

# **Biographies of the members of, and advisers to, the IHR Emergency Committee concerning Middle East respiratory syndrome coronavirus (MERS-CoV)**

## **Chair**

### **Professor Chris Baggoley, Chief Medical Officer, Australian Government Department of Health, Canberra, Australia**

Professor Chris Baggoley is Chief Medical Officer of the Australian Government Department of Health, Ministry of Health of Australia. He is also the principal medical adviser to the Minister and the Australian Government Department of Health and holds direct responsibility for the Department's Office of Health Protection.

Previously, Professor Baggoley, whose clinical background is in emergency medicine, was Chief Executive of the Australian Commission on Safety and Quality in Health Care and Chief Medical Officer and Executive Director with the South Australian Department of Health. He was also President of the Australasian College for Emergency Medicine, Chair of the National Committee of Presidents of Medical Colleges and Chair of the Board of the National Institute of Clinical Studies.

Professor Baggoley chairs a number of national committees, including the Australian Health Protection Principal Committee, the Australian Therapeutic Goods Advisory Council and the National Cancer Expert Reference Group. Other current professional activities include membership of several Antimicrobial Resistance Committees, the National Health and Medical Research Council and the Australian Animal Health Laboratory Strategic Policy Group.

He represents Australia on the International Agency for Research on Cancer Governing Council.

## **Vice-Chair**

### **Dr Theresa Tam, Branch Head, Health Security Infrastructure Branch, Public Health Agency of Canada, Ottawa, Canada**

Dr Theresa Tam is currently the head of the Health Security Infrastructure Branch of the Public Health Agency of Canada (PHAC). She is responsible for leading on key initiatives and programmes on health emergency management, border health security, implementation of the International Health Regulations (IHR) for Canada, development of public health system capacity development, facilitation of action on public health surveillance priorities and the health response for international mass gathering events.

Dr Tam is the former Director General, Centre for Emergency Preparedness and Response, and the former Director, Immunization and Respiratory Infections Division, both at PHAC. She was the Federal co-chair of the Pandemic Influenza Committee of Canada and co-chair of the Canadian Immunization Committee.

Her professional concentration include paediatrics, infectious diseases, field epidemiology with extensive experience in the management of complex health emergency situations including the SARS outbreak, the outbreak of avian influenza in British Columbia, Canada, and the 2009 H1N1 influenza pandemic.

Dr Tam's previous engagement with WHO includes several consultancies on international missions for polio eradication, influenza surveillance and avian influenza H5N1. She has also served as a WHO expert in a number of consultations on SARS, pandemic influenza preparedness, avian influenza H5N1 and health emergency management.

## **Rapporteur**

### **Dr Salah Al Awaidy, Communicable Diseases Adviser to Health Affairs, Ministry of Health, Muscat, Oman**

Dr Salah Al Awaidy is Communicable Diseases Adviser to Health Affairs of the Oman Ministry of Health. From 1997-2011, he was Director of Communicable Disease Surveillance and Control at the Ministry of Health.

His primary fields of professional concentration include vaccination and vaccinology, vaccine cold chain, communicable diseases surveillance, eradication and elimination, as well as the implementation of the International Health Regulations (2005).

Dr Al Awaidy is a member of WHO EMRO's Regional Network of Experts on Infection Prevention and Control, the AIDS Regional Advisory Group (ARAG) and the Technical Advisory Groups on Poliomyelitis Eradication in Afghanistan and Pakistan. He was a member of several WHO advisory groups, namely the Strategic Advisory Group (SAGE) on Immunization, the Strategic and Technical Advisory Group for Tuberculosis (STAG-TB) and the Strategic Advisory Group on Vaccine and Store Management Training Courses. In addition, he served on the National Immunization Technical Advisory Group and on the Advisory Group on AIDS, TB and Infection Control.

He has actively participated in a number of international meetings and forums organized by WHO. Since 2005, he has been responsible for a WHO Collaborating Centre team that carries out global and regional training on vaccine and central store management.

### **Members**

#### **Professor Tjandra Aditama, Director General, Disease Control and Environmental Health, Ministry of Health, Jakarta, Indonesia**

Professor Tjandra Aditama is Director General of the Department of Disease Control and Environmental Health, Ministry of Health in Indonesia. His previous employment includes Director of Communicable Disease Control, Ministry of Health, and senior and director level positions at the Persahabatan Hospital in Jakarta.

