



## Sydney Summer School in Pathogen Genomics and Global Health 11-15 February 2019

This Summer School aims at young graduates, researchers, clinicians and public health professionals that are interested in translational research the field of public health pathogen genomics and communicable disease control. The program includes a mix of inspiring keynotes and master classes, practical hands-on demonstrations and laboratory visits. We will teach the basics of genomics of bacteria, viruses, fungi and parasites with epidemic potential and critically examine the approaches to the analysis of genomes in global health context. Hands-on exercises will be organised to 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 outbreaks and deciphering of transmission pathways. The School will also offer opportunities for exchange of ideas and discussions with presenters and fellow participants.

The number of participants is limited so the organisers will select participants based on their provided information about motivation, prior knowledge and interests. Participants are encouraged to submit or bring fastQ files from their own experiments if they prefer to use them as their training exercises.

**11-15 February 2019**

**Venue:** Sydney Nanoscience Hub, University of Sydney, Camperdown and Centre for Infectious Diseases and Microbiology – Public Health, Westmead Hospital, Westmead

**Registration fees:** \$500 for international and Australian participants. \$200 for University of Sydney students and academics. Registration covers refreshments (morning tea and lunch) and course notes. The deadline for expressions of interest 7 December 2018.

**Accommodation:** There is a choice of affordable hotels in the Sydney CBD around Camperdown (at own cost).

**EOI Submission:**

<https://redcap.sydney.edu.au/surveys/?s=A7EMNR8JKP>

**More Information:**

<http://whatson.sydney.edu.au/events/published/sydney-summer-school-in-pathogen-genomics-and-global-health>

### 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)

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 networks

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.