

### Chair of NERVTAG

**Professor Peter Horby,**  
University of Oxford

Peter Horby is Professor of Emerging Infectious Diseases and director of the Epidemic Diseases Research Group at the University of Oxford. He has led clinical and epidemiological research on a range of epidemic and endemic respiratory virus infections, including SARS, avian influenza, and seasonal influenza. He is an advisor to the World Health Organization on the research agenda for influenza; the prioritization of severe emerging infectious diseases for research and development; and clinical trial designs for epidemic-prone infections. He is also Executive Director of the International Severe Acute Respiratory and emerging Infections Consortium (ISARIC), a global federation of clinical research networks, that collectively provide clinical research preparedness and response capacity for infectious diseases with epidemic or pandemic potential.

### NERVTAG Members

**Professor Wendy Barclay**  
Imperial College London

Wendy Barclay took the Natural Science tripos at Cambridge, graduating in 1985. For her postgraduate study, Wendy infected human volunteers with rhinoviruses at the Common Cold Unit in Salisbury under the supervision of Dr David Tyrrell FRS, to understand the immune response to rhinovirus infection. In her first postdoctoral appointment Wendy joined Professor Jeff Almond at the University of Reading and learned the molecular virology skills, including the genetic engineering of small RNA viruses, that would form the technological basis of her research career. In 1992 she moved to the Mount Sinai Medical Center in New York and learned from Professor Peter Palese the techniques for recovery of recombinant influenza virus from cloned cDNA. Wendy returned to the University of Reading in 1995 and worked on influenza viruses there for 12 years. In May 2007 she moved with her group to take up a Chair in Influenza Virology at Imperial College London. She currently heads a team of around 10 scientists funded by the BBSRC, NC3Rs, and the EU. The lab studies many different aspects of the interaction between influenza viruses and their hosts. She is particularly interested in the mechanism by which viruses can cross from animal sources into humans to cause new pandemics. She is the current Chair of the Virus Division of the Society for General Microbiology. She sits on several advisory boards including that for The Roslin Institute as well as for the Science Media Centre. She has been a frequent contributor in the media on science issues particularly those concerning virus outbreaks.

**Dr Cariad Evans**  
Sheffield Teaching Hospitals  
NHS Foundation Trust

Cariad Evans is a clinical virologist (dual accredited in Infectious Diseases and Virology) working at Sheffield Teaching Hospital NHS Foundation Trust, covering the clinical virology service for South Yorkshire and North Derbyshire. She has a MD from Sheffield University and continues to be active in clinical virology research. Cariad has a specific interest in High Consequence Infectious Disease (HCIDs), including safe systems of working and personal protective equipment using Violet ('Visualising Infection with Optimised Light for Education and Training') a healthcare training mannequin, adapted to show symptoms consistent with a suspected HCID. She has worked on establishing a unified UK HCID PPE ensemble with the UK HCID Network, Health and Safety Executive, NHSE and Public Health England. Cariad also has extensive experience in establishing patient pathways using rapid point of care (POCT) viral diagnostics, focusing on influenza. She has publications on the utility of flu POCT and has helped regional implementation of the service. Cariad has a valuable understanding of the running of a regional NHS virology laboratory service and advises locally on Outbreak management and sits on the Outbreak System Resilience Group. Outside of work Cariad is Chair of a charity, Sheffield Health Action Resource for Ethiopia (SHARE), which aims to improve the healthcare systems in Tigray northern Ethiopia.