Professor Aditama's career has focused on the making of norms and standards, evaluation, and development and implementation of policies in the area of diseases control and environmental health in Indonesia.

He serves as a member of the International Union against Tuberculosis and Lung Diseases, the Research Institute of Tuberculosis, Tokyo, Japan, the Asia Pacific Society of Respiriology, the executive body of the International Coalition against Tobacco, and the Network of Islamic Approach against Tobacco.

Professor Aditama was a member of the WHO Review Committee on the Functioning of the International Health Regulations (2005) in relation to the 2009 influenza pandemic. He has also served as Vice Chair of WHO's Pandemic Influenza Preparedness (PIP) Framework Advisory Group and as a member of the Technical Advisory Group for the bi-regional Asia Pacific Strategy for Emerging Diseases (APSED).

#### **Dr Abdullah Al-Assiri, Assistant Deputy Minister of Health for Preventive Health, Riyadh, Kingdom of Saudi Arabia**

Dr Abdullah M Assiri is the Assistant Deputy Minister for Preventive Health in the Kingdom of Saudi Arabia. He is also a consultant in internal medicine and infectious disease at the King Fahad Medical City in Riyadh.

Previous positions held by Dr Assiri include Director-General for Infection Prevention and Control at the Ministry of Health and Advisor to the Deputy Minister of Public Health. He was also a consultant in internal medicine and infectious disease for the armed forces and the national guard. Dr Assiri was formally a clinical fellow in the infectious diseases division at Dalhousie University in Halifax, Canada. He further worked as an Assistant Consultant to the Department of Medicine at King Faisal Specialist Hospital in Jeddah.

Dr Assiri's fields of professional concentration include infectious diseases, infection control, public health and epidemiology.

Other current professional activities and positions of Dr Assiri include Fellow of the American College of Physicians, Adjunct Associate Professor of Hubert Department of Global Health at Emory University

and a member of the Editorial Board of the Journal of Epidemiology and Global Health. Since 2010 he also chairs the National Infection Control Committee and is a member of the National Committees on AIDS, Immunization, tuberculosis, Decontamination Services and of the Scientific Committee for the International Conference on Mass Gatherings.

Dr Assiri is currently the representative of the Kingdom of Saudi Arabia to the Executive Board of the World Health Organization.

**Dr Hussain Al Rand, Assistant Undersecretary for Health Centers and Clinics, Abu Dhabi, United Arab Emirates**

Dr Hussain Al Rand is the Assistant Undersecretary for Health Centres and Clinics at the Ministry of Health, Dubai, which includes the supervision of five departments: Primary Health Care, Preventive Medicine, Laboratories, Health Education and Promotion, supporting health services, including Nutrition and Occupational health and Radiology.

Previously, Dr Hussain was the Director of Medical Affairs, Consultant and Head of the ENT (Otorhinolaryngology) Department, Dubai Hospital, Dubai Health Authority, as well as Associate Professor and Head of ENT Section at the Dubai Medical College for Girls. Other positions held by Dr Al Rand include President of Pan-Arab Federation of ORL-HNS Societies, President of the ORL, Head and Neck Society, Gulf Cooperation Council, and President of the ORL, Head and Neck Society, United Arab Emirates.

Dr Al Rand's fields of professional concentration include ENT, upper respiratory tract infections, especially those of viral origin and new and re-emerging diseases.

Other current professional activities of Dr Al Rand include memberships in the German Academy of Otolaryngology Head and Neck Surgery Inc., the American Academy of Otolaryngology, Head and Neck Surgery Inc., and the Board Committee of the Gulf Cooperation Council of the Oto-Rhino-Laryngological Head and Neck Society.

**Dr Martin Cetron, Director, Division of Global Migration and Quarantine, National Center for Emerging and Zoonotic Infectious Diseases, Centers for Disease Control and Prevention, Atlanta, United States of America**

Dr Martin Cetron is the Director for the Division of Global Migration and Quarantine (DGMQ) at the United States Centers for Disease Control and Prevention (CDC).

Before joining DGMQ Dr Martin Cetron served in CDC's Division of Parasitic Diseases and Bacterial Respiratory Diseases. He is a Commissioned Officer in the U.S. Public Health Service.

