine A
Sponsored by the IAFP Foundation
Organizers: Lindsay Arthur and Tong-Jen Fu
Convenors: Lindsay Arthur and Tong-Jen Fu
8:30  Metal Contaminants in Food Crops — BEVERLEY HALE, Dept. of Land Resource Science, University of Guelph, Guelph, ON, Canada
9:00  Persistent Organic Contaminants in Water — ABU M. Z. ALAM, AECOM, Austin, TX, USA
9:30  Process-induced Food Toxicants — RICHARD STADLER, Nestlé Product Technology Centre Orbe, Orbe, Switzerland
10:00 Break
10:30  Chemical Contaminants in Food Packaging Materials — FORREST BAYER, The Coca-Cola Company, Atlanta, GA, USA
11:00  Issues and Challenges with the Use of Nanomaterials in Food and Food Packaging Applications — BERNADENE MAGNUSON, Cantox Health Sciences International, Mississauga, ON, Canada
11:30 Managing Chemical Contaminants in Food — NEGA BERU, Center for Food Safety and Applied Nutrition, U.S. Food and Drug Administration, College Park, MD, USA

S23  A Systems Approach to Minimize Escherichia coli O157:H7 Food Safety Hazards Associated with Fresh and Fresh-cut Leafy Greens
Grapevine D
Sponsored by the University of Georgia, National Center for Food Safety and Technology/Illinois Institute of Technology, Michigan State University, and Clemson University. Funded in part by a grant from the United States Department of Agriculture National Integrated Food Safety Initiative, Cooperative State Research, Education and Extension Service
Organizer: Catherine Nnoka
Convenor: Catherine Nnoka
8:30  Overview of the USDA Project on Risk Management Approaches to Ensure the Safety of Leafy Greens and Introduction to Food Safety Objectives — MARTIN B. COLE, National Center for Food Safety & Technology, Summit Argo, IL, USA
9:00  Research Aimed at Minimizing Initial Levels of Contamination — MARILYN C. ERICKSON, University of Georgia, Griffin, GA, USA
9:30  Research Aimed at Reducing Contamination Levels through Processing — ELLIOT T. RYSER, Michigan State University, East Lansing, MI, USA
10:00 Break

RT 3  Measuring and Interpreting Food-handling Behavior and Its Impact on Policy
Grapevine B
Organizer: Christine Bruhn
Convenor: Christine Bruhn
8:30  Are Consumer Cooking Practices Sufficient? — RANDY PHEBUS, Kansas State, Manhattan, KS, USA
8:45  What Happens in the Food Service Kitchen? — BEN CHAPMAN, North Carolina State, Raleigh, NC, USA
9:00  Special Challenges in Asian and Hispanic Restaurants — AMY SIMONNE, University of Florida, Gainesville, FL, USA
9:15  Motivating Safer Food-handling Behavior — LYDIA MEDEIROS, The Ohio State University, Columbus, OH, USA
9:30  How Outbreaks Drive Food Safety Policy — ROBERT BRACKETT, GMA, Washington, D.C., USA
10:00 Break
10:30 Roundtable Discussion
**T7**

**Risk Assessment, Spoilage and Beverages and Water Technical Session**

*Grapevine 1-2*

*Convenors: Panagiotis Skandamis and Anna Van Stelten*

**T7-01**

An Innovative Modeling Approach for Food Safety

8:30

Risk Assessment Research for the Farm-to-Fork Continuum — Mohktari Amir, Beaulieu Stephen, LEE-Ann JAYKUS and Dennis Sherri, North Carolina State University, Food, Bioprocessing, and Nutrition Sciences, Raleigh, NC, USA

**T7-02**

Assessment of Methods to Verify Standards

8:45

for Reduction of Risk from Aerosol Transfer of *Escherichia coli* from Composting and Livestock Operations — Paula Freitas, Carol B. D’Lima, Adrian Sbodio, Patricia Millner and Trevor Suslow, University of California-Davis, Davis, CA, USA

**T7-03**

Risk Assessment of *Campylobacter* Infection

9:00

Due to Poultry Meat Consumption in Japan — Atsushi Hasegawa, Tomoki Matsushita, Akio Yamamoto, Jun’ichiro Iwahori, Toshiyuki Tsutsui, Takehisa Yamamoto, Yoko Hayama, Mikiko Sawada, Keiko Motoyama, Ken Osaka, Yoriko Hanaoka and Fumiko Kasuga, Mitsubishi Research Institute, Inc., Tokyo, Japan

**T7-04**

A Mathematical Risk Model for *Escherichia coli*

9:15

0157:H7 Cross Contamination of Lettuce during Processing — Fernando Pérez-Rodríguez, Danilo Campos, Annemarie L. Buchholz, Bradley P. Marks, Elliot T. Ryser and Ewen Todd, University of Córdoba, Food Science and Technology, Córdoba, Spain

**T7-05**

Analyzing the Power and Error of *Listeria monocytogenes* Growth Challenge Studies — Mark Powell, USDA, Washington, D.C., USA

**T7-06**

Geographic Information Systems Mapping of Foodservice Health Code Violations to Assess Risks for Foodborne Illness in Populations of Different Socioeconomic Status — Valérie L. Darcey and Jennifer J. Quinlan, Drexel University, Dept. of Biology, Philadelphia, PA, USA

10:00 Break

**T7-07**


**T7-08**

Impact of Predator-prey Dynamics in Reducing Seafood Spoilage Bacteria — Muftikhar Ahmed, New Zealand Institute for Plant and Food Research, Seafood Processing & Preservation, Auckland, New Zealand

10:45

**T7-09**

Potential for Microbiological Spoilage in High Pressure Processed Food — Edyta Margas and John T. Holah, Campden BRI, Food Hygiene, Chipping Campden, United Kingdom

11:00

**T7-10**

Inactivation of Bacterial Spores in Tomato Sauce by High Hydrostatic Pressure — Anne Vercammen, B. Vivijs, M. Hendrickx and C. W. Michiels, Laboratory of Food Microbiology and Leuven Food Science and Nutrition Research Centre (LFoRCe), Dept. of Microbial and Molecular Systems, B-3001 Heverlee, Belgium

