



**Food and Agriculture  
Organization of the  
United Nations**



**World Health  
Organization**

## **Joint FAO/WHO Core Expert Meeting on VTEC/STEC**

**Geneva, 19 to 22 July 2016**

### **Experts participating in the meeting**

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#### **Background information**

Following the request from the 47<sup>th</sup> Session of the Codex Committee on Food Hygiene, to develop a report compiling and synthesizing the available relevant information on various aspects of VTEC/STEC, FAO and WHO are convening an expert meeting. This meeting is the first in a series of activities that WHO and FAO are implementing to respond to this request.

#### **List of experts**

The following list of experts is proposed for the meeting. Please find below their bio-sketches. If you have any comments, please contact us at [jemra@fao.org](mailto:jemra@fao.org) and [jemra@who.int](mailto:jemra@who.int) no later than 7 July 2016.

#### **Dr. Nadia Boisen**

Research Scientist, International *Escherichia* and *Klebsiella* Centre at Statens Serum Institut (SSI), Denmark, Visiting Associate Professor to the University of Virginia, Department of Pediatrics in the USA and Associate Professor at the Freie Universität Berlin, Department of Biology, Berlin, Germany

Nadia Boisen is a Research Scientist at the International *Escherichia* and *Klebsiella* Centre at Statens Serum Institut (SSI) in Copenhagen, Denmark and Visiting Associate Professor to the University of Virginia, Department of Pediatrics in the USA. Her focus has been on pathogenic mechanisms of Enteroaggregative *E. coli* (EAEC), specifically VT-producing EAEC. She co-first authored a publication in the New England Journal of Medicine on the origin of the vtx2a-positive O104:H4 EAEC German outbreak strain in 2011 and proposed a pathogenesis model explaining the unusually high rates of HUS associated with this strain. Recent research has focused on the application of a vtx subtyping protocol developed in collaboration with six international research and reference laboratories. Using this vtx subtyping protocol has demonstrated that HUSEC is almost exclusively associated with subtype vtx2a. In 2013, she received the research award, Sapere Aude, from the Danish Council for Independent Research in Medical Sciences. She has published numerous original papers and two book chapters. She holds a PhD in Microbiology from the University of Copenhagen as a collaboration between SSI and the University of Maryland School of Medicine.

### Ms. Isabel Chinen

Biochemist, National Infectious Diseases Institute - ANLIS “Dr. Carlos G. Malbrán”, Argentina

She is Biochemist graduated at the Buenos Aires University in Argentina, and obtained her Master in Molecular Microbiology, from the University of San Martín / ANLIS “Dr. Carlos G. Malbrán” Institute. She works at the National Reference Laboratory for the surveillance of Hemolytic Uremic Syndrome and Shiga Toxin *E. coli* infections (Servicio Fisiopatogenia), of the National Infectious Diseases Institute - ANLIS “Dr. Carlos G. Malbrán”. Since 2004, she works in the surveillance of the foodborne pathogens as part of PulseNet Latin America and Caribbean (PNAL&C), and since 2014, she is in the coordination group. At this moment, ANLIS Institute and PNLA&C are focusing on WGS implementation, and working with different regions in the standardization of the WGS protocols to be applied in public health. Also she is in the Argentine coordination of the Pilot Project of WHO/PAHO–FDA, where the Institution is participating as external laboratory of the Genome TRAKR Project conducted by FDA. She is an active member of the Argentina Society for Microbiology and contributes as part of the Food, Drugs and Cosmetic Division in the organization of scientific events. She is participating as member of the academic committee of the UNSAM /Malbrán Master since 2014.

