

# SPEAKERS

## OECD Conference on RNAi based pesticides

10-12 April 2019

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**OECD Conference on RNAi based Pesticides**

10-12 April 2019 Paris, France

## PAMELA BACHMAN

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Dr. Pamela Bachman is an Associate Science Fellow and the Environmental Strategic Engagement Lead for Bayer Crop Science based in Saint Louis, Missouri, USA. Pamela is currently responsible for many of Bayer's monarch butterfly and biodiversity initiatives with the goal to increase agricultural sector participation in habitat conservation. Prior to her current role Pamela led an ecotoxicology and risk assessment team that evaluated potential and risk of biotechnology-derived crop protection products on non-target terrestrial and aquatic wildlife. In her 10 years in the agriculture industry, Pamela has served on a variety of industry task forces, workshops and scientific committees to develop guidance for ecological risk assessment and further develop and refine these assessments for crop protection products such as Bts and RNAi-based products. Pamela is trained as an aquatic toxicologist/ecologist and received her Ph.D. from Florida International University in Miami.

## THAIS BARROS RODRIGUES

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Dr. Thaís Barros Rodrigues is a scientist engaged in developing new strategies to manage insect pests using biological molecules. As an expert in the field of biotechnology, she has been recognized for her work on RNAi-based pest management.

Rodrigues received a B.S. in biological sciences and an M.S. and a doctorate in plant biotechnology at the Federal University of Lavras, Brazil. Over the course of her graduate program, she worked at the Brazilian Agricultural Research Corporation, Embrapa Maize and Sorghum. In 2012, during her Ph.D. program, she went to the University of Nebraska, USA and developed her research project in the Entomology Department. Since then, her work has been focused on the application of RNAi technology to manage a variety of insect pests. She also trained as a postdoctoral fellow at the University of São Paulo (Cena/USP), Brazil and at the University of Kentucky, USA and has an MBA in project management from the University of São Paulo. Rodrigues has been at the forefront of utilizing oral ingestion of dsRNA to evaluate gene silencing in insect pests. She has served as an FQPA science review board member during USEPA SAP for the human health and ecological risk assessments for the first PIP-RNAi. She joined Greenlight Biosciences in 2018 and has been directly involved in the development of RNAi-based products for pest control.

## SHANNON BORGES

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Shannon Borges is Chief of the Risk Assessment Branch (RAB) in the Biopesticides and Pollution Prevention Division (BPPD) of the Office of Pesticide Programs at the U.S. Environmental Protection Agency (EPA). Ms. Borges joined the OPP in 2004 as a risk assessor in the Environmental Fate and Effects Division, and joined the BPPD in 2008. Since then she has held several leadership positions within BPPD, including Senior Scientist for ecological risk assessments and Team Leader for microbial pesticide product registration. She received her M.S. in Marine, Estuarine, and Environmental Science from the University of Maryland, College Park, Maryland, U.S.A.



## OLIVIER CHRISTIAENS

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Graduated as a bioscience engineer, Olivier Christiaens obtained his PhD degree in applied biological sciences at Ghent University in 2013, investigating nuclear receptors in insects. He then started a research project as a doctor-assistant at the Department of Plants and Crops (Ghent University) researching RNAi efficiency in insects. Two years later, Olivier successfully applied for a postdoctoral fellowship at the Research Foundation – Flanders (FWO). His project entails the development of RNAi delivery methods and formulations to increase oral RNAi efficiency in pest insects and investigating biosafety aspects of RNAi. Recently, he has also been involved in the iPLANTA RNAi biosafety working group and led a consortium conducting a review project on RNAi biosafety for the EFSA GMO Panel.



## LES DAVIES

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Les Davies has a PhD degree in neurochemistry from the Australian National University (ANU), based on research conducted at the John Curtin School of Medical Research. Prior to joining the Australian Public Service he had a research career in neurochemistry and biochemical pharmacology at the Max-Planck Institut für Biophysikalische Chemie in Germany, the Roche Research Institute of Marine Pharmacology in Sydney, the Department of Pharmacology at Sydney University, and the Research School of Biological Sciences at the ANU.