11:15

**T7-11**

Membrane Damage and Microbial Inactivation by UV-light and Radio Frequency Electric Fields Processing of Apple Juice — Dike Ukuku and David Geveke, ARS-USDA, FSIT-ERRC, Wyndmoor, PA, USA

11:30

**T7-12**

Assessment and Modelling of the Microbial Inactivation of *Escherichia coli* O157:H7 at Different Depths of Panbroiled and Roasted Non-intact Steaks — Jeremy M. Adler, Ifigenia Gravina, Tomoki Matsushita, Akio Yamamoto, Jun’ichiro Iwahori, Toshiyuki Tsutsui, Takehisa Yamamoto, Yoko Hayama, Mikiko Sawada, Keiko Motoyama, Ken Osaka, Yoriko Hanaoka and Fumiko Kasuga, Mitsubishi Research Institute, Inc., Tokyo, Japan

11:45

**T8**

**Pathogens Technical Session**

*Grapevine 3-4*

*Convenors: Jeremy Adler and Paul Ebner*

**T8-01**

Effect of Antimicrobial Sanitizers and High Power Ultrasound on Murine Norovirus on Romaine Lettuce — Xueyan Liu, Darren Bates, Stephen F. Grove and Alvin Lee, Illinois Institute of Technology, National Center for Food Safety and Technology, Summit-Argo, IL, USA

8:30

**T8-02**

Thermal Inactivation of *Escherichia coli* O157:H7 on Different Depths of Panbroiled and Roasted DSC Lettuce — Jeremy M. Adler, Ifigenia Gravina, Tomoki Matsushita, Akio Yamamoto, Jun’ichiro Iwahori, Toshiyuki Tsutsui, Takehisa Yamamoto, Yoko Hayama, Mikiko Sawada, Keiko Motoyama, Ken Osaka, Yoriko Hanaoka and Fumiko Kasuga, Mitsubishi Research Institute, Inc., Tokyo, Japan

8:45

**T8-03**

*Listeria monocytogenes* Outbreak Strains — Angela J. Roberts, Shanna Williams, Martin Wiedmann and Kendra K. Nightingale, Texas A&M University, Biology, Fort Worth, TX, USA

9:00

**T8-04**

Detection and Quantification of Rota Virus (RV) from Fresh Produce by Real-time RT-PCR and Cell Culture — Ji-yeon Hyeon, Jae-Hoon Lee, Jeong-Hwan Cheon, Joong-Bok Lee, In-Gyun Hwang, Hyo-Sun Kwak, Yong-Choon Park, Jeong-Su Lee and Kun-Ho Seo, Konkuk University, College of Veterinary Medicine, Dept. of Public Health, Seoul, Korea, South

9:15

**T8-05**

Phage Therapy Reduces Laiage-induced Phagocytosis in Market Weight Pigs — Samantha K. Wall, Jiayi Zhang, Marcos H. Rostagno and Paul Ebner, Purdue University, Animal Sciences, West Lafayette, IN, USA

9:30

**T8-06**

Comparison of the Microbiological Profiles of Conventionally-raised and Grass-fed Beef Samples — Jiayi Zhang and Paul Ebner, Purdue University, Animal Sciences, West Lafayette, IN, USA

9:45

10:00 Break
POSTERS 9:00 a.m. – 5:00 p.m.

**POSTERS**

**P3**

**Dairy and Other Food Commodities, Produce, Epidemiology, Antimicrobials, and General Microbiology Poster Session**

**Exhibit Hall**

Authors with Even-numbered Posters present 9:00 a.m. – 11:00 a.m.

Authors with Odd-numbered Posters present 2:00 p.m. – 4:00 p.m.

Convenors: Kirsten Hirneisen and Sadhana Ravishankar

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**P3-01**

Effect of Packaging Materials on the Viability of Probiotic Bacteria in Goat’s Milk Ice Cream — RD CHAMINDA S. RANADHEERA, Surinder K. Baines and Michelle C. Adams, University of Newcastle, School of Environmental and Life Sciences, Callaghan, NSW, Australia

**P3-02**

Detection and Survival of *Bacillus cereus* Spores in Raw and High-temperature Short-time Pasteurized Milk — NIGEL M. HARPER and Kelly Getty, Kansas State University, Food Science, Manhattan, KS, USA

**P3-03**

Thermal Resistance of *Listeria monocytogenes* Scott A in Concentrated Ultrafiltered Milks and Reconstituted Milk Powder Related to the Effect of Different Milk Components — KINGA SZLACHTA, Susanne Keller, A. Shazer and Stuart Chirtel, NCFST/IIIT, Summit-Argo, IL, USA

**P3-04**

Use of Nisin and Caprylic Acid to Control *Listeria monocytogenes* in Queso Fresco — FRANCISCO DIEZ-GONZALEZ, Mary B. Kamnetz and Zata M. Vickers, University of Minnesota, Food Science and Nutrition, St. Paul, MN, USA

**P3-05**

Evaluation of 3M™ Petrifilm™ Aerobic Count Plate for Enumerating Psychrotrophic Microorganisms in Dairy Products — ADRIANA R. TASSINARI, Katia Leani O. Souza, Maria Teresa Destro, Bernadette G. Franco and Mariza Landgraf, 3M do Brasil Ltda, Microbiology, Sumare, Brazil

**P3-06**

Survival Characteristics of Persistent Dairy *Salmonella* Strains — Yvonne Tan, Mark Fegan, Narelle Fegan and GARY A. DYKES, Food Science Australia, Food Safety and Quality, Brisbane, QLD, Australia

**P3-07**

Isolation and Identification of Microorganisms Responsible for Ropy Milk — LINDSEY M. MCDONNELL, Russell P. McMinn, Amy C. Lee Wong and Kathleen A. Glass, University of Wisconsin – Madison, Food Research Institute, Madison, WI, USA

**P3-08**

Susceptibility of Desiccated Enterobacteriaceae to Chlorine, Heat and Spray Drying — HEATHER CRAVEN and Geoff Knight, Food Science Australia, Werribie, VIC, Australia