<p><b>Professor John Edmunds</b> London School of Hygiene and Tropical Medicine</p>	<p>John Edmunds is a Professor of Infectious Disease Modelling at the London School of Hygiene and Tropical Medicine. His research interests centre on the use of mathematical models to guide infectious disease policy-making. He has published over 300 articles on topics ranging from HPV vaccination to the economics of pandemic influenza. He is a member of a number of national and international committees including WHO's Polio Research Committee and is on the Scientific Advisory Committee of the Coalition for Epidemic Preparedness Innovation (CEPI). He is also a member of the UK's SPI-M (which provides modelling advice on pandemics) and various subcommittees of the Joint Committee of Vaccines and Immunisation (JCVI – the UK's vaccine policy advisory body).</p>
<p><b>Professor Neil Ferguson</b> Medical Research Council</p>	<p>Neil Ferguson is director of the MRC Centre for Outbreak Analysis and Modelling and the NIHR Health Protection Research Unit for Modelling and Health Economics. He uses mathematical and statistical models to investigate the processes shaping infectious disease pathogenesis, evolution and transmission. His recent work has focused on the use of models as contingency planning tools for emerging human infections (notably SARS-CoV-2, Ebola and pandemic influenza), bioterrorist threats and livestock outbreaks, though he also undertakes research on the dynamics and control of vector-borne diseases (dengue, yellow fever and malaria) and pathogen evolution. He was educated at Oxford University where he also undertook postdoctoral research, then held a readership at the University of Nottingham before moving to Imperial College. Professor Ferguson is a Fellow of the UK Academy of Medical Sciences and an International Member of the US National Academy of Medicine and received an OBE for his work on the 2001 UK foot and mouth disease epidemic. Prof Ferguson advises the UK and US governments, WHO and the EU on emerging infections and modelling.</p>
<p><b>Professor Andrew Hayward</b> University College London</p>	<p>Andrew Hayward (BSc MBBS MSc DTM&amp;H MD) is Professor of infectious disease epidemiology and Director of the UCL Institute of Epidemiology and Health Care. Andrew has extensive of epidemiological and public health research in infectious diseases with a particular focus on respiratory infections. Andrew has led research that underpins international influenza vaccination strategies for health care workers. He was chief investigator of the MRC/Wellcome Flu Watch studies which described the community epidemiology of seasonal and pandemic influenza. He is chief investigator of an NIHR pandemic preparedness grant which will monitor serological responses to the next pandemic. As Director of the Institute of Epidemiology and Health Care he leads around 300 population health and health care research scientists.</p>
<p><b>Dr Benjamin Killingley</b> University College London Hospital Trust</p>	<p>Dr Ben Killingley is a consultant in Infectious Diseases and Acute Medicine at University College London Hospital Trust. He is a full-time clinician working at the front door of hospital based services, and possesses experience and knowledge of the workings of modern day acute medicine and how patients with infection are likely present to medical services and the care pathways that they may encounter. His research interest is the transmission of infection and he completed a PhD at the University of Nottingham in 2012 looking at how Influenza is transmitted amongst humans and was subsequently a lead investigator in a large CDC funded project involving human influenza challenge studies.</p>
<p><b>Professor Wei Shen Lim</b> Nottingham University Hospitals NHS Trust</p>	<p>Wei Shen Lim is a Consultant Respiratory Physician at Nottingham University Hospitals NHS Trust, and Honorary Professor of Respiratory Medicine, University of Nottingham. He has a specific interest in respiratory infections and was Chairman of the British Thoracic Society's Respiratory Infection Specialist Advisory Group, Chairman of the British Thoracic Society's</p>