His primary research interests are global health and migration with a focus on emerging infections, tropical diseases, and vaccine-preventable diseases in mobile populations. For over 20 years, Dr Cetron has conducted epidemiologic research globally, developed global health policy and led domestic and international outbreak investigations including high profile international emergency responses to emerging infectious disease outbreaks. He played a leadership role in CDC responses to the 2001 anthrax bio-terrorism incident, the 2003 SARS epidemic, the 2003 US monkeypox outbreak, the 2005 Hurricane Katrina/Rita response, the influenza A (H1N1) pandemic 2009, and the on-going outbreak of MERS-CoV.

Dr Cetron holds faculty appointments in the Division of Infectious Disease at the Emory University School of Medicine and the Department of Epidemiology at Rollins School of Public Health.

Dr Cetron was a member of the Review Committee on the Functioning of the International Health Regulations (2005) in relation to Pandemic (H1N1) 2009 and participated in the US delegation's intergovernmental negotiations during the revision of the IHR.

**Professor Claudia Gonzalez, Psychologist and Researcher, Center of Epidemiology and Public Health Policy, Faculty of Medicine, Clínica Alemana-Universidad del Desarrollo, and Partner-Director Epi-Sur Consultores, Santiago de Chile, Chile**

Professor Claudia Gonzalez is a psychologist and researcher at the Center of Epidemiology and Public Health Policy of the Universidad del Desarrollo in Santiago de Chile since 2011. At the Center she has

conducted research on infectious diseases such as tuberculosis in prisons, risk factors for meningitis in the Chilean population and knowledge and attitudes about hantavirus.

From 2005 until July 2010, she was Epidemiology Coordinator for the Chilean Ministry of Health, focusing on epidemiological surveillance and the development of studies for decision-making in public policy. Before that, Professor Gonzalez worked in the Epidemiology Department research unit, where she was involved in developing the national epidemiological surveillance model, the Chilean national health objectives for the decade 2000–2010, and population surveys to measure quality of life and the prevalence of disease and risk factors in various populations.

In 2009, she was in charge of the executive secretariat of the Committee for the Control of Outbreaks and Health Emergencies, the body responsible for handling the influenza A (H1N1) pandemic 2009 in Chile. She was also head of the National IHR Focal Point and responsible for implementing the IHR in Chile.

Professor Gonzalez has attended a number of international meetings and forums on influenza and IHR, organized by WHO/PAHO. She was also a member of the Review Committee on the Functioning of the International Health Regulations (2005) in relation to Pandemic (H1N1) 2009.

**Dr Paata Imnadze, Head of Scientific Board, National Center for Disease Control and Public Health, Tbilisi, Georgia**

Dr Paata Imnadze is head of the Scientific Board at the National Center for Disease Control and Public Health in Georgia.

Prior to his current position, he was Director General of the National Center for Disease Control and Public Health. He continues to serve as the Head of the Department of Public Health at the Tbilisi State University, and was formerly Associate Professor of the Department of Microbiology and Immunology at the Tbilisi State Medical University.

His professional experience includes epidemiology of communicable diseases, biosafety, infection control, microbiology, molecular epidemiology, emergency preparedness and response.

Dr Imnadze is member of the National Council on Bioethics and Vice President of both the Biosafety Association of Central Asia and Caucasus as well as the Scientific Association of Infectious Diseases, Epidemiology and Microbiology of Georgia.

Dr Imnadze was a member of the WHO Intergovernmental Working Group on the Revision of the IHR (2004-2005), the WHO European Technical Advisory Group of Experts on Immunization (2005-2011), and in 2012 was a member of the Editorial Group "Environmental health inequalities in Europe."

From 2003 to 2006, he was a member elect of the Joint Coordinating Board of the UNICEF/UNDP/World Bank/WHO Special Program for Research and Training in Tropical Diseases.

**Dr Fadzilah Kamaludin, Head, Office of Deputy Director General of Health (Public Health), and Director, Epidemic Intelligence Program (Field Epidemiology Training Program), Ministry of Health, Putrajaya, Malaysia**

Dr Fadzilah Kamaludin is Director of the Epidemic Intelligence Programme and Head of the Office of Deputy Director of Health (Public Health) of Malaysia. In both her capacities, she is actively involved with training public health physicians and public health practitioners in infectious disease outbreaks, surveillance and rapid response.

