

---

## BIOGRAPHIES OF THE ADVISORY GROUP FOR THE DEVELOPMENT OF THE TERMS OF REFERENCE FOR THE INDEPENDENT PANEL ON EVIDENCE FOR ACTION AGAINST ANTIMICROBIAL RESISTANCE

### **Ed Whiting-Chair**

Director of Strategy  
Wellcome Trust  
United Kingdom

Ed is responsible for working with teams across Wellcome to align Wellcome's activity with our mission and ensure Wellcome's impact is greater than the sum of its parts. This includes working with Wellcome's senior teams to set and communicate our short, medium, and long-term priorities and put resources and plans in place to deliver them. As part of Ed's role, Ed is also the Executive Leadership Team sponsor of Wellcome's policy function, strategic partnerships, and mental health priority area.

Before joining Wellcome in September 2016, Ed worked in a number of Whitehall social and financial policy departments, including HM Treasury's financial stability team during the 2008-09 financial crisis. He was most recently at 10 Downing Street as Deputy Principal Private Secretary to the Prime Minister, leading on public services.

### **Keith Belk**

Professor & Head  
Department of Animal Sciences  
Colorado State University  
United States

Keith Belk recently accepted the role as Head, Department of Animal Science. Previously, he served as a Professor and Holder of the Ken & Myra Monfort Endowed Chair in Meat Science with the Center for Meat Safety & Quality, Department of Animal Sciences, Colorado State University. He also served as Director of the Center for Meat Safety & Quality at CSU, and as an Adjunct Professor in the Colorado School of Public Health. He earned B.S. and M.S. degrees from CSU, and a Ph.D. from Texas A&M University. He has been employed in the private sector as a buyer by Safeway, Inc., and by the USDA Agricultural Marketing Service in Washington, DC, as an International Marketing Specialist. At Colorado State University since 1995, he has authored or co-authored 240 refereed scientific journal articles, provided over 530 invited presentations, generated >\$22M in extramural research funding, and was the primary inventor on two patents. He served as the state Meat Extension Specialist between 1995 and 2000, on the Editorial Board for the Journal of Animal Science in 1997-2000, on the Board of Directors for the American Meat Science Association (AMSA) between 2003-2005, and as President of AMSA in 2009-2010.

### **Frank Berthe**

Senior Livestock Specialist  
World Bank Group  
United States

Franck Berthe is Senior Livestock Specialist in the Agriculture Global Practice of the World Bank and coordinator of the Livestock Global Alliance since March 2016. The Alliance brings together the Food and Agriculture Organization of the UN (FAO), the International Fund for Agriculture Development (IFAD), the International Research Institute on Livestock (ILRI/CGIAR), the World Organisation for Animal Health (OIE), and the World Bank, five global public institutions committed for safer, fairer and more sustainable livestock.

Franck was previously Head of the Animal and Plant Health Unit at the European Food Safety Authority (EFSA) based in Parma, Italy. His core activity was to assess animal and plant production systems and practices with respect to primary production, ecosystems and public health. Franck's job was to provide scientific advice to the EU risk managers and decision makers on a wide range of risks at the human-animal-ecosystem interface. Prior to coming to Italy in 2007, Franck was Associate Professor at the Atlantic Veterinary College (UPEI) and Canada Research Chair in Aquatic Health Sciences, exploring host pathogens relations in their environment. From 1994 to 2004, Franck has led active research in aquatic animal health at the French institute for the exploitation of the sea (IFREMER) in France and overseas territories.

Franck is Vice-President of the Biological Standards Commission of the World Organisation for Animal Health (OIE). He has served on OIE specialized Commissions since 1996. A native of France, Franck received a doctorate of veterinary medicine, and a PhD degree in molecular parasitology. He has a diploma in bacteriology from the Pasteur Institute.

