



# ***SPEAKER BIOS***

## **SYMPOSIUM ON SENSITIZING PROPERTIES OF PROTEINS**

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Prague, Czech Republic**

**Sponsored by:**

**ILSI Health and Environmental Sciences Institute  
Protein Allergenicity Technical Committee  
*(with speaker travel support from ILSI Europe)***



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### **Christal Bowman, PhD** (US Environmental Protection Agency, Research Triangle Park, NC, USA)

Dr. Christal Bowman earned a PhD in Microbiology and Immunology in 2001 from Tulane University, studying the adjuvant effects of bacterial toxins. Dr. Bowman's first postdoctoral fellowship was spent investigating the role of inflammatory mediators in impairing host defense mechanisms at the University of North Carolina at Charlotte. In a second postdoctoral fellowship at the US Environmental Protection Agency, she developed rodent models designed to assess the risk of potential allergenicity of genetically modified food crops, including models for oral sensitization, oral tolerizing potential as a risk-mitigating factor, and neonatal susceptibility. Since 2008, Dr. Bowman has supported reviews of the national ambient air quality standards as a biologist with EPA's National Center for Environmental Assessment, contributing to the integrated science assessments in the areas of allergy, host defense, neurotoxicology, carcinogenesis, and pulmonary morbidity. Her general interests are intestinal immunology, allergy, toxicant-induced immune activation, inflammation, neuroimmunology, and autoimmune disease.

### **Montserrat Fernández-Rivas, MD, PhD** (Hospital Clínico San Carlos, Madrid, Spain)

Dr. Montserrat Fernández-Rivas earned his Medical Degree in 1985 from the Universidad del País Vasco, Bilbao, Spain, and his PhD in 1995 from the Universidad Alcalá de Henares, Madrid, Spain. He was a Specialist in Allergy and Clinical Immunology at the Hospital Ramón y Cajal, Madrid, Spain, from 1986 to 1989. In 1998, Dr. Fernández-Rivas earned a Master Diploma in Methodology of Clinical Research from the Universidad Autónoma de Madrid. In 2012, he earned a Master Diploma in Clinical Governance from the Universidad Pompeu Fabra. Currently, he is an Allergist at the Allergy Department of Hospital Clinico San Carlos, Madrid, Spain. He was Coordinator of the Food Allergy Experts Committee of the Spanish Society of Allergy and Clinical Immunology (SEAIC) from 2002 to 2010, and a Member at Large of the SEAIC Board from 2006 to 2010. His research interests include food allergy, food allergens, and allergen immunotherapy. Dr. Fernández-Rivas participates in clinical trials on allergen immunotherapy (inhalants, foods) and in research projects in food allergy and allergens funded by the Spanish Ministry of Science and by the European Commission (SAFE, CREATE, EuroPrevall, FAST). He has more than 90 publications in international journals of allergy.

### **Jeremy Fry, PhD** (ProlImmune Limited, Oxford, United Kingdom)

Dr. Jeremy Fry's academic background is in transplantation immunology, having received his PhD degree in 2000 from the University of Oxford under the supervision of Prof. Kathryn Wood. Following a post-doctoral position in the same laboratory, he joined ProlImmune's research and development team in 2001 to generate new technologies for tracking antigen-specific T cells. With broad experience in immunology, but with a particular emphasis on T cell biology, he has been responsible for leading the technical sales of the company focussing on providing innovative solutions for challenging and complex problems in basic and applied immunology research.



**Richard E. Goodman, PhD** (FARRP, University of Nebraska – Lincoln, NE, USA)

Dr. Richard Goodman is a Professor in the Food Allergy Research and Resource Program (FARRP), University of Nebraska – Lincoln (UNL). His PhD was in Dairy Science at Ohio State University (1990), followed by postdoctoral research in immunology and parasitology at Cornell (1990-1993) and pulmonary immunology at the University of Michigan (1993-1997). He was a Program Manager assessing the allergenicity of GM crops at Monsanto (1997-2004). He manages the AllergenOnline.org database at UNL. His research includes evaluation of novel proteins and GMO safety. He consults with biotechnology and food companies. He trains international scientists in methods to evaluate GM crop safety, and participated in the Codex Task Force Working Group that developed the 2003 guidelines on the allergenicity assessment of GMOs. Publications include articles on improving the assessment of allergenicity of GM crops (e.g., *Nature Biotechnology*, 2008, 26(1):73-81), IgE serum screening, and protein digestion stability. Collaborations include scientists from Africa, China, India and South America.

