

Applied Laboratory Methods PDG

Attendees: Douglas Abbott, Ted Andrew, Leen Baert, Jing Bai, Dory Barninka, Junia Beaubrun, Karen Beers, Scott Benko, Reginald Bennett, Larry Beuchat, Arun Bhunia, Rachel Binet, Wafa Birbari, Bledar Bisha, Preetha Biswas, Philip Blagoyevich, Eva Borjas Orellana, Mick Bosilevac, Alex Brandt, Michael Brodsky, Frank Burns, Oscar Caballero, Alexandra Calle, Catharine Carlin, Evan Chaney, Yang Chen, Yi Chen, Sojeong Choi, Nathaniel Cira, Mike Clark, Kristine Clemens, Kimberly Cook, Phil Coombs, Douglas Cosby, Alexandre Costa, Christopher Crowe, Ashley Cunningham, Marlo Darken, Kelly Dawson, Daniel Demarco, Govindaraj Dev Kumar, Brian Dimenna, Nancy Dobmeier, Katja Dohrendorf, Christophe Dufour, Hari Prakash Dwivedi, Ruth Eden, Franck Edouard, Hesham Elgaali, Blanca Escudero-Abarca, Emilio Esteban, Patrick Fach, Jeremy Faircloth, Paula Fedorka Cray, Peter Feng, Laura Gage, Ted Gatesy, Foivos Genigiorgis, Gary Gensler, Jose Gil, Jackie Glover, Jonathan Glynn, Narjol Gonzalez-Escalona, Nancy Gushing, Miguel Gutierrez, Monica Guzman, Jennifer Hait, Upasana Hariram, Christina Harzman, Alice Hayford, Joe Heinzelmann, Evan Henke, Sunee Himathongkham, Maria Hoffmann, Patricia Jaar, Bala Jagadeesan, John Jarosh, Lee-Ann Jaykus, Wen-Tsai Ji, Karen Jinneman, Rick Kanaby, Brenda Keavey, Shivaramu Keelara Veerappa, Ramin Khaksar, Yasu Komoto, Jeffrey Kornacki, Keith Lampel, Judy Lee, Y. Jennifer Lee, Susan Leonard, Cari Lingle, Maria Lovelace-Johnson, Dumitru Macarisin, Wendy Maduff, Pancita Manalili, Frederic Martinez, Tammy McFate, Jesse Miller, Pat Millner, Molly Mills, Paul Morin, Rodney Moxley, Peter Muriana, Stacey Murphy, Charles Muyanja, Joshua Nazareth, Chad Nelson, Minh Nguyen, Xiangwu Nou, Moustapha Oke, Modesto Olanya, Palmer Orlandi, Omar Oyarzabal, Mickey Parish, Salina Parveen, Amanda Pashenee, Alma Perez-Mendez, Tina Pfefer, Jerri Lynn Pickett, Sophie Pierre, Karen Pietrzen, Jean-Louis Pittet, Aaron Pleitner, Tracy Posavatz, Sarita Raengpradub, Srinivas Ramaswamy, Ravinder Reddy, Glenner Richards, Jena Roberts, Angela Ruple, Jean Schoeni, Carla Schwan, Brooke Schwartz, Kyle Schweisthal, Arlette Shazer, Angela Siemens, Jennifer Sinatra, Kenna Smith, Thierry Sofia, Insook Son, Matthew Stasiewicz, Larry Steenson, Tyler Stephens, Don Stoeckel, Mehgan Styke, Zhanqiang Su, Ben Tall, Sandra Tallent, Leslie Thompson, David Tomas, Jean-Philippe Tourniaire, Peter Trabold, Purnendu Vasavada, Danah Vetter, Jeyachchandran Visvalingam, Morgan Wallace, Li Wan, Chun Wang, Hua Wang, Kurt Westmoreland, Pamela Wilger, Pierre Woehl, Florence Wu, Shuang Wu, Jin Xu, May Yeow, Kisun Yoon, Edith Zambrana, Elliott Zell, Wayne Ziemer, and Joseph Zindulis. **Number of Attendees:** 171

Meeting Called to Order: 3:15 p.m., Sunday, July 31, 2016.

Sign in for PDG meeting performed using scanning device. Replaces sign-in sheets. Option to add or delete PDG membership is available via the IAFFP web site.

Old Business: Approval of 2015 minutes. Motion to accept minutes made by Ben Tall, seconded by Emilio Esteban, and approved.

New Business: Mickey Parish, representative of the IAFP Board, provided updates:

- Presently 4,100 members.
- Projecting 3,400 attendees at IAFP 2016.
- Largest number of exhibitors at 175. Encouraged attendees to visit booths.
- Symposia proposals: Program Committee will adhere to 30-minute slots for each speaker. Full symposia are three hours (six speakers); Half symposia are 1.5 hours (three speakers) and on the last day of the meeting, symposia can be two hours (four speakers).

