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Channing Microbiome Seminar

March 17 (Friday), 2023, 9AM (ET)

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Yu Deng, PhD

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Use of sewage surveillance for SARS-CoV-2 in Hong Kong

Abstract: Wastewater surveillance offers an efficient and inexpensive way to anonymously measure the population health without requiring individual participation. It has been recognized as a useful supplementary tool of public health surveillance for preparedness and response to coronavirus disease 2019 (COVID-19) and other infectious diseases. HKU Civil Engineering-led multidisciplinary team developed a method for SARS-CoV-2 detection in wastewater for building up a systematic wastewater surveillance program from the ground-up, and helped the Government implemented it as a statutory program on a city-wide scale (covers over 80% of total population) that has been lasting for more than two years.

Bio: *Dr. Yu Deng obtained her PhD in Environmental Engineering from the University of Hong Kong in 2017. She was a Postdoctoral Fellow in the Department of Civil Engineering at the University of Hong Kong from December 2017 to January 2021. She is currently a Research Assistant Professor in the Department of Civil Engineering at the University of Hong Kong (since February 2021) and a Visiting Scientist in the Department of Biological Engineering at the Massachusetts Institute of Technology (since March 2023). Dr. Deng's research background is in environmental microbiology, and her expertise and research experience include environmental microbiology, wastewater-based epidemiology, bioinformatics, and antibiotic resistance. She has extensive research experience in wastewater-based epidemiology. Since April 2020, she has been involved in monitoring the SARS-CoV-2 virus in sewage in Hong Kong, including developing detection methods and applying the methods as public health tools to help control the epidemic. Dr. Deng has published 33 peer-reviewed papers in several international journals and is also one of holders for four patents related to wastewater surveillance.*

Hosted by Yang-Yu Liu