	<p>Community Acquired Pneumonia Guidelines Committee, Guideline Development Group member for the NICE Pneumonia Guideline and Chairman of the joint British Thoracic Society, British Infection Society, Health Protection Agency and DoH Pandemic Influenza Clinical Management Guidelines Committee. He sat on the CMO's Pandemic Influenza Clinical and Operational (PICO) advisory group during the 2009-10 pandemic. He is Chief Investigator of a NIHR-funded pandemic influenza trial investigating Adjuvant Steroids in Adults with Pandemic Influenza (ASAP trial), Co-Investigator of the RECOVERY trial, Member of the UK-CTAP Anti-viral subgroup and Chair of the JCVI sub-group on COVID-19 immunisation.</p>
<p><b>Dr Jim McMenamin</b> Health Protection Scotland</p>	<p>Jim graduated from Glasgow University in 1987 (MBChB) and trained in General Medicine (MRCP – Glasgow) and Infectious Diseases (DTM&amp;H-London) before moving into Research in infection where he developed an interest in the Public Health aspects of Communicable Disease (MPH-Glasgow). He worked as a Consultant in Public Health Medicine/Communicable Disease in Greater Glasgow before moving to his current post in Health Protection Scotland. Jim is the strategic lead for the Respiratory Viral team within HPS and is responsible for seasonal and pandemic influenza. He currently co-chairs the Scottish Immunisation Programme Epidemiology and Surveillance group. Jim is very active in the area of assessment of seasonal influenza vaccine effectiveness through collaboration with EU partners in the IMOVE project. He has a keen interest in data linkage and works with a consortium of Scottish University &amp; NHS Scotland colleagues on assessment of the impact of the seasonal influenza vaccination programme. Jim acted as an external advisor to the ECDC for the risk assessment of the 2011/12 and 2012/13 influenza season. He has secured in excess of £5 million of research and service development monies over the past seven years. He has over 90 publications across a range of infection topics.</p>
<p><b>Professor Peter Openshaw</b> Imperial College London</p>	<p>Peter Openshaw is a respiratory physician, Professor of Experimental Medicine at the National Heart and Lung Institute, Imperial College London and the President of the British Society for Immunology. His research focuses on the immunology of the lung, viral lung disease, vaccination and viral immunopathogenesis. He has worked on extensively on mouse models of respiratory syncytial virus disease (RSV) and led a consortium ('MOSAIC') studying immunopathogenesis in hospitalised patients with influenza. He conducts studies of human volunteers experimentally infected with RSV and influenza and leads an MRC-funded consortium HIC-vac, which promotes the use of infection challenge to accelerate vaccine development.</p> <p>He has served on many committees including the Department of Health's Scientific Advisory Group on Influenza (SAGE) and the Scientific Pandemic Influenza committee (SPI). He has co-authored over 230 scientific manuscripts (h-index 60). He is a member of ISARIC, the EU PREPARE and RESCEU consortia, Infection Theme Lead for the Imperial College Biomedical Research Centre, an NIHR Senior Clinical Investigator and a Consul of Imperial College (Clinical) and president of the International RSV Society.</p>
<p><b>Professor Calum Semple,</b> University of Liverpool</p>	<p>Calum Semple is Professor of Outbreak Medicine and Child Health at the University of Liverpool. He was jointly appointed as Consultant in Paediatric Respiratory Medicine at Alder Hey Children's Hospital in 2006. Calum is Chief Investigator (CI) on the ISARIC WHO Clinical Characterisation Protocol for Severe Emerging Infection UK (CCP-UK) and leads the COVID-19 Clinical Information Network (CO-CIN). He is also CI on the Pandemic Influenza community Assessment Tools (Flu-</p>

