

Biographies

Ana Maria Bispo de Filippis, PhD

Dr Ana Maria Bispo de Filippis has a MSc in Molecular and Cellular Biology and a PhD in Virology. She has been a researcher in the Virology Department of the Oswaldo Cruz Foundation (Fiocruz), Rio de Janeiro, Brazil since 1983. She has worked in various research topics within the areas of surveillance and molecular epidemiology of viruses such as poliovirus and other enteroviruses, yellow fever virus, dengue, Zika and other arboviruses. From 2004 until 2010, she worked as Regional Advisor of the Pan-American Health Organization (PAHO/WHO) in Washington DC, coordinating the network of regional laboratories that support the immunization programs in the American region, specifically, measles/rubella, polio, rotavirus and HPV laboratory network. In March 2010, Dr Bispo de Filippis returned to the Flavivirus Laboratory in the Oswaldo Cruz Institute, working again with virologic surveillance, pathogenesis, and atypical clinical presentation of dengue and other arboviruses with epidemiological importance in Brazil. In November 2015, she led the team that detected, for the first time in the world, the presence of Zika virus in amniotic fluid of a pregnant woman whose fetus had developed microcephaly, representing the first strong evidence of the causal association between Zika virus infection and microcephaly. She is the principal investigator of multiple projects in the areas of Zika virus with funding from the European Union, WHO, Wellcome Trust, the Brazilian Health Department, IDRC (Canada) and MRC (UK). Dr Bispo de Filippis has a continuous role in training human resources at different levels, technical professionals and academics (undergraduates, master students and PhDs). Dr Bispo's laboratory collaborates with institutes from Brazil, Europe and the United States. She is a frequent speaker in scientific meetings, permanent consultant for the Brazilian Health Department, Regional and Municipal Health Secretariat, and PAHO/WHO, and is the author and co-author of multiple manuals, scientific articles and book chapters.

David W G Brown, MBBS, MSc, FRCPath, FFPH

David Brown was director of the Virus Reference Department, Health Protection Agency and visiting professor at the London School of Tropical Medicine and Hygiene. In 2014 he moved to the Oswaldo Cruz Foundation (Fiocruz) in Rio de Janeiro to take up a research fellowship. After training in medicine at Middlesex Hospital and in clinical virology in Birmingham and London, he worked on a Wellcome Trust project in south India. Over the last 25 years he has worked as a public health virologist based in London with an interest in viral diagnostics and molecular epidemiological techniques applied to the understanding and control of viral infections. He has a broad interest in development of new surveillance programs for viral infections including measles, norovirus, and more recently, Zika. He was a member of ACMSF from 2001-11. He has extensive international experience and was head of the WHO Global Specialised Laboratory for Measles / Rubella. He has published over 320 peer reviewed papers.

May C. Chu, PhD

Dr Chu received her doctorate degree from the University of Hawaii at Manoa with specialties in Tropical Medicine and Medical Microbiology. She spent 30 years working at the Centers for Disease Control and Prevention (CDC). Dr Chu's research background includes flavivirus molecular epidemiology and pathogenesis as well as staphylococcal toxins, laboratory diagnosis of *Yersinia pestis* and *Francisella tularensis*. Dr Chu directed the CDC's diagnostic reference laboratory for bacterial zoonotic diseases (plague, tularemia and Lyme disease, 1993-2004). Dr Chu was seconded to the World Health Organization (2004-2010) joining the outbreak and response team and later led the WHO Laboratory Alliances and Biosafety team in the International Health Regulations Department. She returned to CDC (2010-2013) as the Director of the Laboratory Science Policy and Practice Program overseeing programs on quality laboratory management, regulatory compliance and specimen repository. Dr Chu was assigned (2014-2015) from the CDC to the White House Office of Science and Technology Policy as the Assistant Director for Public Health where she was an integral part of the President's Ebola Task Force and led the national review of the Select Agent Program (Bioterrorism). She currently serves as senior science advisor to USAID (Zika Grand Challenge) and to WHO (Personal Protective Equipment Innovation and Experts Networks) and is a Clinical Professor at the Colorado School of Public Health.

Marc Fischer, M.D., M.P.H.

Dr. Fischer is a Medical Epidemiologist in the Arboviral Diseases Branch at the US Centers for Disease Control and Prevention (CDC) in Fort Collins, Colorado. Current activities and research interests include surveillance and epidemiology of arthropod-borne viral diseases (e.g., West Nile, chikungunya, yellow fever, Zika, and Japanese encephalitis viruses), and development and recommendations for the use of arboviral vaccines. Dr. Fischer received his bachelor's and medical degrees from Duke University in North Carolina, and his Masters of Public Health from the University of Washington in Seattle. He completed a residency in pediatrics and a fellowship in pediatric infectious diseases at Children's Hospital and Regional Medical Center in Seattle. Dr. Fischer is an Associate Clinical Professor in the Department of Pediatrics at the University of Colorado School of Medicine. He is a CDC liaison to the American Academy of Pediatrics Committee on Infectious Diseases (Red Book Committee), a member of the editorial board for the *Journal of the Pediatric Infectious Diseases Society*, and Associate Editor of *Principles and Practice of Pediatric Infectious Diseases* fifth edition.