#### **Otto Cars**

Senior Professor, Infectious Diseases  
Founder and Senior Adviser, ReAct-Action on Antibiotic Resistance  
Department of Medical Sciences, Uppsala University  
Sweden

Otto Cars is an MD and specialist in infectious diseases trained at the Department of Infectious Diseases at Uppsala University Hospital where he was the head for ten years. In 2003, he was appointed Professor of Infectious Diseases and Antimicrobial Resistance at Uppsala University, and since 2014 he holds a position as Senior Professor. His research has focused on pharmacokinetics and pharmacodynamics of antibiotics, optimal antibiotic dosing regimens, resistance epidemiology and antibiotic policies.

Otto Cars was leading the Swedish strategic programme against antimicrobial resistance (Strama) on behalf of the Swedish government between 1995- 2010. He has been actively involved in numerous European and international initiatives in the area of antimicrobial resistance and has served as an expert to the World Health Organization, the European Commission, the European Centre for Disease Prevention and Control and the European Medicines Agency. In 2013, he coordinated the Lancet Infectious Diseases commission "Antibiotic Resistance - the need for global solutions".

Otto Cars served as a member of the UN ad hoc Interagency Coordination Group on Antimicrobial Resistance (IACG). He was the founder of the international network Action on Antibiotic Resistance-ReAct ([www.reactgroup.org](http://www.reactgroup.org)) which, supported by the Swedish International Development cooperation, since 2005 is working on all continents as a catalyst, advocating for and supporting multilevel engagement on AMR.

**Clare Chandler**

Professor in Clinical Anthropology  
London School of Hygiene and Tropical Medicine  
United Kingdom

Clare Chandler (BA, MSc, PhD) is Professor in Medical Anthropology and Director of the Antimicrobial Resistance (AMR) Centre at the London School of Hygiene and Tropical Medicine. Clare's degrees are in anthropology, epidemiology and public health. Clare has been doing research in global and public health since 2004, with a focus on the delivery of health care, medicines use, diagnostics, and access to care. She has worked across Africa and Asia, with her long-term field sites in East Africa. Currently, she holds numerous grants on antimicrobial resistance and in her team she leads 27 social researchers around the globe using anthropological approaches to understand societies' reliance on not only for treatment of illnesses but in anticipation of infections in humans, animals and in crops, and how this relates to wider economic and political imperatives. Through the AMR Centre, Professor Chandler promotes interdisciplinary working on the complex challenges posed by AMR internationally, catalysing innovation in AMR research across more than 130 scientists at LSHTM from microbiologists to economists to modellers. Clare provides technical advice about behavioural aspects of global health, for example on malaria, Ebola, and antimicrobial resistance, to various governmental and multi-lateral agencies.

**Gunilla Eklund**

Deputy Director  
Ministry of Enterprise and Innovation  
Sweden

Gunilla Eklund holds a PhD in Food Toxicology and a Master of Science in Veterinary Medicine from the Swedish University of Agricultural Sciences in Uppsala. She has long experience of work duties along the food chain, from primary production to negotiations and policy dialogue at EU and at international level. Dr. Eklund was recently seconded to FAO from the Swedish Government to contribute to FAO's expertise in the field of antimicrobial resistance, with a special focus on antimicrobial resistance in the environment. Prior to coming to FAO, she worked for the Swedish Government Offices for a decade, at the Ministry of Agriculture and at the Ministry of Enterprise and Innovations with veterinary public health issues focusing on antimicrobial resistance from a policy making perspective. Other tasks have been within the field of biosafety and include zoonotic infection control and consumer protection. Previous experience also includes performing health risk assessments and risk management of harmful substances present in the environment and in food.

**Sabiha Essack**

South African Research Chair in Antibiotic Resistance & One Health  
Professor of Pharmaceutical Sciences  
Director of Antimicrobial Research Unit  
College of Health Sciences, University of KwaZulu-Natal  
South Africa

Professor Essack serves as expert consultant on antimicrobial resistance (AMR) to the World Health Organization and the International Centre for Antimicrobial Resistance Solutions (ICARS) initiated by the Danish government. She is chairperson of the Global Respiratory Infection Partnership (GRIP), serves

on the Advisory Board of the Combating Antibiotic Resistant Bacteria Biopharmaceutical Accelerator (CARB-X), serves on the Market Analysis Expert Advisory Group (EAG) of the Global AMR Research and Development Hub convened by the German government and is a member of the Wellcome Trust Surveillance and Epidemiology of Drug Resistant Infections Consortium (SEDRIC). She served as Vice Chairperson of the South African Ministerial Advisory Committee on AMR at its inception as well as on the International Pharmacy Federation Working Group on AMR, the South African Chapter of the Global Antibiotic Resistance Partnership (GARP) and the South African Antibiotic Stewardship Programme (SAASP). Professor Essack was founder and co-chair of the South African Chapter of the Alliance for the Prudent Use of Antibiotics (APUA).

