

GSC23 Bangkok, 11 August 2023

Genomic Standards for Precision Medicine, Agriculture, Comparative Genomics, and Metabolomics

Location: Room 304-305, SiMR Building, Siriraj Hospital Mahidol University, 2 Thanon Wang Lang, Siriraj, Bangkok Noi, Bangkok 10700, Thailand

[Oxford Nanopore Technologies Limited](#) is a UK-based company which develops and sells nanopore sequencing products (including the portable DNA sequencer, MinION) for the direct, electronic analysis of single molecules.

This hands-on workshop will provide attendees with a critical understanding of Oxford Nanopore sequencing technology through a comprehensive laboratory and analysis workflow approach. The workshop will provide a background understanding of the sequencing technology, QC, and sequencer set up with laboratory training including “hands-on” individually generated sequence ready barcoded libraries, loading flow cells, and operating the MinKNOW sequencing software. Basic data analysis with EPI2ME software will allow participants to analyze and view the results. The program will consist of a morning session where participants will prepare actual sequencing libraries, load the MK1C MinION flow cell and initiate sequencing. An afternoon session will include understanding the QC outputs and Introduction to basecalling and Epi2ME analysis workflows.

Prerequisites include basic laboratory safety procedures, low volume pipette operations, and basic understanding of DNA sequencing.

Topics covered:

- Introduction and Overview of Technology
- Library Synthesis and Quality Control
- Loading the Nanopore Flow Cell
- Operating MinKNOW Software
- Sequence Operations of MK1C
- Sequence Monitoring Metrics
- Post Sequencing Data Analysis