Synopsis of ALM supported symposia/round tables/workshops: 11 symposia, 1 roundtable and 1 workshop

Symposia and Roundtable

- Lab Detection of Food Safety Hazards: Has Sample Prep Advanced into the 21st Century?
- We are What We Eat: Should Food Microbiology Take the Lead on Understanding How the Homeostasis of the Gut Microbiome Influences Human Health and Disease?
- Prokaryotic Hibernators-persisters in Foods – What is Really Going on?
- Pathogen Adaptation: Transmission from the Environment to Host and from Host to Host.
- Now That WGS Has Arrived, What Does the Data Really Tell Us?
- The Complexity of Antibiotic Resistance – The Need for Multi-System Approaches.
- *Campylobacter* roundtable.
- Multiplex Foodborne Pathogen Detection Assays: Fishing for Them All with One Bait.
- Crowdsourcing and Novel Digital Data: 21st Century Tools for Food Safety Monitoring, Surveillance, and Management.
- How Safe is Your Infants' Powdered Formula: A Tale of *Cronobacter sakazakii*?
- Revisiting the STEC Testing Approach: Regulatory and Industry Perspectives on Making It. More Reliable for Routine Application in Food Industry.
- VBNC bacteria: not your typical injured cells.

Workshop

- Norovirus workshop.

Interactive Discussions

USDA-FSIS Updates: Emilio Esteban summarized the ongoing whole genome sequencing efforts at the U.S. Department of Agriculture and the efforts to identify and characterize every pathogen isolated from meat, poultry, egg products and catfish (domestic and imported) by 2017. He also described the chemistry efforts to continue the collection of data on heavy metals, drugs, pesticides, and antimicrobials. A revised enrichment medium with a neutralizing agent has been implemented by FSIS in the collection of samples for pathogen testing and for baseline studies. The Microbiology Laboratory Guidelines are not changing, only the formulation of the medium for sample collection has been update. The agency is moving to a universal enrichment for pathogen detection and a continuous flow from research to regulatory testing.

Canadian Microbiological Methods: Martin Duplessis stated that in Canada the Compendium of Analytical Methods has the protocols for seven pathogens as of March 2016 and is available on their web site.

Method Validation ISO 16140: Pamela Wilger reviewed the efforts on Method Validation ISO 16140 and mentioned that the ISO representing organization in the USA, ANSI, is looking for different technical experts.

STEC Detection Methods: Peter Feng provided an update on STEC detection methods and which genetic determinants are used to make regulatory calls for public health risks. Presence of specific virulence genes, along with stx variants, and serotyping are critical components of how different regulatory agencies (FDA, EFSA, FSIS, CFIA) take regulatory action.

Norovirus Method Update/NoroCore: Lee-Ann Jaykus provided an update on cell culture model to propagate noroviruses recently developed by Mary Estes. She also reported on a recent study that looked at prevalence of norovirus in airplanes and restrooms; 1% prevalence found in restrooms. In addition, norovirus was found to be aerosolized in vomitus from infected people. Lastly, she updated the membership on a recent comparative study on the effect of disinfectants on norovirus as well as the Tulane virus to be uses as a surrogate for norovirus.

STEC CAP Grant Update on STEC Methods: Rodney Moxley provided an update on the USDA STEC CAP grant. He outlined the five objectives of the grant that included PCR based detection

assays, development of biosensors, the utility of the Possé differential agar, use of other agars for STEC isolation, and NEOSEEK testing.

Pathogen Testing in Meat Industry: Melody Thompson presented an update on pathogen testing in the meat industry.

Enterotoxins: Sandy Tallent spoke about efforts to harmonize methods to detect enterotoxins from certain pathogens. Part of this process is based on ISO methods with new pre-enrichment broth changes. She also noted that certain methods, such as Tecra kit for *Bacillus cereus*, have been eliminated and now use VITEK. Other companies now have revised their kits (BioControl with AOAC validation study underway) and bioMerieux has introduced a new method.

Comments made on the type of symposia for 2017 include:

- Methods validation.
- Understanding how *Listeria* survives in the environment and how transient versus resident strains can be identified.
- Universal enrichment broths.
- Low-water activity foods and the selective agents in media (antibiotics) that may stop growth of target organisms.
- Recovery of injured cells and discussion on whether anaerobic or aerobic incubation is better for isolation of facultative aerobes.
- Micro data management.
- Variability of results among automated methods.
- Detection of live vs. dead cells.
- Metabolites or markers to detect the presence of pathogens in samples.

Recommendation to the Executive Board:

1. Request a different setup for the meeting, with a large table in the middle where the officers will sit. Request two hand-held microphones.

Next Meeting: Conference call has been set for September 14, 2016.

Meeting Adjourned: 5:05 p.m.

Chairperson: Hari Dwivedi