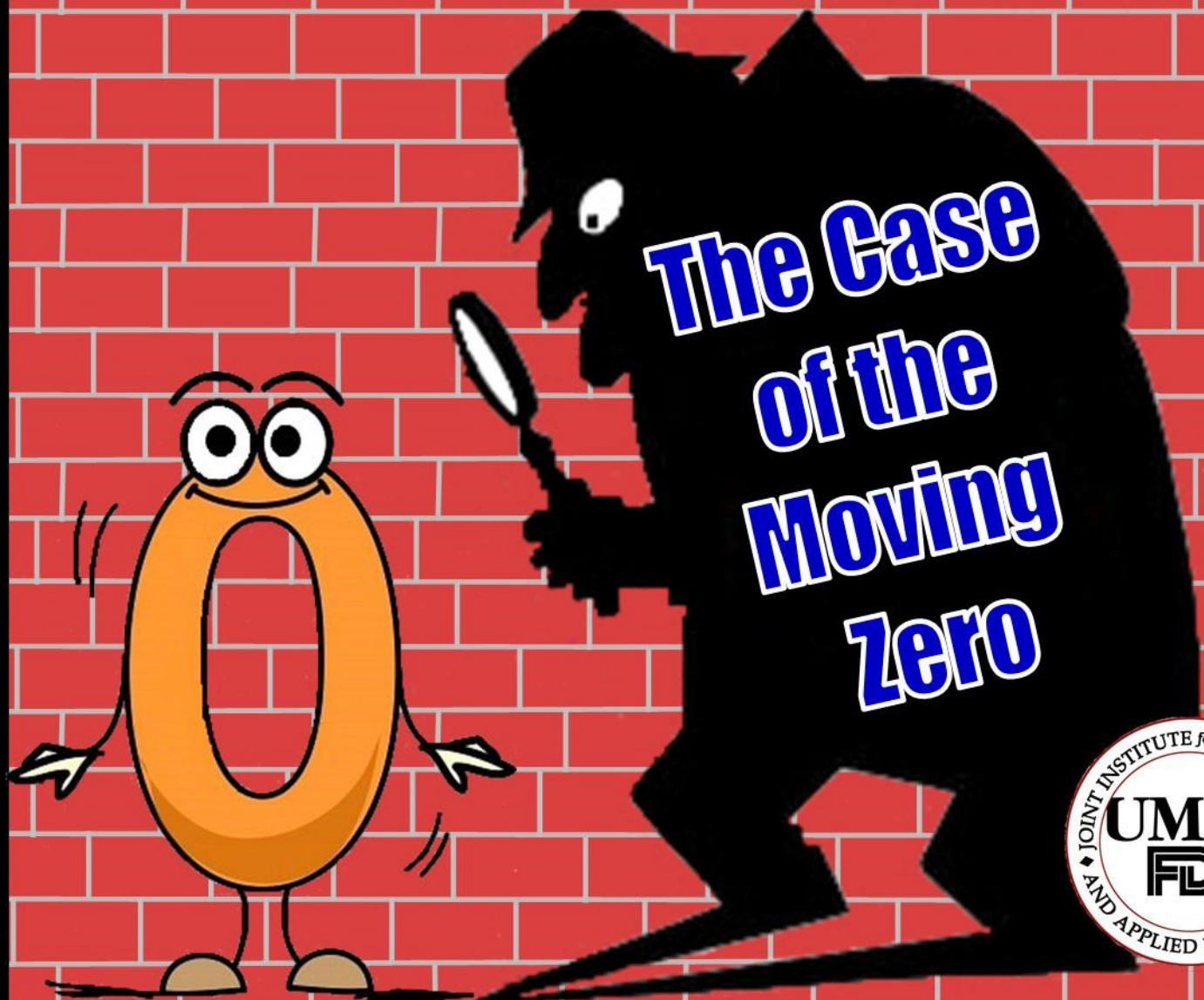


**University of Maryland**  
**JIFSAN Advisory Council 2013**  
**Annual Spring Symposium**

**CONUNDRUM OF  
DEFINING  
FOOD SAFETY:**





# JIFSAN Advisory Council Annual Symposium

THE EVENT IS SPONSORED BY:



# JIFSAN

## Our Vision

To be a premier source of scientific information and education programs on food safety and applied nutrition that enables the development of sound public health policy and reduces the incidence of food-related illness.

## Our Aim

One of JIFSAN's goals is to improve the safety of foods for all consumers, domestically and internationally, through education and training. A major portion of the food consumed in the U.S. is imported, thus it is critical that we train our international suppliers in the same food safety practices that we utilize within the U.S. This proactive, preventative approach is critical because a very small portion of imported food is actually inspected at the ports of entry. JIFSAN works directly with various U.S. government agencies, including FDA, USDA, EPA and others, with input from industry, consumer groups and foreign government agencies to develop and deliver science-based food safety training. Programs are directed to the point of production and to all steps in handling, processing, distribution, and analytical techniques.



# *From the Desk of the Director*

Welcome to the 2013 JIFSAN Advisory Council Spring Symposium!

Founded in 1996 by the University of Maryland and the US Food & Drug Administration, the Joint Institute for Food Safety & Applied Nutrition (JIFSAN) is a multidisciplinary research, education and outreach program. JIFSAN's mission is to advance sound strategies that improve public health, food safety, applied nutrition and animal health using risk analysis principles through cooperative programs.

JIFSAN plays an exemplary role in building partnerships with the federal government, the industry and international community. We have developed and will continue to conduct innovative research, and to offer professional development courses and training programs that are delivered in a variety of modes to improve the expertise of government, academia and industry personnel in risk analysis, and to train food safety professionals from all over the world.

The JIFSAN Advisory Council consists of representatives of industries, academic institutions, and consumer organizations. The Council provides advice to the JIFSAN Director concerning their understanding of the Institute's research, education and outreach programs, to identify emerging issues in areas of JIFSAN's responsibilities, to identify industry needs with which JIFSAN might provide assistance, and to serve as the "eyes and ears" of the Director within industry, academia, agriculture, food, and consumer organizations. The Council sponsors an annual symposium on food safety and applied nutrition. This year's symposium focuses on the examination of the conundrum in defining food safety and how the definition has changed with time. We hope it will provide you better understanding of the issues contributing to the conundrum of defining safety, how perceptions are influences, and how expectations of safety are being met.

We thank the Advisory Council for supporting the symposium and you for participation.

Sincerely,



Jianghong Meng, Director



***Advisory Council***  
***Annual Symposium***  
***2013 Program***

## Symposium Background:

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Safety is the goal of everyone associated with the food supply and the expectation of all who consume food. But while the expectation of safety has remained constant, the definition of safety continues to evolve. Advances in science, changes in the methodologies and our understanding and acceptance of risk influence how we define safety.

The JIFSAN Advisory Council Spring Symposium will examine the conundrum of defining food safety and how the definition has changed with time. In some cases, the science of understanding a hazard has not kept pace with the advances in detecting ever decreasing levels of contaminants, and has contributed to the conundrum. And while risk assessment is increasingly used to help define safety, there is often disagreement in what is an acceptable risk.

It is critically important to understand consumers' perception of safety and what influences their behavior with respect to what they purchase and consume. The importance of social media in providing information to the consumer and how this influences perception and behavior will be examined.

Attending the JIFSAN Advisory Council Spring Symposium will provide you with a better understanding of the issues contributing to the conundrum of defining safety, how perceptions are influenced, and how expectations of safety are being met.