#### **Wondwossen A. Gebreyes**

Professor and Executive Director of Global One Health initiative  
Department of Veterinary Preventive Medicine  
The Ohio State University  
United States

Dr. Gebreyes is a Hazel C. Youngberg Distinguished Professor of molecular epidemiology and Executive Director of Global One Health initiative (GOHi) at The Ohio State University. He completed his Doctor of Veterinary Medicine (DVM) at Addis Ababa University and his PhD at North Carolina State University. Dr. Gebreyes is the principal investigator of several research and training programs sponsored by the National Institute of Health (NIH) Fogarty International Center, Centers for Disease Control and Prevention (CDC) and others. He is engaged in food safety research activities mainly focused on antimicrobial resistance. Dr. Gebreyes co-founded the International Congress on Pathogens at the Human Animal Interface (ICOPHAI) (<http://icophai.org>) and currently serves as the Chairperson. He is a recipient of several awards including the Universitas 21 international award; Michael P. Malone International Leadership Award by APLU; Battelle Endowment for Technology and Human Affairs (BETHA); Pfizer Award for Veterinary Research Excellence; Andrew Heiskell Award (honorable mention) by the Institute of International Education (IIE) and Emerging International Engagement award.

#### **Ramanan Laxminarayan**

Director  
Center for Disease Dynamics, Economics & Policy  
United States

Laxminarayan is founder and director of the Center for Disease Dynamics, Economics & Policy (CDDEP) in Washington, D.C., a senior research scholar at Princeton University and affiliate professor at the University of Washington. Since 1995, Laxminarayan has worked to improve the understanding of antibiotic resistance as a problem of managing a shared global resource. His work encompasses extensive peer-reviewed research, public outreach, and direct engagement across Asia and Africa. Through his prolific research, and active public outreach (including a widely viewed TED talk) he has played a central role in bringing the issue of drug resistance to the attention of leaders and policymakers worldwide and to the United Nations General Assembly in September 2016. Laxminarayan served on the President Obama's Council of Advisors on Science and Technology's antimicrobial resistance working group and is a voting member of the U.S. Presidential Advisory Council on Combating Antimicrobial Resistance. He is series editor of the Disease Control Priorities for

Developing Countries, 3rd edition. In 2019, he received the Birla Institute of Technology and Science's Distinguished Alumnus Award.

**Arshnee Moodley**

AMR Team Leader

CGIAR AMR Hub hosted by International Livestock Research Institute  
Kenya

Arshnee leads the CGIAR AMR Hub that was launched in 2019, with the aim to support efforts to mitigate the risks of agricultural associated antimicrobial resistance (AMR) in low- and middle- income countries working within a One Health framework. She is a microbiologist with a PhD in antimicrobial resistance and zoonosis from the University of Copenhagen (UCPH), Denmark. She joined ILRI from the Department of Veterinary and Animal Sciences at UCPH, Denmark, where she has been an Associate Professor in AMR, AMR research group leader, head of the PhD graduate programme Molecular Bacteriology and Infection and responsible for the NGS services at the section.

