

SCIENTIFIC PROGRAM

SESSION LECTURE

No.8

One Health and Prevention of Emerging Infectious Diseases

Room: Swan Room 3

Co-Chairs:
Jianguo Xu



Deyin Guo



Linfa Wang



Day 1 October 19th (Saturday) 14:00 – 17:30

Time	Speaker	Title
14:00-14:30	Linfa Wang Duke-NUS Medical School, Singapore	One Health Lessons from Studying Bats and Bat Viruses
14:30-15:00	Jianguo Xu Chinese Centers for Disease Control and Prevention, China	The tremendous unknown microbe around us
15:00-15:30	Gregory C Gray University of Texas Medical Branch, Galveston, TX, USA	A Practical One Health Strategy to Detect Pre-Pandemic Zoonotic Respiratory Virus Threats
15:30-16:00	Tea Break	
16:00-16:30	Zhengli Shi Guangzhou National Laboratory, Guangzhou, China	Pathogenicity and spillover risk assessment of bat coronaviruses
16:30-17:00	Supaporn Wacharapluesadee King Chulalongkorn Memorial Hospital, Bangkok, Thailand	One Health surveillance of Nipah virus from flying foxes in Thailand
17:00-17:30	Deyin Guo Guangzhou National Laboratory, Guangzhou, China	Development of broad-spectrum antiviral drugs to RNA viruses of pandemic risk



Jianguo Xu

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Professor at National Institute for Communicable Disease Control and Prevention, Chinese Centers for Disease Control and Prevention, Member of Chinese Academy of Engineering, President of Chinese Society for Microbiology, Chairman of the National Expert Committee for Laboratory Biosafety of Microbial Pathogens; Chairman of National Expert Committee for Biosafety; Director of National Key Laboratory of Intelligent Tracking and Forecasting for Infectious Diseases (NITFID). DR. Xu's team has implemented nine etiological investigations for major infectious diseases outbreaks in China caused by emerging pathogens, such as the outbreak caused by *Escherichia coli* O157:H7 in 1999, by *Streptococcus suis* sequence type 7 in 2005, by *Anaplasma phagocytophilum* in 2006, by *Neisseria meningitidis* sequence type 4821 complex in 2005.



Linfa Wang

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Linfa Wang is a professor of the Programme in Emerging Infectious Diseases at Duke-NUS Medical School, and the inaugural executive director of PREPARE, Ministry of Health, Singapore. His research focuses on bat-borne viruses and virus-bat interaction in addressing the key question on how bats co-exist with a large number of viruses without developing clinical diseases. In response to the COVID-19 pandemic, he served on multiple WHO committees for COVID-19, including the WHO IHR Emergency Committee. He is an elected fellow of the Australian Academy of Technological Sciences and Engineering, the American Academy of Microbiology and the Australian Academy of Science. He received the Singapore President Science Award in 2021.



Gregory C Gray

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Professor of Infectious Disease Epidemiology in the Department of Internal Medicine (Infectious Diseases) at the University of Texas Medical Branch in Galveston, Texas. He directs the UTMB One Health Research and Training Program which involves conducting epidemiological studies currently in the United States, Kenya, Malaysia, Mexico, Mongolia, Pakistan, the Philippines, Sri Lanka, and Vietnam. Professor Gray received his medical degree at the University of Alabama at Birmingham, School of Medicine and his Master in Public Health degree from Johns Hopkins School of Hygiene & Public Health in Baltimore, Maryland. His medical boards are in Preventive Medicine and Public Health. Dr. Gray has conducted diverse epidemiological studies of infectious diseases for more than 30 years in 5 continents. He has authored more than 380 peer-reviewed manuscripts and book chapters. Much of his work has involved studying zoonotic respiratory viruses.



Zhengli Shi

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Dr. Shi is a senior scientist of the Guangzhou Laboratory. She focuses her research on pathogen investigation of unknown viruses in wild animals and interspecies infection mechanism of zoonotic viruses. She is in charge for the viral surveillance screening among bat samples leading to the discovery and recognition of a wide-array of SARS-like coronaviruses, adenoviruses and adeno-associated viruses in mainland China. Her long experience on bat coronavirus led to the rapid identification of the pathogen of COVID-19 and its probable bat origin. Shi won the second prize of Natural Science Award of China in 2018 and was elected as fellowship of American Academy of Microbiology in 2019. She has served since 2017 as Editor-in-Chief for *Virologica Sinica*.



Supaporn Wacharapluesadee

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Dr. Supaporn Wacharapluesadee serves at Thai Red Cross Emerging Infectious Diseases Clinical Center, King Chulalongkorn Memorial Hospital, Bangkok, Thailand. She has 29 years of experience in public health research and 20+ years of experience in emerging viral zoonoses from bats and other wildlife. Her research projects include pathogen discovery, diagnostics development, public health surveillance, field surveillance in wild mammals, human behavioral risk surveys, and clinical research. Her research background mainly focuses on understanding the process of zoonotic disease emergence, particularly viral zoonoses. This includes identifying the bat origin of the Nipah virus, MERS-CoV, and SARS-CoV-2, as well as pathogenesis and rabies diagnosis.



Deyin Guo

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Dr. Deyin Guo, PhD, is a principal investigator at Guangzhou National Laboratory and a Professor of Medical Virology at Guangzhou Medical University and the Zhongshan School of Medicine, Sun Yat-sen University. Dr. Guo received his PhD in Microbiology from the Faculty of Biosciences, Braunschweig University of Technology in German. Dr. Guo focuses his work on molecular mechanisms of the infection and pathogenesis of RNA viruses, in particular, the emerging coronaviruses including SARS-CoV and SARS-CoV-2, as well as development antiviral drugs against RNA viruses. He established high-throughput antiviral drug screening systems based on his own findings in basic research on coronavirus; he developed one adenosine analogue anti-SARS-CoV-2 prodrug which is now phase III clinical trials. He has published more than 200 peer-reviewed papers and book chapters.