Regulatory roles in human health risk assessment were with the Australian Department of Health, the Therapeutic Goods Administration (TGA) and the Swedish Medical Products Agency (Uppsala). In early 2006 he was appointed as Manager of the Chemical Review Section of the Australian Pesticides and Veterinary Medicines Authority (APVMA). In February 2011 he became the APVMA's Chief Regulatory Scientist, Pesticides, and continued in this role and as Chief Scientist until retirement from full-time paid employment in late October 2016. He currently undertakes part-time consulting.

He has been involved in international programs related to chemicals regulation and risk assessment, including the OECD Working Group on Pesticides, the WHO/FAO/UNEP International Program on Chemical Safety (IPCS), the United Nations Environment Program (UNEP), and the WHO/FAO Joint Meeting on Pesticide Residues (JMPR).

## ACHIM GATHMANN

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Dr. Achim Gathmann is a head of the Unit Environment in the Department Plant Protection Products at the Federal Office of Consumer Protection and Food Safety (BVL). He obtained a Diploma and a Ph.D. in Biology. His key qualifications are agroecology, plant protection, biological control, risk assessment and risk management of Plant Production Products and GMOs.

## FRANK HOLTkamp

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Frank Holtkamp is a clinical scientific expert (PharmD, PhD) at the Dutch Medicines Evaluation Board (MEB) with over 10 years of experience. The MEB is one of the Member States of the European Medicines Agency. As a scientific clinical expert at the MEB, he is involved in the (clinical) assessment of new marketing authorisation requests, modification of existing authorisations, and drug development strategies of medicinal products intended for use for the European market. Frank was closely involved in the assessment of several of the antisense oligonucleotides that were submitted to EMA for marketing authorisation request. Further, he is a member of the Rheumatology and Immunology Working Party (RIWP) at EMA (as a nephrology expert) and has experience in assessment of drugs for cardiovascular management, lipid disorders and nephrology.

## DIMITRA KARDASSI

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Dimitra Kardassi is a chemist with a PhD in Physical Chemistry from the National Technical University of Athens (Greece). Dimitra holds also a Master of Science in Nutrition and Public Health. She had been working for more than 10 years in the Hellenic Food Authority (Greece) and she has held senior positions for several years. She represented Greece in several European Commission and Council working groups of experts and she was leading national delegations in EU and International Committees. She contributed in many legislative proposals of the Commission in food safety areas and she was acting as project manager of European funded projects. As of 2014 she joined European Food Safety Authority (EFSA), Pesticide Unit as Scientific Officer where she is dealing with the coordination of the peer review processes of the risk assessment of active substances (chemicals and microorganisms). She is also involved in many transversal activities and EFSA Scientific Panel projects supporting developmental activities. She has contributed in the development of many outputs including EFSA conclusions, technical reports, scientific opinions and guidances.

## KARL-HEINZ KOGEL

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Dr. Kogel studied biology and social sciences at the RWTH Aachen University from 1975 to 1981. In 1983, he conducted research at the Weizmann Institute of Science in Rehovot, Israel. In 1986 he received his doctorate at the RWTH Aachen University with a PhD in biology. Until 1988 he worked as a postdoc at the Max Planck Institute for Plant Breeding Research in Cologne. After several years working in the area of bio-patents, he habilitated in plant physiology. In 1996, he accepted a call from the University of Giessen to a professorship in crop protection and plant pathology. From 2000 to 2006 Kogel was a member of a senate commission of the Deutsche Forschungsgemeinschaft (DFG). From 2006 to 2009 Kogel was Vice President of the University of Giessen.

Since 2013, Kogel has been researching the role of RNAs, such as dsRNA and small non-coding RNA in the development and control of cereal diseases. In addition, Kogel dealt in the biosafety research with the impact of transgenic cereals on the environment (green genetic engineering). He is a pioneer of sustainable crop production through the application of the green gene technology and genome editing (CRISPR/Cas9 method) as a way to reduce the use of pesticides.