	<p>CATs) study and Bronchiolitis Endotracheal Surfactant Study (BESS). He was a co-investigator on FLU-CIN (2009-12), MOSAIC (2010-2014), and ARCHIE (2014-202). He was Consortium Lead Investigator for the Ebola Convalescent Plasma study in Sierra Leone (Ebola_CP) 2014-17 and Co-Investigator on the sister study in Guinea (Ebola_Tx). He was awarded the Queen's Ebola Medal for Service in West Africa. He is an Honorary Senior Clinical Advisor to the CMO and Cabinet Office of HMG UK, and sat on the Pandemic Influenza Clinical Operational group 2009-10, Olympic Health Threats Advisory Group 2012 and Health Secretary's Meningococcal Disease group. He was a member of the WHO Scientific Technical Advisory Committee on Ebola Emergency (STAC-EE) (2014-16) and is Senior Clinical Editor for the journal Influenza and Other Respiratory Viruses.</p>
<p><b>Dr James Rubin</b> Kings College London</p>	<p>James is an academic psychologist at King's College London, where he is a Reader in the Psychology of Emerging Health Risks. His main research interest is in understanding how people perceive health risks and what implications these perceptions have for how people behave and for their physical and mental well-being. He has published over 150 peer-reviewed academic papers on these and related topics.</p> <p>James's work covers two overlapping areas. The first assesses the importance of perceptions relating to suddenly occurring mass exposure to a potentially hazardous substance. Much of this work is conducted under the auspices of the NIHR Health Protection Research Unit in Emergency Preparedness and Response, which he is the assistant director for. The second area involves understanding how psychological and social factors can determine whether or not a person will develop symptoms following exposure to a potentially hazardous substance. James has previously published papers on why people attribute physical symptoms or seek health care following apparent exposure to mobile phone signals, wifi, police radio systems, common chemicals, wind turbines, swine flu, chemical terrorism and outbreaks of plague, among other things. As a result of his research, he has been invited to work with UK, EU and World Health Organisation bodies investigating the potential effects of newly identified health risks and is an honorary non-medical consultant with the Emergency Response Department, Public Health England.</p>
<p><b>Co-opted Members</b></p>	
<p><b>Dr Chloe Sellwood</b> NHS England &amp; NHS Improvement</p>	<p>Chloe Sellwood (BSc (Hons) PhD FRSPH DipHEP) is currently the National Lead Pandemic Influenza for NHS England and NHS Improvement, within the Emergency Preparedness, Resilience and Response (EPRR) Team. Her experience ranges from local to international levels and encompasses scientific, strategic and operational aspects. She spent over seven years at the Health Protection Agency, including three years as the Senior Scientist and Coordinator of the Pandemic Influenza Office. In 2008 she joined NHS London as the Pandemic Influenza Resilience Manager. In 2010 she took on responsibility for Health Resilience for the NHS across London for the Olympic and Paralympic Games, and in autumn 2014 she assumed the strategic leadership for NHS Ebola preparedness in London. Since February 2017 she has also been Deputy Head of the NHS England and NHS Improvement (London) EPRR team and has been intrinsically involved in the response to major incidents in London and nationally, including those over summer 2017. She is the co-editor of, and a contributing author to, two textbooks on pandemic influenza and one on health EPRR, as well as articles and papers on influenza resilience. She has worked with WHO and ECDC on international consultations, as well as on secondment to the Department of Health and Social Care (England) Pandemic Influenza Preparedness Programme.</p>

<p><b>Professor Ian Brown</b> Animal and Plant Health Agency</p>	<p>Professor Ian Brown is Head of Virology at the Animal and Plant Health Agency - Weybridge and Director of OIE/FAO International Reference Laboratories for Avian Influenza, Newcastle Disease and Swine Influenza. Ian is the UK national expert on Avian and Swine Influenza and a designated OIE expert for the three diseases.</p> <p>Ian is a founder member of the OFFLU open global network on animal influenza and currently chairs the steering committee. He has taken the lead on a number of key international issues related to the work of this group both on the avian and swine subgroups. He provides a broad range of disease consultancy at both international and national level on all the aforementioned diseases, specialising in science evidence and laboratory application as directly relevant to disease control. His specific research interests include the epidemiology, pathogenicity, transmission and infection dynamics in relation to the control of influenza in animal hosts including zoonotic threat. Ian gained his PhD on 'Epizootiology of influenza in pigs in Great Britain with emphasis on characterisation of viruses isolated since 1986'. Ian holds a visiting Professorship position in Avian Virology at the University of Nottingham and Honorary Professorship in Pathobiology and Population Sciences with Royal Veterinary College, London. He was awarded an OBE in the 2020 New Year honours list for services to animal health and welfare.</p>
<p><b>Dr Lisa Ritchie</b> NHS England &amp; NHS Improvement</p>	<p>Lisa Ritchie has worked in health protection/infection prevention and control since 1998. From 2009 Lisa worked as a Nurse Consultant in Infection Prevention and Control and was clinical lead for the National Infection Prevention and Control Policy, Guidance and Outbreak Health Protection Programme at Health Protection Scotland. Lisa has been active in developing infection prevention and control guidelines both nationally and internationally and has been involved with several key initiatives in this area, including the development of a national infection prevention and control manual for Scotland. Lisa completed a PhD at Glasgow Caledonian University in 2018 looking at the effectiveness of admission risk assessment and pre-emptive patient cohorting in the control of MRSA transmission. In April 2020 she took up post as Head of Infection Prevention and Control at NHS England and NHS Improvement.</p>
<p><b>Temporary Co-opted Members for COVID-19</b></p>	
<p><b>Professor Julian Hiscox</b> University of Liverpool</p>	<p>Julian A. Hiscox is Chair in Infection and Global Health and Deputy Executive Dean in the Institute of Infection, Veterinary and Ecological Sciences, University of Liverpool. He also is an adjunct professor at the Infectious Diseases Horizontal Technology Centre (ID HTC), A*STAR, Singapore. He did a BSc in Genetics at University College London in 1991 and then a PhD on porcine coronavirus replication at the Institute for Animal Health (University of Reading, 1994). After post-doctoral training in the USA and back in the UK on avian coronaviruses, he became a Lecturer/PI at the University of Reading starting a research group on the avian coronavirus, infectious bronchitis virus (IBV). At Reading he focused on the cell biology of the virus, the viral nucleoprotein and developing field based ELISAs. He moved to the University of Leeds in 2002 and carried on with IBV but also included work on severe acute respiratory syndrome coronavirus (SARS-CoV) and human respiratory syncytial virus. In 2012 he moved to the University of Liverpool, where he included Ebola virus in his research portfolio and in the past two years he and his laboratory have been visiting Saudi Arabia to work with collaborators on Middle East respiratory syndrome coronavirus (MERS-CoV). He currently leads a £4.1M research program funded by the</p>

