

Challenges in Supply, Market Competition, and Regulation of Infant Formula in the United States

Committee

Barbara O. Schneeman

Chair

Barbara O. Schneeman, Ph.D. is Emeritus Professor, University of California, Davis. For over 8 years, she was the Director of the Office of Nutrition, Labeling, and Dietary Supplements at the Food and Drug Administration (FDA) and oversaw the development of policy and regulations for dietary supplements, labeling, food standards, infant formula, and medical foods and served as U.S. delegate to two Codex committees (CCFL and CCFNSDU). From 1976-2004, she was a member of the nutrition and food science faculty at UC Davis and served in several administrative roles, including Chair of the Department of Nutrition, Dean of the College of Agricultural and Environmental Sciences, and Associate Vice Provost for University Outreach. She has been a visiting scientist at UC San Francisco and Assistant Administrator for Nutrition in the USDA Agricultural Research Service. Professional activities include serving as the Higher Education coordinator at USAID, participation in Dietary Guidelines Advisory Committees (including chair of the 2020 DGAC), member of committees for the National Academies of Sciences, Engineering and Medicine, USDA, Food and Agricultural Organization, and World Health Organization. She has been Associate Editor for the Journal of Nutrition and on several editorial boards. Dr. Schneeman served as an external member on a strategic planning committee for Abbott Laboratories from September 2021 to March 2022. Professional honors include Fellow of the American Society of Nutrition, Fellow of the American Association for the Advancement of Science, awards from the Institute of Food Technology, the Conrad Elvehjem Award for Public Service in Nutrition, the FDA Commissioner's Special Citation and the Harvey W. Wiley Medal, the FDA Merit Award, and several honorary lectureships. She is recognized for her work on dietary fiber, gastro-intestinal function, development and use of food-based dietary guidelines, and policy development in food and nutrition. She received her B.S. degree in Food Science from the UC Davis, Ph.D. in Nutrition from the UC Berkeley, and postdoctoral training in gastro-intestinal physiology at Children's Hospital in Oakland, California.

Steven A. Abrams

Member

Steven A. Abrams, M.D. is a practicing board-certified neonatologist and currently is Professor of Pediatrics at Dell Medical at the University of Texas at Austin. He served as an Associate Editor of the American Journal of Clinical Nutrition and is now Editor-in-Chief of Advances in Nutrition. He currently sits on the 2025 U.S. Dietary Guidelines Advisory Committee and was previously on the 2015 Committee. He has chaired the American Academy of Pediatrics' Committee on Nutrition and participated in multiple committees of the National Academies of Science, Engineering, and Medicine which established DRI values. His research focuses on infant nutrition and mineral metabolism in children. He is the author of articles related to infant feeding for the American Academy of Pediatrics, and is active in the area of infant formula. He is the recipient of career research awards in pediatric nutrition from the American Academy of Pediatrics and the American Society for Nutrition.

Susan S. Baker

Member

Susan S. Baker, M.D., Ph.D. is a tenured professor in the department of Pediatrics at the University at Buffalo. She has extensive medical and research experience in the basic processes that underlie nutritional health in children and how the resources that they have available can be used to benefit their health. From the undernourished children, especially infants, in the Kalahari Desert and Nquto, on a Bantustan in an apartheid country, to over nourished children in the US she has strived to understand the causes and what effective measures can be instituted to improve their health. She is the recipient of several honors, including the 2020 American Academy of Pediatrics Murray Davidson Award for outstanding work as a clinician, educator and scientist. She is an elected member of the Council for the American Pediatric Society and serves on their Advocacy Committee. She is an editor for the JPGN and has served on several NAS committees focused on child nutrition. Dr. Baker has an MD from Temple Medical School, a PhD in Nutrition from the Massachusetts Institute of Technology and clinically trained in nutrition and gastroenterology at Boston's Children's Hospital.

