



From Forest to Market: Tracking virus diversity and cross-species transmission risks in African bushmeat

Date: Friday March 21st

Time: 16:00 (UTC+8)

Venue: 3N01 + Zoom



Our work aims to assess the prevalence and diversity of pathogens in animals sold at bushmeat markets, evaluating the potential for cross-species transmission and zoonotic risks to consumers. In Spring 2022, we conducted pathogen surveillance in bushmeat markets in Yaoundé, Cameroon, observing the sale of various wildlife species from different provinces in south and central Cameroon, including white-bellied pangolins, mona monkeys, duikers, porcupines, and cane rats. This work was spurred by the discovery of SARS-related coronaviruses (SARSr-CoVs) in Asian pangolins. Given this finding, we aimed to investigate the possibility of coronavirus and tick-borne virus infections in African pangolins and assess associated risks in the bushmeat trade. We have employed metagenomic and metatranscriptomic sequencing of animals and their ectoparasites to investigate viruses with zoonotic and epizootic potential, contributing to our understanding of disease dynamics within diverse wildlife host species. This work may be used to support conservation efforts, provide essential knowledge for improved human and animal health, and inform targeted biosecurity practices.



Brian Worthington

Dr. Brian Worthington is a virologist and public health researcher dedicated to unraveling the origins of viral spillover at the human-wildlife interface. As a Postdoctoral Fellow at the Laboratory of Data Discovery for Health and HKU's State Key Laboratory of Emerging Infectious Diseases, he investigates cross-species transmission dynamics of high-risk zoonotic and epizootic viruses, including Coronaviruses, Paramyxoviruses, and Ranaviruses, within wildlife populations. By integrating field surveillance, molecular virology, and phylogenomics, his work aims to identify ecological drivers of pathogen emergence and evolution. A graduate of HKU's School of Public Health (PhD, Public Health & Virology), Dr. Worthington is a passionate advocate for One Health approaches, bridging public health and conservation biology to address challenges at the intersection of wildlife trade, land-use change, and global health security.

ALL ARE WELCOME!