	<p>US FDA on severe coronavirus infections including MERS-CoV and SARS-CoV-2. His research is defined by using high resolution approaches to characterise clinical samples and inform functional analysis.</p>
<p><b>Dr Muge Cevik</b> <b>University of St Andrews</b></p>	<p>Muge Cevik, MD, MSc, MRCP(UK) is a clinician scientist in infectious diseases and medical virology. Her research interests focus on HIV, tuberculosis, other tropical infections and emerging infections including Covid-19 since the beginning of 2020.</p> <p>During the Covid-19 pandemic, as well as working on the NHS front line of the response, Dr Cevik provided scientific advice to the Chief Medical Officer – Scotland and advisory groups on recent scientific developments on Covid-19. She has been co-opted to NERVTAG (New and Emerging Respiratory Virus Threats Advisory Group) as a member for Covid-19, advising and producing guidance documents for UK-SAGE (Scientific Advisory Group for Emergencies). She also provided advice and consultancy to the World Health Organisation (WHO) on risk communication during Covid-19 pandemic.</p> <p>Dr Cevik is coordinating the recruitment of hospitalised COVID-19 patients in South East Asia and South Africa working closely with the International Severe Acute Respiratory and Emerging Infections Consortium (ISARIC). Additionally, she is co-leading a household SARS-CoV2 transmission study in Scotland as well as a prospective study to quantify the burden of Covid-19 in patients with tuberculosis in Kampala, Uganda.</p>
<p><b>Professor Ravindra K Gupta</b> <b>University of Cambridge</b></p>	<p>Having completed undergraduate medical studies at Cambridge and Oxford Universities, Ravi Gupta pursued a Masters' degree in Public Health at Harvard as a Fulbright scholar. Upon return he trained in infectious diseases in Oxford and London (UCLH, Hospital for Tropical Diseases) and completed his PhD at UCL on HIV-1 resistance to antiretrovirals and lentiviral evasion of innate immune responses.</p> <p>He established his research group at UCL in 2011 working on intra-host evolution and biology of HIV and was promoted to full professor in 2016. Gupta, a Wellcome Trust Senior Fellow in Clinical Science, joined the Department of Medicine at the University of Cambridge in 2019. He is also faculty at the Wellcome Africa Health Research Institute in South Africa where his HIV-1 work includes study of central nervous system reservoirs. Gupta has been an advisor to WHO on HIV Drug Resistance and is part of ResNet, the WHO global HIV resistance surveillance network.</p> <p>During 2020 he demonstrated clinical utility of isothermal amplification for rapid diagnosis of COVID-19 and the added benefit of rapid antibody testing in latter stages of illness. He recently demonstrated the first evidence of in vivo SARS-CoV-2 escape from neutralising antibodies along with the most comprehensive assessment of intra-host SARS-CoV-2 evolution to date. His group has also characterised the SARS-CoV-2 Spike 69/70 deletion, present in the UK variant B.1.1.7, as an infectivity enhancing mutation that potentially allows multiple antibody escape mutations to accumulate.</p>