## GUNTER MEISTER

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Gunter Meister is professor and chair for Biochemistry at the University of Regensburg, Germany. He graduated in Biology at the University of Bayreuth, Germany. During his PhD, he worked on the role of splicing regulation and obtained his PhD in 2002 from the Max-Planck-Institute of Biochemistry and the Ludwig Maximilians University, Munich, Germany. From 2003 to 2005, he joined the lab of Tom Tuschl at the Rockefeller University in New York, USA as postdoc and started to work on mechanistic aspects of small RNA-guided gene regulation. In 2005, he started his independent lab at the Max-Planck-Institute of Biochemistry. His lab contributed to our current understanding of the mechanism of microRNA regulation. In 2009, he was appointed full professor and chair for Biochemistry at the University of Regensburg, Germany. His research focus is the biochemical analysis of small RNA-guided gene silencing pathways, long non-coding RNAs, RNA binding proteins and RNA modifications in mammals. His lab combines molecular biology and biochemistry with biophysical and structural approaches. Gunter Meister received the Research Award of the Peter and Traudl Engelhorn foundation, the Schering Young Investigator Award as well as starting and consolidator grants of the European Research Council (ERC).

## MIKE MENDELSON

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Mike Mendelsohn is chief of the United States Environmental Protection Agency's Emerging Technologies Branch in the Biopesticides and Pollution Prevention Division of the Office of Pesticide Programs and manages plant-incorporated protectants such as Bt corn, RNAi, genetically engineered microorganisms, genetically engineered mosquitoes, and other pesticide emerging technologies such as Wolbachia infected mosquitoes. Mike has been with EPA for over 30 years and worked in the risk assessment and risk management of biopesticides, as well as conventional and antimicrobial/biocide pesticides.

## NEENA MITTER

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Professor Neena Mitter, Director, Centre for Horticultural Science, Queensland Alliance for Agriculture and Food Innovation, the University of Queensland, is one of Queensland's leading biotechnologists, having been involved in molecular biology and biotechnology in Australia and India for over 20 years. She is internationally recognised for her leadership in innovative, cross-functional research and exceptional industry engagement to address global challenges of agriculture and food security. She leads an impactful research group to deliver global innovations, namely '*DsRNA based BioClay spray for crop protection*', '*Single dose- shelf stable Nanovaccines for animal health*' and '*Clonal propagation of avocado using plant stem cells*'. These are ground breaking platform technologies impacting agricultural production, environmental sustainability and socio-economic dynamics of farming community. With increased scrutiny on use of chemicals as crop and animal disease control agents; Prof Mitter is focussed on developing clean technologies for the agriculture of tomorrow.

## BRENDA OPPERT

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Trained in protein chemistry, Brenda Oppert received a Ph.D. in Biochemistry from Kansas State University and joined the Center for Grain and Animal Health Research in Manhattan, KS in 1991. Since that time, she has studied insect digestive enzymes and pioneered research on insect protease-mediated resistance to *Bacillus thuringiensis* toxins. Her impatience to see the big picture was rewarded when she shifted to functional genomics to identify vulnerable metabolic pathways in insect pests for the development of new biologically-based control methods. Dr. Oppert is currently spearheading the sequencing of four stored product insect pest genomes and annotating digestive enzyme genes in many i5k insect genomes. She uses gene expression (RNA-Seq) and gene disruption technologies (RNAi, CRISPR) to probe insect responses to microbial toxins and other control products, as well as study the molecular mechanisms of insecticide resistance. Among her many projects, she collaborates on a US DOD DARPA project to develop genetic resources for insects as alternative food resources. Dr. Oppert was an Ad Hoc Panel Member for the EPA Scientific Advisory Panel on *RNAi Technology as a Pesticide: Problem Formulation for Human Health & Ecological Risk Assessment Meeting*, Washington DC, February 2014.