**P3-09**

Survival of Enterohemorrhagic and Avian Pathogenic *Escherichia coli* from Spinach Plants after Overhead Irrigation with (Currently Acceptable) Contamination Levels — DAVID T. INGRAM, Cheryl Mudd, Sean Ferguson, Kalmie E. Kniel and Manan Sharma, USDA-ARS, Environmental Microbial and Food Safety Laboratory, Beltsville, MD, USA

**P3-10**

The Effect of Storage Conditions on the Behavior of *Escherichia coli* O157:H7 and Normal Microflora on Packaged Fresh Spinach — LIAO WANG, Diana Stewart, Karl Reineke, Arlette Shazer, Yoon Song and Mary Lou Tortorello, NCFST/IIT, Summit-Argo, IL, USA

**P3-11**

Thermal Resistance of Heat-shocked *Escherichia coli* O157:H7, *Salmonella* and *Listeria monocytogenes* in Dairy Compost — RANDHIR SINGH, Xiuping Jiang and Feng Luo, Clemson University, Dept. of Biological Science, Clemson, SC, USA

**P3-12**

Evaluation of Physical Coverings Used to Reduce *Escherichia coli* O157:H7 Populations at the Surface of Compost Heaps — MARION W. SHEPHERD, Jinkyung Kim, Xiuping Jiang, Michael P. Doyle and Marilyn C. Erickson, Clemson University, Dept. of Biological Sciences, Central, SC, USA
<table>
<thead>
<tr>
<th>Session</th>
<th>Title</th>
<th>Authors</th>
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<tr>
<td>P3-13</td>
<td>Interaction of <em>Escherichia coli</em> O157:H7 with DSC Growing Spinach Plants — SHUAIHUA PU, John C. Beaulieu, Witoon Prinyawiwatkul and Belei Ge, Louisiana State University, Dept. of Food Science, Baton Rouge, LA, USA</td>
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<td>P3-14</td>
<td>Fate of Internalized <em>Escherichia coli</em> O157:H7 on Field Grown Spinach Treated with Contaminated Irrigation Water — CATHY WEBB, Marilyn Erickson, Juan Carlos Diaz-Perez, Sharad Phatak, John Silvoy, Lindsey McGhin, Alison Payton, Jean Liao and Michael Doyle, University of Georgia, Center for Food Safety, Griffin, GA, USA</td>
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<td>P3-15</td>
<td>The Survival of <em>Escherichia coli</em> O157:H7 in Cucumber Fermentation Brines — FRED BREIDT, Food, Bioprocessing and Nutrition Sciences, NC State University, USDA-ARS, Raleigh, NC, USA</td>
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<td>P3-16</td>
<td>Pre-harvest Internalization of <em>Escherichia coli</em> O157:H7 into Lettuce Leaves as Impacted by the Presence of Insects — MARILYN C. ERICKSON, Jean Liao, Alison Payton, David Riley, Cathy Webb, Lindsey McGhin, Sophia Tison, Michael Doyle, Larry Beuchat, Guodong Zhang and Li Ma, University of Georgia, Center for Food Safety, Griffin, GA, USA</td>
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<td>P3-17</td>
<td>Internalization of Enteric Viruses in Spinach and Green Onions — KIRSTEN A. HIRNEISEN, Haiquang Chen, Randy W. Worobo, Karl R. Matthews and Kalmia E. Kniel, University of Delaware, Dept. of Animal and Food Sciences, Newark, DE, USA</td>
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<td>P3-18</td>
<td>Effect of Heat and Drought Stress during Growth of Lettuce (<em>Lactuca sativa L.</em>) on Internalization of <em>Escherichia coli</em> O157:H7 — GUODONG ZHANG, Li Ma, Larry R. Beuchat, Marilyn C. Erickson, Vanessa H. Phelan and Michael P. Doyle, University of Georgia, Center for Food Safety, Griffin, GA, USA</td>
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<td>P3-19</td>
<td>Surface Water Irrigation Disinfection in Lettuce Production — MARA MASSEL, Jose Grazon, Garry Grabow, Chris Gunter and Trevor Phister, North Carolina State University, Food, Bioprocessing and Nutrition Sciences, Raleigh, NC, USA</td>
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<td>P3-20</td>
<td>Effect of Sodium Hypochlorite and High Power Ultrasound on <em>Escherichia coli</em> O157:H7 in Lettuce Homogenate and on Romaine Lettuce — NICOLE D. MAKS, Darren Bates, Stephen Grove and Alvin Lee, National Center for Food Safety and Technology, Summit-Argo, IL, USA</td>
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<td>P3-21</td>
<td>Microbial Contamination of Spinach Placed in Close Proximity of Cattle Feed Yard Operations — SUNDEEP YANAMALA, Mindy M. Brashears, Guy H. Loneragan and Markus F. Miller, Texas Tech University, Animal and Food Science, Lubbock, TX, USA</td>
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<td>P3-22</td>
<td>Quantification of <em>Escherichia coli</em> O157:H7 Transfer to Equipment during Commercial Production of Fresh-cut Leafy Greens — ANNEMARIE L. BUCHHOLZ, Gordon R. Davidson, Danilo T. Campos, Bradley P. Marks, Ewen C. Todd and Elliot T. Ryser, Michigan State University, Food Science and Human Nutrition, East Lansing, MI, USA</td>
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<td>P3-23</td>
<td>Use of the Systems Approach to Determine the Fate of <em>Escherichia coli</em> O157:H7 on Fresh and Fresh-cut Iceberg Lettuce and Spinach — MARK A. HARRISON, William L. Kerr, William C. Hurst, Ruth A. Morrow and Helga J. Doering, University of Georgia, Athens, GA, USA</td>
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<td>P3-24</td>
<td>Reduction of <em>Escherichia coli</em> O157:H7 in Fresh DSC Spinach Using Chlorine and Lactic Acid Bacteria as a Multi-Hurdle Intervention — SARA GRAGG and Mindy Brashears, Texas Tech University, Animal and Food Sciences, Lubbock, TX, USA</td>
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<td>P3-25</td>
<td>Changes in Residual Chlorine Products Generated on Fresh-cut Lettuce after Chlorine Treatment — SUN-DUK CHO, Min-Sun Chang, Yu-Si Lee, Ji-Young Lee, Sang-Do Ha and Gun-Hee Kim, Duksoo Women’s University, Food, and Nutrition, Seoul, Korea, South</td>
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<td>P3-26</td>
<td>Modeling the Growth of <em>Salmonella enterica</em> from Broth and Diced Tomatoes — WENJING PAN and Don Schaffner, Rutgers University, Food Science, New Brunswick, NJ, USA</td>
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<td>P3-27</td>
<td>High Pressure Processing to Reduce <em>Salmonella enterica</em> from Broth and Diced Tomatoes — JESSICA MAITLAND, Renee R. Boyer, Robert C. Williams and Joseph D. Eifert, Virginia Tech, Blacksburg, VA, USA</td>
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<td>P3-28</td>
<td>Factors Affecting Infiltration, Survival, and Growth of <em>Salmonella enterica</em> on Inshell Pecans and Pecan Nutmeats — DAVID A. MANN and Larry R. Beuchat, University of Georgia, Griffin, GA, USA</td>
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<td>P3-29</td>
<td>Behavior of <em>Salmonella enterica</em> Inoculated onto Walnut Hulls before and during Harvest and Hulling — TYANN BLESSINGTON, Elizabeth J. Mitcham and Linda J. Harris, University of California Davis, Dept. of Food Science and Technology and Dept. of Plant Sciences, Davis, CA, USA</td>
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<td>P3-30</td>
<td>Ozone Inactivation of Norovirus Surrogates on Fresh Produce — SARAH M. MARKLAND, Kirsten A. Hirneisen and Kalmia E. Kniel, University of Delaware, Animal and Food Sciences, Newark, DE, USA</td>
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<td>P3-31</td>
<td>Parasite Resistance to Peroxiacetic and Citric Acid-based Disinfectants — YNES R. ORTEGA and Maria Torres, University of Georgia, CFS, Griffin, GA, USA</td>
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<td>P3-32</td>
<td>Effects of Compost Tea and Compost Socks on Microbiological and Harvest Quality of Strawberry Fruits — DAVID T. INGRAM, Patricia D. Millner and Sally L. Reynolds, USDA-ARS, Environmental Microbial and Food Safety Laboratory, Beltsville, MD, USA</td>
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<td>P3-33</td>
<td>Efficacy of Consumer-available Antimicrobials for In-home Surface Disinfection of Produce — JACK A. NEAL, Alejandro Castillo and T. M. Taylor, Texas A&amp;M University, Animal Science, College Station, TX, USA</td>
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<td>P3-34</td>
<td>Washing Effect of Sodium Hypochlorite with 5% Acetic Acid on the Vegetative Cells and Spore of Pathogenic Microorganisms and Sensory Quality of Fresh Produce — KYUNG YOON KWON, Kyung Ah Kang and Ki Sun Yoon, Kyung Hee University, Food and Nutrition, Seoul, Korea, South</td>
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P3-35 Reduction of Pathogenic Bacteria on Avocados by Washing Treatments — OFELIA M. RODRIGUEZ-GARCIA, Marisela García-Bernal, Porfirio Gutiérrez-González, Liliana Martínez-Chávez and Cristina Martínez-Cárdenas, Universidad de Guadalajara, Farmacobiologia, Guadalajara, Mexico

