




# 2023 Annual Summer Science Symposium

A Gathering of Scientific and Regulatory Experts

**Institute for the Advancement of Food and Nutrition Sciences**

**13-14 June 2023, National Press Club, Washington, DC**

## **Full Agenda**

<b>June 13, 2023</b>	
<b>10:00 – 10:15 am ET</b>	<b>Welcome</b> <i>Coffee, tea and other refreshments will be available before the session starts.</i> <ul style="list-style-type: none"><li>• Annual review of IAFNS accomplishments and goals for the year</li><li>• Comments by IAFNS Leadership</li></ul>
<b>10:15 am – Noon ET</b> 	<b>Artificial Intelligence in Food and Nutrition</b> The 2021 National AI Initiative Act coordinates government efforts to accelerate AI research and application. Since then, NSF, NIH and USDA have funded research focused on AI's ability to analyze large and complex datasets and generate modeled outcomes. Understanding the potential of these technologies can inform cross-sector resource allocation and a better understanding of the strengths and limitations of AI in the food sector. Starting with an overview of the AI landscape, speakers will cover current applications and the promise of AI for advancing our understanding of the complex relationships between food, nutrition and health. <ul style="list-style-type: none"><li>• Rickey Yada, University of British Columbia – Moderator</li></ul> <i>Digesting AI: An Overview of Artificial Intelligence</i> <ul style="list-style-type: none"><li>• Nelly Wilson, Google Cloud</li></ul> <i>The Warp Intelligent Learning Engine (WILEE) Project: Unleashing the Power of Big Data for Food Safety</i> <ul style="list-style-type: none"><li>• Ernest Kwegyir-Afful, FDA CFSAN</li></ul> <i>AI for Enhancing Food Safety and Developing Novel Formulations of Food Bioactives</i> <ul style="list-style-type: none"><li>• Nitin Nitin, University of California, Davis</li></ul> <i>Funding and Priorities in AI at USDA-NIFA</i> <ul style="list-style-type: none"><li>• Steven Thomson, USDA NIFA</li></ul>



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	<p><i>Complex Systems Modeling for Digital Health and Nutrition</i></p> <ul style="list-style-type: none"><li>Giulia Menichetti, Harvard University</li></ul>
<b>Noon – 12:30 pm ET</b>	<b>Lunch</b>
<b>12:30 – 1:30 pm ET</b>	<b>Keynote: Current Direction of and Challenges Facing FDA CFSAN</b> <ul style="list-style-type: none"><li>Steven M. Musser, Deputy Center Director for Scientific Operations, FDA CFSAN</li></ul>
<b>1:30 – 2:00 pm ET</b>	<b>Break</b>
<b>2:00 – 3:15 pm ET</b> 	<b>Advancements in Dietary Bioactive Science</b> <p>Interest in bioactive food components remains high for researchers, the food and supplement industries, and consumers seeking foods with elevated health benefits. Speakers will cover how bioactives have historically been considered in dietary guidance and the evolution of thinking about dietary recommendations. Speakers will provide an update on the current science on bioactive food component benefits including gut chemistry and individual responses. Given interest in food processing, the effects of various common processing technologies on the bioavailability, concentration and bioactivity of compounds also will be reviewed.</p> <ul style="list-style-type: none"><li>Cindy Davis, USDA ARS – Moderator</li></ul> <p><i>Overview of Dietary Recommendations for Bioactives --- Where We've Been, Where We Are, and Where We're Headed</i></p> <ul style="list-style-type: none"><li>Allison A. Yates, USDA ARS (retired)</li></ul> <p><i>Processing Considerations in Delivery of Bioactive Benefits from Foods</i></p> <ul style="list-style-type: none"><li>Mario Ferruzzi, University of Arkansas for Medical Sciences</li></ul> <p><i>Gut Microbiome, Microbial Metabolism, and Personalized Responses to Bioactive Food Components</i></p> <ul style="list-style-type: none"><li>Andrew Neilson, North Carolina State University</li></ul>
<b>3:15 – 3:30 pm ET</b>	<b>Break</b>