## NIKOLETTA PAPADOPOULOU

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Nikoletta Papadopoulou is a scientific officer at the Genetically Modified Organisms (GMO) Unit of the European Food Safety Authority (EFSA). She supports the assessment of data submitted for the molecular characterisation of genetically modified plants, in food and feed applications before market authorisation in Europe, including RNAi, next-generation sequencing (NGS) and bioinformatics analyses. Nikoletta obtained a bachelor's degree in molecular biology from the University of Portsmouth (1996), Master's (1998) and PhD (2003) degrees in molecular endocrinology from the University of Warwick, UK. After postdoctoral research on the signalling pathways that regulate allergic, inflammatory and stress-induced responses in mammalian systems at Tufts University Medical School, Boston (USA), and work on immune regulation at the Helmholtz Centre Munich (Grossharden) and the Institute of Genetics at the University of Cologne (Germany) using transgenic models, she moved in 2008 to the Institute for Medical Microbiology, Immunology and Hygiene (University of Cologne) as a group leader, focusing on the role of miRNA-pathway components in allergy and inflammation. She joined EFSA in 2016.

## ALAN RAYBOULD

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Alan Raybould is a Senior Science and Technology Fellow at Syngenta in Basel, Switzerland. Alan joined Syngenta in 2001 and until 2014 worked in its Product Safety department at Jealott's Hill International Research Centre in the United Kingdom. There he led the preparation of environmental risk assessments as part of worldwide regulatory submissions for Syngenta's transgenic crops. Alan moved to Basel in 2014 where he currently works on risk assessment and societal acceptance of agricultural products of new technology. Before joining Syngenta, Alan was a Principal Scientific Officer at the UK's Centre for Ecology and Hydrology, where he led a research group developing methods for estimating gene flow among populations of wild plants, and studying the ecological genetics of insect and virus resistance in wild relatives of crops.

## JÖRG ROMEIS

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Dr. Jörg Romeis heads the Biosafety Research Group at Agroscope in Zurich, Switzerland. Agroscope is the Swiss center of excellence for agricultural research, and is affiliated with the Federal Office for Agriculture. In addition, he is a lecturer at the University of Bern and an adjunct professor at the Institute of Plant Protection of the Chinese Academy of Agricultural Sciences in Beijing.

Jörg holds an MSc and PhD in biology and was trained as an applied entomologist with a focus on biological pest control and multi-trophic interactions. He has more than 18 years of experience in the risk assessment of genetically modified (GM) crops and in particular in the design and execution of non-target laboratory studies. His research has focused on the effects of insect-resistant GM plants, such as Bt maize and cotton, on arthropod herbivores and their predators and parasitoids. More recently, he also is studying the non-target effects of RNAi-based GM plants.

In addition to primary research, Jörg has been actively involved in defining operational environmental protection goals, in developing guidelines for risk assessment and protocols for non-target testing.

## MAGDA SACHANA

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Dr. Magda Sachana is Policy Analyst within the Health and Safety Division of the OECD's Environmental Directorate. She joined the OECD in 2015, and since then she has been responsible for the development and implementation of policies in the field of chemical safety. She currently contributes to the OECD's Pesticides, Test Guidelines and Hazard Assessment Programmes. Dr Magda Sachana provides Secretariat support to the work of the Ad Hoc Expert Group on RNAi-based pesticides since its formation. She has over 10 years of experience in academic research and scientific project management, having served as a Lecturer at the University of Liverpool in the United Kingdom and as an Assistant Professor at the Aristotle University of Thessaloniki in Greece. Dr Sachana is a trained veterinarian with M.Sc. in Biotechnology from Nottingham Trent University in the United Kingdom and a Ph.D. in toxicology and biochemistry from the Aristotle University of Thessaloniki in Greece.

## RICHARD SIGMAN

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Richard Sigman is a Principal Administrator for the Organisation for Economic Co-operation and Development (OECD) in Paris. He joined the OECD in 1993, and has been responsible for OECD's work on chemical risk management, new chemicals, biocides the chemicals chapters of OECD Environmental Outlook publications, Pollutant Release and Transfer Registers (PRTRs), exposure assessment, and liaison with newly emerging economies including the accession of countries to the OECD as it relates to chemicals. He currently is responsible for OECD's Good Laboratory Practice programme and the Pesticides programme. Prior to joining OECD, he worked for the US Chemical Manufacturers Association, the Executive Office of the US President, and the US Environmental Protection Agency. He received his Bachelor of Arts degree in social ecology from the University of California, Irvine and a Masters in Public Administration in environmental policy from Indiana University.