**Gerard Moulin**

Deputy Director of the National Agency for Veterinary Medical Products (ANSES)

Director of the French Agency for Food, Environmental and Occupational Health & Safety  
France

G rard Moulin is a microbiologist by training. He is Research Director in the French Agency for Food, Environmental and Occupational Health & Safety (Anses) and Deputy Director of the National Agency for Veterinary Medicinal Products (Anses-ANMV - Foug res - France). Dr Moulin's main areas of activities are antimicrobial resistance, pharmacokinetics and residues of antimicrobials, Veterinary pharmaceutical legislation, benefit/risk analysis. He is involved in the Veterinary and Human French action plans on antimicrobial resistance. He is responsible for the French survey of veterinary antimicrobial sales and is part of different working groups on antimicrobial resistance. At the European Level, Dr Moulin was Chair of the Committee of Veterinary medicinal products (European Medicine Agency) between 2003 and 2010, and Chair of the JIACRA (Joint interagencies consumption and resistance analysis EU expert working group) between 2014-2015. He is currently Chair of the AMEG (Antimicrobial expert group) at the European Medicine Agency. He is also the French representative for the ESV network (European Surveillance of Antimicrobial Consumption). At the international level, Dr Moulin participated as an expert to tripartite WHO/OIE/FAO consultations on antimicrobial resistance and to the Codex task force on antimicrobial resistance (co-chair of a working group on risk management). He is involved on a regular basis in OIE activities on antimicrobial resistance and in the OIE data collection of antimicrobials. Dr Moulin was a member of the WHO-AGISAR (Advisory Group on Integrated Surveillance of Antimicrobial Resistance) and member of the guideline development group for the development of a WHO guideline on Critically Important Antimicrobials in Humans. He also participates in different initiatives related to capacity building and training.

**Sunita Narain**

Director General

Centre for Science and Environment

India
<p>Sunita Narain is a Delhi-based environmentalist and author. She is currently the Director General of Center for Science and Environment (CSE) and Editor of the fortnightly magazine, Down To Earth. Dr. Narain plays an active role in policy formulation on issues of environment and development in India and globally. She has worked extensively on climate change, with a particular interest in advocating for an ambitious and equitable global agreement. Her work on air pollution, water and waste management as well as industrial pollution has led to an understanding of the need for affordable and sustainable solutions in countries like India where the challenge is to ensure inclusive and sustainable growth. She was a member of the Indian Prime Minister's Council on Climate Change and has been awarded the Padma Shri, the fourth highest civilian honour. In 2005, the Centre for Science and Environment, under her leadership was also awarded the Stockholm Water Prize. In 2016, Time magazine selected her as one of the most influential people in the world. She received "The Order of the Polar Star" award from the Swedish Government in 2017. Penguin has recently published her new book <b><i>Conflicts of Interest</i></b>, in which she has written about CSE's campaigns from air pollution to colas to tigers. She continues to serve on national and international committees on environment.</p>
<p><b>George Sarpong</b> G.A Sarpong &amp; Co. Ghana</p>
<p>George Agyemang Sarpong is the Managing Partner of G. A Sarpong &amp; Co., Legal Practitioners and Consultants, Accra; and a former Director of the Ghana School of Law. George is an alumnus of the Faculty of Law University of Ghana (LL. B, 1981); the Ghana School of Law (B.L, 1983); the University of British Columbia (LL.M International Law, 1984); and the University of London School of Oriental and African Studies (LL.M Environmental Law, Occasional Student, 1995). He has been the recipient of many awards, fellowships and visiting scholarships; including from the UN (Human Rights studies, Geneva and Strasbourg) and the Universities of British Columbia, Leiden, Nottingham, Queens (Belfast) and North-Western (United States).</p> <p>Sarpong entered academia after a career in the Ghana Armed Forces. He trained at the Ghana Military Academy and the Combat Arms School CFB Gagetown, NB (Canada). He was a member of the Commission of Enquiry into the Organizational Structure of the Ghana Armed Forces (General Erskine Commission) in 1987-89; and an adjunct Lecturer in the Law of the Sea at the Ghana Armed Forces Command and Staff College. He Honourably retired in the rank of Major in 1990. George joined the Faculty of Law, University of Ghana in 1990. He was promoted Senior Lecturer in 1996. He served for 16 years during which period he taught Public International Law, Law of Contract, Business and Environmental Laws. In January 2009, he was appointed Director of Legal Education, Ghana; and Director of the Ghana School of Law (GSL). He served in that capacity till August 2012 when he retired from the GSL upon attaining the statutory retirement age of 60.</p>