**Corinne Herouet-Guicheney, PhD** (Bayer SAS, Bayer CropScience, Sophia Antipolis, France)

Dr. Corinne Herouet-Guicheney leads the Human and Animal Safety group dedicated to the safety evaluation of biotechnology products in the Regulatory Science Department of Bayer CropScience. She obtained her PhD in Toxicology at the University of Paris. She has gained some experience in the immunology field in the Dermatology Department of the Hautklinik in Mainz, Germany, and, in the Immunotoxicology Department of the University of Genève, Switzerland. She has also worked four years for the Cosmetics Industry (L'Oréal) on the evaluation of potential Immunotoxicity of chemicals and the development of alternatives to animal testing. In 2000, she moved to the Agrochemical Industry as a regulatory toxicologist for Aventis CropScience, and subsequently Bayer CropScience. She has been directly involved with Research and Development projects in food, feed and chemical products. She has had wide experience of project management and regulatory approval processes associated with successful technology application and transfer of more than 10 commercialised products. As a result, she has dealt with regulatory authorities worldwide, particularly with regard to safety issues surrounding the registration and product defence of new biotechnology products. During her career, she has been increasingly involved in developing and validating new methods and strategies for assessing potential toxic and/or allergenic properties of many compounds. Alternatives to animal testing have been another major interest. She is a member of numerous scientific societies and has served on a large number of associations and committees (e.g., ILSI Europe, ILSI HESI PATC, ILSI IFBiC, CropLife International). She has written major scientific publications on the specific topics listed above and speaks widely on crop biotechnology safety assessment.

**Karin Hoffmann-Sommergruber, PhD** (Medical University of Vienna, Austria)

Dr. Karin Hoffmann-Sommergruber received her PhD in Biology and Biochemistry at the University of Vienna, Austria. Afterwards she moved to the Medical University of Vienna and joined the Department of Pathophysiology and Allergy Research where she currently heads a research group. She identified a number of Bet v 1-related food allergens, studied their gene families, and cloned these allergens. Later, her research interests extended to the identification,



characterisation, and production of plant and animal derived food allergens and their application in component resolved diagnosis and for the development of novel allergen detection assays. Dr. Hoffmann-Sommergruber is interacting with national and international regulatory authorities such as EFSA on the allergenic risk assessment of genetically modified organisms. Currently, she is chairing the Interest Group on Food Allergy for the European Academy of Allergy and Clinical Immunology.

**Simon P. Hogan, PhD** (Cincinnati Children's Hospital Medical Center, Cincinnati, OH, USA)

Dr. Simon Hogan is a tenured-track Associate Professor of Pediatrics within the Division of Allergy and Immunology at Cincinnati Children's Hospital Medical Center. He completed his PhD, which was focused on the role of the cytokines IL-4, IL-5, IFN $\gamma$ , and IL-13 in experimental asthma at the John Curtin School of Medical Research, Australian National University, under the mentorship of Professor Paul Foster. Following his PhD, he received a National Health Medical Research Council CJ Martin Postdoctoral Fellowship Award, and performed his post-doctoral training in the laboratory of Professor Marc E. Rothenberg at Cincinnati Children's Hospital Medical Center (CCHMC), where he studied the role of eotaxin-1 and eosinophils in eosinophil gastrointestinal diseases. In 2004, he was appointed faculty at the University of Cincinnati and CCHMC, where he has developed a research program focused on delineating immune interactions at the gastrointestinal interface. His research is focused on the relative contribution of Th2 cytokines (IL-9 and IL-13) and Th2-associated inflammatory cells, mast cells, and eosinophils in the regulation of intestinal barrier function.