P3-36 The Effect of Gaseous Ozone on the Shelf Life and Sensory Properties of Fresh Lychees — LOUISE FIELDING, Rebecca Brown and Arthur Tatham, UWIC, Cardiff School of Health Sciences, Cardiff, United Kingdom

P3-37 Fate of Salmonella spp. on Fresh and Frozen Cut Mangos — LAURA K. STRAWN and Michelle D. Danyluk, University of Florida, Food Science and Human Nutrition, Lake Alfred, FL, USA

P3-38 Growth and Survival of Salmonella Enteritidis in Mango Pulp — ANA L. PENTEADO and Maria E Castro, Embrapa – CTA, Food Microbiology, Rio de Janeiro, Brazil

P3-39 Microbial Quality of Fresh Hand-picked Ontario-grown Fruits — Muhan Zhang, Kelley Knight, Xiu-Zhen Li, Lindsay Arthur and TING ZHOU, Agriculture and Agri-Food Canada, Guelph Food Research Center, Guelph, ON, Canada

P3-40 Salmonella Transfer Potential Associated with the Hand-peeling of Citrus — LORETTA M. FRIEDRICH and Michelle D. Danyluk, University of Florida, CREC, Lake Alfred, FL, USA

P3-41 Distribution of Listeria monocytogenes in a Frozen Spinach Plant: Impact of Changes on Sanitation Procedures on Contamination Patterns — Julian J. Esquivel Hernandez, Beatriz L. Alvarez Mayorga, Leopoldo Orozco Ramirez, Aurea Hernandez Parada and MONTSERRAT HERNANDEZ ITURRIAGA, Universidad Autonoma de Queretaro, Departamento de Investigación y Posgrado en Alimentos / Facultad de Química, Queretaro, Mexico

P3-42 A Review of Gastrointestinal Outbreaks in Schools: Recommendations to Reduce Illness — MARIYN LEE and Judy D. Greig, Ryerson University, Occupational and Public Health, Toronto, ON, Canada


P3-44 Enteric Disease Outbreaks Associated with Consumption of Fresh Melons — United States, 1998 to 2007 — CARY C. CHEN, Tracy Ayers, and Ian Williams, CDC, Atlanta, GA, USA

P3-45 Epidemiology of Multistate Foodborne Outbreaks, United States: 1998 to 2007 — STEPHANI GRAY, Tracy Ayers, Julian Grass and Ian Williams, CDC and FDA, Enteric Diseases Epidemiology Branch, Atlanta, GA, USA

P3-46 Epidemiological Approaches for Food Safety — OLASUNMBO A. AJAYI, Leonard Williams and Jacob Olouwoye, Alabama A&M University, Madison, AL, USA

P3-47 Ethnic Food Safety Trends in the United States: CDC Foodborne Illness Data from 1990 to 2006 — DEANN AKINS and Amarat Simonne, University of Florida, Gainesville, FL, USA