**UNIVERSITY OF MARYLAND**  
**JOINT INSTITUTE FOR FOOD SAFETY AND APPLIED NUTRITION**  
**ADVISORY COUNCIL 2013 SPRING SYMPOSIUM**  
**Conundrum of Defining Food Safety—The Case of the Moving Zero**

**Greenbelt Marriott Hotel**

**Greenbelt, MD**

**April 18-19, 2013**

- 8:00 AM**                    **Registration & Continental Breakfast**
- 9:00 AM**                    **Symposium Opening—Welcome**  
*Jianghong Meng, JIFSAN, Director*  
*George Evancho, JIFSAN, Symposium Chair*
- 9:15 AM**                    **Session 1: The Vanishing Zero and the Food Safety Conundrum**
- Introduction:**  
*Chair: Julie Jones, St. Catherine University, St. Paul, MN*  
*Co-Chair: Bradd Eldridge, Abbott Nutrition, Abbott Park, IL*
- How Risky is Risky? The Use of Risk Assessment in Establishing Safety  
*Julie Jones, St. Catherine University, St. Paul, MN*
- 9:45 AM**                    **Chasing Zero—How Changes in Methodology Contribute to the Food Safety Conundrum**  
*Jonathan DeVries, General Mills/Medallion Laboratories, Minneapolis, MN*
- 10:15 AM**                    **BREAK**
- 10:30 AM**                    **Consumer Perceptions of Food Safety in a Global Supply Chain**  
*Carmen Stacy, Grocery Manufacturers of America (GMA), Washington, DC*
- 11:15 AM**                    **Food Safety from A Lawyer’s Perspective**  
*R. Drew Falkenstein, Marler Clark LLP PS, The Food Safety Law Firm, Seattle, WA*
- Question and Answer Session**
- 12:00 PM**                    **Lunch**  
*Speaker: David R. Lineback, JIFSAN Senior Fellow, Southport, NC*

1:15 PM                    **Session 2: Science and the Moving Zero**

**Introduction**

*Chair: Patrizia Barone, Unilever, Englewood Cliffs, NJ*

*Co-Chair: Craig Llewellyn, The Coca Cola Company, Atlanta, GA*

1:20 PM                    How Safe is Safe—Chemical Perspective

*Michael Landa, Food and Drug Administration, College Park, MD*

2:00 PM                    How Safe is Safe: Examining the Past and Present to Gain a Perspective on the Future,  
and the Effect of the FDA Public Database

*Donald Zink, Food and Drug Administration, College Park, MD*

**3:00 PM                    BREAK**

3:15 PM                    Epidemiology of Weak Associations

*Paolo Boffetta, Mt. Sinai Medical School, New York City, New York*

4:00 PM                    Toxicology in the 21st Century

*Thomas Hartung, John Hopkins University, Baltimore, MD*

**Question and Answer Session/ Day Overview**

***Evening Event***

5:45 PM                    Reception and Participant's Dinner

8:30 PM                    *Conclusion of Dinner*



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**April 18, 2013**

- 8:00 AM**                    **Registration & Continental Breakfast**
- 9:00 AM**                    **Welcome—Day Two**  
*Jianghong Meng, Director, JIFSAN*  
*George Evancho, JIFSAN, Symposium Chair*
- Keynote Speaker**  
*Gilbert Leveille, Leveille Associates, Denville, NJ*
- 9:45 AM**                    **Session 3: The Changing Face of Consumer Perception**
- Introduction**  
*Chair: Anthony Flood, International Food Informational Council, Washington, DC*  
*Co-Chair: Donna Rosenbaum, Food Safety Partners Ltd, Northbrook, IL*
- 9:50 AM**                    **How Consumers' Perceptions have Changed Over Time—A Case Study**  
*Donna Rosenbaum, Food Safety Partners, Ltd. Northbrook, IL*
- 10:20**                      **BREAK**
- 10:35**                      **Does Knowledge of a Risk Change Behavior? Case of Aflatoxin in Kenya**  
*Clare Narrod, Risk Analysis Manager, JIFSAN/University of Maryland—College Park, MD*
- 11:05**                      **How the Social Media has Influenced Consumer Perception**  
*Jania Matthews, International Food Information Council, Washington, DC*
- 11:35**                      **Arsenic in Food: Rice—A Case Study**  
*Elizabeth Petrun, University of Maryland, College Park, MD*
- Question and Answer Session/ Symposium Wrap-up**

***Symposium  
Speakers  
And  
Abstracts***

# Julie Jones

## *St. Catherine University*

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**Julie Miller Jones**, a board Certified Nutrition Specialist and Licensed Nutritionist, received her B.S. degree from Iowa State University and her Ph.D. Food Science and Nutrition (Home Economics) from the University of Minnesota. Currently, she is Professor Emerita and Distinguished Scholar of Food and Nutrition at St. Catherine University in St. Paul. She has twice been named their outstanding professor, was awarded the Myser Award as a professor 'who made a difference in people's lives'.

She regularly communicates about whole grains and dietary fiber, carbohydrates, sugars, the glycemic index, fat, antioxidants, diets, celiac and gluten-free, and various aspects of food safety. She authored a number of books and scientific articles. She has appeared on radio and TV shows in many cities and has answered hundreds of consumer letters in the FIXIT column of the *Minneapolis Star and Tribune*. She is a

frequent speaker for many professional and consumer organizations, locally, nationally and internationally.

As part of her many activities in many professional organizations, she has served as President and Board Chair of the American Association of Cereal Chemists. In 2004 she received their highest award, the Geddes Award. In 2011 she was named an Academic Fellow of the International Cereal Chemists. She currently is chair of the Whole Grains Working Group. In 2012 she received the Dream Maker Award for menu plans that were highly successful for improving health and causing weight loss of residents of Dakota Communities.

She is a scientific advisor for the Joint Institute of Food Safety and Nutrition of the US Food and Drug Administration and the University of Maryland, the International Life Sciences Institute, and the Grains Food Foundation and the Wheat Foods Council.

# How Risky is Risky? The Use of Risk Assessment in Establishing Food Safety

*Julie Jones  
St. Catherine University  
St. Paul, MN*

## ABSTRACT

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We, both consumers and professionals, believe that we are experts on food that is best for us - partly because we eat every day. Further, we are barraged by food scares from many sources - from credible ones without agendas and to those with specific agendas and from shyster hawkers to well-meaning and frightened bloggers. The case of the vanishing zero widens the arena. Chemicals are being found in food that previous methods failed to detect. These methodological advances uncover amounts so miniscule that we have surpassed our ability to comprehend their health effects. Consumers are frightened by their mere mention but have a complete lack of understanding that their presence does not inevitably lead to an adverse event. Risk assessment can help sort out risks. However, it must make a judgment about the risk posed by understanding the chemical's toxicity and metabolism, its intake from food and other sources, and its effect on vulnerable groups. Risk assessment must be carried out under conditions of incomplete data using extrapolation from animal models, varied background diets and mixtures of chemical intake. This may lead to widely varying scientific appraisals with, at times, diametrically opposed perspectives – some with loud voices and strong biases, and the haunting knowledge that safety can never be proven. Thus, the actual assessment of the risk requires not only a sound scientific base, but also a Solomon-like ability to weigh many factors. Several cases studies will be discussed including dioxin, heat-induced toxins, nitrates and food colors. These will deal not only with assessing the risk of using the substance, but also the potential unintended consequences of making the level too low or banning it all together.

# Jonathan DeVries

## *General Mills/Medallion Laboratories*

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**Jonathan W. DeVries, PhD** is currently a Senior Principal Scientist at General Mills Inc. where he serves as Senior Technical Manager for the Medallion Laboratories division, a division which provides analytical services to the food and other industries. Jon has been active in quality related analytical work for over 45 years. Jon has been active in food safety, nutrition, and quality research including packaging research and trace analyses for over 35 years. His analytical methods work includes methods for dietary fiber(s) and its components, fat and oils and components thereof, vitamins, minerals, sugars, pesticide and fumigant residues, sulfites, lead and other heavy metal residues, natural toxins (aflatoxin, deoxynivalenol, fumonisins), and potential migrants from packaging (regular and microwave heated) to foods. For 34 years, Dr DeVries has been working for validation and international standardization of analytical methods through such

organizations as AOAC International and AACC International. Jon recently completed a term as president of AOACI, has served six years on the Official Methods Board (including 3 years as chair), is a fellow of AOACI and currently serves as the organization's treasurer. He has authored numerous papers on carbohydrate analysis, particularly related to dietary fiber and has been instrumental in validation of Official Methods of Analysis for dietary fiber and its components. He has also been instrumental in validation of Official Methods of Analysis for fats and fatty acids, vitamin A, vitamin E, and several water soluble vitamins using automated methodologies. Jon received his Bachelors Degree in Chemistry (minor in mathematics) from Augsburg College, Minneapolis, MN and his PhD in Organic Chemistry (minors in physical chemistry and biochemistry) from the University of Minnesota, Minneapolis, MN.