**Jonathan Hourihane, MD, FRCPI** (University College Cork, Ireland)

Dr. Jonathan Hourihane has been Professor of Paediatrics and Child Health in University College Cork, Ireland, since 2005. He graduated from Trinity College Dublin in 1987. His primary area of clinical and research interest is in paediatric food allergy and anaphylaxis with ongoing projects in the following areas: clinical and proteomic characterisation of emerging food allergy syndromes, exploration of the link between skin barrier dysfunction and systemic allergic disorders, threshold doses of food allergens, immunomodulation of established allergic responses, prevention of allergic sensitisation, including use of pre- and probiotic-enhanced infant formulae, and evaluation of quality of life in food allergic children. He is Co-Principal Investigator of the BASELINE birth cohort study ([www.baselinestudy.net](http://www.baselinestudy.net)). He is Secretary of the Irish Association of Allergy and Immunology, and he is a board member of Molecular Medicine Ireland ([www.MolecularMedicineIreland.ie](http://www.MolecularMedicineIreland.ie)).

**Lone Hummelshøj, PhD** (Gentofte Hospital, Hellerup, Denmark)

Dr. Lone Hummelshøj is a biochemical scientist who completed her PhD studies in immunology at the Allergy Clinic, National University Hospital, Copenhagen, in 2006 under the supervision of Prof. Lars K. Poulsen. The studies were focused on developing *in vitro* models of immunoglobulin isotype switching and differentiation to IgE-producing B cells. She has since carried out postdoctoral studies at the Allergy Clinic while continuing her studies on B cell differentiation. Recently in her research, Dr. Hummelshøj has been working on understanding



how long-term memory is established and maintained. She seeks to identify molecular pathways required for inhibiting the development of long-lasting IgE-producing plasma cells.

**Gregory S. Ladics, PhD, DABT, ATS** (DuPont Agricultural Biotechnology, Wilmington, DE, USA)

Dr. Gregory Ladics received his Bachelor of Science *cum laude* in Toxicology from the Philadelphia College of Pharmacy and Science in 1987. In 1991, he received his Doctor of Philosophy in Pharmacology and Toxicology from the Medical College of Virginia/Virginia Commonwealth University. He has been employed by the DuPont Co. for over 20 years where he is presently a Research Fellow. In 1999, Dr. Ladics became a Diplomate of the American Board of Toxicology and a *Fellow* of the Academy of Toxicological Sciences (ATS) in 2012. He serves as Chair of the International Life Sciences Institute (ILSI) Health and Environmental Science Institute's (HESI) Protein Allergenicity Technical Committee, and is a member of the HESI Immunotoxicology Technical Committee. Dr. Ladics is also Chair of the CropLife International Protein Allergenicity Team. He is a member of the Editorial Boards for the *Journal of Immunotoxicology* and the *International Journal of Toxicology*. Current research activities involve the evaluation and validation of test methods to assess protein allergenicity potential and research to address issues and further refine bioinformatic/protein modeling approaches for assessing potential protein allergenicity. Dr. Ladics has over 140 abstract, journal, and book chapter publications in the field of Immunotoxicology and Allergy.

**Charlotte Bernhard Madsen, DVM** (Technical University of Denmark, Søborg, Denmark)

Dr. Charlotte Bernhard Madsen graduated as DVM from The Royal Veterinary and Agricultural University, Copenhagen, Denmark, in 1979. She is Research Leader of the Allergy and Novel Food Group in the Division of Toxicology and Risk Assessment, National Food Institute, Technical University of Denmark. Her main current research focus is animal models in food allergy and development of risk assessment methods in food allergy. In the EU project ALLERGEST, she was responsible for the animal experiments studying the sensitising potential of digested allergens. She was a member of the management team of the EU IP project EuroPrevall where her group studied the sensitising potential of related food allergens and their transformation products. In addition, she led the projects Theme 5, a cross-project activity designed to translate the research into food allergy management. Dr. Madsen advises the Danish Environmental Protection Agency and the Danish Veterinary and Food Administration in matters concerning allergy.

