NATIONAL ACADEMIES Sciences Engineering Medicine

Communication to Bridge the Gap Between Food Production and Nutrition and Health: A Workshop May 30, 2024

Workshop Speakers

SESSION 1: Challenges and Successes in Communicating about Food Sources and Food Production

Moderator

Payam Vahmani, PhD, is an Assistant Professor in the Department of Animal Science at University of California-Davis (UC Davis). His research focus is on using animal nutrition and management to improve the nutritional value of animal sourced foods, with emphasis on enrichment of bioactive fatty acids and testing their health effects in rodent models for obesity and type-2 diabetes. Dr. Vahmani completed his Ph.D. in Animal Nutrition at Dalhousie University, Canada. He joined the faculty at UC Davis in 2019 after completing a Natural Sciences and Engineering Research Council of Canada (NSERC) postdoctoral fellowship studying the enrichment of bioactive fatty acids in red meat at Agriculture and Agri-food Canada (USDA equivalent). He is an editorial board member for Meat Science and has published 40+ papers, many in the field of enhancement of fatty acid composition in beef and dairy products.

Speakers

Alison Van Eenennaam, PhD, is a Distinguished Professor of Cooperative Extension in the field of Animal Genomics and Biotechnology in the Department of Animal Science at the University of California, Davis where she has been on faculty for over 20 years. Her extension program focuses on the use of animal genomics and biotechnology in livestock production systems. She has a multifaceted research program that includes uses of DNA information and biotechnologies in beef cattle production systems, and the development of genome editing approaches for cattle and sheep. Dr. Van Eenennaam was the recipient of the Council for Agricultural Science and Technology 2014 Borlaug Communication Award, and the American Society of Animal Science 2019 Rockefeller Prentice Award in Animal Breeding and Genetics. She received a Bachelor of Agricultural Science from the University of Melbourne, and both an MS in Animal Science, and a PhD in Genetics from UC Davis. She served as a past member of the USDA's National Advisory Committee on Biotechnology & 21st Century Agriculture, a temporary voting member on the FDA's AquAdvantage Genetically-Engineered Salmon Veterinary Medicine Advisory Committee and was on the United States NASEM study committee for "Science Breakthroughs 2030: A Strategy for Food and Agricultural Research".

Hale Ann Tufan leads the Equitable Agricultural Research (EQUAL) Lab at Cornell which brings together researchers with experience in plant breeding, agricultural economics, GIS, anthropology, gender studies and science and technology studies to contribute to equitable crop improvement theory and practice. She explores how agricultural research processes and outputs can positively contribute to gender equality and social inclusion. Through her research to develop methods and approaches she enables gender analysis in agricultural innovation, while advocating for inclusive agricultural research by challenging power and norms in the research ecosystem. Hale serves in leadership positions of several grant-funded projects, including priority setting co-lead of the Feed the Future Innovation Lab for Crop Improvement, principal investigator of the Gender Responsive Researchers Equipped for Agricultural Transformation (GREAT) project, and principal investigator of Muhogo Bora: Cassava for All. Hale brings a

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multidisciplinary background to her research spanning Ph.D.-level research in molecular plant pathogen interactions, plant breeding with CIMMYT, international agricultural research for development program management, and gender research and capacity development across sub-Saharan Africa. She is the 2019 recipient of the Norman Borlaug Field Award.

Paul Kononoff, PhD, is a native of Saskatoon, Saskatchewan, Canada. He holds a BSA and an MSc in animal science from the University of Saskatchewan (Saskatoon, SK) and a PhD in dairy and animal science from The Pennsylvania State University (University Park, PA). Since 2005, Kononoff has been employed at the University of Nebraska-Lincoln, with a research, extension, service appointment. Kononoff's research program is primary focused on solving problems related to feeding the lactating dairy cow. He has several major areas of dairy nutrition research, including (1) forage particle size and effective fiber, (2) feed characterization, (3) byproducts, and (4) energy metabolism. He is a co-inventor of the Penn State Particle Separator. He has built a program and research capabilities that uses indirect calorimetry to explore the effects of diet on methane production and whole-animal energy utilization. Kononoff serves the State of Nebraska as a board member of both the Nebraska State Dairy Association and the Dairy Council of Nebraska and on the Western Dairy Management Conference planning committee. Kononoff is currently the Editor-in-Chief of the *Journal of Dairy Science* and served on the National Research Council committee to revise *Nutrient Requirements of Dairy Cattle* (8th rev. ed.).