Previously, Dr Kamaludin was Deputy Director Management & Training, Institute of Public Health (2008-2012) and Principal Assistance Director, Surveillance Section, Disease Control Division, Ministry of Health (2004-2008).

Her professional experience and interests are in field investigation and training in infectious diseases surveillance and response.

Dr Kamaludin's other professional affiliations include Chair, Training in Epidemiology and Public Health Intervention Networks Advisory Board, Vice President of EIP (Epidemic Intelligence Program) Malaysia Society, and memberships in the Malaysian Public Health Specialists Society, the Malaysian Academy of Medicine, the International Society of Infectious Diseases, and the Malaysian Health Physicians Society.

She was previously involved with WHO in a number of consultancies including the modified Field Epidemiology Training Programme (FETP), Field Epidemiology Training (FET) and applied epidemiology. She has also been a WHO temporary advisor in the development of guidelines for outbreak risk communication.

**Dr Bjørn-Inge Larsen, Secretary General, Ministry of Health and Care Services, Oslo, Norway**

Dr Bjørn-Inge Larsen is Secretary General, Norwegian Ministry of Health and Care Services. From 2002 to 2013 he served as Chief Medical Officer and Director General, Directorate for Health.

Dr Larsen has held a number of public health positions with a focus on management of the health sector, health economics, use of Information and Communications Technology (ICT) in health services, and preventive medicine. As Director General for Health, he has led the Norwegian work on pandemic influenza, the Norwegian health preparedness committee, the Norwegian priority council for health services and the patient safety initiative. As Secretary-General, he is currently heading national programs on e-health and health research.

In May 2013, he ended his three year membership on the Executive Board of the World Health Organization, having served one year as vice president. Dr Larsen has also chaired the Standing Committee for the Regional Committee for WHO Europe. Dr Larsen has been especially engaged in WHO reform, the non-communicable disease epidemic, and health systems development, including health workforce shortage.

**Dr Ziad Memish, Deputy Minister for Public Health, Riyadh, Kingdom of Saudi Arabia<sup>1</sup>**

Dr Ziad Memish is Deputy Minister for Public Health in the Kingdom of Saudi Arabia. He is also Director of the WHO Collaborating Centre for Mass Gatherings Medicine, a consultant in adult infectious diseases at King Fahad Medical City, and a professor in the College of Medicine, Alfaisal University & King Saud University in Riyadh.

He was formerly the Assistant Deputy Minister of Health for Preventive Medicine in the Ministry of Health. He also used to serve as the Chairman of the Department of Infection Prevention and Control as well as the Executive Director for Infection Prevention and Control at the King Abdulaziz Medical City.

His main professional focus is public health, mass gatherings and infection control and infectious diseases.

Dr Memish's international committee memberships include the Council of the International Society of Infectious Diseases, the Executive Board of the International Society for Infectious Diseases, and the Executive Council of the Gulf Cooperation Council States for the Ministers of Health. He was also Chairman of the External Affairs Committee of the Society for Healthcare Epidemiology of America. Dr Memish is engaged with WHO as a member of the Executive Board of WHO, the International Infection Control Informal Network at WHO, the Core WHO Hand Hygiene Guidelines Committee in Geneva and the WHO Pandemic Influenza Preparedness framework committee. He has been a member of the WHO Virtual Interdisciplinary Advisory Board for Mass Gatherings (since 2008), and, as of this year, a member of the Strategic and Technical Advisory Group for Tuberculosis (STAG-TB). On a regional level, he is a member of the WHO EMRO Research Advisory Group, the WHO EMRO Regional Expanded Program for Immunization Advisory Group and the WHO Regional Network on Infection Control.

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<sup>1</sup> This information was valid during Dr Memish's tenure as a member of the Emergency Committee from the first through the fifth meetings.

**Professor Babacar Ndoye, Expert-consultant and trainer in hospital hygiene, infection control and patient safety, Dakar, Senegal**

Professor Babacar Ndoye is an expert-consultant and trainer in hospital hygiene, infection control and patient safety in Senegal.

Professor Ndoye recently retired, having set-up and led one of the first African national programs on infection prevention and control. He is currently setting up a training programme on hygiene and infection control in Senegal.