Wendy L. Johnson

Member

Wendy L. Johnson, Ph.D. is President of All Things Healing, which is an LLC focused on Nutrition Advocacy, Nutrition Strategy and Nutrition Policy. Prior to assuming this role Dr. Johnson was employed by Nestle in the areas of Nutrition Health and Wellness, Corporate Affairs and Scientific Advocacy representing the Nestle USA, Nestle Health Sciences and Gerber businesses. Her skill set includes scientific writing, public health expertise, strategy development, community engagement, critical thinking, and crisis/issues management and vision alignment. Dr. Johnson was educated at UNC where she received a BA, MPH and a PhD in Chemistry, Nutrition and Nutrition and Health Policy respectively. Dr. Johnson's interest and approach to her work was strongly influenced by her more than a decade at the National Institutes of Health, Division of Nutrition Coordination in the capacity of public health nutrition and health policy advisor. She is an active member of the American Public Health Association where she is past chair of the section. Dr. Johnson is also an active member of the American Dietetic Association and the American Society for Nutrition.

Reynaldo Martorell

Member

Reynaldo Martorell Ph.D. is the Robert W. Woodruff Professor of International Nutrition (Emeritus) at the Hubert Department of Global Health, Emory University. After obtaining his PhD in Human Biology from the University of Washington in Seattle, he has devoted his career to nutrition and public health. He began his career as a scientist at the Institute of Nutrition of Central America and Panama (INCAP) and was on the faculty at Stanford and Cornell universities. His research interests include maternal and child nutrition, child growth and development, micronutrient malnutrition, the emergence of obesity in developing countries and program design and evaluation. He serves on the Executive Management Team, Food Fortification Initiative; the Board of Trustees, Helen Keller International; Steering Committee, Double Salt (DFS) Fortification Consultation of the Global Iodine Network, and is Chair of INCAP's External Advisory Committee, among other appointments. His honors include election to the USA National Academy of Medicine, election to the Spanish Academy of Nutrition, election to the American Epidemiological Society, Fellow of the American Society for Nutrition and the International Union of Nutritional Sciences, the Gopalan Oration and Gold Medal Award from the Nutrition Society of India, the International Nutrition Prize of the American Society for Nutrition, the Carlos Slim Award for Lifetime Achievements in Research on Health, an Award for contributions to Fighting Hunger and Malnutrition from the President of Honduras, the Raymond Pearl Award from the Human Biology Association and three awards from Emory University (The Fifth Distinguished Faculty Lecture, the Thomas Sellers Award and Marion V. Creekmore Award for Internationalization), among others. He is committed to service to the profession, particularly concerning the translation of research to policies and programs. Dr. Martorell has served on numerous committees of the Bill and Melinda Gates Foundation, USAID, The Wellcome Trust, the Institute of Medicine, NIH, The World Bank, and several UN agencies (WHO, PAHO, FAO, WFP, UNICEF) and governments.

Zoë Neuberger

Member

Zoë Neuberger, J.D., MPP is a Senior Policy Analyst at the Center on Budget and Policy Priorities, where she has worked since 2001. Her work focuses on strengthening and improving access to federal nutrition assistance programs, including the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC). For more than 20 years she has closely monitored policies and costs related to how the WIC program provides infant formula to participants. Previously she worked as a budget analyst at the White House Office of Management and Budget, where WIC was in her portfolio, and in the New York City Mayor's Office, where she focused on health policy. She holds a law degree from Yale University and a Master in Public Policy degree from Harvard's Kennedy School of Government.