Mary Ellen Camire is the Editor-in-Chief for *Comprehensive Reviews in Food Science and Food Safety*, a highly-ranked journal published by the Institute of Food Technologists. She is a Food Science & Human Nutrition Professor at the University of Maine School of Food & Agriculture, where she has worked since 1989. She holds degrees in biology, nutrition, and food science. Her research interests include consumer acceptability of healthful foods and developing healthy products and processes. She received the Babcock-Hart Award from IFT and ILSI and is an IFT Fellow. She also received her College and University Outstanding Researcher Awards and the American Society for Nutrition's General Mills Bell Institute of Health and Nutrition Innovation Award. She served as President of the IFT and the Cereals and Grains Association. For over 20 years, Mary Ellen served as a food science communicator for IFT, providing sound science to the public on food and nutrition topics in print media, television, radio, and online.

Joe Proudman is the Associate Director for Communications at the Clarity and Leadership for Environmental Awareness and Research (CLEAR) Center in the Department of Animal Science at the University of California at Davis, where he oversees communications and media relations outreach. His work is primarily focused on the communication of issues that involve animal agriculture and sustainability, specifically with how livestock sectors impact planetary health. His background is in photography and journalism, where he earned his BA in photography from San Jose State University and his MA in digital media journalism from the Graduate School of Journalism at Columbia University. His experience involves interning with *The New York Times* on the *Lens Blog* and at the *Star-Ledger* in New Jersey, with additional experience as a sports editor with the *Tahoe Daily Tribune*.

Milton Stokes has been at the intersection of food, agriculture, and nutrition for the last 10 years working on some of the most urgent issues facing people and planet–issues like food and nutrition security as well as sustainability. As the Senior Director, Food & Nutrition, Milton supports IFIC's mission



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of effectively communicating science-based information on food safety, nutrition, and sustainable food systems. Most recently, Milton worked as a consultant to commodity boards, public relations agencies, restaurants, and startups in food, nutrition, and agriculture providing a range of services in communication, strategy, and programmatic activation. Prior to his recent consulting, Milton held leadership positions with Sensei Ag and Bayer, had a professorship and directed a dietetic internship, and co-owned a restaurant. Milton has been an active member of the Academy of Nutrition and Dietetics where he's served in appointed and elected positions on the local, state, and national levels. He is a member of the International Affiliate of the Academy of Nutrition and Dietetics and an honorary member of the Nutritionist-Dietitians Association of the Philippines. Milton has a master's degree in Public Health from Hunter College – City University of New York, and his clinical training was conducted at Yale-New Haven Hospital affiliated with Yale University School of Medicine. His doctoral degree, from the University of Connecticut, is in Communication and Marketing with a specialization in Health Communication. He lives in central Connecticut, near Hartford.

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SESSION 2: Challenges and Successes in Communicating about Food Composition

Moderator

Rodolphe Barrangou, Ph.D. is the T. R. Klaenhammer Distinguished Professor in Probiotics Research in the Department of Food, Bioprocessing and Nutrition Sciences at North Carolina State University, focusing on the evolution and functions of CRISPR-Cas systems, and their applications in bacteria used in food manufacturing. He spent 9 years in R&D and M&A at Danisco and DuPont in the food industry. Dr. Barrangou is also an associate member of the Microbiology graduate program, the Biotechnology graduate program, the Functional Genomics graduate program, the Genetics program, the Genome Engineering and Society Center, and the Comparative Medicine Institute. Recently, for his work establishing the biological function of CRISPR, he received the 2016 Warren Alpert Prize, the 2016 Canada Gairdner International Award, the 2017 NAS Award in Molecular Biology and the 2018 NAS Prize in Food and Agriculture Sciences. Dr. Barrangou was elected into the U.S. National Academy of Sciences in 2018 and the U.S. National Academy of Engineering in 2019. Dr. Barrangou is also the former Chairman of the Board of Directors of Caribou Biosciences, a co-founder and member of the Scientific Advisory Board of Intellia Therapeutics, a co-founder of Locus Biosciences, an advisor to Inari Ag, and the Editor in Chief of the CRISPR Journal. Dr. Barrangou earned a Ph.D. in genomics from NC State and a MBA from the University of Wisconsin-Madison.