**Adriano Mari, MD** (Allergome - Allergy Data Laboratories sc, Latina, Italy)

Dr. Adriano Mari currently heads the Center for Molecular Allergology – IDI-IRCCS, Rome, Italy. Formerly, he was a clinical allergist in the Italian NHS and a researcher in the Department of Immunology, Italian NIH. His current Interest is mainly clinical and translation research in molecular allergology, with special interest in allergenic molecule identification and characterization. He pioneered the use of micro-technology in allergy diagnosis and lab research, in combination with new bioinformatics tools. He is the creator and administrator of the *Allergome* ([www.allergome.org](http://www.allergome.org)), a web-based platform dedicated to collect data on



allergenic compounds. Currently, the Allergome has been expanded to be the online repository of data on allergy sensitizations using real time connectivity (ReTiME) with *InterAll*, the electronic allergy record for the clinical allergist and the lab. Recently, a new *Allergome* module has been released: the *AllergomeConsumer*. The module should work to monitor ingredient use in industrial foods, combine them with allergic sensitization prevalence to estimate real life risks, and help food allergic patients to safely and electronically read labels.

**Professor Clare Mills** (University of Manchester, United Kingdom)

Prof. Clare Mills has a chair in Molecular Allergology at the School of Translational Medicine at the University of Manchester. She heads a research team focussed on Food and Molecular Allergology. Previously, she led the BBSRC Institute Strategic Programme Grant on Food Structure and Health at the Institute of Food Research in Norwich, and was co-ordinator of the EU project EuroPrevall. Her research interests are focused on structure-function relationships in food proteins particularly with regards to what makes some proteins, and not others, become allergens. Prof. Mills has a BSc in Biochemistry (Bristol, UK), and a PhD Biochemistry (University of Kent at Canterbury, UK). Prof. Mills is a Visiting Professor at Wageningen University in the Netherlands. She is also on the Advisory Committee on Novel Foods and Processes, the BBSRC DRINC Initiative Steering Group, and the BBSRC Committee C.

**Isabella Pali, Dr. rer. nat., Dr. scient. med.** (Medical University of Vienna, Austria)

Dr. Isabella Pali-Schöll has studied nutritional sciences, and performed her doctoral theses for “Doctor rerum naturalium” and “Doctor scientiae medicae” at the Institute of Pathophysiology (Medical University of Vienna) where she is leader of the working group “Nutritional Immunology.” Since October 2011, she is employed as University assistant for “Comparative Allergology” at the newly founded Messerli Research Institute (University of Veterinary Medicine, Medical University and University of Vienna). Her particular research area is the revelation of factors responsible for allergy development. In addition, the transfer of the risk for allergic diseases from mother to next generation is within the focus of her scientific work. Furthermore, she is working on the optimization of immunotherapy for type I allergies, with a focus on carrier systems and active substances. Dr. Isabella Pali-Schöll is enthusiastic in transferring science to the public, like within “University meets public” or “Children’s University.” She has received several scientific awards and grants, and is author of numerous articles and papers.

**André H. Penninks, PhD, ERT** (TNO Triskelion BV, Zeist, The Netherlands)

Dr. André Penninks obtained both his doctoral degree in Biology in 1979 and his PhD on an immunotoxicological subject in 1985 at the University of Utrecht in the Netherlands, where he also headed the immunotoxicology group. In 1990, he left the University to join the contract research institute TNO Quality of Life in Zeist. At TNO, he headed various departments and started collaborative research on Food Allergy from 1996 with several groups of the University of Utrecht. In 2001, he founded the “Utrecht Centre of Food Allergy (UCFA),” focused on improvement of knowledge in the area of food allergy, and of which he was chair until 2009. Within TNO, the development of the BN rat model to predict the potential allergenicity of new



food proteins (e.g., GMOs) was started from 1993. Nowadays, he manages the Experimental Immunology group at TNO Triskelion BV and is still involved in several projects on Food Allergy.