He has published extensively in local and international journals on Public International and Environmental Laws and attended several training programmes and conferences in his areas of expertise. He has also been involved in several initiatives as legal consultant to the Government of Ghana, UN bodies and international agencies in the implementation of projects, programmes and policies on sustainable development. George is a member of the Ghana Bar. He was a member of the African Union's High-Level African Panel on Modern Biotechnology that provided a blue print for Biotechnology in Africa. He is currently a member of the World Commission on Environmental Law (WCEL) of the International Union for Conservation of Nature (IUCN); and of the Council of Directors, BJ Da Rocha Institute (Ghana). He also serves on the Board of The African Agricultural Technology Foundation (AATF) a Nairobi based organisation dedicated to the improvement of Agriculture in Sub-Saharan Africa through modern technology.

#### **Rohana Subasinghe**

Managing Director  
Future fish  
Sri Lanka

Rohana Subasinghe is a specialist in aquaculture development and aquatic animal health management. He retired from FAO in October 2015, while serving as the Chief of the Aquaculture Branch. He joined FAO in 1994 and took responsibility in implementing many programmes and projects on aquaculture and aquatic animal health at national, regional and international levels, worldwide, until his retirement. Among others, at FAO, he was also responsible for analysing global trends in aquaculture development. For fifteen years, he served as the Technical Secretary to the Sub-Committee on Aquaculture of the Committee on Fisheries of the FAO, the only global inter-governmental forum on aquaculture which meets every two years. A former teacher of the University of Colombo and the University Putra Malaysia, Rohana earned his MSc in aquaculture from University South West, England and PhD from University of Stirling, Scotland. Rohana is a founder member and former Chair Person of the Fish Health Section of the Asian Fisheries Society. He is a honorary life member of the World Aquaculture Society (WAS) and is the President of the Asia-Pacific Chapter of WAS. Rohana has been an active participant of the OIE aquatic commission from 1995 to 2015. Besides his desire for improved biosecurity in agriculture, he is a strong advocate of sustainable, responsible and equitable aquaculture and improving its contribution to global food and nutrition security. His passion is to increase fish consumption among rural poor, especially among childbearing women and young children, towards improving their health and wellbeing. Rohana is still active in the field of fisheries and aquaculture, currently extending his years of experience and expertise, as a consultant, to many agencies and institutions worldwide.

#### **Lothar Wieler**

Head of the German CDC  
President of the Robert Koch Institute  
Germany

Prof. Lothar H. Wieler is president of the Robert Koch Institute in Berlin, the national Public Health Institute in Germany. A veterinarian by training, Prof. Wieler has focused his research on zoonotic diseases, i.e. infections that are passed between animals and humans, and account for many of the newly (re-)emerging infectious diseases. A particular research interest of Prof. Wieler are the molecular mechanisms, which enable bacterial zoonotic pathogens such as *e. coli* and *s. aureus* to infect different hosts and develop resistance to antibiotics. In his work, Wieler has used genome-based typing methods to identify zoonotic pathogens, which were subsequently analysed in functional experiments in order to learn more about their evolution and adaption to different habitats. The insights generated from this work can be used to develop new interventions to target pathogenic bacteria.

Prof. Wieler is deputy spokesperson for the research consortium InfectControl 2020, which pursues intersectoral approaches to preventing and treating infections from a One Health perspective. Within InfectControl 2020, Wieler also heads the *IRMRESS* and *Neobiom* networks. *IRMRESS* researches innovative strategies to fight multi-drug resistant bacteria and aims to use next generation sequencing techniques to establish a molecular surveillance system. *Neobiom* identifies factors that change the microbiome, resistome and mykobiome of premature babies.

Prof. Wieler is also a member of the Strategic and Technical Advisory Group for Infectious Hazards (STAG-IH) of the World Health Organisation, the scientific advisory board of the Global Research Collaboration for Infectious Disease Preparedness (GloPID-R) and the WHO Europe Advisory Committee on Health Research (EACHR) as well as member of the scientific board of the organisation TMF – Technology, Methods, and Infrastructure for Networked Medical Research in Germany. Since 2010, he is also an elected member of the German National Academy of Sciences.