P3-48 Restaurant Outbreaks 1990–2006 — XUMAN A. TIAN and Caroline Smith DeWaal, Center for Science in the Public Interest, Washington, D.C., USA

P3-49 Relative Rates of Illnesses by Food Category, Adjusted for Consumption, 1999 to 2006 — Xuman A. Tian and CAROLINE SMITH DEWAAL, Center for Science in the Public Interest, Washington, D.C., USA

P3-50 Beef Grinding and Record Keeping Practices, a Survey of Retail Establishments in Three States, 2008 — HANNAH GOULD, Dawn Norton, Karen Everstine, Danny Ripley, David Reimann, Moshe Dreyfuss, Wu San Chen, Scott Seys and Carol A. Selman, Centers for Disease Control and Prevention, Enteric Diseases Epidemiology Branch, Atlanta, GA, USA

P3-51 Effect of Various Antimicrobials on the Growth Kinetics of Foodborne Pathogens in Ready-to-Eat Pyeonyuk (Boiled and Pressed Pork) — KYUNG JIN MIN and Ki Sun Yoon, Kyung Hee University, Food and Nutrition, Seoul, Korea, South

P3-52 Effectiveness of Different Antimicrobial Treatments on Microbial Populations on Alligator Carcasses — RESHANI N. SENEVIRATNE, Miguel A. Gutierrez, Shreya Datta, Ronson Scott, Sailaja Chintagari, Raviraj Jedeja and Marlene E. Janes, Louisiana State University, Baton Rouge, LA, USA

P3-53 Growth of Listeria monocytogenes on Three Ham Products Formulated with and without Potassium/Sodium Lactate and Sodium Diacetate — IFIGENIA GEORNARAS, Camelia C. Grosulescu, Shivani Gupta, Yvan LeMarc, Patricia A. Kendall, József Baranyi and John N. Sofos, Colorado State University, Dept. of Animal Sciences, Fort Collins, CO, USA

P3-54 Weibull Type Distribution of Resistances of Escherichia coli to Different Concentrations of Potassium Sorbate and Sodium Benzoate — ANGELICA SANTIESTEBAN-LOPEZ, Sandra Guerrero, Enrique Palou, Stella M. Alzamora and Aurelio Lopez-Malo, Universidad de las Americas, Puebla, Chemical and Food Engineering, Cholula, Mexico

P3-55 Bactericidal Efficacy of Salicyclic (Low Concentration Electrolyzed Water) on Different Foodborne Pathogens — SYED M. RAHMAN, Jae-Ho Choi, Jai-Moung Kim, Ding Tian, Jung-Beom Kim, Uranchimeg Purev, Kang-Hyun Choi and Deog-Hwan Oh, Kangwon National University, Food Science and Biotechnology, Chuncheon, Korea, South
P3-56  Acidic Calcium Sulfate as a Secondary Barrier to Control Post-extrusion Salmonella Contamination in Dry Pet Foods — DANIELLE A. PERKIN, Randall K. Phebus and Minto Michael, Kansas State University, Animal Sciences & Industry, Manhattan, KS, USA

P3-57  In vitro Inhibition of Listeria monocytogenes with Acidic Calcium Sulfate Combined with Nisin or ε-Polylysine — ALEX L. BRANDT, Margaret D. Hardin, Alejandro Castillo, Kerri B. Harris, Jimmy T. Keeton and T. Matthew Taylor, Texas A&M University, Dept. of Animal Science, College Station, TX, USA

P3-58  Inappropriate Use of D-values for Determining Biocidal Activity of Various Antimicrobials — JESSE D. HINES, Pamela McKevelly and Peter Bodnaruk, Ecolab, Eagan, MN, USA

P3-59  Antimicrobial Activity of Various Natural Compounds against Escherichia coli O157:H7 Cultured in Ground Beef Extract — KYUNG YUK KO, Keith E. Belk, Gary C. Smith and John N. Sofos, Colorado State University, Dept. of Animal Sciences, Fort Collins, CO, USA

P3-60  Potential Food Application of Plant Derived Peptides That Inhibit the Growth of Spoilage and Foodborne Bacteria — Wen-Hsuan Wu, Rong Di and KARL MATTHEWS, Rutgers University, New Brunswick, NJ, USA

P3-61  Antimicrobial Activity of Recombinant Tobacco Osmotin — Ywh-Min Tzou, TUNG-SHI HUANG, Narendra Singh and Sondra Jean Weese, Auburn University, Nutrition and Food Science, Auburn, AL, USA

P3-62  The Effect of Chitosan on the Infectivity of Murine Norovirus, Feline Calicivirus and MS2 Bacteriophage — Xiaowei Su, Svetlana Zivanovic and DORIS H. D’SOUZA, University of Tennessee-Knoxville, Food Science and Technology, Knoxville, TN, USA

P3-63  Extracts of Agave americana Demonstrate Activities against Conidio genesis and Aflatoxin Production by Aspergillus parasiticus — SANTOS GARCIA, Adrian Rosas, Norma L. Heredia, Deepak Bhatnagar, Eduardo Sanchez and Alberto Morales, Universidad A. De Nuevo Leon, San Nicolas, Mexico

P3-64  Antimicrobial Activity of Greater Galangal (Alpinia Galanga (Linn.)) Flowers — WEI YEA HSU, Alexandra Weissman and Amarat Simonne, University of Florida, Dept. of Family, Youth, and Community Sciences, Gainesville, FL, USA

P3-65  Bactericidal Effects of Titanium Dioxide/UV Reaction on Foodborne Pathogenic Bacteria and Thermoturic Spores — SOOHYUN KIM, Youngbong Kim, Sungeyun Cho, Hyungee Lee and Jiyoung Park, Yonsei University, Biotechnology, Seoul, Korea, South

P3-66  Staphylococcus aureus Inactivation Kinetics during Thermo-ultrasonication Treatments at Selected Amplitudes and with Different Vanillin Concentrations — Raul Avila-Sosa, Gabriela G. Gastelm-Reynoso, Enrique Palou and AURELIO LOPEZ-MALÓ, Univ-ersidad de las Americas, Puebla, Chemical and Food Engineering, Cholula, Mexico