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<p><b>3:30 – 5:00 pm ET</b></p> <p><b>CEU</b></p>	<p><b>Hazard, Risk, and Global Regulations</b></p> <p>Across the globe, different countries regulate food additives, ingredients, and food differently. Additionally, global expert groups and authorities take a range of approaches from hazard-based to risk-based in their reviews. When non-aligned conclusions are reached by authoritative bodies, the outcomes have domestic and global implications for policy and regulation. Through case studies and panel discussion, this session will include considerations for communicating risk.</p> <ul style="list-style-type: none"> <li>Alex Eapen, Cargill – Moderator</li> </ul> <p><i>Hazard vs. Risk? Hazard IS Risk</i></p> <ul style="list-style-type: none"> <li>Chris Borgert, Applied Pharmacology and Toxicology, Inc.</li> </ul> <p><i>Hazard, Risk, Candy and the Law</i></p> <ul style="list-style-type: none"> <li>Lyle Burgoon, Raptor Pharm &amp; Tox</li> </ul> <p><i>The Hazards of Risk Communication</i></p> <ul style="list-style-type: none"> <li>Kristine Butler, FDA CFSAN</li> </ul> <p><i>What Happens There Matters Here: Legal and Regulatory Implications of Food Chemical Safety Determinations by International Bodies</i></p> <ul style="list-style-type: none"> <li>Andrea Bruce, Hogan Lovells</li> </ul>
<p><b>5:00 – 8:00 pm ET</b></p>	<p><b>Evening Reception</b></p> <p>Dinner-portion hors d'oeuvres and drinks</p> <p>Speaker: Carter Williams, CEO and Managing Principal at iSelect Funds.</p> <p>Join us for a conversation with Carter Williams on Innovation and Creative Destruction and the Food and Beverage Ecosystem. Carter has spent his entire career working on innovation. First as a young engineer at McDonnell Douglas, next in his leadership roles at Boeing managing R&amp;D and starting Boeing Ventures. Later as a successful entrepreneur and venture investor. Throughout his career, he has directly managed investments of over \$600 million in early-stage ventures and corporate research, resulting in several billion dollars of new product revenues. He has an M.B.A. from the MIT Sloan School and a B.S. in Mechanical Engineering from Rensselaer Polytechnic Institute.</p>



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June 14, 2023

<p><b>10:00 – 11:00 am ET</b></p> <p><b>CEU</b></p>	<p><b>Non-Chemical Protection of Food</b></p> <p><i>Coffee, tea, and other refreshments will be available before the session starts</i></p> <p>Pathogenic bacteria develop resistance to traditional sanitation strategies requiring alternative methods to ensure food safety. The use of bacteria from the native food microbiome as a protective tool could be a valuable mitigation strategy to reduce foodborne illness. Bacteria such as lactic acid bacteria can inactivate pathogenic bacteria through a competition for nutrients and physical space or through the production of inhibitory antimicrobial byproducts. This session will focus on the types of bacteria that are present in foods, their use as protective cultures against pathogenic bacteria in food production, and regulatory aspects of the use of non-chemical treatments.</p> <ul style="list-style-type: none"> <li>• Chuck Czuprynski, University of Wisconsin – Moderator</li> </ul> <p><i>One Health Approaches in the Application of Metagenomic Sequencing to Improve Food Safety</i></p> <ul style="list-style-type: none"> <li>• Karen Jarvis, FDA CFSAN</li> </ul> <p><i>FSIS Technical Review Process- Regulatory Implications of Using Non-Chemical Intervention Strategies</i></p> <ul style="list-style-type: none"> <li>• Jennifer Green, USDA FSIS</li> </ul> <p><i>Human Pathogens, Native Microbiota, Protective Cultures, and their Involvement in Produce Safety</i></p> <ul style="list-style-type: none"> <li>• Luxin Wang, University of California, Davis</li> </ul>
<p><b>11:00 – 11:15 am ET</b></p>	<p><b>Break</b></p>
<p><b>11:15 – 12: 30 pm ET</b></p> <p><b>CEU</b></p>	<p><b>Heavy Metals in Food: Regulatory Update and Mitigation Strategies</b></p> <p>Reducing the presence of heavy metals in the US food supply is a priority for regulators, food companies and growers. In this session, speakers will provide an update on the FDA’s ‘Closer to Zero’ initiative and the agency’s efforts to set action limits for heavy metals in baby foods. New research findings on prioritizing and mitigating exposure to heavy metals in infant and baby foods will be presented. This includes prioritization of foods and related mitigation practices based on risks for sensitive populations, and the impact of these strategies on the predictability of supply. Finally, session panelists will summarize challenges and opportunities in reducing heavy metals in fresh produce from the perspective of growers in the Western U.S.</p>