Deborah O'Connor

Member

Deborah L. O'Connor, Ph.D. R.D. is the Earle W. McHenry Professor and Chair of the Department of Nutritional Sciences at the University of Toronto, and a Tier 1 Canada Research Chair in Human Milk and Infant Nutrition. She holds scientific appointments in the Translational Medicine Program at The Hospital for Sick Children, and the Department of Pediatrics at Sinai Health. At SickKids, she served as Director of Clinical Dietetics from 2000 to 2012 and then as Associate Chief of Academic and Professional Practice until 2013. Prior to arriving in Toronto in 2000, she was a Senior Group Leader at Abbott Laboratories where she helped launch its first concentrated human milk nutrient fortifier, and addition of long chain fatty acids to formulas designed for preterm infants. Dr. O'Connor received her BASC in Applied Human Nutrition from the University of Guelph in Canada and her MS and PhD in the Department of Nutritional Sciences at the University of Illinois (Urbana). Dr. O'Connor's current research program focuses on early enteral feeding strategies for vulnerable infants, including very low birth weight infants, to support optimal nutrition, growth, and neurodevelopment. Her research is funded by the Canadian Institutes of Health Research, Natural Sciences and Engineering Research Council of Canada, and the U.S. National Institutes of Health (NIH). Dr. O'Connor has served on several national and international committees, including the Society of Obstetricians and Gynecologists of Canada Nutrition Practice Guidelines, US-Canada Governments Joint Dietary Reference Intake Working Group on Chronic Disease Endpoints, US National Academy of Sciences, Engineering and Medicine Planning Committee to Explore New Evidence for Nutrition during Pregnancy and Lactation, World Health Organization Human Milk Banking Guideline Development Committee, and NIH's Breastmilk Ecology: Genesis of Infant Nutrition (BEGIN) Project.

Jennifer L. Pomeranz

Member

Jennifer L. Pomeranz, J.D., MPH is a public health lawyer and Associate Professor in the Department of Public Health Policy and Management in the School of Global Public Health at New York University. She was previously the Director of Legal Initiatives at the Rudd Center for Food Policy and Obesity at Yale University. Her research focuses on legal opportunities and barriers to enacting public health policies at the federal, state, and local levels with a primary focus on food and nutrition policy including the marketing, labeling and ingredients of infant formula and toddler drinks. Ms. Pomeranz is the author of the book, *Food Law for Public Health*, and the first author of the book, *Public Health Law in Practice*, both published by Oxford University Press, and dozens of peer-reviewed journal articles on policy and legal options to address products associated with public health harm, diet-related disease, and social injustices that lead to health disparities. She is regularly invited to speak on her research including at the Food Forum hosted by the National Academies of Sciences, Engineering, and Medicine. Ms. Pomeranz served has agreed to serve as a paid expert witness for plaintiffs in cases concerning cow milk-based infant formula marketed for premature infants who developed necrotizing enterocolitis. Ms. Pomeranz earned her Juris Doctorate from Cornell Law School and Master of Public Health from the Harvard T.H. Chan School of Public Health.

Kathleen M. Rasmussen

Member

Kathleen M. Rasmussen, Sc.D., Sc.M. is The Nancy Schlegel Meinig Professor of Maternal and Child Nutrition, emeritus at Cornell University, where she spent her academic career. Dr. Rasmussen's expertise is in maternal and child nutrition, with a focus on pregnancy and lactation. She and her students have worked with animal models and with human subjects in the US and numerous other countries. Her research has been recognized by awards from the American Public Health Association and the International Society for Research on Human Milk and Lactation. In addition, Dr. Rasmussen has been the President of two scientific societies and received awards for her public service, teaching, and mentoring. Her graduate and postdoctoral training were completed Harvard University and Cornell University, respectively, and both were focused on nutrition. Dr. Rasmussen has served on numerous committees at the National Academies, and been the chairperson of five of them. Her service as a member the Committee on Scientific Evaluation of WIC Nutrition Risk Criteria (1996) and as the chair of the Committee to Review WIC Food Packages (2017) are relevant to the present activity. Dr. Rasmussen is currently a member of the Food and Nutrition Board.

Katheryn Russ

Member

Katheryn Russ, Ph.D. is Professor and Chair of Economics at the University of California, Davis. She specializes in open-economy macroeconomics and international trade. She is a faculty research associate in the National Bureau of Economic Research International Trade and Investment Group and Co-Organizer of the International Trade and Macroeconomics Working Group. She served as Senior Economist for International Trade and Finance for the White House Council of Economic Advisors 2015-16. She serves as President of the International Economics and Finance Society, Vice President of the International Banking and Finance Association, and a member of the Econofact network. Dr. Russ conducts research and writes about the market for infant formula.