# Chasing Zero—How Changes in Methodology Contribute to the Food Safety Conundrum

*Jonathan DeVries  
General Mills/Medallion Laboratories  
Minneapolis, MN*

## ABSTRACT

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Microbial safety and food defense have dominated the headlines in food safety in recent years. Concurrently analytical chemists have been continuing to deal with significant questions regarding chemical analyses, and their relevance with regard to food safety. There have been a number of product recalls, public health alerts and trade issues on a worldwide basis related to chemical toxins, both man-made and naturally occurring, in the past few years. These range from alcohol to perchlorate, to Sudan Red dye to acrylamide. As stakeholders in food safety, we want to monitor and understand these potentially harmful chemical contaminants to determine what can be done to prevent or mitigate any adverse effects. Since nothing in nature is absolutely pure, and we as analysts cannot ascertain such, we are left with the alternative, i.e. measuring the “impurities” in foods. When the limit of detection is lowered, we inevitably detect known compounds that we did not observe before, and we detect additional compounds we were previously unaware of in that food. As we detect more compounds and report on the findings, society as a whole, because they’ve heard bad things about some of these compounds feels obligated to chase that receding zero despite the fact that the risk level was considered and regulations set based on combinations of analytical and toxicological data. Therefore, we need to consider how and when we chase this zero level. Can science draw a line at what we should be looking at in terms of risk and how we handle setting appropriate limits for these compounds? Or should we be chasing zero in all cases?

# **Carmen Stacy**

## *Grocery Manufacturers of America (GMA)*

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**Carmen Stacy** is the Director, Global Issues & Multilateral Affairs for the Grocery Manufacturers Association (GMA). Carmen helps develop and use international public policy and advocacy tools to advance the global commerce interests of the consumer packaged goods (CPG) industry. Prior to joining GMA, Carmen served as Senior Director and Counsel at the Agricultural Retailers Association (ARA). Previous to ARA, Carmen held research assistantships at Purdue University and at Texas Tech University, Office of the President. Carmen also served short stints at the US House Agriculture Committee, Archer Daniels Midland, and the US Department of Agriculture's Foreign Agricultural Service.

Carmen serves as a cleared advisor on the Agricultural Trade Advisory Committee for Processed Foods. This committee advises the Secretary of Agriculture and the U.S. Trade Representative on the administration of the processed foods trade policy matters of the United States.

Carmen holds a BS in agribusiness from Texas Tech University, a MS in agricultural economics with an emphasis in international development from Purdue University, and a JD from the Texas Tech University School of Law. Carmen is licensed to practice by the Texas State Bar.

# Drew Falkenstein

*Marler Clark LLP PS, The Food Safety Law Firm*

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**Drew Falkenstein** joined Marler Clark in January, 2004 and has concentrated his practice in representing victims of foodborne illness. He has litigated nationwide against some of the biggest food corporations in the world. He has worked on landmark cases that have helped shape food safety policy, HACCP protocol, and consumer rights, such as the *E. coli* outbreak in fresh spinach in 2006, the 2008 Peanut Corporation of America outbreak of *Salmonella*, and the nationwide outbreak of *Salmonella* in Iowa eggs in 2010.

A frequent speaker for the not-for-profit organization [Outbreak, Inc](#), Mr. Falkenstein travels the country to address public and environmental health organizations as well as food safety meetings and annual educational conferences. He speaks on the intersection of law and public health, and addresses companies on how to prevent food borne illness outbreaks. He is often called upon by the media to discuss outbreaks in the news, including recent appearances on Good Morning America, MSNBC, and the Newshour on PBS.

Mr. Falkenstein is a frequent contributor to [Food Safety News](#) and a writer for [Food Poison Journal](#). He lives in Seattle.



# Michael Landa

## *Food and Drug Administration*

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On January 10, 2012, **Michael M. Landa** was appointed Director, Center for Food Safety and Applied Nutrition, U.S. Food and Drug Administration. From May 2010 until January 2012 he served as Acting Director; beginning May 2004 he served as the Center's Deputy Director for Regulatory Affairs. Previously, Mr. Landa was Acting Chief Counsel (2001; 2009-2010) and Deputy Chief Counsel, FDA (2000-2004). Prior to that time, he was a shareholder with Heller Ehrman (1998-1999); of counsel and then a partner with Fenwick & West (1993-1998); and, for various periods, Assistant and then Associate Chief Counsel for Enforcement, Medical Devices, and Veterinary Medicine, FDA (1978-1993).

Mr. Landa holds a BA from Columbia College (1971), a JD from the University of Virginia (1975) and an LL.M. from New York University (1978), where he was the Food and Drug Law Institute Fellow during the 1977-78 academic year.

# Donald Zink

## *Food and Drug Administration*

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**Dr. Donald L. Zink** received a Bachelor of Science from Abilene Christian University (1974), and an M.S. degree in Microbiology (1976) and a Ph.D. in Biochemistry and Biophysics (1978) from Texas A&M University. Between 1978 and 1983, he held faculty positions at Texas A&M University's College of Veterinary Medicine and at the University of Arizona in the Department of Microbiology and the Department of Food Science. He joined Campbell Soup Company in 1983 as Manager of Process Microbiology where he worked in the area of refrigerated food safety and aseptic processing. In 1990, he joined Nestlé, where he held various positions in Quality Assurance for the Carnation Company and as Director of Food Safety for Nestlé USA. In 2000, he joined a new beef processing venture company, Future Beef Operations, as Vice President of Research and Development and Product Safety. In 2002, he moved to the U.S. Food & Drug Administration's Center for Food Safety and Applied Nutrition (CFSAN) where he served as a Senior Food Scientist in the Office of Food Safety. In 2009 he became the Senior Science Advisor for CFSAN in the Office of the Center Director.

Dr. Zink currently serves as a member of the National Advisory Committee on Microbiological Criteria for Foods (2003 – present), is a member of the Executive Advisory Board of the National Center for Food Safety and Technology located in Summit-Argo, Illinois, and serves as the Vice President for the International Association for Food Protection. He has served as a member of several government advisory committees including the Committee on Program and Technical Review of the U.S. Army Natick Research Development and Engineering Center for the National Research Council and the Human Systems Panel - Laboratory Infrastructure Capabilities Study of the Institute for Defense Analysis. Dr. Zink has served as the U.S. Delegate to the Codex Committee on Food Hygiene and as an Advisor and FDA representative to the Conference on Food Protection. Dr. Zink has been a member of various industry committees during his years with the food industry. He served as member and Vice-Chairman of the ILSI North America Food Microbiology Committee and as a member and Chairman of the Grocery Manufacturers of America Microbiological Safety and Control Working Group (now the Food Microbiology Committee) and the Grocery Manufacturers of America Science and Regulatory Affairs Committee. Dr. Zink gave the 2003 Ivan Parkin Lecture and has been an invited speaker at numerous meetings in both the U.S. and internationally. He was a Foundation Lecturer for the American Society for Microbiology and served as the Lead Judge, Junior Division Biochemistry for the California State Science Fair. In 2006, Dr. Zink received the Food Safety Magazine Distinguished Service Award. Dr. Zink has received various awards from the U.S. Food & Drug Administration, including the FDA Award of Merit, the Health and Human Services Secretary's Award for Distinguished Service and three Commissioner's Special Citations.

Dr. Zink has been a member of the International Association for Food Protection (IAFP) since 1996 and of the Capitol Area IAFP affiliate since 2010. He has been active in IAFP as a past member of the Program Committee and the Selection Committee. He currently serves as Vice-Chair of the Foundation Committee. Dr. Zink has authored 28 peer-reviewed publications. His research interests have centered on food borne bacterial pathogens, particularly *Yersinia* sp., *Brucella* sp., and *Clostridium botulinum*.

# Paolo Boffetta

## *Mt. Sinai Medical School*

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**Dr. Boffetta** moved to Mount Sinai School of Medicine in 2010. He is Director of the Institute for Translational Epidemiology and Associate Director for Population Sciences of The Tisch Cancer Institute.

Dr. Boffetta's previous employments include Columbia University (New York, NY), the American Cancer Society (New York, NY), the American Cancer Society (New York, NY), the International Agency for Research on Cancer (Lyon, France), and the German Cancer Research Center (Heidelberg, Germany).

Dr. Boffetta is Adjunct Professor at the Department of Epidemiology, Harvard School of Public Health (Boston, MA), Visiting Professor at the Department of Biomedical Sciences and Human Oncology, University of Turin (Turin, Italy), Adjunct Professor at the Department of Medicine, Vanderbilt University (Nashville, TN), Affiliate Member of the R. Samuel McLaughlin Centre for Population Health Risk Assessment, University of Ottawa (Ottawa, Canada), Senior Fellow of the Hellenic Health Foundation (Athens, Greece), Honorary Professor at the College of Medicine, Dentistry and Nursing, University of Dundee (Dundee, United Kingdom), Adjunct Professor at Biodesign Institute, Arizona State University (Tempe, AZ), and Vice-President of the International Prevention Research Institute (Lyon, France).