Infection control and patient safety is Professor Ndoye's main professional focus. Recently, he participated in a WHO mission to Tunisia that investigated the epidemiological situation of MERS-CoV and recommended appropriate public health actions.

His professional affiliations include the Infection Control Africa Network, the French Society of Hospital Hygiene (SF2H), the Editing Committee of the French newspaper "Hygiène", and the Global Environment Facility/United Nations Development Programme working group for the best practices in health care waste management. Dr Ndoye was recently appointed to the International Scientific Committee of the World Alliance Against Antibiotic Resistance, a new international non-governmental organization based in France.

Professor Ndoye has been engaged with WHO in a number of working groups, including the Global Infection Prevention and Control Network (GIPCN), the Steering Committee of Save Lives, and the WHO working group for elaborating guidance for the prevention of surgical site infections. In 2008, he served WHO AFRO as an informal consultant regarding infection prevention and control in Africa.

**Professor Mahmudur Rahman, Director, Institute of Epidemiology, Disease Control and Research and National Influenza Centre, Ministry of Health and Family Welfare, Dhaka, Bangladesh**

Professor Mahmudur Rahman, is Director of the Institute of Epidemiology, Disease Control and Research and National Influenza Center, Ministry of Health and Family Welfare in Bangladesh. Previously, he served as the Professor and Head of the Department of Epidemiology at the National Institute of Preventive and Social Medicine (NIPSOM) from 2002 to 2004, following six years as Associate Professor of Epidemiology in NIPSOM.

Professor Rahman devoted most of his academic career to the fields of epidemiology and public health. His past research has focused on disease surveillance, communicable, particularly infectious disease, and non-communicable disease epidemiology and public health policy issues. He also played a key facilitator role in establishing the National Influenza Center, Biosecurity Level 3 and Nipah laboratory and web-based disease surveillance in Bangladesh. He has been instrumental in establishing the 8th Global Disease Detection centre of the United States Centers for Disease Prevention and Control in Bangladesh.

He is currently serving as a member of the WHO Expert Review Committee on Polio Eradication, the WHO Scientific Advisory Committee on Visceral Leishmaniasis, the Executive Board of the International Association of National Public Health Institutes (IANPHI), the SEAR Certification Commission for Polio Eradication (SEARCCPE), and he is Editorial Board member of the SEARO Journal. In addition, Professor Rahman chaired and served on a number of panels covering different issues of epidemiology, disease surveillance and public health policies, ranging from avian and pandemic influenza surveillance to health and population program planning.

Professor Rahman was member of the Review Committee on the Functioning of the International Health Regulations (2005) in relation to Pandemic (H1N1) 2009.

**Professor Maha Talaat, Director, Infection Control Unit and Deputy Director, Disease Prevention, Global Disease Detection and Response Center, United States Naval Medical Research Unit, No.3, Cairo, Egypt**

Professor Maha Talaat is Director of the Infection Control Unit and Deputy Director for Disease Prevention at the Global Disease Detection and Response Center in Egypt at the US Naval Medical Research Unit, No.3 (NAMRU-3) in Cairo, Egypt.

Previously, she was the Director of the Community Medicine Department at the Theodor Bilharz Research Institute, and a member of the core team of an International Schistosomiasis Research Project in Egypt.

Professor Talaat's professional focus includes technical support to the Ministries of Health to develop national infection control programs in Egypt and other countries in the Eastern Mediterranean region.

She also served as a principal investigator to manage a network of countries establishing surveillance of severe acute respiratory illnesses (EMARIS) since 2007. Her work for EMARIS includes capacity building of Ministries of Health and the establishment of standardized methodologies for the testing of MERS-CoV and other respiratory pathogens.

Professor Talaat holds Master's and Doctoral Degrees in Public Health and has a number of professional affiliations including memberships in the Scientific Review Board (SRB), NAMRU-3, Cairo, Egypt, and the Infection Control Steering Committees of several universities in Egypt (Cairo, Alexandria, Ain Shams) to provide technical support for implementation of infection control programs.

Professor Talaat has engaged with WHO on many occasions. She has been a WHO temporary advisor in several consultancies including promotion of infection control, surveillance of communicable diseases, and prevention of viral hepatitis in Egypt. She was also a member of the WHO committee for selection of grants (2004-2006) and is a current member of the WHO Global Network on Infection Prevention and Control in Healthcare for Preparedness and Response to Communicable Disease Crises.

