

Sydney Summer School in Pathogen Genomics and Global Health 2021

Webinar Series

February-March 2021

EOI Open

Following the successful annual Sydney Summer School in Pathogen Genomics and Global Health programs in 2017 - 2020, we are pleased to open EOIs for 2021, to microbiologists, clinicians, epidemiologists and public health professionals that are interested in translational research in the field of public health pathogen genomics and communicable disease control. The program includes a mix of inspiring keynotes, master classes and practical demonstrations delivered by expert practitioners in a webinar series. We will teach the basics of genomics of bacteria, viruses, and fungi with epidemic potential and critically examine the approaches to the analysis of genomes in global health context. The webinar series will illustrate the power of genomics, functional genomics and metagenomics in answering important questions on the assessment of evolution, virulence, transmissibility and drug resistance as well as on detection of local and international outbreaks and deciphering of transmission pathways. The special focus this year will be on applications of genomics and tracking the evolution and community spread of SARS-CoV-2.

The number of participants is limited. Organisers will select participants based on their provided information about motivation, prior knowledge and interests.

Course Information

Dates: 26th Feb, 5th, 12th, 19th March 2021

Time: 1pm – 5pm Australian Eastern Standard Time (AEST)

EOI Submission Link (close date 10th Jan 2021):

<https://redcap.sydney.edu.au/surveys/?s=TXCPLW99XR>

Program: Detailed 4 day webinar series program to be released soon. Please refer to the CIDM-PH website for 2020 program.

Registration Fees (to be confirmed upon EOI):

\$400 International and Australian participants

\$250 University of Sydney students and academics

Enquiries: WSLHD-CIDM-PH@health.nsw.gov.au

The Summer School is organized by the Centre for Infectious Diseases and Microbiology – Public Health (CIDM-PH) WSLHD, and Marie Bashir Institute (MBI) with the support of the Sydney Informatics Hub, University of Sydney.



Topics to be covered

- What can the analysis of microbial genomes tell translational researchers clinicians? How to select sequencing and bioinformatics solutions for specific research questions? Genome-wide association studies and patient outcomes
- Integration of genomic, clinical and epidemiological data: global and local perspectives and solutions
- Integrated data models, data analytics for knowledge discovery and data visualisation (we will employ phylogenetics and phylodynamics as case studies)
- Generation and analysis of SARS-CoV-2 genomic data in the context of current pandemic
- Implementation of next generation sequencing technologies in diagnostic and public health laboratories
- Effective and ethical data sharing and translation of genomics into precision medicine and public health
- Modelling and evaluation of genomics-guided interventions in hospital and community settings; genomics knowledge network