

Microbial Modelling and Risk Analysis PDG

Members Present: Sofia Santillana Farakos (Chair), Abdullatif Tay (Vice-Chair), Hiroki Abe, Gary Aldis, Clifton Baldwin, John Bassett, Zachary Berglund, Ryan Blaustein, Melissa Bohn, Fred Breidt, Carmen Cantu, Emily Cason, Sneha Chhabra, Shihyu (Andrew) Chuang, Sara Bover Cid, Tyler Chandross-Cohen, Margaret (Peg) Coleman, Roger Cook, Kim Cook, Ashley Cunningham, Denise DuFresne, Maude Michaud Dumont, Alberto Garre, Binita Goshali, Jakob Gryniewski, Sanjay Gummalla, Matt Guo, Ruth Harper, Gregory Harter, Eelco Heintz, Ian Hildebrandt, Haknyeong Hong, Keith Ito, Vijay Juneja, YeonJin Jung, Erin Kealey, Shannon Koerber, Shige Koseki, Kunihiro Kubota, Devin LaPolt, Susan Leonard, Shenmiao (Ivy) Li, Xiyang Liu, Nicolas Nguyen Van Long, Deon Mahoney, Bradley Marks, Christopher McNamara, Sharon Nieves-Miranda, Nanaje Gowda Na, Cecil Barnett-Neefs, Kasey Nelson, George-John Nychas, Himadri Pal, Gabriella Pinto, Alda Pires, Breanna Polen, Simone Potkamp, Shivaprasad Doddabematti Prakash, Gustavo Reyes, Kaylee Rumbaugh, Todd Ruthman, Deepti Salvi, Donald Schaffner, Frank Segers, Chris Sharps, Malavika Sinha, Panos Skandamis, Matthew Stasiewicz, Jaya Sundaram, Chrysoula Tassou, Francisco Garces-Vega, Ann Charles Vegdahl, Xiaohong Wei, Eric Wilhelmsen, Jacqueline Wilhelmsen, Zhenlei Xiao, Yoshimasa Yamakawa, Shigeki Yamamoto, Kang Zhou.

Total Number of Attendees: 77.

Meeting Called to Order: Sunday, 3:15 p.m. Eastern Time, July 16, 2023.

Minutes Recording Secretary: Abdullatif Tay.

Old Business: No issues were brought up related to old business.

New Business: Welcome and Agenda: Dr. Santillana Farakos open the meeting with welcome message. Antitrust policy: Dr. Santillana Farakos read the policy that the PDG members must follow the Antitrust policy that restricts to discuss any trade secrets, price fixing, and all related items related to antitrust policy. Motion to adopt 2022 PDG Meeting minutes which is published on the IAFP website. Student PDG member Grace Akumu from Texas Tech University provided

1 the Student PDG update. Dr. Sofia Santillana Farakos provided the Board updates. Encouraged submission of symposia, roundtable and workshop proposals by October 3, 2023.

Guest speaker presentation: Dr. Kang Zhou “RiskAssessment from an International Level.” Dr. Kang gave an overview of the Joint FAO/WHO Expert Meeting on Microbiological Risk Assessment (JEMRA) secretariats that provide microbiological risk assessment and scientific advice to Codex Alimentarius to support the development of international guidelines and standards.

Student abstract awards presented and certificates to students distributed

Top 1: Zachary Berglund, Purdue University, Predictive Modeling of Wheat Flour Safety Recall Behaviors and Recall Awareness; P3-161 Wednesday, July 19th.

Top 2: Alexander Gmeiner, Technical University of Denmark, Predicting Disinfectant Resistance in *Listeria monocytogenes* Using Whole Genome Sequencing and Machine Learning; T8-03 Tuesday July 18th, 9-9:15AM

Symposia/roundtables accepted/rejected for 2023.

Summary presented and will be posted on *IAFP Connect* library of the community.

Webinars and other communication activities: Future webinars are encouraged.

Future symposia/roundtables/workshop proposals: Extensive discussion on proposals for 2024 were conducted by dividing the members into 4 groups by category: predictive modeling, risk assessment, risk management and risk communication. The groups discussed future topics for 1 hour and the facilitator for each of the groups presented the summary of the discussion and potential ideas. These are captured in the addendum.

Any other businesses/Dissemination activities:

Members discussed the possibility of expanding the mission of the PDG to be able to include chemical hazards in modeling and risk assessment. This may require a change in the name of the PDG (i.e., removing the word microbial from the name and the mission) to be more inclusive to other hazards in the food supply. There is currently no PDG that addresses quantitative risk assessment for chemical hazards. This is a growing need in food safety and members in the current MMRA PDG hold the expertise in assessing, modeling and risk of these hazards.

Recommendations to the Executive Board:

1. Discuss the possibility of expanding the mission of the MMRA PDG to include other hazards in foods.

ADDENDUM

Predictive modeling group ideas:

- Predictive model assessing quality of the product.
- Collecting data and should be treated in different ways. Combine different tools with the data to use tools for example. Digital brains.
- User friendly QRA tools, new tools, application-real-time prediction.
- Risk prioritization and latest development. Criteria, case studies, explore linkage with risk management group.

Risk assessment group ideas:

- Controlled env AG.
- Quality control risk assessment models.
- Paths to a database. Data pieces, function so skill and community development. IAFP training.

Risk management group ideas:

- AI and machine learning past, present, future symposia. Texas Tech.

- AI and digital.
- Decision making and risk management. Advantages and pitfalls.
- Navigating through best data for RM, predictive modelling communication. How to do that navigation.
- So many new members in the room. Is there a need to focus on basics? Is it time to go back to predictive modelling 101, risk assessment 101. Workshop, trainings, symposia.
- How to communicate the risk tools to non-technical.

Risk communication group ideas:

- Translating risk (lay terms) targeting consumers, food business operators, authorities, academics, etc.(symposia).
- Integrating social media to risk communication(workshop).

Next Meeting Date: July 14, 2024, Long Beach, California.

Meeting Adjourned: 5:15 p.m. Eastern Time.

Chairperson: Sofia Santillana Farakos.