

# CLIMADE AFRICA WORKING GROUP MEETING MINUTES – WEEK 12

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**Host:** Centre for Epidemic Response and Innovation (CERI)

**Date:** May 16, 2023

**Time:** 12:00 – 13:00 p.m. (SAST)

**Facilitators:** Dr Eduan Wilkinson and Prof Tulio de Oliveira

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**Attendance/ No. of Participants:** 67

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

## Purpose of the meeting

Pipelines for viruses: Bioinformatic analysis and viral typing tools

## Agenda Items

1. Welcome and update by Dr Eduan Wilkinson.
2. Introduction and presentation by Prof Tulio de Oliveira on arbovirus typing tools (Genome Detective)
3. Questions and Discussion

## Discussion points and questions

1. Prof Tulio discussed the following;
  - The protocol and steps used to sequence samples (general sequencing steps), protocols that are available on GitHub
  - MinION pipeline recently developed
  - Introduction to Genome Detective
  - Overview of the Genome Detective methods
  - Explanation of Genome Detective outputs i.e., reads, coverage, mutations.
  - Yellow fever epidemic in Brazil and Typing tool
  - Bootstrap support value > 70
2. Natural History of Yellow fever virus
3. Interactive Discussion on what could have led to further outbreaks of YFV

4. Interactive discussion of metagenomics and when it should be used and why
5. Phylogenetic analysis of YFV using Genome Detective
6. Automated phylogenetic classification for Dengue, Zika, and Chikungunya (Fonseca et al PLOS NTD 2019)
  - Outline of classification procedure
  - Investigation the suitability of sub-genomic regions for genotyping through boot-scanning

### **Adjournment and Closing points.**

1. Dr Eduan Wilkinson adjourned the meeting at 13.37 p.m. (SAST).

### **Next Meeting**

Tuesday, May 22, 2023, at 12:00 – 13:00 p.m. (SAST)

**Submitted by:** Akhil Maharaj

**Approved By:** Monika Moir