Dr. Boffetta is the author of over 700 peer-reviewed publications, mainly in the field of epidemiology of chronic diseases. He has edited 15 books and authored over 80 book chapters. He is associate editor of *Lung Cancer*, *European Journal of Clinical Investigation*, and *Frontiers in Cancer Epidemiology*, and is a member for more than 10 editorial boards of scientific journals. He is the founding member of several international cancer epidemiology consortia and networks.

# Epidemiology of Weak Associations

*Paolo Boffetta  
Mt. Sinai Medical School  
New York City, New York*

## ABSTRACT

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Despite their observational nature, epidemiologic studies have been used for making inductive inferences about the causes of human diseases. The development of a theoretical framework for the establishment of causation in the absence of experimental evidence represents an important conceptual development in the interpretation and explanation of biologic phenomena. This framework is based on a combination of convergent lines of evidence, none of which is sufficient per se to establish a cause-effect relation. The guidelines proposed by Hill have been used as paradigm for causation in observational epidemiology.

One of the original guidelines, which has been maintained in all subsequent formulations, is that of strength of the association. The observation of a strong statistical association between a suspected risk (or a protective) factor and a condition or disease, typically measured via a measure of the incidence (or prevalence) of the condition among the exposed relative to that among the unexposed (often loosely defined as 'relative risk') adds credibility to its causal nature. The interpretation of this guideline, which has an instinctive appeal, is that chance, bias and unmeasured confounding are less likely to explain (or at least to explain completely) a relative risk which is further away from the null.

Most of the carcinogens identified in the early decades of cancer epidemiologic research were characterized by strong associations with at least one type of cancer. In recent decades, however, it has become clear that known carcinogenic exposures explain only a proportion of human cancers, and that it is unlikely that many strong carcinogens exist, which have not yet been discovered. It is therefore plausible that 'weak' carcinogens play collectively an important role in human cancer etiology.

Epidemiology is therefore facing the challenge to identify weak causal associations which require large study populations and special care to exclude bias and confounding, and it is not surprising that the evidence which they are based on is often challenged. The case of lung cancer risk from exposure to second hand smoke among non-smokers is a good example of the difficulty in establishing the causal nature of a weak association. The early epidemiologic studies showing an increased risk of lung cancer among non-smoking women married to a smoker as compared to non-smoking women married to a non-smoker date from the early 1980s. Since then, a large body of evidence has accumulated which, by and large, consistently shows a weak overall association between various measures of exposure to second hand smoke and lung cancer risk with limited evidence of a dose-relation. The excess risk among individuals exposed for a relatively long duration of time is in order of 25% as compared to individuals exposed at background level (nobody is completely unexposed to second hand smoke, although the situation might change in the future thanks to the ban of smoking from public settings). Because of the small risk to detect, studies had to include several hundreds cases and controls, and since non-smokers represent only a small fraction of total lung cancers, this was a difficult endeavor. Furthermore, given the strong association between active smoking and lung cancer (their risk is 20 or more times higher than that of non-smokers), a relatively weak association is sufficient between active smoking and exposure to second hand smoke (e.g., a few self-reported non-smokers exposed to second hand smoke are in fact smokers) to generate the observed effect. Epidemiologic studies have been demanded to demonstrate that such misclassification did not occur (e.g., via biological markers of smoking). Other sources of bias which have been evoked to explain the observed association include a higher propensity of non-smokers with lung cancer to report past exposure as compared to healthy controls, the presence of other confounders (e.g., a healthier diet of non-smokers living in smoke-free environments), a selective under-reporting of results of studies not showing an association.

Weak associations are important in all areas of epidemiology, and in particular in nutritional epidemiology. In the case of diet and cancer, the results of early studies, mainly of case-control design, pointed towards the existence of relatively strong associations between certain components of diet and cancer risk. During the last decade, however, the analysis of prospective studies, which are less prone to bias (but on the other hand may include populations with limited exposure contrast), has mainly resulted in weak (or null) associations. This is shown by comparing the evaluations of the evidence between fruit and vegetable intake and cancer risk made by the World Cancer Research Fund in 1997 and in 2007: with a few notable exceptions, the strength of the evidence for these associations was judged weaker in the second report as compared to the first one. Although it could be argued that recent studies might have under-estimated the effect of diet on cancer risk, it is likely that also in the case of diet most of the associations to be identified are of small magnitude. The association between red meat intake and colorectal cancer risk is another example in which early studies provided stronger results than later, more carefully conducted studies.

In conclusion, cancer epidemiology is to a large extent looking after small effects and weak associations. This poses major challenges: identifying the causal nature of weak association is not impossible, but requires large, well-planned and well-conducted studies and supporting evidence from molecular and experimental studies.

# Thomas Hartung

## *John Hopkins University*

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**Thomas Hartung**, MD, PhD, is Professor of Toxicology (Chair for Evidence-based Toxicology), Pharmacology, Molecular Microbiology and Immunology at The Johns Hopkins University Bloomberg School of Public Health, Baltimore, and University of Konstanz, Germany; he also is Director of their Centers for Alternatives to Animal Testing (CAAT, <http://caat.jhsph.edu>) with the portal AltWeb (<http://altweb.jhsph.edu>). CAAT hosts the secretariat of the Evidence-based Toxicology Collaboration (<http://www.ebtox.com>) and the industry refinement working group. As PI, he heads the Human Toxome project funded as an NIH Transformative Research Grant. He is the former Head of the European Center for the Validation of Alternative Methods (ECVAM), Ispra, Italy. He has authored more than 370 scientific publications.

# Toxicology in the 21st Century

*Thomas Hartung  
John Hopkins University  
Baltimore, MD*

## ABSTRACT

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The National Research Council report from 2007 "*Toxicity Testing in the 21st Century: A vision and a strategy*" (Tox-21c) has created an atmosphere of departure in the US. It suggests moving away from traditional (animal) testing to modern technologies based on pathways of toxicity. These pathways of toxicity could be modeled in relatively simple cell tests, which can be run by robots. The ToxCast and Tox-21 projects of US federal agencies implement this on large scale profiling substances of interest in hundreds of biological assays. Among them are many food-related substances. A major challenge is, how to integrate this new information into the current food safety testing paradigm and move the field to embracing such 21<sup>st</sup> century tools based on pathways of toxicity. One key goal is to develop a public database for such pathways, the Human Toxome, to enable scientific collaboration and exchange.

Tox-21c suggests moving to a new resolution, i.e. pathways of toxicity. The problem is that the respective science is only emerging. What will be needed is the Human Toxome as the comprehensive pathway list, an annotation of cell types, species, toxicant classes and hazards to these pathways, an integration of information in systems toxicology approaches, the *in-vitro-in-vivo*-extrapolation by reversed dosimetry and finally making sense of the data, most probably in a probabilistic way. The NIH is funding since September 2011 by a transformative research grant *The Human Toxome* project led by CAAT. The project involves US EPA ToxCast, the Hamner Institute, Agilent and several members of the Tox-21c panel. The new approach is shaped around pro-estrogenic endocrine disruption as a test case.

Early on, the need for quality assurance for the new approaches as a sparring partner for their development and implementation has been noted. The Evidence-based Toxicology Collaboration (EBTC) was created in the US and Europe in 2011 and 2012, respectively. This collaboration of representatives from all stakeholder groups aims to develop tools of Evidence-based Medicine for toxicology, with the secretariat run by CAAT. All together, Tox-21c and its implementation activities including the Human Toxome and the EBTC promise a credible approach to revamp regulatory toxicology.

# Donna Rosenbaum

## *Food Safety Partners, Ltd*

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**Donna Rosenbaum** is the CEO and lead consultant for Food Safety Partners, Ltd. of Northbrook, Illinois. Food Safety Partners is a national food safety consulting firm that specializes in consumer-based projects. Donna is currently a candidate in the Master of Science in Communication program at Northwestern University; recent studies include issues in change management, leadership and development, global strategies, contemporary media in business and government, managing information for innovation, and crisis management. She became devoted to food safety in 1992 when *E. coli* disease claimed the life of her daughter's best friend as the first victim in the Jack in the Box outbreak.

Donna has twenty years of advocacy expertise in working on consumer food safety issues including having personally worked with thousands of foodborne illness victims. She also worked for three years on the development of the Food Safety Modernization Act and on traceability requirements for food products. Recent endeavors include consultation on the development of traceability software, work on various foodborne illness cases, development of food safety material for white papers, educational material for management of recalls and outbreaks for a food industry insurance group, media work with national journalists, and media and social media outreach platforms on food safety for interested corporations.