**Maud Plantinga, MSc** (Ghent University, Belgium)

Maud Plantinga, MSc, studied Biomedical Science at the Utrecht University. In 2008, she joined the laboratory of Immunoregulation at the Ghent University led by Prof. Bart Lambrecht to do a PhD. Her main interest is the role of dendritic cells (DCs) in asthma development and maintenance. More specifically, she tried to identify which subset of lung dendritic cells is mediating T<sub>H</sub>2 sensitization to house dust mite (HDM). She tried to simplify the growing world of DC subsets, mainly focussing on the lung.

**Anna Pomés, PhD** (Indoor Biotechnologies, Inc., Charlottesville, VA, USA)

Dr. Anna Pomés is Research Director at Indoor Biotechnologies, Inc. since 2001. She obtained her PhD at the University of Barcelona in 1993. After a Postdoctoral Fellowship at Merck and Co., Inc. (1994-1997), she took a Research Associate position at the University of Virginia where she became a faculty member in 2000. She was recipient of the Pharmacia Award in 2002. The area of research in her laboratory is Determinants of Allergenicity related to the structure and function of allergens, focusing on conformational B cell epitopes. Her research is being funded by the National Institute of Allergy and Infectious Diseases (NIH), and she has served on Expert Panels to review grants and contracts for the NIH. She is Fellow of the American Academy of Allergy, Asthma and Immunology, and Member of the WHO/IUIS Sub-Committee of Allergen Nomenclature.

**Lars K. Poulsen, PhD, Dr. Med.** (Gentofte Hospital, Copenhagen, Denmark)

Prof. Lars K. Poulsen (PhD 1988, Dr. Med. 2000) is Clinical Professor of Basic Allergology at the University of Copenhagen, Medical Faculty, since 2009. He received a MSc in Chemistry at the Danish Technical University in 1984 and a Diploma of Business Administration at the Copenhagen Business School in 1997. Following his PhD at the Medical Faculty at the University of Copenhagen, he was a post-doc at the Johns Hopkins University Medical School in 1989. Since 2002, he is Head of Allergy Research at the Gentofte Hospital (formerly National University Hospital). Prof. Poulsen has supervised 31 PhD students, 59 graduate students, and was opponent/censor for 19 PhD students and 20 graduate students. He regularly reviews grants and positions for the EU Commission, the National Medical Research Councils in Austria, Singapore, Switzerland, Spain, the Austrian National Bank Foundation, and the Danish Universities. Prof. Poulsen is the Scientific Programme Coordinator of the European Academy of Allergy and Clinical Immunology (EAACI) since 2010, and served in 2010 as a consultant for the Danish Food Institute and EFSA.

**Dr. Erwin L. Roggen** (Novozymes A/S, Bagsvaerd, Denmark)

Dr. Erwin Roggen obtained a degree in Biochemistry at the University of Antwerp. Throughout the years he acquired knowledge and expertise in the areas of protein chemistry, molecular biology, microbiology, immunology and cell biology. As Science Manager at Novozymes, Dr. Roggen is and has been involved for the last 10 years in development, implementation,



dissemination and acceptance of alternative methods to animal testing. For the past six years, he was coordinator of the FP6 funded project Sens-it-iv. In 2009 he started a firm ([www.3RsMC.eu](http://www.3RsMC.eu)) that provides professional services related to development, implementation and application of 3Rs strategies. Dr. Roggen is president of IVTIP, member of the ECVAM Scientific Advisory Committee (ESAC), the EPAA Steering Committee, and the ecopa board. Finally, he is active in several Scientific Advisory Boards of National and European Consortia, in the area of the 3Rs, as well as in the Editorial Board of Toxicology In Vitro.

**Joost J. Smit, PhD** (Utrecht University, The Netherlands)

Dr. Joost Smit is assistant professor in the Immunotoxicology group (headed by Dr. Raymond Pieters) at the Institute for Risk Assessment Sciences (IRAS) of Utrecht University. He earned his PhD in Immunology on research into the immunomodulatory effects of mycobacteria in allergy and asthma. This was followed by research at the University of Michigan on the role of dendritic cells in RSV infection and asthma. Now the focus of his research is on the mechanisms behind allergic sensitisation and allergic effector responses in food allergy. Moreover, Dr. Smit works on *in vivo* and *in vitro* translational assays for the assessment of safety and efficacy of various compounds, including food proteins. The research group he works in consists of post docs, PhD students that perform fundamental research within national and EU-funded projects, as well as applied research for pharmaceutical and food companies.

