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Date & time: 6 July 2020; 7pm – 8pm

Topics: The Emergence of COVID-19 – The Known Unknown

Synopsis
The COVID-19 outbreak was first recognized in December 2019 in Wuhan, China and has since spread to all parts of the world, resulting in a total of 10,357,662 confirmed infections with 508,055 deaths as of 1 July, 2020. The causative agent was identified as 2019-nCoV, subsequently designated SARS-CoV-2, which belongs to the species SARS-related coronavirus (SARSr-CoV), same as for SARS-CoV, the causative agent of the SARS outbreak 17 years ago.

Although it is ‘known’ that coronaviruses of wildlife (especially bat) origin are a significant risk of emerging infectious disease outbreaks, the “unknown” aspect of when, where and how such an outbreak will impact the global economy and world order still caught us all by surprise from the COVID-19 pandemic.

In this lecture, I will provide a review of the early events, global transmission, the role of animals in a zoonotic disease outbreak and finish with lessons we have learnt from this and other outbreaks caused by emerging viruses of bat origin.

Short biography
Professor Wang is the Director of the Programme in Emerging Infectious Diseases at Duke-NUS Medical School, Singapore.

Prof Wang is an expert in the field of zoonotic diseases, bat immunology and pathogen discovery. His early research was at the Monash Centre for Molecular Biology and Medicine. In 1990, he joined the Commonwealth Scientific and Industrial Research Organization (CSIRO), Australian Animal Health Laboratory (AAHL) where he played a leading role in identifying bats as the natural host of the Severe Acute Respiratory Syndrome (SARS) virus. His research then extended from bat-borne viruses to better understand virus-bat interaction and how bats co-exist with a large number of viruses without developing clinical diseases. His recent research contributions include developing antibody based serological tests to detect the SARS-CoV-2 virus, responsible for the COVID-19 outbreak, and the early and successful culture of the virus from an infected patents sample. His team is also working
together with local and international partners to develop new vaccines and therapeutics for COVID-19.

Prof Wang is a member of multiple World Health Organization committees on COVID-19. His work has been recognised internationally through various international awards, numerous invited speeches at major international conferences and more than 400 scientific papers including many top scientific publications in Science, Nature, Nature Reviews in Microbiology, Lancet and the Proceedings of the National Academy of Sciences (PNAS), along with five patents and many invited book chapters. He holds a number of honorary positions and memberships and has received numerous awards such as the 2014 Eureka Prize for Research in Infectious Diseases. In 2010, Prof Wang was elected as a Fellow of Australian Academy of Technological Sciences and Engineering in recognition of his expertise in new and emerging diseases. He is also active internationally by serving on various editorial boards for publication in the areas of virology, microbiology and infectious diseases. He is currently the Editor-in-Chief of the Virology Journal.

Prof Wang holds a PhD degree from the University of California, Davis USA and a Bachelor’s degree from the East China Normal University, Shanghai China.