# How Consumer's Perceptions have Changed Over Time—A Case Study

*Donna Rosenbaum  
Food Safety Partners Ltd.  
Northbrook, IL*

## ABSTRACT

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We will be looking at what has changed about consumers' perception of food safety since the sentinel Jack in the Box *E. coli* O157:H7 outbreak happened twenty years ago, and attempt to answer the following questions: What has changed and what are the implications for food companies and government agencies when working with consumers? How are consumers different from twenty years ago? What do they expect? How do cultural differences and global issues impact expectations? What happens when expectations are not met? What relationships do consumers have with various authority groups? Who do they believe on food safety issues? How do print, broadcast and social media impact consumers? How do consumers judge food risk? What is the best way for food companies and government agencies to approach consumers when doing risk communication?



# Clare Narrod

## *JIFSAN*

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**Dr. Clare Narrod** is the Risk Analysis Program Manager. She received her Ph.D. in Energy Management and Environmental Policy in 1997 and a Master's Degree in International Development and Appropriate Technology both from the University of Pennsylvania. From 1998-2000 Dr. Narrod served as an American Association for the Advancement of Science (AAAS) Risk Fellow at USDA.

Prior to coming to JIFSAN, she was at the International Food Policy Research Institute where she conducted research to improve food and water safety along the value chains of poor producers. In the past, she worked at the

Office of Risk Assessment and Cost-Benefit Analysis of the United States Department of Agriculture and at the Food and Agriculture Organization. She has also consulted for the World Bank and the Inter-American Institute for Cooperation on Agriculture.

Recent research interests have been to identify cost-effective aflatoxin and avian flu risk reduction measures for economically disadvantaged producers in developing countries, understanding the role of public-private partnerships in improving market access. Dr. Narrod has field experience in Brazil, China, Costa Rica, Ethiopia, Ghana, India, Indonesia, Kenya, Nigeria, Thailand, Mali, Mexico, Vietnam, and Zambia. She has lived in Italy and Costa Rica.

# Does Knowledge of a Risk Change Behavior? A Case of Aflatoxin in Kenya

*Clare Narrod  
JIFSAN/University of Maryland  
College Park, MD*

## ABSTRACT

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Most of socio-economic analyses of the impact of aflatoxin have concentrated on the economic impacts of aflatoxin. Losses however can be reduced through education; awareness and behavior change. Knowledge, attitude, and practices analyses are widely used to evaluate the effectiveness of public health and information campaigns as well as to assist policymakers in customizing educational programs to fit the public's needs. This talk discusses findings from a Bill and Melinda Gates funded project that was interested in reducing the risk associated with aflatoxin exposure in Africa. Using household survey data collected from Kenyan maize producers across different agro ecological zones in 2010 we use a health belief model to analyze how knowledge, attitudes, perception influence producers behavior (action) in terms of reducing aflatoxin risk. Part of the households surveyed were in regions where deaths associated with acute aflatoxin exposure were known to occur in 2004. Findings indicate that even though knowledge about aflatoxin was higher in households in these regions, this did not result in changes in behavior, highlighting the challenge of educational campaigns in regions where people are food insecure.

# Jania Matthews

## *International Food Information Council*

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**Jania Matthews** is the Associate Director of Strategic Communications at the International Food Information Council (IFIC) and IFIC Foundation, based in Washington, D.C. Jania leads the planning and development of the organization's social media report and other strategic and consumer insight communication materials that identify trends and forecast their impact on food safety, nutrition and health issues. She works with the Director of Media Relations to provide public relations services including contact with reporters, writing and editing, media monitoring and evaluation, and other general assignments in support of IFIC's media and issue committee programs. She has been with IFIC for nine years.

Jania is a member of the Public Relations Society of America and enjoys public speaking and engaging in dialogue with different audiences.

She holds a Bachelors of Science degree from the University of Tennessee (Knoxville, TN) in Communications. She also received a Master's degree in Public Relations/Corporate Communications from Georgetown University in Washington, DC.

# How the Social Media has Influenced Consumer Perception

*Jania Matthews  
International Food Information Council  
Washington, DC*

## ABSTRACT

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The evolution of social media has changed the way people communicate. According to Pew Internet Project's research, as of December 2012, 67 percent of online adults use social networking sites. Facebook alone says it now has 1.01 billion people using the site each month. Social media's empowerment of the individual means anyone can be an influencer. Many people are self-proclaimed experts and opinion is often presented as fact. This dichotomy presents both opportunities and challenges. Emotions are running amuck and science is taking a backseat. Social networking has made it possible for people to share interests and activities across political, economic, and geographic borders to connect and advocate for specific causes. Specific instances where social media played a prominent role in not only influencing consumer perception, but also challenging the food industry and regulators to take action, include examples around such topics as bisphenol-a, finely textured lean beef, commonly characterized as "pink slime," and most recently food colors, where activities were orchestrated by two mommy bloggers. This session will explore the role social media plays in shaping debate and influencing consumer perceptions. During this session we will consider what role regulatory officials, academicians, and food industry stakeholders have to play in this environment. Lastly, this session will highlight how we can expect the influence of social media to evolve in the days and months ahead.

# Elizabeth Petrun

## *University of Maryland*

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**Elizabeth L. Petrun** is a researcher and project manager for the Effective Risk Communication Project at the National Consortium for the Study of Terrorism and Responses to Terrorism (START), funded by the Department of Homeland Security (DHS) Human Factors/ Behavioral Sciences Division. The project is developing a training program for local, state, and federal government professionals tasked with conducting risk communication. Set to launch in June 2013, the training is based on research that analyzed 173 English-language risk communication-training programs. The objective of the project is to bring academic literature and theory together to inform government risk communication practitioners in an effective and applicable way.

Petrun is also a doctoral candidate and fellow at the University of Kentucky (UK) in the College of Communication and Information. Her dissertation, titled “Organizational Response to Perceptual Crises: Managing Substantial Responses to Unsubstantiated Events,” explores how risk perception influences human, social, and physical capital. Petrun’s research specifically follows risk and crisis, health, and organizational communication processes. She also received her B.A. in strategic communication and classical sociology in 2008, M.A. in communication in 2010, and a graduate certificate in health communication in 2010 from UK.

Petrun has collaborated on research with the National Center for Food Protection and Defense (NCFPD), the National Center for Risk and Economic Analysis of Terrorism Events (CREATE), the Department of Homeland Security (DHS), the Centers for Disease Control and Prevention (CDC), and the World Health Organization (WHO). She was also recently selected as the International Food Information Council’s 2012 Sylvia Rowe Fellow. Her work has been accepted for presentation at national conferences and she has been published in *The Northwest Journal of Communication*, *Management Communication Quarterly*, *Southern Communication Journal*, and *Corporate Reputation Review*.

Finally, when Petrun is not researching she also enjoys teaching communication courses to undergraduate students. To date, she has instructed courses on mass media, interpersonal communication, organizational communication, and composition and communication. Most recently, she co-taught a course in London, England at King’s College on world media systems. In 2012, Petrun received the UK College of Communication and Information Graduate Teaching Award and the UK Westley Award for Excellence in Mass Communication Theory and Research.

# Arsenic in Food: Rice—A Case Study

*Elizabeth Petrun  
University of Maryland  
College Park, MD*

## ABSTRACT

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As a naturally occurring substance, arsenic is found in water, air, soil – and food. Beginning in 2011 and continuing through 2012, arsenic has emerged rhetorically as another threat to our food systems. In September 2011, apple juice became the premier target for those wishing to wholly eliminate arsenic (even in trace amounts) from our food supply when the Dr. Oz Show aired a segment declaring apple juice unsafe for consumption. A subsequent January 2012 *Consumer Reports* article emphasized a need for stricter federal regulations, which further exasperated public concern. In 2012, the arsenic discussion once again shifted to highlight the potential threat of arsenic in rice and rice –based products such as rice cereal for infants and children. If the U.S. Food and Drug Administration (FDA) has continually monitored both the juice and rice industry for arsenic content for years, why are these topics reemerging as potential public health threats? How is media influencing our discussion and public perception about arsenic in food? This presentation will discuss how arsenic has reemerged as a legitimate risk, when in reality actual risks have remained fairly static, particularly providing an overview of television coverage of total arsenic and rice. Finally, recommendations are made to direct public conversations away from misinformation along with prescribed steps for incorporating scientifically accurate information on arsenic to the public.