P3-67  Efficacy of BioSealed for Concrete™ against Multiple Strains of Listeria spp. and Their Biofilms on Concrete Surfaces — DIEGO M. PAIVA, Manpreet Singh, Kenneth Macklin, Stuart Price, Donald Conner and Joseph Hess, Auburn University, Poultry Science, Auburn, AL, USA

P3-68  Safety and Shelf Life of Modified Atmosphere-packed and Vacuum-packed Chilled Food Products with Respect to Risks of Psychrotrophic Clostridium botulinum — GREG JONES and Gail Betts, Campden BRI, Chipping Campden, United Kingdom

P3-69  Bacteriophages to Control Foodborne Pathogens in Ready-to-Eat Meat — HANY E. ANANY, Isabelle Gross and Mansell Griffiths, University of Guelph, Canadian Research Institute for Food Safety, Guelph, ON, Canada

P3-70  Control and Prevention of Cronobacter sakazakii and S. enterica Typhimurium by Each Virulent Phage in Powdered Infant Formula — YOUNG-DUCK LEE, Young-Duck Lee, Tae-Hwa Ryu, Hyo-Ihl Chang and Jong-Hyun Park, Korea University, Seoul, Korea, South

P3-71  Isolation and Identification of Bacteriophages against Salmonella Typhimurium — MASTURA AKHTAR, Stelios Viazis, Joellen Feirtag and Francisco Diez-Gonzalez, University of Minnesota, Food Science and Nutrition, St. Paul, MN, USA

P3-72  Effect of Contact Time, Dose, Storage Time and Temperature on the Efficacy of Bacteriophage Listex P100 in Reducing Listeria monocytogenes Counts on the Surface of Fresh Catfish Fillet Tissue — Kamlesh A. Soni and RAMAKRISHNA NANNAPENI, Mississippi State University, Dept. of Food Science, Nutrition and Health Promotion, Mississippi State, MS, USA

P3-73  Destruction of High and Low Inoculum Concentrations of Listeria monocytogenes on the Surface of Raw Salmon Fillet Tissue by Bacteriophage Listex P100 — RAMAKRISHNA NANNAPENI and Kamlesh A. Soni, Mississippi State University, Dept. of Food Science, Nutrition and Health Promotion, Mississippi State, MS, USA

P3-74  Characterization of Lytic Bacteriophages against Bacillus cereus for Potential Use as Bio-control Agents — TAREK EL-ARABI and Mansel W. Griffiths, University of Guelph, Canadian Research Institute for Food Safety, Guelph, ON, Canada

P3-75  Isolation and Characterization of Lytic Bacteriophages against Enterohemorrhagic Escherichia coli — STELIOS VIZAZIS, Mastura Akhtar, Joellen Feirtag and Francisco Diez-Gonzalez, University of Minnesota, Food Science and Nutrition, St. Paul, MN, USA
DSC Serovars for Cocktail Preparation: A Case Study in P3-85 Selecting Susceptible and Resistant Salmonella Serovars for Cocktail Preparation: A Case Study in Mitigating Sample Bias Using Statistical Methods — MELISSA K. HUGHES, Bryan M. Hughes, Guy Loneragan and Mindy M. Brashers, Texas Tech University, Animal & Food Sciences, Lubbock, TX, USA

P3-76 Analysis of Antimicrobial Resistance in Enterococcus spp. Recovered from a Commercial Beef Processing Plant — MUEEN ASLAM, Cara Service, Heidi Rempel and Moussa Diarra, Lacombe Research Centre, Agriculture and Agri-Food Canada, Lacombe, AB, Canada

P3-77 Antimicrobial Susceptibility of Arcobacter butzleri Isolated from Korean Chickens — MIN HWA LEE, Sun-Kyung Heo and Sang-Do Ha, Chung-Ang University, Food Science & Technology, Ansung-Si, Korea, South

P3-78 Resistance of Pediococcus pentosaceus to Antibiotics Used in Food Animals — RONIELE P. CORDEIRO and Rick A. Holley, University of Manitoba, Food Science, Winnipeg, MB, Canada

P3-79 Antibiotic-resistant Enterobacteriaceae Isolates from Retail Meats and Domestic Kitchen Environment in Tennessee — AGNES KILONZO-NTHENGE, Sandra Godwin and Fur-chi Chen, Tennessee State University, Family and Consumer Sciences, Nashville, TN, USA

P3-80 Antimicrobial Resistance in Escherichia coli O157:H7 from Patients in Alberta — SHEILA M. COOK, Christina J. Ferrato, Bryanne Crago, Melissa St. Denis, Linda Chui, Stanford Kim, Tim McAllister, Ranjana Sharma, Rafiq Ahmed and Marie Louie, Provinical Laboratory for Public Health (Microbiology), Calgary, AB, Canada

P3-81 Pediocin PA-1-like Bacteriocin Produced by Enterococcus faecium ST5HA — Svetoslav D. Todorov, MARIA TERESA DESTRO, Eb Chiarini, Bernadette D. Franco, Mariza Landgraf and Manuela Vaz-Velho, University of São Paulo, Food and Experimental Nutrition, São Paulo, Brazil

P3-82 Effect of Carnobacterium maltaromaticum UAL 307 and Enterococcus faecalis 710C Cultures and Culture Supernatants on the Growth of Listeria monocytogenes in Fresh Beef Sausage — EMEFA A. MONU, Kamila Moquin and Lynn M. McMullen, University of Alberta, Agricultural, Food and Nutritional Science, Edmonton, AB, Canada

P3-83 Effect of Antimicrobial Packaging on Control of Spoilage Microorganisms on Naturally Contaminated Ready-to-Eat Meats — YOEN JU PARK and Jinru Chen, University of Georgia, Food Science & Technology, Griffin, GA, USA

P3-84 A Science-based Approach to Calculating Safe Cooking Temperatures for Poultry Meat in New Zealand — SUSAN E. GILBERT, Lynn McIntyre, Andrew Hudson, Lisa Olsen and Roger Cook, Institute of Environmental Science and Research (ESR) Limited, Food Safety Programme, Christchurch, New Zealand

