CLIMADE AFRICA WORKING GROUP MEETING MINUTES – WEEK 11

Host: Centre for Epidemic Response and Innovation (CERI)

Date: May 9, 2023

Time: 12:00 – 13:00 p.m. (SAST)

Facilitators: Dr Eduan Wilkinson, Dr Monika Moir and Dr Yeshnee Naidoo

Attendance/ No. of Participants: 83

Start time: 12:03p.m. (SAST)

Purpose of the meeting

Sequencing methods for Cholera

Agenda Items

1. Welcome and update by Dr Monika Moir.
2. Introduction to the presentation by Dr Yeshnee Naidoo and Presentation by Lucious Chabuka from the Public Health Institute of Malawi and an MSc fellow at CERI Tygerberg laboratories.
3. Questions and Discussion

Discussion points and questions

1. Mr. Chabuka discussed the adaptive protocol for Cholera whole genome sequencing during the Malawi epidemic which included:

- The history and comparison of cholera outbreaks in Malawi
- The geographical range of outbreaks and specimen collection.
- Sample preparation
  - sub-culture samples suspended in phosphate buffer.
  - DNA isolation using Qiagen QIAmp DNA mini kit

- The protocol was adapted for the Nextseq 1000 platform.
- Whole genome sequencing using Illuminias DNA Prep kit.
- Detailed explanation on the DNA tagmentation, amplification and library preparation steps.
- DNA quantification using Qubit or Pico green.
- Fragment size selection workflow.
- Normalization steps

2. The sequencing protocol can be adapted to other viruses and bacterium.
3. Illumina DNA Prep Kit formerly known as the Nextera DNA prep kit.
4. Stored samples without sub-culturing have not been tired for this protocol.
5. Cholera and Arbovirus sequencing protocols are available on the CLIMADE GitHub link: https://github.com/CERI-KRISP/CLIMADE/tree/master/protocols
6. Session recording will be available on the GitHub repository.

Adjournment and Closing points.

1. Dr Eduan Wilkinson adjourned the meeting at 12:52 p.m. (SAST).

Next Meeting

Tuesday, May 16, 2023, at 12:00 – 13:00 p.m. (SAST)

Submitted by: Yajna Ramphal

Approved By: Monika Moir