***JIFSAN***  
***Advisory Council***  
***Membership***

# Craig Llewellyn

## *The Coca Cola Company*

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**Dr. G. Craig Llewellyn** completed a B.S. degree in Biology from Virginia Commonwealth University, a Ph.D. in Pharmacology and Toxicology from the Medical College of Virginia, Virginia Commonwealth University, and a post-doctoral fellowship in Investigative Toxicology at Eli Lilly and Company. His global responsibilities include addressing toxicological food safety issues, food ingredient safety assessments, and regulatory status of all ingredients used across The Coca-Cola Company. Prior to joining The Coca-Cola Company, Craig held similar positions with Kraft Foods and The William Wrigley Jr. Company. Prior to completing his Ph.D., he was an Analytical Food Chemist in the Department of Consolidated Laboratory Services for the Commonwealth of Virginia. Craig participates in a number of professional and scientific organizations including; Society of Toxicology (SOT), Toxicology Forum, International Life Sciences Institute (ILSI), Grocery Manufacturers Association (GMA), International Food Information Council (IFIC), Joint Institute of Food Safety and Nutrition (JIFSAN), National Coffee Association (NCA), Food Allergy Research and Resource Program (FARRP), American Beverage Association (ABA), Flavor and Extracts Manufacturers Association (FEMA), Institute of Food Technologists (IFT), and American College of Toxicology (ACT).



# Scott Hood

*General Mills, Inc.*

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**Scott Hood, Ph.D** is the Director for Global Food Safety and Regulatory Affairs at General Mills with responsibility for microbiology, toxicology, and thermal processing. Over the past 14 years, he has held various roles in quality and food safety at General Mills. Previous experience includes roles in both R&D and Quality at Michael Foods and Land O'lakes. Scott is active in a number of industry initiatives related to food safety, including; the National Advisory Committee on the Microbiological Criteria for Food and the Board of Advisors for University of Georgia Center for Food Safety. Scott has a BS in Food Science from the University of Wisconsin and an MS & PhD in Food Science from the University of Minnesota.

# Sarah Geisert

## *Alternate, General Mills, Inc.*

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**Sarah Geisert**, Senior Director leads General Mills Global Product Safety and Regulatory Affairs department.

Sarah joined General Mills in 1983. She has spent the last 30 years with General Mills in a variety of roles and departments including R&D, Operations and most recently Quality & Regulatory Operations. In her current capacity, she is responsible for leading General Mills global product safety and regulatory affairs department. This department has responsibility for leading the establishment of food safety & sanitation standards, the assessment and measurement of product safety risk, auditing of GMI operations, identifying emerging issues & prevention strategies and management of global regulatory affairs. Sarah has direct responsibility for

leading the food safety incident management team. She represents General Mills external interests in numerous scientific, trade and regulatory associations.

Sarah is on the Grocery Manufacturers of America Science & Regulatory Affairs Board of Directors. She is active in numerous scientific and regulatory affairs efforts including the Council to Improve Foodborne Outbreak Response, Association of Food and Drug Officials where she is currently chairing the Industry Member Committee and has participated in several Asia Pacific Economic Cooperative collaboration training meetings. Outside of work, Sarah is on Second Harvest Heartland Board of Directors which is focused on ending hunger in Minnesota.

Sarah Geisert received her B.S. from the University of Missouri in 1981 and M.S. from the University of Nebraska in 1983. Both degrees were in the area of food science. She and her husband Scot have one son, Christian.

# Laurie S. Post

*MARS Snackfood US, LLC*

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**Dr. Laurie S. Post** has spent over 25 years in the food industry as a Food Microbiologist and Food Safety professional. She is an expert in pathogen control programs for low moisture foods and processes. Dr. Post earned her B.S. degree in Microbiology and Master's degree in Food Microbiology from the University of Maryland and her PhD in Food Microbiology from the University of Tennessee. Following a post-doctorate fellowship in the Department of Food Science, Rutgers University and a three-year period as an Assistant Professor of Food Microbiology, Dr. Post joined Mars Inc. as a Senior Research Scientist. She is currently the Senior Manager for Food Safety and Microbiology for Mars Global Chocolate. Dr. Post is the author of numerous publications and has chaired the microbiological food safety committees of the International Life Sciences Institute and GMA.

# Patrizia Barone

## *Unilever*

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**Dr. Patrizia Barone** is the Regional Regulatory Affairs Vice President at Unilever, leading the strategic regulatory activities for the North American region as well as Foods and Refreshment globally. Before joining Unilever, Patrizia held positions at Reckitt Benckiser, initially as Vice President of R&D for North America. She moved to Australia to head the Asia Pacific & South Asia R&D Laboratory, and upon her return held positions culminating as Global R&D Category Group Director - Regulatory Affairs & R&D Systems, responsible for product safety and regulatory strategies for all products globally. Earlier, Patrizia worked with Colgate-Palmolive and Miles, Inc. Household Products Division, a division of Bayer AG.

Patrizia has a Bachelor of Science in Chemistry from the University of Maryland College Park and a Ph.D. in Inorganic Chemistry from Georgetown University, Washington, D.C.

# John Vicini

## *Monsanto Company*

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**Dr. John L. Vicini** is a Senior Research Fellow and the Lead of the Food Safety, Health & Nutrition Team in Monsanto Regulatory. Dr. Vicini received a B.S. in Animal Sciences from the University of Maryland, a M.S. in Animal Sciences from West Virginia University, and a Ph.D. in Dairy Science from the University of Illinois. The American Dairy Science Association recognized his research at the University of Illinois by awarding him the R. M. Hoyt Award in 1987. Dr. Vicini joined Monsanto in 1987 where he conducted numerous development studies with POSILAC<sup>®</sup> brand of bST. In 1994 he worked with the Monsanto Technical Services group in Syracuse, NY. In 1998 he moved back to the Technology Group in St. Louis and is currently responsible for communicating food safety of foods and feeds developed by advanced breeding techniques or through

biotechnology. He has worked with teams that have developed several products for improving productivity of farms to enhance human nutrition. Dr. Vicini has held numerous offices within the American Dairy Science Association and currently is an Editor of the Journal of Dairy Science.

# Joseph A. Scimeca

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**Joseph Scimeca** currently holds the position of Vice President of Global Regulatory & Scientific Affairs, Corporate Food Safety and Regulatory Affairs at Cargill, where he provides leadership for ensuring that company food and feed products and processes are safe, included being protected against intentional acts of adulteration and bioterrorism, and are in compliance with the appropriate food/feed regulations. He manages a team of regulatory professionals based in various regions of the world. Before joining Cargill in February 2004, Dr. Scimeca was a Senior Manager for Quality & Regulatory Operations, at General Mills, Inc. Previously he held the position of Director, Food Safety and Regulatory Affairs with The Pillsbury Company, where he was employed since June 1999. Prior to joining Pillsbury, he was employed with Kraft, Inc. where for nearly twelve years he held various positions in toxicology and nutrition. Prior to Pillsbury, he received his Ph.D. in Pharmacology and Toxicology from the Medical College of Virginia, Virginia Commonwealth University, in 1987. He has and continues to serve on various technical committees for several scientific organizations and trade associations, such as

Grocery Manufacturers Association, Food Allergy Resource and Resource Program, Joint Institute for Food Safety and Nutrition, and the International Life Sciences Institute. For the latter organization, he is currently serving as chair of the Food Nutrition and Safety Program, and has been past chair of the Technical Committee on Food Toxicology and Safety Assessment. At the request of the National Academy of Sciences, he has served on a subcommittee involved in the development of a framework for evaluating the safety of dietary supplements. Similarly, he served on an expert panel for the Institute of Food Technologists in developing a report on evaluating food chemical safety. Recently he was selected to serve on the 2010-2015 Food Ingredients Expert Committee of the USP. He has actively participated in the Society of Toxicology Food Safety Section since its inception, where he has held several positions, including president. Joe is currently serving as the co-chair of the Industry Working Group of the National Center for Food Protection and Defense, based at the University of Minnesota. He also chairs the Minnesota Food Safety and Defense Task Force, held under the auspices of the Minnesota Departments of Agriculture and Health. He has authored over thirty peer-reviewed scientific publications, two monographs, and four book chapters.

# Phil Kilby

## *Waters Corporation*

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**Phil Kilby** is the Senior Director of Strategic Relations at Waters Corporation, USA. With over ten years of experience in the pharmaceutical industry, Phil led a team focused on technology and business development before joining Waters, Europe in 1998. Highly experienced with managing sophisticated analytical scientific projects across broad markets, he now manages the diverse and successful engagements with customers and partners within Worldwide Marketing. Mr. Kilby moved to Waters, US in 2001 and is based at the worldwide headquarters in Milford, Massachusetts.