### Dr. Roger L Cook

Manager of the Food Risk Assessment Team and Principal Microbiologist in the Biosecurity Science, Food Science & Risk Assessment Directorate of New Zealand's Ministry for Primary Industries (MPI), New Zealand

He gained a PhD in Microbiology from the University of Otago, followed by several years' post-doctoral research at the Toronto General Hospital and the Detroit Medical Centre. On his return to New Zealand, Roger moved from a focus on sexually transmitted diseases to food as a research scientist in New Zealand's Meat Industry Research Institute (MIRINZ) where he headed New Zealand Ministry of Agriculture & Fisheries( MAF) -contracted research projects, and was instrumental in development of food safety assurance programmes for the US and EU.

In 1995, Roger joined MAF's Regulatory Authority (Meat & Seafood) as National Manager (Microbiology), and in which he remains despite organizational changes through MAF Food, the NZ Food Safety Authority (NZFSA), back to MAF and now MPI.

Dr Cook's team of microbiologists, toxicologists, risk modellers, and meat inspection experts carry out food risk assessments, develop and manage operational research programmes, and design monitoring and surveillance programmes to support New Zealand food safety regulations and specifications for both the export and domestic food sectors.

Dr Cook has also been, and remains, closely associated with the MPI- and meat industry-funded STEC research projects and PhD studies at Massey University, and the Crown-Research Institutes, AgResearch and ESR. He is an author of many peer-reviewed publications, although most reports while peer-reviewed have been maintained as confidential to MPI and the New Zealand food sectors to which the research applied.

### Dr. Tim Dallman

Senior Bioinformatician, Gastrointestinal Bacteria Reference Unit, Public Health England, the United Kingdom

Dr Tim Dallman trained as a bioinformatician at University College London employing machine learning techniques to improve remote homology detection for the assignment of proteins into structural and functional families.

Since joining Public Health England in 2007 he has led the development on several large scale hybrid molecular typing and epidemiological databases before taking a post as the lead bioinformatician within the Gastrointestinal Bacteria Reference Unit (GBRU) in 2010. Within GBRU Dr Dallman currently manages the Genomics Services with the goal to implement whole genome sequencing methodologies into reference microbiology. He has successfully overseen the validation and implementation of a WGS solution for *Salmonella*, *Escherichia coli*, *Shigella* and *Campylobacter* for typing, surveillance and antimicrobial resistance prediction.

He has been involved in several next generation sequencing research projects with the focus on leveraging these technologies for public health molecular epidemiology and the translation of genomic data to molecular diagnostics and typing. He has led the bioinformatics analysis of several key enteric pathogen isolates for incident investigation. He currently manages the sequencing component of a £2m FSA grant on VTEC O157:H7 “supershedding” and has published more than 50 peer-reviewed publications.

### Dr. Brecht Devleesschauwer

Epidemiologist at the Belgian Scientific Institute of Public Health (WIV-ISP), with expertise in burden assessment, risk assessment, health economics and health information systems, Belgium

Prior to joining WIV-ISP, he worked as an assistant scientist in global food safety and zoonoses at the University of Florida, USA, and has held a post-doc position at Ghent University, Belgium. He is chair of the Epidemiology working group of COST Action TD1302 CYSTINET, and co-chair of the Risk Forecasting working group of COST Action FA1408 EURO-FBP. He was a member of the WHO Foodborne Disease Burden Epidemiology Reference Group (FERG) and participated to the FAO/WHO expert meeting on risk-based examples for control of *Trichinella* spp. and *Taenia saginata* in meat. His research activities have resulted in nearly 50 peer-reviewed papers and have led to new insights in the epidemiology and burden of foodborne and zoonotic diseases.

He received his Ph.D. degrees from Ghent University (Veterinary Sciences) and Université catholique de Louvain (Public Health), and M.Sc. degrees from Ghent University (Veterinary Medicine) and KULeuven (Statistics).

### Dr. Peter Feng

Research Microbiologist; Subject Matter Expert (SME) for *E. coli* and Pathogenic *E. coli*, Division of Microbiology, Center for Food Safety and Applied Nutrition, U.S. Food and Drug Administration, College Park, MD. U.S.A.