**Emily Swindle, PhD** (University of Southampton, United Kingdom)

Dr. Emily Swindle is a senior research fellow at the University of Southampton (UoS). She obtained her PhD from the University of Liverpool before undertaking a postdoctoral fellowship at the National Institutes of Health, USA, under the mentorship of Dr. Dean Metcalfe investigating the role of reactive oxygen species on IgE- and bacterial-mediated mast cell (MC) function. On returning to the UK, she continued her interest in respiratory diseases, undertaking research with Prof. Donna Davies (UoS) on a multidisciplinary project investigating the interaction of bronchial epithelial cells (BEC) and dendritic cells in asthma using a novel device to monitor the epithelial barrier by electrical impedance spectroscopy. She currently has a career track fellowship exploring the interaction of BEC and MC in virus-induced exacerbations of asthma. She has a keen interest in understanding the mechanisms by which BECs interact with underlying immune cells and developing *in vitro* models of the airways.

**Ronald van Ree, PhD** (Academic Medical Center, Amsterdam University, The Netherlands)

Dr. Ronald van Ree received his PhD degree in immunobiology in 1994 at the University of Amsterdam. From 1994 until summer 2005, he was a scientific staff member of the Allergy Research Group at Sanquin Research in Amsterdam. In the summer 2005, Dr. van Ree was appointed Associate Professor, and in 2009 Full Professor in Molecular and Translational Allergology at the Academic Medical Center in Amsterdam. His main fields of expertise are allergen characterization, recombinant allergens, humoral immune responses against allergens, allergy diagnostics, biological activity of IgE antibodies, allergen cross-reactivity, assays for allergen measurement and allergen standardization, and the influence of environment, infections, and lifestyle on the development of allergy. Dr. van Ree has been a member of the



leadership of the large EU-project in the area of food allergy, EuroPrevall. Since 2008, he is coordinating EU-FAST project aiming at developing novel biotech strategies for the treatment of food allergy.

**Dr. Jean-Michel Wal (INRA-CEA SACLAY, France)**

Dr. Jean-Michel Wal is Head of the Food Allergy Laboratory (i.e., UIAA) of INRA, Scientific Division on Food and Nutrition. The UIAA research programmes focuses i) on the study of the relationship between the structure of food proteins and peptides, their digestibility and their allergenicity; and ii) on the analysis of factors, including environmental conditions, that interact to induce or prevent an allergic reaction and on the mechanisms that are involved. For these purposes, it develops new *in vitro* and cell based tests and animal models. Dr. Wal is a member of scientific societies for nutrition, immunology, and allergology, and of several scientific committees in charge of the safety assessment of foods. He is currently a member of the GMO Panel, of which he chaired the working group on Allergenicity, and an Expert of the Food Allergy working group of the Nutrition Panel of the European Food Safety Authority (EFSA).

**Marsha Wills-Karp, PhD (Johns Hopkins University Bloomberg School of Public Health, Baltimore, MD, USA)**

Dr. Marsha Wills-Karp is the Chair of the Department of Environmental Health Sciences at the Johns Hopkins Bloomberg School of Public Health. Dr. Wills-Karp's research interests have been focused on determining the fundamental genetic and environmental causes of allergic diseases such as asthma. For the past 20 years, her research has been focused on the role of aberrant production of CD4+ Th2 cytokines in the development of asthma. She and her group were one of the first groups to demonstrate the importance of the Th2 cytokine, IL-13 in the development of allergic asthma. Antibodies against this cytokine are now in clinical trials for the treatment of asthma. More recently, she has made substantial contributions to our understanding of the mechanisms underlying allergenicity of common allergens. Specifically, we have shown that the common allergen, house dust mite, initiates immune responses through activation of TLR4-activated and C-type lectin receptor-mediated pathways.