# Brent Flickinger

## *Archer Daniel Midland Company*

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**Brent D. Flickinger, Ph.D.**, is Senior Manager, Nutritional Science for the Archer Daniels Midland Company in Decatur, IL. He has been employed by ADM since April 1999. During his tenure at ADM, his area of expertise and responsibility has grown to include scientific and regulatory support for ADM's entire portfolio of food and dietary supplement ingredients. He and his colleagues evaluate scientific literature to identify new areas for ingredients, conduct evidence-based reviews to substantiate marketing claims, submit product dossiers for and rulemaking comments to global regulatory agencies, and provide regulatory guidance for food labeling.

Dr. Flickinger received his doctoral degree in Nutritional Sciences from the University of Illinois at Urbana-Champaign and his bachelor's degree in Chemistry from Juniata College in Huntingdon, PA. Immediately prior to joining ADM, he held a postdoctoral research fellowship in the Department of Biochemistry at the University of Texas Health Science Center at San Antonio during which he was awarded an individual NIH Postdoctoral National Research Award fellowship. His training has an emphasis in lipid chemistry, biochemistry and metabolism. He has published in the areas of metabolism of unique dietary fatty acids, cellular targeting of bioactive lipids and emerging research/innovations in dietary fats and oils.

Professionally, he is an active in the American Oil Chemists' Society (past president of the Health and Nutrition Division), the Institute of Food Technologists, the American Society for Nutrition and the American Dietetics Association. Dr. Flickinger also participates in numerous industry associations including Institute of Shortenings and Edible Oils, International Food Information Council (currently chair of Dietary Fats Committee), United Soybean Board, International Life Sciences Institute – North America (currently chair of Technical Committee on Dietary Lipids and Food Nutrition and Safety Program Committee) as well as the American Heart Association's Industry Nutrition Advisory Panel (chair from 2009-2011).



# Bradd P. Eldridge

## *Abbott Nutrition*

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**Bradd P. Eldridge** is the Director of Quality Compliance, Food Safety and Strategy with Abbott Nutrition. He started with Abbott in 1990 and held a variety of roles with increasing responsibilities in quality and manufacturing across various levels of the organization starting at the manufacturing plant level, moving to the Abbott Corporate location in Chicago, Illinois and then to his current Director position within the Abbott Nutrition division. His current responsibilities include understanding global regulations, and developing and implementing programs to assure successful product quality and compliance across the Abbott Nutrition division.

Before joining Abbott 21 years ago, Bradd worked for the U.S. government in Washington, D.C., and for another U.S. healthcare company.

His professional affiliations include the International Association for Food Protection, the Institute of Food Technologists, the Joint Institute of Food Safety and Applied Nutrition, and the Association of Food and Drug Officials. Bradd is also active with the Asia Pacific Economic Cooperation and the Partnership Training Institute Network.

Bradd holds a Bachelor of Arts Degree with major studies in Chemistry and Computer Science and minor studies in Business Administration, Economics and Mathematics from Catawba College in Salisbury, North Carolina, and a Masters of Business Administration from Indiana University. Bradd and his wife are the parents of three children.

# DeAnn L. Benesh

3M

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**DeAnn L. Benesh** is a Global Regulatory Affairs Manager in 3M Food Safety, where she provides strategic leadership to teams engaging in local and regional regulatory activities to help drive recognition and acceptance of methods; and to actively partner with government and non-government organizations to participate in development of ideas, technologies, and processes to address food safety challenges and requirements within the food industry. She has worked in the food industry for 25 years, and at 3M for the past 32 years in a variety of businesses and capacities including: research in 3M Pharmaceuticals, new product development within 3M Health Care, and more recently as International Technical Services Manager within 3M Microbiology.

DeAnn has a Bachelor of Science degree in Medical Technology from the College of Pathology, University of Minnesota, Minneapolis, MN; a Mini-Masters in International Business from the University of St. Thomas, St. Paul, MN; and is currently working on a Certificate in International Food Law from Michigan State University, East Lansing, MI.

# Steven J. Hermansky

## *ConAgra Foods, Inc.*

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**Dr. Steven J. Hermansky** is the Vice President and Fellow in Scientific and Regulatory Affairs and Toxicology at ConAgra Foods. Steve joined ConAgra Foods in May 2007 to direct & oversee the corporation's toxicology & product safety risk assessment programs and now heads the Scientific and Regulatory Affairs department. He has over 20 years of post-doctoral toxicology experience in the chemical and pharmaceutical industries and has worked in a variety of product development and safety positions. Prior to coming to ConAgra, Steve was the Director of Product Safety and Performance for Schering-Plough HealthCare Products. In that capacity, he was responsible for pre-clinical toxicology, human clinical safety testing, claims substantiation, post-marketing safety surveillance (adverse event monitoring and reporting), and consumer relations.

Steve has a Doctor of Pharmacy degree as well as Master of Science and Doctor of Philosophy degrees in toxicology. He is a Diplomate of the American Board of Toxicology and has published over 40 textbook chapters, peer reviewed publications and scientific abstracts.

# Joan Menke-Schaenzer

## *Alternate, ConAgra Foods, Inc.*

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**Joan Menke-Schaenzer** joined ConAgra Foods in May 2007 as Global Chief Quality Officer. Joan leads programs to create a world class foundation for quality and food safety through the standardization of best practices throughout ConAgra.

Prior to joining ConAgra Foods, Joan was vice president of Food Safety and Defense at Wal-Mart Stores, Inc., in Bentonville, Arkansas. Joan led the creation of worldwide quality, food safety and food defense programs and standards, all designed to protect the public while mitigating risks to Wal-Mart and its brands. She was responsible for food safety in 3000 stores and 200 clubs worldwide.

Joan was with Kraft Foods, Inc., in Northfield, Illinois for 20 years. She last served as vice president of Kraft Foods North America Quality and Food Safety. During her tenure at Kraft, her accomplishments included leading the development of worldwide quality and food safety programs and policies through the Phillip Morris Worldwide Quality Council and the development of the company's crisis management/quick response team.

Joan is married and the mother of two.

# Ravindra Ramadhar

## *Perkin Elmer, Inc.*

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**Ravindra (Ravi) Ramadhar** is currently the Director of Food Safety Segment at PerkinElmer, which incorporates strategic planning and general management of the Food Safety Segment. Ravi's passion is innovation and the development and commercialization of technology in the agriculture and food safety industry. With a career arc spanning entrepreneurial early stage technology companies to change management in mature organizations, he brings a wealth of knowledge and experience to advancing food safety. Using a unique blend of strategic planning, technology management, product development and marketing experience, has lead technology driven organizations toward successful product commercialization. His experience in M&A, VC and business development provides traction to his passion for technology development. Ravi brings over 15 years of experience in food and technology. Past experiences include working with DuPont Qualicon, a business within the DuPont Agriculture and Nutrition portfolio, where he served as Director of Business Development and led strategy and partnership development, collaborations and in-licensing agreements. Ravi has also held other leadership positions within leading food industry companies such as Verdia Genetics and Monsanto. He was part of the small executive team that successfully managed the sale of Verdia to DuPont. Currently, Ravi leads strategic planning and general management of the Food Safety Segment at Perkin Elmer.

Ravindra Ramadhar received a BS in Molecular Biology from Rutgers University and an MBA in Finance and Innovation Management from Syracuse University. His post graduate studies include completion Executive Education from Harvard Business School, focusing on Intellectual Property Strategy and Building Ventures in Established Companies.

# Tim Jackson

## *Nestlé North America*

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**Tim Jackson** is the Director of Food Safety for Nestlé US and Nestlé Canada, with responsibility for thermal processing and food safety programs in hygiene, microbiology, allergens and chemical contaminants. He has held this position since 2009. Tim has worked for Nestlé as a research and industrial microbiologist since 1995 as a research associate, head of the microbiology department of Nestlé's reference laboratory for the US and Canada and from 2004 to 2008 as Microbiology Advisor to Corporate Quality Management for Nestlé world-wide.

Tim received his Bachelor of Science in Biology from Abilene Christian University and his Master of Science and Ph.D. in Food Microbiology from Texas A&M University.