#### **Professor Oyewale Tomori, Redeemer's University, Redemption City, Nigeria**

Professor Tomori is a professor of virology, and formerly vice-chancellor of Redeemer's University. Prior to this, he was the regional virologist and laboratory coordinator for WHO AFRO.

His professional career focusses on disease surveillance and laboratory diagnosis of viral diseases. Professor Tomori holds a number of professional affiliations, including the President of Nigeria Academy of Sciences, Chair of the Scientific Steering Committee, Meningitis Free World Initiative, Chair of the Nigeria Expert Review Committee on Polio Eradication and Routine Immunization, Chair of the Nigeria National Medical Laboratory Strategic Plan Implementation Committee, member of the International Steering Committee of the International Consortium on Anti-Virals, member of the Judging Panel, GlaxoSmithKline-Save the Children Fund Healthcare Innovation Award, and senior editor of the African Journal of Laboratory Medicine.

His previous engagement with WHO includes memberships in the following WHO committees: the Strategic Advisory Group of Experts (SAGE) on Immunization; the Advisory Committee on Variola Virus Research; the East Mediterranean Regional Certification Commission for Poliomyelitis Eradication; the Expert Advisory Panel of Viral Diseases; and the Polio Research Committee. He is also a member of the Africa Regional Certification Committee for Poliomyelitis Eradication, and the USA Institute of Medicine's committees on sustainable global surveillance of zoonotic diseases, and identification and prioritization of new vaccines for development.

#### **Professor Maria Zambon, Director, Reference Microbiology Services, Public Health England, London, United Kingdom of Great Britain and Northern Ireland**

Professor Zambon is the Director of Reference Microbiology, Public Health England. She is also a consultant medical virologist, the Head of the UK National Influenza Centre, the UK National Microbiology Focal Point and the UK lead for pandemic influenza vaccine studies.

Previously, she was Director of the Health Protection Agency's Centre for Infections (2009-2011), and Deputy Director of its Virus Reference Division (2000-2009).

Her professional experience includes clinical virology, vaccines and antivirals with a focus on respiratory viruses, influenza virology, SARS diagnostics, as well as laboratory sciences for pandemic influenza and other emerging respiratory infections.

Professor Zambon's affiliations include membership in the International Society for Respiratory Viruses, fellowship in the UK Academy of Medical Sciences and honorary professorships at the London School of Hygiene and Tropical Medicine, and Leicester University.

She has engaged with WHO on a number of occasions since 1999, including in the field of influenza, vaccines, antivirals, pandemic planning, diagnostics, laboratory capabilities, serological studies and SARS. In addition, she has been a member of IHR Emergency Committee for Pandemic Influenza since 2009, Director of WHO laboratory training courses for influenza in association with the WHO

collaborating Centre Mill Hill and WHO Europe since 2005, and Director of the WHO National Influenza Centre for the United Kingdom of Britain and Northern Ireland.

### **Advisers**

#### **Dr Anthony Evans, Chief, Aviation Medicine Section, International Civil Aviation Organization**

Dr Anthony Evans is Chief of the Aviation Medicine Section at the International Civil Aviation Organization (ICAO). He is also the Manager of the Collaborative Arrangement for the Prevention and Management of Public Health Events in civil aviation – a multi-sector programme of ICAO to facilitate the implementation of harmonized medical requirements for pilots and air traffic controllers.

Previously, Dr Evans was the Chief Medical Officer of the Civil Aviation Authority for the United Kingdom of Great Britain and Northern Ireland.

Dr Evans' fields of professional concentration include the development and implementation of harmonised medical requirements for pilots and air traffic controllers.

Other current professional activities of Dr Evans include memberships in the Faculty of Occupational Medicine of the United Kingdom, of the Society of Occupational Medicine and of the Royal Aeronautic Society. He is also a Fellow of the Aerospace Medical Association and Deputy Secretary General of the International Academy of Aviation and Space Medicine.

Dr Evans has been a consultant to the World Health Organization, a member of the International Health Regulations (IHR) Emergency Committee concerning Influenza Pandemic (H1N1) and is currently an adviser to the IHR Emergency Committees concerning Ebola and Poliomyelitis.