Peter Feng obtained his Ph.D. in Microbiology from Iowa State University and did postdoctoral research in molecular biology at Purdue University. Prior to joining the FDA in 1988, he was Program Manager at IGEN Inc. in charge of developing pathogen detection assays using monoclonal antibodies and DNA. He holds patents on the use of electrochemiluminescent markers and on pathogen detection. He has 26 years of research expertise on Shiga toxin-producing *E. coli* (STEC) including molecular characterization of strains and virulence, evolutionary emergence of O157:H7, assay development, safety of fresh produce and other foods and STEC health risk analysis. He has published >120 papers, reviews, technical reports and book chapters. As the FDA's SME for STEC, he assists in outbreak investigations, advises on methods used in compliance programs, reviews compliance violation cases, serves as Federal expert witness in litigations and assesses STEC

health risks. He has served as science advisor to PAHO, the USDA Micro Data Program on produce analysis, is on the European Food Safety Authority Expert Database and has served as Science Advisor to the Taiwan FDA since 1990. He is a member of the U.S. TAG, ISO TC 34/SC 9 and the National Advisory Committee for Microbiological Criteria for Foods, evaluating health risk criteria for STEC. He is a fellow of the American Academy of Microbiology and has received the FDA Scientific Achievement Award and the FDA Award of Merit. He is fluent in mandarin Chinese and Spanish.

#### **Dr. Alex Gill**

Research Scientist, Health Canada - Santé Canada, Bureau of Microbial Hazards. Ottawa, Ontario, Canada

Dr. Alexander Gill holds a Ph.D. in Food and Nutritional Sciences from the University of Manitoba (2006). Following his doctorate he was employed at Health Canada as a post-doctoral fellow and since 2008 as a research scientist, leading the Verotoxigenic *Escherichia coli* (VTEC) laboratory. The VTEC laboratory conducts research to support public health efforts to reduce the impact of VTEC illness in Canada. The research activities of Dr. Gill include the development of detection methodologies for VTEC, technologies for the decontamination of foods, VTEC virulence markers, VTEC survival during food production and dose exposure in foodborne VTEC outbreaks. He has authored >25 publications on VTEC and food bacteriology.

Dr. Gill is a founding member of the Canadian Federal VTEC Research Network. He was a member of the organising committee for the 2010 Verotoxigenic *E. coli* Risk Identification and Risk Management Workshop held in Gatineau, Quebec, and a contributing editor to the report produced from that meeting. He has served as a member of the STEC Working Group for the AOAC International Stakeholder Panel on Alternative Methods (2012), the Alberta Government Strategic Pathogen Reduction Working Group (2012-2013) and ISO Technical Advisory Group 18 on Shiga toxin-producing *Escherichia coli* (2016)

#### **Dr. Patricia M Griffin**

Chief, the US Centers for Disease Control (CDC) - USA

Patricia Griffin is Chief of the US Centers for Disease Control (CDC) and Prevention's epidemiology group that conducts surveillance and investigation of bacterial enteric diseases. She attended medical school and internal medicine residency at the University of Pennsylvania, trained in gastroenterology at Brigham and Women's Hospital, and in epidemiology at CDC.

Dr Griffin oversees surveillance and investigation of sporadic illnesses in the United States caused by enteric bacteria and hemolytic uremic syndrome. Her group uses these data to estimate the incidence and the number and of illnesses, hospitalizations, and deaths caused by foodborne pathogens. They also conduct surveillance for antibiotic resistance among human *Salmonella* and *Campylobacter* isolates, and determine sources of and risk factors for resistant pathogens. The group analyzes data from foodborne disease outbreaks, and uses these data to create models to estimate the proportion of illness due to each food category.

She is an author of over 220 peer-reviewed publications. She received CDC's Shepard Award for the best scientific paper in 1990 and the CDC Shepard Lifetime Scientific Achievement Award in 2015. She is the Food Safety editor for the Clinical Infectious Diseases journal and an adjunct professor in the Emory University Rollins School of Public Health.

