

Plant-Based Alternative Products Quality and Food Safety PDG

Attendees: Yanyan Huang (Chair), Aaron Pleitner (Vice Chair), Mathew Bartkowiak, Kantha Shelke, Jaclyn Merrill, Mileah Shriner, Catherine Sander, Urvi Shah, Deepa Thiagarajan, Jesse Miller, Alejandra Ramirez, Robert Price, Stephen Grove, John Bassett, Harneel Kaur, Joe Holt, Gry Terrell, Chris Rupert, Rocelle Grabarek, Judith Hajdenwurcel, Lijun Hu, Kent Juliot, Kristin Schill, Hui-Erh Chai, Brad Taylor, Todd Napolitano, Megan Rose-Martel, Emmanuel Onuoha, Ruth Petran, Steve Taylor, Erica Bendix, Sarita Raengpradub, Michael O'Rourke, Juming Tang, Patricia Rule, Olivia Arends, Vinayak Ghate, Magdalena Olszewska, Justyce Jedlicka, Jignesh Rasania, Ryan Maus, Ingrid Zamora, Melanie Downs, Joe Baumert, Sanjana Laobangdisa, Sakshi Lamba, Steve Tracey, Guodong Zhang, Hui Zeng, Kangming Ma, Lily Yang, Hany Anany, Ivonne Litwin, Sampathkumar Balamurugan, Stefano Luccioli, David Crabtree, William Whitman, Helen Taylor, Nic Sharman, Marvin Mitchell, Jr., Vijay Krishna, Margaret Kirchner, Katie Overbey, Emily Kingston, Maayan Abramovich, Evan Henke, Daniel Smieszek, Varalakshmi Sudagar, Makena Brand, Erin Dreyling, Will Gannon, Naveen Murthy, Jody Swaim, Grace Kringle, Calvin Slaughter, Amanda Yackley, Katherine Qu, Ava Weyrich, Gabriella Gephart, Weilin Shelver, Adeniyi Odugbemi, Adejare Adegbuyi, Jeff Farber, Angela Anandappa, Niam Abeysiriwardena, Bledar Bisha, Rafael Ferreira, Robert Brackett, Lisa Lupo, Yuewei Hu, Shannon Koerber, Luciana Salles, Subash Shrestha, Gregory Siragusa.

Number of Attendees: 98.

Meeting Called to Order: Sunday, July 31, 2022.

Old Business: None.

New Business: Executive Summary: Scope of this PDG is to cover PB and alternative proteins (cultured meat, insect proteins, and air proteins): Lily Yang will lead our cultured meat sub-committee. We need volunteers to lead insect protein and air proteins.

Topics to be covered by this PDG: Unique and specific risks to PB and alternative products on Micro, Allergen, Chemical for food safety and quality, Regulatory, labelling, nutrition and consumer perspectives; Testing methods specific for PB and alternative products; Academia: research and safety data sharing.

Submit abstract before Oct. 4, 2022 for 2023 program. Please volunteer and communicate to Yanyan Huang and Aaron Pleitner if you are willing to be part of the program planning. We will host a workshop to finalize this. Stay tuned!

Please volunteer to speak at one of the webinars.

Topics discussed: Scope of the PDG: should the PDG only cover PB? Or should the PDG cover other alternative proteins: cultured meat, insect proteins, and air proteins.

Proposed decision: cover PB and alternative proteins, PDG to serve as contact for industry of new and novel products that do not have the competency to identify and mitigate hazards, form subcommittee to lead on each alternative proteins. If you are willing to lead one of the three categories (Cultured meat, insect proteins, and air proteins), please contact Yanyan Huang and Aaron Pleitner

Food safety (Micro, Chemical, Physical, Radiological, Allergen): Identify the unique and specific Food Safety risks to each type of PB and alternative product; Novel processes (e.g., soy extraction) vs just soy for tofu, impacting overall safety and quality stability of the product; Also, increase frequency and volume of consumption per consumer; Impact of natural vs derive vs synthesized ingredients

Micro: Insect proteins and micro hazards w/ preventive controls; What does it look like on the consumer endpoint, Alternative proteins - identification of hazards and risk, C. bot 10 day rule still apply? What about algae? What about shared ingredients and mixing of microflora, Ingredient safety (and testing methods), Spore formers in ingredients, GAP analysis missing or not executed on with hazards, Mixing or hybrid products (and how does one do predictive micro and risk analysis)

Chemical: Insect protein, Chemical contaminants, Allergen-True unknown for allergenicity of things like cell culture and insect, What is the true allergen profile?

Ingredient safety: micro on food safety and spoilages; How does one set up their Food Safety plan when a hazard is not necessarily known? Intrinsic risks to materials as well as shared line carry over of unknown risks; Cell cultures - what goes into production and who is the government entity overseeing

Quality (spoilage, shelf life, appearance, taste...) The decision is to have different subcommittee for Micro, Chemical, Allergen but not dividing into food safety and quality and ingredient safety. Please volunteer to be subcommittee leaders for Micro, Chemical, and Allergen.

Terminology: Could we be a driver for standardized lingo/language (i.e. what is cultivated meat, what is plant-based 'milk', how to name insect proteins, etc.)

Combine regulation, labelling, nutrition and consumer perspectives into one subcommittee: Regulation (EFSA joint CODEX committee, FDA, EU) Combine with Labeling but also split between Food Safety and Nutrition, Only intervene is truly used inappropriately or could cause harm (from FDA speaker), Labeling (soy-free, vegan, nutrition), Education for consumers w/ sensory performance (e.g., Vegans not liking IF): CFP conference for alignment in US, EU as well for standard of identify, Nutrition, Consumer perspectives: Vegan preferences, perception, Sustainability and impact on planet, 'Healthier'.

Testing methods - No dedicated methods in ISO or BAM, Patricia Rule from BMX can be our leader on this subcommittee.

Greater Academic perspective - Warrants increased efforts for data sharing and perspective, Provisional patents having an impact on all this.

Others: Predictive Methodology; Cultured media PB source; Antimicrobial Resistance concerns for PB: Highest topics - academic, test methods, food safety (micro/chem/allergen), and all above.

2023 program Planning: Symposia, Roundtable, Technical Session, Process validations, Sanitation, Testing methods, Poster Session, Workshop.

Recommendations to the Executive Board: None.

Next Meeting Date: Sunday, July 16, 2023, Toronto, Ontario, Canada.

Chairperson: Yanyan Huang