María G Guzmán, MD, PhD, DrSc, MSc

Professor María G Guzmán, Senior Professor, Senior Research, and Researcher of Merit, has more than 30 years of experience working in virology and specifically in dengue and other arboviruses. Her work has contributed to the knowledge of the pathogenesis, clinical presentation, diagnosis, epidemiology, and control of dengue. She has also contributed to the improvement of the virologic diagnosis and surveillance of dengue in Cuba and abroad. She has been involved in the analysis of several dengue epidemics in the American region. She has also promoted the development of a Cuban group of scientists working in virology, dengue, and other arboviruses. Since 2001, Dr Guzmán has been a member of the expert group of the Cuban Ministry of Health for emerging infectious diseases as well as a member

of the National Commission for Pandemic Influenza since 2009. She is a member of the commission for Ebola, chikungunya and Zika, among other Cuban health commissions.

Dr Guzmán is the author of more than 300 papers and short communications, including two new hypotheses, six patents and 20 book chapters. She is the principal investigator of more than 70 research projects supported by PAHO, WHO, TDR, Wellcome Trust, IDRC, EU, Atlantic Philanthropies, Medicuba Suiza, and the Cuban Ministry of Health. Dr Guzmán is a senior professor with more than 130 training courses. She has been the Coordinator and Professor of the Cuban Master Degree Course in Virology since 1992. In addition, she is the Coordinator and Professor of the Cuban Dengue International Course since its first edition in 1987. Dr Guzmán was a Professor at the dengue course organized by WHO-National environmental agency AEA, Singapore, 2010 and 2014.

Dr Guzmán has been the Director of the PAHO/WHO Collaborating Centre for the Study of Dengue and its Vector since 2005 (with three re-nominations) at IPK. She is also currently the president of the Scientific Committee at IPK since 2015. Additionally, she serves as a National Representative Virology Division of the International Union of Microbiological Science and a Member of APUA. Dr Guzmán is a council member of the International Society Infectious Diseases, ISID since 2012 and of the ICSU Committee on Scientific Planning and Review 2015-2018. Dr Guzmán has been a member of the Jury for the UNESCO Carlos J Finlay award in microbiology since 2015. She is the Director of the Centre for Research, Diagnostic and Reference Activities, CIDR at IPK since January 2016 and the Head of the Cuban project for vaccine development since 1992. In 2005, *Science* published her scientific biography as part of the activities for the 125th anniversary of this Journal.

Marion Koopmans, DVM, PhD

Professor Marion Koopmans focuses on global population level impact of rapidly spreading zoonotic virus infections, with special emphasis on foodborne transmission. Her research focuses on unravelling the modes of transmission of viruses among animals and between animals and humans, and the use of pathogenic genomic information to unravel these pathways and to signal changes in transmission or disease impact. She is scientific coordinator of COMPARE, a large H2020 funded project (20 million Euros), exploring the potential uses of next generation sequencing techniques for outbreak detection and tracking (www.compare-europe.eu), and co-PI in the FP7 funded PREPARE project (www.prepare-europe.eu) aimed at building a pan-European operational network for rapid and large-scale European clinical research in response to infectious disease outbreaks with epidemic potential. She is director of the WHO collaborating centre for emerging infectious diseases at Erasmus, and Scientific Director of “Emerging Infectious Diseases” of the Netherlands Centre for One Health (www.ncoh.nl). She has received the Infectious Disease Award of the Dutch Association for Infectious Diseases and is the recipient of the Stevin Premium 2018. She has co-authored more than 500 papers that have been cited over 20,000 times.

Amy Lambert, PhD

Dr Lambert is a Research Microbiologist at the Arbovirus Diseases Branch, Centers for Disease Control and Prevention (CDC) in Fort Collins, CO, USA. During her 20 years at CDC, Dr Lambert’s research has focused on the molecular characterization and detection of arthropod-borne viruses and their infections, including West Nile, Zika, and others.

Nora Inken Monnier, MD, DTMH

Dr Monnier is a board certified specialist of Internal Medicine (FMH Allgemeine Innere Medizin) from Zurich, Switzerland. She is a consultant in the High Threat Pathogens Unit, Health Emergencies Program at the World Health Organization in Geneva, advising on the guidance of Zika and related flaviviruses laboratory diagnostics. She has 15 years of professional clinical experience having worked in middle- and low-income countries and internationally-renowned institutions such as the icddr, b with a focus on infectious and neglected tropical diseases, travel medicine and vaccinology. She is completing a Master of Science degree in Tropical Medicine and International Health at the London School of Hygiene and Tropical Medicine (LSHTM) and finalizing her specialist training in Tropical and Travel Medicine (FMH Tropen- und Reisemedizin) in Switzerland. She holds a Doctor of Medicine degree from University of Zurich, Diploma for Tropical Medicine and Hygiene (DTMH) from LSHTM and Mahidol University, Bangkok.