## PETR SVOBODA

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Petr Svoboda received a Master degree in Developmental Biology at the Charles University in Prague in 1997; where he did his diploma thesis research at the Institute of Hematology and Blood Transfusion in Prague. During 1998-2002, he did his PhD research University of Pennsylvania in the lab of prof. Richard Schultz, where he studied RNA interference in mouse oocytes. For postdoctoral research he moved to prof. Witold Filipowicz laboratory at the Friedrich Miescher Institute in Basel, Switzerland, where he studied mammalian miRNAs (2003-2006). He started his research group with support of the EMBO Installation Grant at the Institute of Molecular Genetics in Prague in 2007. His laboratory studies various aspects of post-transcriptional regulation during oocyte-to-zygote transition, with a particular focus on regulations mediated by small RNAs. His research on RNA silencing has been supported by an ERC Consolidator Grant (2015-2020). In 2012, he was promoted to the Senior researcher position, in 2013 he was named associate professor and in 2017 he became the full professor in Developmental and Cell Biology at the Charles University where he runs Epigenetics semestral course. In 2018 he was elected EMBO Member.

## ANDRÁS SZÉKÁS

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Prof. Székács (chemical engineer, PhD, DSc) is Director of the Agro-Environmental Research Institute, National Agricultural Research and Innovation Centre (Budapest, Hungary); Professor at Szent István University (Gödöllő, Hungary); Dr. habil. at the Budapest University of Technology and Economics (Budapest, Hungary). His research expertise include aspects of chemical, genetic and biological environmental and food safety, including analysis and ecotoxicology of organic micropollutants in the food chain; environmental safety of agricultural biotechnology; instrumental and bioanalytical methods in food analysis for the measurement of nutriment, composites; assessment of biological and health related utility of agricultural produce and food products.

Besides his role as an active researcher, he is member in numerous advisory boards and committees, including the Management Board of the Environmental Food Safety Authority (EFSA); the Scientific Advisory Body and the Management Board of the Co-operative Research Programme (CRP) at the Organisation for Economic Cooperation and Development (OECD); the International Biosafety Clearing-House (Convention on Biological Diversity); as well as the Board of the European Network of Scientists for Social and Environmental Responsibility (ENSSER). Prof. Székács is author of over 150 scientific publications in prestigious international research periodicals and books (Web of Science h-index: 21, cumulated Thomson Reuters impact factor: 206). Publications: [https://www.researchgate.net/profile/Andras\\_Szekacs/publications](https://www.researchgate.net/profile/Andras_Szekacs/publications)

## ANA MARIA VÉLEZ ARANGO

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Dr. Ana Vélez is an Assistant Professor in the Department of Entomology at the University of Nebraska-Lincoln in the United States. Dr. Vélez holds an M.S. and Ph.D. in Entomology from the National University of Colombia and the University of Nebraska-Lincoln respectively. Her research focuses on current and emerging technologies for insect pest management, specifically understanding how pests and non-target insects respond and adapt to these technologies. Over her career, Dr. Vélez has worked with insect resistance to plants expressing proteins from *Bacillus thuringiensis*, and different aspects of RNAi as a pest management tool, including mode of action, resistance and risk assessment.

## STEVE WHYARD

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Dr. Steven Whyard is an Associate Professor in the Department of Biological Sciences, University of Manitoba, Canada. Dr. Whyard received his PhD in Biology from Queen's University in 1993, studying molecular mechanisms of insecticide resistance in pest insects. He then spent 10 years in CSIRO Australia, the country's largest research organization, conducting and leading research on the development of novel strategies to control pest insect and other invasive species. He acquired extensive experience with RNA interference (RNAi) technologies while in Australia, developing techniques for RNAi as a molecular biology research tool as well as considering its utility in pest animal control technologies. Following his return to Canada, he has developed a research program that is focused on understanding the molecular controls that govern invertebrate development, sex determination, and sexual differentiation, and continues to be involved in developing RNAi technologies applicable to pest and pathogen control.



For more information:

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