### Dr. Karen H. Keddy

Chief Consultant, Center for Enteric Diseases, National Institute for Communicable Diseases, National Health Laboratory Service, South Africa

Dr Keddy qualified as a medical microbiologist in 1996 and was tasked with setting up a national reference centre for bacterial enteric pathogens, the Centre for Enteric Diseases (CED) of the National Institute for Communicable Diseases, South Africa. She initiated laboratory-based surveillance for enteric pathogens through the GERMS-SA programme, including non-typhoidal *Salmonella* and *Shigella*, diarrhoeagenic *Escherichia coli*, typhoid fever and cholera and is involved in sentinel surveillance for diarrhoea in children aged < five years. Recently she introduced surveillance for *Campylobacter* and *Listeria*. Through Dr Keddy's initiative, CED hosts the PulseNet Africa database contributing to global knowledge on the molecular epidemiology of enteric pathogens. Dr Keddy is a member of Global Foodborne Diseases Network (WHO), Global Task Force on Cholera Control (GTFCC) and other expert committees on matters relating to waterborne and foodborne disease, she has consulted on antimicrobial resistance in enteric pathogens and has run numerous training programmes for enteric pathogens on behalf of WHO and various NGOs over the last 12 years. She is an *ad hoc* attendee of the annual European Centers for Disease Control Food and Waterborne Diseases meeting. Dr Keddy has published on both epidemiological and microbiological aspects of the enteric bacteria in South Africa and globally.

### Dr. Shannon Majowicz

Infectious disease epidemiologist and Assistant Professor in the School of Public Health and Health Systems, University of Waterloo, Ontario, Canada

Dr. Majowicz is an infectious disease epidemiologist and Assistant Professor in the School of Public Health and Health Systems (University of Waterloo, Ontario, Canada). Her research focuses on the epidemiology of foodborne and enteric diseases (including burden, risk factors, vulnerabilities, and interventions), and the application of systems approaches to public health practice. She has expertise in public health surveillance, including the under-reporting and ascertainment of enteric illnesses within populations. She has led international teams in estimating the global burden of non-typhoidal salmonellosis, and Shiga toxin-producing *E. coli* infection, in consultation with the World Health Organization's Global Burden of Foodborne Diseases initiative. Prior to joining the University of Waterloo, she spent 12 years as an epidemiologist with Health Canada and the Public Health Agency of Canada, where her applied research focused on determining the burden and severity of enteric infections in the Canadian population.

Dr. Majowicz has (co-)authored over 50 peer-reviewed publications, and her work has been used to improve public health surveillance in Canada, and inform various prevention activities. She is an Associate Editor at the journal *Epidemiology & Infection*, and holds degrees in Bio-medical Science (BSc) and Epidemiology (MSc, PhD), from the University of Guelph (Canada).

### Dr. Sara Monteiro Pires

Senior Scientist, DTU Food (National Food Institute, Technical University of Denmark) - Denmark

Sara Pires is a senior scientist at the Risk Benefit Group of the National Food Institute, Technical University of Denmark. She is a DVM from the Faculty of Veterinary Medicine of Lisbon, Portugal, and has a PhD in Epidemiology from the University of Copenhagen, Denmark. Her main research area is the public health impact, epidemiology and control of food-associated diseases. She has focused on applying health metrics and burden of disease models, on developing methods for attributing foodborne human illness to the responsible sources, and quantitative risk assessments. Sara Pires is currently coordinating the Danish Initiative to estimate the burden of foodborne diseases, and rank foodborne diseases and foods at the National Food Institute. She was a member of the World Health Organization's initiative to estimate the global burden of foodborne diseases (Foodborne Disease Epidemiology Reference Group; FERG). She has also participated in WHO's Global Foodborne Infections Network (GFN), and in expert groups of the European Food Safety Authority (EFSA).

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