Dr María Alejandra Morales

Dr María Alejandra Morales served as a Biochemist at the University of La Plata, School of Exact Sciences, Buenos Aires, Argentina since 1995, and Specialist in Clinical Biochemistry, Virology orientation, College of Biochemists in Buenos Aires, Argentina since 2014. Since 1997, she has worked at the Instituto Nacional de Enfermedades Virales Humanas (INEVH), the Argentine WHO/PAHO Collaborating Centre in Viral Haemorrhagic Fevers and Arboviruses, a designated member in 1987. During this time, she has conducted research on diagnosis, epidemiology and surveillance of zoonoses by arboviruses, arenaviruses and hantaviruses in humans, vectors and other hosts. Due to the reemergence of dengue in Argentina, Dr Morales has focused on developing and structuring a national network for an integrated laboratory surveillance of arboviruses. Since 2004, she has been in charge of managing and coordinating this network, currently composed of 65 provincial laboratories with molecular and serological detection capabilities. Since 2014, Dr Morales has been the head of the Virology and Immunology Division of the Research Department at INEVH, and since 2018, the Director of the Collaborating Centre activities. Over the past two decades, Dr Morales and colleagues have detected the emergence and re-emergence in Argentina of the four serotypes of dengue virus, Saint Louis encephalitis virus, West Nile virus, yellow fever virus, chikungunya and Zika.

Jorge L. Muñoz-Jordan, PhD

Dr Jorge L. Muñoz works at the U.S. Centers for Disease Control and Prevention (CDC), Dengue Branch, in San Juan, Puerto Rico, where he has held the position of Laboratory Chief for 14 years. Dr Muñoz has a PhD from The Rockefeller University. Prior to coming to CDC, he worked on dengue, influenza and ebola at the Mount Sinai School of Medicine, and on trypanosomiasis at the Rockefeller University in New York. This is in addition to previous experience in tropical diseases in Latin America. Dr Muñoz-Jordan oversees research and diagnostic areas of a national and international reference laboratory, and a PAHO/WHO Collaborating Centre for Global Dengue and Caribbean arboviruses including Zika and chikungunya. He has published more than 100 peer-reviewed articles, including 4 book chapters, and has been an invited reviewer and advisor for numerous working groups globally. Dr Muñoz has developed high throughput molecular diagnostic tests in multiplex formats that can detect the four dengue virus subtypes or differentiate between Zika, dengue and chikungunya viruses in patients; which have FDA approval in the USA and have been deployed globally. Dr. Muñoz is currently the elected coordinator for the PAHO network of National Arbovirus Laboratories (RELDA).

Lee Ching Ng, PhD

Associate Professor Ng is the Director of the National Environment Agency (NEA) Environmental Health Institute (EHI), a national public health laboratory in Singapore and a WHO Collaborating Centre for Reference and Research of Arbovirus and their Associated Vectors. She has spent almost 20 years contributing to the building of laboratory capabilities for Singapore's public health systems, understanding disease risk and transmission, and developing tools and strategies for mitigation of risks. She also serves as an Adjunct Associate Professor at Nanyang Technological University (NTU); is a regular Temporary Advisor to the World Health Organization (WHO), especially in the areas of dengue and chikungunya surveillance and control; and serves as the Director of the WHO Collaborating Centre for Reference and Research of Arbovirus and their Associated Vectors. The centre has contributed to regional capacity building through hosting ad-hoc attachments of public health practitioners at EHI, and organising the series of Asia-Pacific Dengue Workshops.

Ingrid Rabe, MBChB, MMed

Dr Ingrid Rabe serves as a consultant medical epidemiologist for the World Health Organization Zika Task Force, advancing global surveillance systems for Zika and related arboviruses. She qualified as a medical practitioner and practiced general clinical medicine in South Africa and completed a residency in Public Health Medicine. She joined the US Centers for Disease Control and Prevention (CDC) in 2017 as an Epidemic Intelligence Service (EIS) officer, and subsequently served until 2018 as a medical epidemiologist in the Surveillance and Epidemiology Team of the CDC Arboviral Disease Branch.

Bertrand Sudre, MD, PhD

Dr Bertrand Sudre's professional interest is to support prevention and control of infectious diseases notably emerging and vector-borne diseases. Dr Sudre also has both a clinical, laboratory and scientific background. Dr Sudre is currently working as Scientific Officer Environmental Determinants and Outbreak Response in the Surveillance and Response Support Unit at the European Centre for Disease Prevention and Control (ECDC). In addition, Dr Sudre supports the Emerging and Vector-borne Disease program, notably arboviruses, in performing risk assessment and providing multidisciplinary analysis to inform decision-making processes in health emergencies and public health.