#### **Dr Bernard Faye, Consultant to the Food and Agriculture Organization of the United Nations, Camel project, Center for Agriculture Project, Al-Kharj, Kingdom of Saudi Arabia, and Senior Scientist, French Agricultural Research Centre for International Development, Montpellier, France**

Dr Faye is currently a consultant to the Food and Agriculture Organization of the United Nations (FAO) on a camel project in the Kingdom of Saudi Arabia, and a Senior scientist and project manager in the animal production sector at the French Agricultural Research Centre for International Development (CIRAD), Montpellier, France. His area of professional concentration is camel production and disease, including extensive research activities.

Dr Faye previously worked for several years as scientist and head of the biochemistry-nutrition laboratory at the National Veterinary Institute in Debré-Zeit, Ethiopia. He later took a position as scientist and epidemiologist at the Ecopathology laboratory (National Agronomic Research Institute) at Clermont-Ferrand, France, including ten years as head of the laboratory. In 1996, he joined CIRAD as head of the animal production programme. Since October 2010, he has been a consultant to FAO in Al-Kharj, Kingdom of Saudi Arabia, for scientific management of the camel and range research centre. Dr Faye holds and has held numerous national and international positions in relation to his field of study. He is founder, and first chair, of the International Society for Camelid Research and Development and a Scientific Advisor for the International Foundation for Science. His distinctions include the Malbrant-Feunteun Prize (Veterinary Academy of France) and the Chevalier du mérite agricole.

#### **Professor David Shu-Cheong Hui, Stanley Ho Professor of Respiratory Medicine and Director, Stanley Ho Centre for Emerging Infectious Diseases, The Chinese University of Hong Kong, Hong Kong SAR, China**

Professor Hui is the Stanley Ho Professor of Respiratory Medicine and Director, Stanley Ho Centre for Emerging Infectious Diseases, the Chinese University of Hong Kong.

Dr Hui was heavily involved in the clinical management of patients with Severe Acute Respiratory Syndrome (SARS) during the major outbreak in Hong Kong in 2003. He served as a WHO advisor to review the clinical management of influenza A(H5N1) during the early human outbreak in Vietnam in



February 2004 and has since been a regular advisor to the WHO on the clinical management of severe acute respiratory infections.

Dr Hui has contributed to the WHO treatment guidelines (including the clinical management of influenza A (H5N1) virus in 2007, clinical management of influenza A (H1N1) pandemic in 2009, the Middle East Respiratory Syndrome (MERS) and the WHO training workshop in the clinical management of influenza A(H7N9)), in addition to joining several WHO missions on MERS in the Middle East and the Republic of Korea.

**Dr Marion Koopmans, Professor of Public Health Virology, Viroscience Department (head of department starting July 2014), Erasmus University of Rotterdam; and Chief, Virology Department, Laboratory for Infectious Diseases and Screening, National Institute of Public Health and the Environment, Kingdom of the Netherlands**

Professor Marion Koopmans is a professor of public health virology in the Viroscience Department of the Erasmus University of Rotterdam. Starting in July 2014, Professor Koopmans will head this Department.

Previously, Professor Koopmans was Chief of Virology at the National Institute of Public health and the Environment in Bilthoven, Kingdom of the Netherlands .

Professor Koopmans' fields of professional concentration include viral infections at the human animal interface, laboratory preparedness and response activities, foodborne viruses and molecular epidemiology.

Other current professional activities of Professor Koopmans include memberships in the National Organisation for Medical Microbiologists, the European Society for Virology and CRESA (Centre de Recerca en Sanitat Animal) in Barcelona, Spain. She is also an ad hoc expert advisor to the National Health Council and National Outbreak Management Teams (including on SARS, Marburg, avian influenza and MERS) , a scientific advisor to the Guangdong Center of Disease Control and Prevention, Peoples Republic of China, and Editor of the Journal of Clinical Virology.

Professor Koopmans has provided advice to the World Health Organization in relation to Severe Acute Respiratory Syndrome (SARS) and interacts regularly with WHO's Food Safety Department.