Speakers

Michael A. Grusak, PhD, is a U.S. Department of Agriculture (USDA) Agricultural Research Service scientist, the Center Director of the Edward T. Schafer Agricultural Research Center in Fargo, North Dakota, and an Emeritus Professor of Pediatrics at Baylor College of Medicine. Currently, Grusak is serving as the Senior Advisor for Precision Nutrition and Cancer Moonshot in the Office of the USDA Under Secretary for the Research, Education, and Economics Mission Area. In Fargo, he leads a program consisting of five research units whose scientists conduct research focused on crop plants, insects, food safety, and food quality. The Center's broad mission is to solve problems that will help farmers produce a safe, nutritious, and sustainable food supply. Grusak's personal research involves understanding ways to enhance the nutritional quality of plant foods for human or animal consumption; he studies how mineral nutrients are acquired from soil and transported throughout plants to edible tissues and works with breeders to translate this fundamental knowledge into strategies for developing nutritionally enhanced food crops. His group also has contributed to clinical investigations to study nutrient bioavailability from plant foods in humans. In 2016, he served as President of the Crop Science Society of America and the 2022 - 2023 Chair of the Council of Scientific Society Presidents. Grusak received a Ph.D. in botany from the University of California, Davis.

Daniela Barile, PhD, is from Italy, Daniela joined the Faculty of the Food Science Department at the University of California at Davis 13 years ago. Daniela's lab researches the chemical and biological properties of food, with a focus on small molecules, to generate insights into bioactive ingredients that ameliorate human health. The Barile Lab has established an analytical platform based on mass spectrometry for studying oligosaccharides, peptides, glycoproteins and more, identifying various foods

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and associated processing streams as sources of valuable compounds. Her lab is also assembling bioinformatic libraries of food waste that help investigating the underlying conditions that give rise to the formation/preservation of bioactive compounds. She is an active contributor to the International network INFOGEST (promoting the harmonization of in-vitro digestion models) and to FoodData Central (the USDA's comprehensive source of food composition database). Her peer-reviewed publications (>150) have been cited over 5,000 times in just the last 5 years. Barile earned her PhD in Food Science from the University of Piemonte Orientale A. Avogadro in Italy.

Alfredo Morabia, MD, PhD, has been serving as the Editor in Chief of the American Journal of Public Health since 2015. Currently, he holds positions as Professor of Epidemiology at the Barry Commoner Center for Health and the Environment at Queens College, City University of New York, as well as Professor of Clinical Epidemiology in the Department of Epidemiology at the Mailman School of Public Health, Columbia University, New York. As the Principal Investigator of the ongoing World Trade Center-Heart cohort study, funded by NIOSH, Dr. Morabia leads research examining the long-term effects of the 9/11 2001 attack on the heart health of first responders. His expertise as a historian lies in the history of scientific methods employed to study populations, particularly focusing on methodologies where counts and statistics play a pivotal role in identifying causes and implementing effective interventions. Recently, Dr. Morabia authored "The Public Health Approach: Population Thinking from the Black Death to COVID-19," published on October 17, 2023, by Johns Hopkins University Press. This book offers insights into the evolution of population-based approaches to public health, spanning from historical pandemics to contemporary global health crises like COVID-19. He earned his MD from the University of Geneva and both his PhD and MPH in epidemiology from Johns Hopkins School of Hygiene and Public Health.

Laura Fernández Celemín, PhD, is currently the Director General of the European Food Information Council (EUFIC), including 20 years dedicated to the organization. During her time as Director General, she has worked to launch the Food Facts Network, a European science communication initiative to counteract misinformation and misrepresentation of science in the media, and developed numerous awareness-raising campaigns and activities to facilitate better dietary and lifestyle choices by citizens. Additionally, she has led the Nutrition and Food Safety strategy for EUFIC, with multiple peer-reviewed publications, manuscripts, and trade magazines published for her work. She has been a speaker at multiple conferences, including the FAO/WHO, World Trade Organization and African Union sponsored International Food Safety Conference. She earned her BSc in Dietetics from Institut Paul Lambin in Brussels and her PhD in Biomedical Sciences from the University of Louvain in Belgium.

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SESSION 3: Challenges and Successes in Communicating Health and Nutrition Needs of Consumers across the Food System