Melissa A. Simon

Member

Melissa A. Simon, M.D., MPH is the George H. Gardner Professor of Clinical Gynecology, Vice Chair of Research in the Department of Obstetrics and Gynecology at Northwestern University Feinberg School of Medicine. She is also the Founder and Director of the Center for Health Equity Transformation and the Chicago Cancer Health Equity Collaborative. She serves as the Robert H. Lurie Comprehensive Cancer Center's Associate Director for Community Outreach and Engagement. She is an expert in implementation science, women's health across the lifespan, minority health, community engagement and health equity. She has been recognized with numerous awards for her substantial contribution to excellence in health equity scholarship, women's health, and mentorship, including her recent election to the National Academy of Medicine and the Association of American Physicians. She has received the Presidential Award in Excellence in Science Mathematics and Engineering Mentorship and is a Presidential Leadership Scholar. She is a former member of the US Preventive Services Task Force and currently serves on the CDC Community Preventive Services Task Force and the NIH Office of Research in Women's Health Advisory Committee.

Marta Wosinska

Member

Marta E. Wosinska, Ph.D. is a Senior Fellow in Economic Studies at The Brookings Institution. She is a healthcare economist specializing in prescription drug markets. She has experience spanning top academic institutions, prominent think tanks, and federal agencies including FTC, FDA, and HHS Office of Inspector General. She holds a PhD in Economics from UC Berkeley. Dr Wosinska has extensive experience studying drug supply chains and drug shortages. Her work was cited in the June 2021 White House report on supply chains, and she also served on the Ad Hoc NASEM Committee on Security of America's Medical Product Supply Chain.

Bridget E. Young

Member

Bridget E. Young, Ph.D. is an Assistant Professor of Pediatrics at the University of Rochester School of Medicine and Dentistry, and was previously faculty at the University of Colorado in Pediatric Nutrition. Dr Young directs and infant nutrition research lab where she studies how maternal phenotype impacts bioactive components in human milk and how these components can have programming effects on infant outcomes and future disease risk. She also studies how variation in infant formula ingredients can impact infant development and future disease risk. Dr Young is the 2021 recipient of the Erlich Koldovsky early career award for research in human milk and lactation (awarded by the International Society for Research in Human Milk and Lactation). Dr Young holds a PhD in Nutrition from Cornell University. She conducted her postdoctoral training in Pediatric Nutrition at the University of Colorado. In 2018-2019, Young provided nutrition consulting services to three infant formula start-up companies. Currently, she receives proceeds from website sales of an e-book and course geared toward parents of infants and medical practitioners.

Ravi Anupindi

Vice Chair

Ravi Anupindi, M.E., M.S., Ph.D. is Colonel William G. and Ann C. Svetlich Professor of Operations Research and Management at the Stephen M. Ross School of Business. Dr. Anupindi is chair of (UM) President's Advisory Committee on Labor Standards and Human Rights and is a member of NASEM's Board of Global Health. He was the founding Faculty Director of the Center for Value Chain Innovation (2017-2020) and the Ross Master of Supply Chain Management program (2008-2015). His main research areas include technology and business innovation, global supply chain management, supply chain risk and resilience, health care delivery in low and middle-income countries, economic development, and environmental & social sustainability. He serves as a faculty expert on a task force to look into health care supply chain and national security issues. He was co-chair of 2021 NASEM consensus study on Globally Resilient Supply Chains for Seasonal and Pandemic Influenza Vaccines. Dr. Anupindi is co-Chair of the annual Global Health Supply Chain Summit (GHSCS) that brings together academics, country planners, NGOs, practitioners, private sector, and representatives of various multi-lateral and donor agencies to discuss the issues, progress, (new) developments in global health supply chains and delivery. Dr. Anupindi is recipient the Ross School of Business Neary Teaching Excellence Award (2019), Victor L. Bernard Teaching Leadership Award (2019), and the CORE (Contribution to Research Environment) Award (2015). He was a founding board member of the People that Deliver Initiative and now serves on the board of the William Davidson Institute, the Fair Labor Association, and ProjectStanley; and as a technical advisor to Vital Ocean. Dr. Anupindi received his PhD in Management of Manufacturing and Automation from the Carnegie Mellon University.