**Professor Malik Peiris, Director, School of Public Health and Chair in Virology; Co-Director, WHO H5 Reference Laboratory, The University of Hong Kong, Hong Kong SAR, China**

Professor Peiris is a clinical and public health virologist with a particular interest in emerging virus disease at the animal-human interface including influenza, coronaviruses and others. His current research encompasses the pathogenesis, innate immune responses, transmission, ecology and epidemiology of human and animal (poultry, swine, wild birds) influenza viruses. His research has provided understanding on the emergence and pathogenesis of the 2009 pandemic H1N1 virus and on avian influenza viruses H5N1, H9N2 and H7N9. His collaborative research has provided evidence-based options for the control of these viruses in poultry and in humans. In 2003, he played a key role in the discovery that a novel coronavirus was the cause of Severe Acute Respiratory Syndrome (SARS), its diagnosis and pathogenesis. Currently he is researching Middle East Respiratory Syndrome coronavirus (MERS-CoV).

He coordinates an eight-year multi-disciplinary and multi-institutional Area of Excellence Program of the University Grants Committee of Hong Kong on the "Control of Pandemic and Inter-pandemic Influenza" and a recent Theme Based Research grant on "Influenza Transmission and Pathogenesis" from the Research Grants Council, Hong Kong. He is an investigator in the Centers of Excellence for Influenza Research and Surveillance (CEIRS) program of the National Institute of Allergy and Infectious Diseases (NIAID), National Institutes of Health, United States of America. He has an extensive collaborative research network globally.

He co-directs the WHO H5 Reference Laboratory at The University of Hong Kong and serves on many standing committees and ad-hoc advisory committees of the WHO and Food and Agriculture Organization of the United Nations.

He was elected a Fellow of the Royal Society of London in 2006, awarded the Chevalier de la Légion d'honneur, France (2007), Mahathir Science Award, Akademi Sains, Malaysia (2007) and Silver

Bauhinia Star (S.B.S.), Hong Kong SAR (2008). He serves on the editorial boards of Lancet Infectious Diseases and PLoS Medicine and is editor of the scientific journal "One Health".

**Ms Karen Tan, Senior Director, Public Communication Division, Ministry of Communications and Information, Singapore**

Ms Tan is Senior Director with the Public Communication Division of Ministry of Communications and Information in Singapore. Her current portfolio includes the strengthening of Whole-of-Government public communications, ensuring consistent messaging and building capacity in content development. Specifically, she is responsible for crisis communications for the government and leading Whole-of-Government efforts in the planning and execution of key public communications initiatives, which includes news media engagement, public engagement and national marketing for Singapore.

Prior to her current position, Ms Tan served at the Ministry of Health (Singapore) for 10 years. At the Ministry of Health, she had a dual capacity as the Director of Corporate Communications and as Press Secretary to the Minister for Health. During that time she was responsible for strategic communications planning, media relations, issue management, corporate publications, community relations and public consultations. She was responsible for all aspects of mass communications during the SARS epidemic in 2003 and the influenza A (H1N1) pandemic in 2009.

Ms Tan has served as a WHO Temporary Advisor on Outbreak Communications and IHR implementation, and was involved in various capacity building initiatives in risk communications.

**Dr Maria Van Kerkhove, Head, Outbreak Investigation Task Force, Center for Global Health, Institut Pasteur, Paris, France**

Dr Maria Van Kerkhove is the Head of the Outbreak Investigation Task Force at Institut Pasteur's Center for Global Health. She is an experienced infectious disease epidemiologist with strong field experience in infectious disease outbreaks and epidemiologic investigations in Asia, North/Central/South America, the Middle East and Africa.

Dr Van Kerkhove's main research interests include zoonoses viruses, respiratory viruses and emerging/re-emerging viruses such as Ebola and Marburg. She is a leading member of the Consortium for the Standardization of Influenza Seroepidemiology, which is a global partnership aiming to standardize influenza seroepidemiology and develop comprehensive influenza investigation protocols to inform public health policy.

Dr Van Kerkhove is also currently a technical consultant for WHO as a member of the Middle East respiratory syndrome coronavirus (MERS-CoV) task force. She has worked with WHO to routinely analyze available data from countries and conduct risk assessments, and regularly participated on Missions to affected countries.

Dr Van Kerkhove was previously employed by Imperial College London in the Medical Research Council Centre for Outbreak Analysis and Modelling where she worked closely with WHO on influenza, yellow fever, meningitis, MERS-CoV and Ebola Virus Disease.