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	<ul style="list-style-type: none"> <li>Hongda Chen, USDA NIFA – Moderator</li> </ul> <p><i>Update on FDA’s Closer to Zero Goal to Reduce Childhood Exposure to Contaminants in Foods</i></p> <ul style="list-style-type: none"> <li>Conrad Choiniere, FDA CFSAN</li> </ul> <p><i>Reducing Heavy Metals in Leafy Greens: Learnings and Perspectives from Growers in the Western US</i></p> <ul style="list-style-type: none"> <li>De Ann Davis, Western Growers Association</li> </ul> <p><i>Exposures to Foodborne Heavy Metals by Age Group, Food, and Consumption Patterns</i></p> <ul style="list-style-type: none"> <li>Felicia Wu, Michigan State University</li> </ul>
<b>12:30 – 1:00 pm ET</b>	<b>Lunch</b>
<b>1:00 – 2:00 pm ET</b>	<p><b>Classification of Foods Using Processing Level and Formulation</b></p> <p>Global food polices are being implemented around the concepts of “ultra-processed” or “highly processed” foods, due to research suggesting links to adverse health outcomes. However, there are several different schemes for classification of foods as “highly-processed” which categorize foods differently and classification can vary depending upon the researcher. Successful nutrition policies are based on validated metrics, which, when applied consistently in research, point to substantial evidence for health impact. As the dialogue intensifies around the concept of “ultra-processed,” it is critical to solidify the reliability and validity of these schemes to support regulations and polices that impact public health. In this session, recent dialogues on the topic — including those hosted by IAFNS and USDA — will be summarized. A panel with diverse perspectives will share ideas on the future of this concept and the potential impact on the food and beverage ecosystem globally.</p> <p><i>Considerations for Food Classification Systems that Support Research – Outcomes of the IAFNS Workshop</i></p> <ul style="list-style-type: none"> <li>David Klurfeld, USDA ARS (retired), Indiana University – Moderator</li> </ul> <p><i>Developing a Research Roadmap about Processed Foods, food Processing, and Human Health in the Context of the US Food System</i></p> <ul style="list-style-type: none"> <li>Lauren O’Connor, USDA ARS</li> </ul> <p><i>Standardizing NOVA Classification for US Dietary Data</i></p> <ul style="list-style-type: none"> <li>Kirsten Herrick, NIH</li> </ul>



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	<p><i>IUFoST TaskForce: Food Processing for Nutrition, Diet and Health</i></p> <ul style="list-style-type: none"><li>• Barbara Schneeman, University of California, Davis</li></ul> <p><i>Food Processing and the Challenges of Translating Science into Law: Lessons From Latin America</i></p> <ul style="list-style-type: none"><li>• Valentina Castagnari, Georgetown University</li></ul>
<b>2:00 – 2:30 pm ET</b>	<b>Break</b>
<b>2:30 – 3:30 pm ET</b>	<p><b>Food Packaging and Recycling Innovations</b></p> <p>What will it take to reach the "moonshot" promise of a future with 100% safe and sustainable food packaging? The push toward safe, recyclable, sustainable packaging has hit roadblocks, including complex regulatory landscapes, safety concerns with potential contaminants, and technological challenges. Packaging processes can be disrupted as state and federal regulators move to restrict widely-used packaging chemicals like PFAS and phthalates. The session will include information on the food industry's efforts to address the "moonshot" challenge along with new state and federal requirements.</p> <ul style="list-style-type: none"><li>• Maggie Pandis, Conagra Brands – Moderator</li></ul> <p><i>Regulatory Considerations for Use of Recycled Plastic in Food Packaging (Working Title)</i></p> <ul style="list-style-type: none"><li>• Allan Bailey, FDA CFSAN</li></ul> <p><i>Innovations to Improve the Sustainability of Packaged Foods</i></p> <ul style="list-style-type: none"><li>• Julie Goddard, Cornell University</li></ul> <p><i>Getting Real About the Risks of PFAS in Food</i></p> <ul style="list-style-type: none"><li>• Britt Erickson, Chemical and Engineering News</li></ul>
<b>3:30 – 4:00 pm ET</b>	<b>Break</b>
<b>4:00 – 5:00 pm ET</b>	<p><b>What to Cover? Science Journalism and Story Selection</b></p> <p>In a world abundant with complex and often conflicting scientific knowledge, how do journalists and their editors synthesize information and decide what to cover? How do reporters stay ahead of what's important and interesting to their readers as interests change and evolve? Can scientists work more effectively with reporters to get their findings out? In this session, these questions and others will be addressed by science reporters and experts in science communications.</p>



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	<ul style="list-style-type: none"><li>• Johanna Dwyer, Tufts University – Moderator</li></ul> <p><i>Brief Reflections on How I Decide What to Cover (Working Title)</i></p> <ul style="list-style-type: none"><li>• Helena Bottemiller Evich, Food Fix</li></ul> <p>Panelists:</p> <ul style="list-style-type: none"><li>• Christopher Doering, <i>Food Dive</i></li><li>• Kristin Lewis, AAAS</li></ul>
<b>5:00 pm ET</b>	<b>Closing Remarks and Adjourn</b>



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