P3-85 Selecting Susceptible and Resistant Salmonella Serovars for Cocktail Preparation: A Case Study in Mitigating Sample Bias Using Statistical Methods — MELISSA K. HUGHES, Bryan M. Hughes, Guy Loneragan and Mindy M. Brashers, Texas Tech University, Animal & Food Sciences, Lubbock, TX, USA

P3-86 A Response Surface Model to Describe the Effect of Temperature and pH on the Growth of Bacillus cereus in Cooked Rice — JI-YOUNG LEE, Sun-Kyung Heo and Sang-Do Ha, Chung-Ang University, Food Science & Technology, Ansung-Si, Korea, South

P3-87 Growth of Escherichia albertii on Ground Beef DSC Stored at Various Temperatures — KEILA L. PEREZ and T. Matthew Taylor, Texas A&M University, Animal Science, College Station, TX, USA

P3-88 Cold Tolerance of Clostridium perfingens Induced by GRAS Substances — Norma L. Heredia, SANTOS GARCIA and Julio Limon, Universidad A. De Nuevo Leon, San Nicolas, Mexico

P3-89 Effects of Temperature and pH on the Thermal Inactivation of Bacillus pumilus, B. licheniformis, B. subtilis and B. megaterium — JOY E. GAZE and Andres Rodriguez-Lozano, Campden BRI, Microbiology, Chipping Campden, United Kingdom

P3-90 Time-temperature Profiling Associated with Preparation and Storage of Powdered Infant Formula: Implications for Microbial Safety — ELIZABETH C. REDMOND and Christopher J. Griffith, University of Wales Institute Cardiff, Cardiff School of Health Sciences, Cardiff, United Kingdom

P3-91 Pulsed Electric Field Inactivation of Escherichia coli O157:H7 and Surrogate Bacteria in Orange Juice — JOSHUA B. GURTLE, David J. Geveke, Rebecca B. Rivera and Howard Q. Zhang, United States Dept. of Agriculture, ARS, Eastern Regional Research Center, Wyndmoor, PA, USA

P3-92 Impact of Pressure Pulsing on Biochemical Changes of Bacillus amyloliquefaciens Spore Inactivation through Fourier Transform Infrared Microspectroscopy — WANNASAWAT RATHPITAGSANTI, Luis E. Rodriguez-Sãona and VM. (Bala) Balasubramaniam, The Ohio State University, Food Science and Technology, Columbus, OH, USA

P3-93 Inactivation of Escherichia coli O157:H7 and Nonpathogenic E. coli in Strawberry Juice by Pulsed Electric Field, Sodium Benzoate, Potassium Sorbate, and Citric Acid — JOSHUA B. GURTLE, David J. Geveke and Howard Q. Zhang, United States Dept. of Agriculture, ARS, Eastern Regional Research Center, Wyndmoor, PA, USA

P3-94 Inactivation of Mango Nectar Native Flora Combining Low Frequency Ultrasound and Short Wave Ultraviolet Light — MARTHA Julieta Martinez-Ramirez, Juan Jose Gomez-Diaz, ENRIQUE PALOU and Aurelio Lopez-Malo, Universidad de las Americas, Puebla, Chemical and Food Engineering, Cholula, Mexico

P3-95 Use of a Terbium-Dipicolinic Acid Fluorescence Assay to Analyze Thermal Death Time Data of Bacillus and Clostridium Endospores — SIMMON HOFSTETTER, Tennille Villeneuve, Lynn M. McMullen and Michael G. Ganze, University of Alberta, Agricultural, Food and Nutritional Science, Edmonton, AB, Canada
P3-96 Survival of Lactic Acid Bacteria in Various Water DSC Sources and Sandy Loam Soil — ANGELA M. LAURY and Mindy M. Brashears, Texas Tech University, Animal and Food Sciences, Lubbock, TX, USA

P3-97 Withdrawn

P3-98 Application of a Novel Single Bacterial Cell DSC Manipulation Technique Listeria monocyctogenes — BARBARA RÖDER, Martin Wagner and Peter Rossmanith, University of Veterinary Medicine Vienna, Dept. of Veterinary Public Health and Food Science, Vienna, Austria

P3-99 Evaluation of a New Automated Method for Enumerating Yeast and Mold in Food Products — GREGORY DEVULDER, bioMérieux, Marcy l’Etoile, France

P3-100 Polymerase Chain Reaction-restriction Fragment Length Polymorphism (PCR-RFLP) of the aroA Gene from Arcobacter butzleri Korean Isolates — MIN HWA LEE, SunKeum Choi and Changsun Choi, Chung-Ang University, Ansung, Korea, South

P3-101 Subtyping and Characterization of Cronobacter sakazakii isolated from Powdered Food — YOUNG-DUCK LEE, Young-Duck Lee, Tae-Hwa Ryu, Hyo-Ihl Chang and Jong-Hyun Park, Korea University, Seoul, Korea, South

P3-102 Rapid Two Day Isolation and Identification of Salmonella Using Single Selective Enrichment and Brilliance™ Salmonella Agar — JEFF J. KOZICZKOWSKI, Dorn L. Clark, Roy P. Radcliff and Christine M. Hilbert, Marshfield Food Safety, Food Safety, Marshfield, WI, USA

P3-103 Purification and Characterization of Xylanase from a New Strain of Bacillus sp. — LI-JUNG YIN, Yen-I Chiang and Shann-Tzong Jiang, National Kaohsiung Marine University, Dept. of Sea Food Science, Kaohsiung, Taiwan

P3-104 Survival of Escherichia coli O157:H7 and Salmonella Newport in Animal Feces — SADHANA RAVISHANKAR, Libin Zhu and Jorge M. Fonseca, University of Arizona, Veterinary Science and Microbiology, Tucson, AZ, USA

P3-105 Recovery and Infectivity of Norovirus in Bacterial Biofilms on Stainless Steel — ADRIENNE E. SHEARER and Kalmia E. Kniel, University of Delaware, Animal and Food Sciences, Newark, DE, USA