# Michael Doyle

## *University of Georgia*

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**Dr. Michael P. Doyle** is a Regents Professor of Food Microbiology and Director of the Center for Food Safety at the University of Georgia. He is an active researcher in the area of food safety and security and works closely with the food industry, government agencies, and consumer groups on issues related to the microbiological safety of foods. He serves on food safety committees of many scientific organizations and has served as a scientific advisor to many groups, including the World Health Organization, the Institute of Medicine, the National Academy of Science-National Research Council, the International Life Sciences Institute-North America, the Food and Drug Administration, the U.S. Department of Agriculture, the U.S. Department of Defense,

and the U.S. Environmental Protection Agency. He is a Fellow of the American Academy of Microbiology, the American Association for the Advancement of Science, the International Association for Food Protection and the Institute of Food Technologists, and is a member of the National Academies Institute of Medicine.

# **Teresa Green**

## *National Consumers League*

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**Teresa Green** joined the National Consumers League in September of 2011. She works on a variety of issues related to food safety, nutrition, and alcohol labeling. Teresa represents NCL on the Make Our Food Safe and Safe Food Coalitions, which work to improve food safety systems in the U.S., and as part of the National Alliance for Nutrition and Activity, which works to promote healthy eating and physical activity.

Before coming to NCL, Teresa was at Olsson, Frank and Weeda as a legislative intern where she worked on a number of agricultural and nutrition issues, including school meals, food security and biofuels. She earned her Bachelor of the Arts in International Studies at Emory University where she was a Robert W. Woodruff Scholar. Teresa is a native of Arlington, Virginia.



# Julie Miller Jones

## *St. Catherine University*

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**Julie Miller Jones**, a board Certified Nutrition Specialist and Licensed Nutritionist, received her B.S. degree from Iowa State University and her Ph.D. Food Science and Nutrition (Home Economics) from the University of Minnesota. Currently, she is Professor Emerita and Distinguished Scholar of Food and Nutrition at St. Catherine University in St. Paul. She has twice been named their outstanding professor, was awarded the Myser Award as a professor 'who made a difference in people's lives'.

She regularly communicates about whole grains and dietary fiber, carbohydrates, sugars, the glycemic index, fat, antioxidants, diets, celiac and gluten-free, and various aspects of food safety. She authored a number of books and scientific articles. She has appeared on radio and TV shows in many cities and has answered hundreds of consumer letters in the FIXIT column of the *Minneapolis Star and Tribune*. She is a frequent speaker for many professional and consumer organizations, locally, nationally and internationally.

As part of her many activities in many professional organizations, she has served as President and Board Chair of the American Association of Cereal Chemists. In 2004 she received their highest award, the Geddes Award. In 2011 she was named an Academic Fellow of the International Cereal Chemists. She currently is chair of the Whole Grains Working Group. In 2012 she received the Dream Maker Award for menu plans that were highly successful for improving health and causing weight loss of residents of Dakota Communities.

She is a scientific advisor for the Joint Institute of Food Safety and Nutrition of the US Food and Drug Administration and the University of Maryland, the International Life Sciences Institute, and the Grains Food Foundation and the Wheat Foods Council.

# Donna Rosenbaum

## *Food Safety Partners, Ltd.*

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**Donna Rosenbaum** is the CEO and lead consultant for Food Safety Partners, Ltd. of Northbrook, Illinois. Food Safety Partners is a national food safety consulting firm that specializes in consumer-based projects. Donna is currently a candidate in the Master of Science in Communication program at Northwestern University; recent studies include issues in change management, leadership and development, global strategies, contemporary media in business and government, managing information for innovation, and crisis management. She became devoted to food safety in 1992 when *E. coli* disease claimed the life of her daughter's best friend as the first victim in the Jack in the Box outbreak.

Donna has twenty years of advocacy expertise in working on consumer food safety issues including having personally worked with thousands of foodborne illness victims. She also worked for three years on the development of the Food Safety Modernization Act and on traceability requirements for food products. Recent endeavors include consultation on the development of traceability software, work on various foodborne illness cases, development of food safety material for white papers, educational material for management of recalls and outbreaks for a food industry insurance group, media work with national journalists, and media and social media outreach platforms on food safety for interested corporations.

# Gilbert A. Leveille

## *Leveille Associates*

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**GILBERT A. LEVEILLE** is currently the Emeritus Director of the Wrigley Science Institute and is also President of Leveille Associates, a company providing consultation in the areas of Nutrition, Food Science and Regulatory Affairs.

Dr. Leveille started his career in academia as Professor of Nutritional Biochemistry at the University of Illinois (1965-1971) then was Professor and Chairman of the Department of Food Science and Human Nutrition at Michigan State University from 1971 to 1980. In 1980 he moved to the private sector where he has been employed by a number of food firms including General Foods, Nabisco, McNeil Nutritionals, and Cargill.

Dr. Leveille received his Ph.D. from Rutgers University and received his undergraduate degree from the University of Massachusetts at Amherst. He also has been awarded an honorary D.Sc. degree from Purdue University.

Dr. Leveille is a past president of the Institute of Food Technologists and of the American Society for Nutrition and is a Fellow of both organizations. He is a member of numerous other professional organizations. He lectures widely and has published more than 300 scientific papers and several books and patents. Dr. Leveille is the recipient of several awards including the Mead Johnson and the Conrad Elvehjem Awards from the American Society for Nutrition and the Carl Fellers, Industrial Scientist and Appert Awards from the Institute of Food Technologists. In 2010 an endowed lectureship was established, The Gilbert A Leveille Award and Lectureship, honoring Dr. Leveille's commitment to the disciplines of Food Science and Nutrition, the award will be jointly managed by the American Society for Nutrition and the Institute of Food Technologists

# David R. Lineback

*JIFSAN*

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**Dr. David Lineback** is a member of the American Chemical Society, AACC International (formerly the American Association of Cereal Chemists) (Past-president and Fellow), the American Association for the Advancement of Science (Fellow), the American Society for Nutritional Sciences, the Institute of Food Technologists (Past-president and Fellow), the International Union of Food Science and Technology (IUFoST) (Past President and Fellow of the International Academy of Food Science and Technology), the Japanese Society of Applied Glycoscience (formerly the Japanese Society of Starch Science), Gamma Sigma Delta, Phi Tau Sigma, and Sigma Xi.

Dr. Lineback has received the IUFoST Lifetime Achievement Award (2012); the IUFoST Distinguished Service Award (2012); Permanent Honorary Member of the Chinese Institute of Food Science and Technology (CIFST) (2008); Fellow, ICC Academy, International Association for Cereal Science and Technology (ICC) (2008); Food Chemistry Division Lecture, IFT Annual Meeting and Expo, Orlando, FL, 2006; CFSAN Director's Special Citation Award (2002); Outstanding Food Science Award, Department of Food Science, Purdue University (2002); Geddes Memorial Award, American Association of Cereal Chemists (1998); Carl R. Fellers Award, Phi Tau Sigma/IFT (1991); William F. Geddes Lecture, Northwest Section, AACC (1988), Purdue University "Old Master" (1986); and Special Award of Merit, Japanese Society of Starch Science (1985).

Dr. Lineback is author or coauthor of more than 75 scholarly papers or book chapters. His research interests encompassed carbohydrate and cereal chemistry with an emphasis on starch structure, properties, and functionality in foods, and enzymes involved in starch degradation/hydrolysis. Current interests involve the issues of acrylamide in foods, food safety and security (domestic and international). He served as major professor for 13 Ph.D. and 7 M.S. students.

# Deirdre Schlunegger

## *STOP Foodborne Illnesses*

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**Deirdre Schlunegger**, Chief Executive Officer for STOP has over twenty years of nonprofit experience. Before she joined STOP, she held the position of President & CEO with the Make A Wish Foundation in Oklahoma. Prior to Make A Wish, she was Vice-President of Affiliate Relations at Breast Cancer Network of Strength (formerly known as Y-Me National Breast Cancer Organization). She had oversight of all the organization's chapters around the country. She developed business plans and launched new chapters in new markets. She has served as the Executive Director of a Chicago nonprofit organization and a national foundation, has been the Director of Child Life Programs in a number of Children's Hospitals, served as an adjunct faculty member at the Medical College of Georgia Hospital and Clinics, developed a program at Cabrini Green and was the Director of a Chicago Head Start Program. Deirdre has also worked as a consultant for various organizations.

Deirdre graduated from Colorado State University with a Bachelors of Science degree in Human Development and Family Studies, completed a Child Life Internship at Johns Hopkins Children's Hospital and a program in Nonprofit Management at Kellogg School of Business and has attended numerous courses in leadership including one at the Wharton School of Business. She served on the Chicago Mayor's Office on Domestic Violence Advisory Committee, the Juvenile Court Domestic Violence Committee and was a Board Member of the Illinois Coalition of Domestic Violence.