Moderator

Susan C. Scrimshaw, Ph.D. is past President of Russell Sage College, Troy and Albany, NY. Previous positions include President of Simmons College, Boston, Massachusetts, Dean of the School of Public Health at the University of Illinois at Chicago, and Associate Dean of Public Health and Professor of Public Health and Anthropology at the University of California at Los Angeles. She currently serves on the Board of Directors of the non-profit Capital District Physicians' Health Plan (CDPHP) in Albany, New York. She recently Chaired the National Academy of Sciences Committee on Birth Settings and co-edited the report Birth Settings in America: Outcomes, Quality, Access and Choice (National Academies Press 2020). She is also lead editor for the second edition of The Handbook of Social Studies in Health and Medicine, to be published in 2021 by Sage Publications, London. Her research includes community participatory research methods, combining qualitative and quantitative research methods, health disparities, pregnancy outcomes, health communication, and culturally appropriate delivery of health care. When she was elected to the National Academy of Medicine (NAM) in 1993, she and her father, Dr. Nevin S. Scrimshaw, became the first father/daughter members of the NAM. She is a fellow of the American Association for the Advancement of Science and the American Anthropological Association. She served on the Chicago and Illinois State Boards of Health and the New York State Minority Health Council. She is past president of the board of the U.S.-Mexico Foundation for Science and of the Society for Medical Anthropology, and former chair of the Association of Schools of Public Health. She was a member of the board of governors of the US-Mexico Foundation for Science (FUMEC) for 10 years and served as board president for 3 of those years. Her honors include the Yarmolinsky Medal, given by the National Academy of Medicine for distinguished service, the Margaret Mead Award from the American Anthropological Association, and a Hero of Public Health gold medal awarded by President Vicente Fox of Mexico. She obtained a Ph.D. in anthropology from Columbia University.

Speakers

Elizabeth L. Fox, PhD, RDN is an Assistant Professor of Practice in the Department of Public and Ecosystem Health at Cornell University's College of Veterinary Medicine. Her applied research broadly focuses on improving the implementation of policies and programs to reflect the social, cultural, economic and environmental factors that influence nutrition decisions. As a nutritional anthropologist, she uses ethnographic methods to understand food-related tradeoffs and values, including those across the food system, and to assess public health nutrition issues and develop community-informed interventions. More recently, her work involves examining Farm-to-School programming, the impact of food environments on food choices, and ways to better align goals of health and sustainability in our food system. Prior to her current position at Cornell, she was a Hecht-Levi Postdoctoral Fellow with the Global Food Ethics and Policy Program at Johns Hopkins University. She received her PhD in International Nutrition at Cornell and is a Registered Dietitian Nutritionist (RD/RDN). Additionally, she has worked as a public health nutritionist with the WIC program in San Diego, California and with a pediatric nutrition program at Les Centres GHESKIO, an HIV/AIDS and tuberculosis clinic in Port-au-Prince, Haiti.

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Jaron Porciello is an Associate Professor of Practice in Information and Data Science with the Lucy Family Institute for Data and Society at the University of Notre Dame. She was Co-Director of Ceres2030, which was a food systems project focused on sustainable solutions to address hunger. She is now the Co-Director of the Hesat2030 project, which is the next phase involving a real-time evidence-based roadmap of global hunger that integrates women's empowerment, climate adaptation, and nutrition as additional outcomes in understanding official development assistance and food aid. She has collaborated with multiple international organizations in Sub-Saharan Africa, including UN agencies, NGOs, and donors to address agrifood and food system challenges to sustainably address hunger, while moving the needle in evidence-based communication. She earned dual master's degrees in information and library sciences and English literature from Indiana University.

Jessica Fanzo, Ph.D., is a Professor of Climate and the Director of the Food for Humanity Action Collaborative at Columbia University's Climate School in New York City. Before coming to Columbia in 2023, Professor Fanzo was the Bloomberg Distinguished Professor of Global Food Policy and Ethics at Johns Hopkins University. She has also held positions at the Food and Agriculture Organization of the United Nations (UN), the UN World Food Programme, Bioversity International, the Earth Institute, the Millennium Development Goal Centre at the World Agroforestry Center in Kenya, and the Doris Duke Charitable Foundation. She has participated in various collective endeavors, including the Food Systems Economic Commission, the Global Panel of Agriculture and Food Systems for Nutrition Foresight 2.0 report, the Lancet Commission on Anaemia, and the EAT-Lancet Commissions 1 and now 2. She was also the Co-Chair of the Global Nutrition Report and Team Leader for the UN High-Level Panel of Experts on Food Systems and Nutrition. She currently leads the development of the Food Systems Dashboard and the Food Systems Countdown to 2030 Initiative in collaboration with the Global Alliance of Improved Nutrition. Fanzo became an elected member of the U.S. National Academy of Sciences in 2024.

Alice Callahan, Ph.D., is a reporter at The New York Times. She mainly writes about nutrition, gastrointestinal health, and eating well for health and pleasure. She reports for the Well desk at the Times, where the focus is on providing readers with science-based guidance for living a healthy life. She earned a BS in animal science from Cornell University and a PhD in nutritional biology from the University of California, Davis. She also completed postdoctoral training in fetal physiology at the University of Arizona before transitioning to a writing career. She worked as a freelance science writer for a decade – publishing work in outlets like Scientific American, The Atlantic, Slate, The Washington Post, Undark, and Knowable Magazine – before joining The Times full-time in 2023. She lives in and works from Eugene, Oregon.