P3-106 Antimicrobial Activities of Cinnamaldehyde and Carvacrol against Salmonella Newport on Contaminated Oyster and Celery — SADHANA RAVISHANKAR, Libin Zhu and Mendel Friedman, University of Arizona, Veterinary Science & Microbiology, Tucson, AZ, USA

P3-107 Risk Factors Associated with the Presence of Listeria in Rural Households with or without Ruminant Animals — MAWILL RODRIGUEZ-MARVAL, Jeff LeJeune, Lydia C. Medeiros, Patricia A. Kendall and John N. Sofos, Colorado State University, Dept. of Animal Sciences, Fort Collins, CO, USA
**WEDNESDAY AFTERNOON**

**JULY 15**

**D**

**Pros and Cons of Zero-tolerance Policy for Pathogens in Food**

_Grapevine C_

1:30 **Organizers:** Catie Beauchamp and Brooke Whitney

3:30 **Moderator:** Ben Chapman

**Panel:**

CAROLINE SMITH DEWAAL, Center for Science in the Public Interest, Washington, D.C., USA

EMILIO ESTEBAN, USDA-FSIS-OPHS-EALS, Athens, GA, USA

RUSS FLOWERS, Silliker Group Corp., Homewood, IL, USA

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**S25**

**Food Safety Challenges for Unrefrigerated Display of Ready-to-Eat Foods**

_Grapevine D_

**Organizer:** Allen Sayler

**Convenors:** Veneranda Gapud and Allen Sayler

1:30 Microbiological Challenges of Unrefrigerated Display of Refrigerated RTE Foods — KATHLEEN A. GLASS, University of Wisconsin, Madison, WI, USA

2:00 United States Retail Food Industry Practices and Perspectives on Ambient Display of RTE Foods — To be determined

2:30 Australian Retail Food Industry Practices and Perspectives on Ambient Display of RTE Foods — To be determined

3:00 European Perspectives and Directives on Ambient Display of RTE in Retail Food Locations — ROY BETTS, Campden BRI, Chipping Campden, Gloucestershire, United Kingdom

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**S26**

**Shigatoxin Escherichia coli: The Bad, the Worse, and the Pathogenic**

_Grapevine A_

**Sponsored by the IAFP Foundation**

**Organizers:** Patrice Arbault, Frank Burns and Nandini Natrajan

**Convenors:** Patrice Arbault and Frank Burns

1:30 Comparative Genomics as an Aid to Identify the Bad, the Worse, and the Pathogenic — MOHAMED KARMALI, Public Health Agency of Canada, Guelph, ON, Canada

2:00 Outbreak Investigation: On the Road to the Pathogenic STECs — PETER GERNER-SMIDT, CDC, Atlanta, GA, USA

2:30 The United State Food Industry Perspective: STEC as an Emerging Threat? — JENNY SCOTT, Grocery Manufacturers Association, Washington, D.C., USA

3:00 Analytical Methods: The Needs, the Reality and the Perspectives — PETER FENG, FDA, College Park, MD, USA

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**S27**

**Focusing Our Efforts: Vulnerability Assessment and Mitigations Research in Food Processing and Handling Default**

_Grapevine B_

**Organizer:** Cory Bryant

**Convenor:** Shaun Kennedy

1:30 Vulnerabilities and Mitigations — DONALD A. KAUTTER, FDA, College Park, MD, USA

2:05 Vulnerability: An Industry Perspective — DAVE WANKOWSKI, Kraft Foods, Glenview, IL, USA

2:40 Mitigations Research — SHAUN KENNEDY, University of Minnesota, St. Paul, MN, USA

3:15 Question & Answer Period

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**S28**

**CSI: Beverage Plant: On the Trail of Hot- and Cold-fill Spoilers**

_Grapevine 1-2_

**Sponsored by the IAFP Foundation**

**Organizers:** Julie Kuruc, Kathleen Lawlor, Mangesh Palekar, Patricia Rule and Isabel Walls

**Convenors:** Julie Kuruc and Mangesh Palekar

1:30 Investigating the Spoilage of Heat-processed Beverages: Challenges and Methodologies — EMILIA RICO-MUNOZ, BCN Research Laboratories, Inc., Rockford, TN, USA

2:00 HRM Spoilage in a Hot-filled Ready-to-Drink Tea Product — GORDON HAYBURN, The Tetley Group Ltd., Greenford, Middlesex, United Kingdom

2:30 Finding the Needle in the Haystack: Identifying the Cause of Spoilage in Aseptically Packed High-acid Beverages — WILFREDO OCASIO, The National Food Laboratory, Inc., Dublin, CA, USA

3:00 When Cooling Water Meets Package Seal, Will Bacterial Travelers Receive a Warm or Cool Reception? — KATHLEEN A. LAWLOR, PepsiCo, Valhalla, NY, USA

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**S29**

**Food Safety Programs across an Integrated Poultry Industry**

_Grapevine 3-4_

**Sponsored by the IAFP Foundation**

**Organizers:** Margaret Hardin, John Marcy and Marcos Sanchez

**Convenors:** Margaret Hardin, John Marcy and Marcos Sanchez

1:30 Tracking Antibiotic Resistance in the Poultry Processing Environment — PAULA FEDORKA-CRAY, Bacterial Epidemiology and Antimicrobial Resistance Research Unit, USDA ARS, Athens, GA, USA
2:00  Microbial Challenges and Interventions on the Farm — BILLY HARGIS, Center of Excellence for Poultry Science, University of Arkansas, Fayetteville, AR, USA

2:30  Microbial Interventions Used in Poultry Processing — SHANE CALHOUN, Pilgrim’s Pride Corporation, Pittsburg, TX, USA

3:00  Managing Food Safety across a Vertically Integrated Company — SCOTT STILLWELL, Tyson Foods, Springdale, AR, USA

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**CLOSING SESSION**

4:00 p.m. – 4:45 p.m.

**John H. Silliker Lecture – Grapevine A**

The 2008 Irish Dioxin Crisis: A Public Health, Food Safety, Economic, Legal, or a Risk Communication Challenge? — Dr. Patrick Wall, University College Dublin, School of Public Health and Population Sciences, Belfield, Ireland