

CLIMADE AFRICA WORKING GROUP MEETING MINUTES – MEETING 1

Host: Centre for Epidemic Response and Innovation (CERI)

Date: January 30, 2024

Time: 12:00 – 13:00 p.m. (SAST)

Facilitators: Dr Monika Moir and Prof Tulio de Oliveira

Attendance/ No. of Participants: 74

Start time: 12:01p.m. (SAST)

Purpose of the meeting

Building pathogen genomic sequencing capacity in Africa.

Agenda Items

1. Welcome
2. Presentation by Dr. Eric Agboli and Professor Molalegne Bitew on a genomics and bioinformatics training.
3. A talk by Professor Tulio de Oliveira on investing in Africa's scientific future by increasing genomics capacity and the challenges of retaining skilled personnel.
4. Discussion and feedback

Discussion points and questions

- Welcome by Dr Monika Moir
- Dr. Eric Agboli began the presentation on a genomics and bioinformatics training by introduction this history of genomics.
- Whole genome sequencing has become routine for disease genomic surveillance.
- Need for bioinformatic skills to process and analyses large datasets.
- Major challenges continue to persist in resource-limited settings such a slow and middle-income countries in Africa.
- Lack of access to local bioinformatic expertise and training.
- Limited number of well-trained genomic scientists.

- Lack of computational or poor research infrastructure.
- Internet access instability.
- Socio-economic challenges.
- Support from Africa CDC and WH-AFRO to CERI-KRISP to maintain commitment to capacity building.
- CERI's CLIMADE initiative.
- Capacity building and genomic Workshop application process.
 - o Selection Process
 - o Demographics of applicants and participants.
 - o African collaborators and contribution towards sequencing during the COVID-19 pandemic.
- Fellows' professional experiences in laboratory and data analysis.
- Learning objectives of the training:
 - o Hands-on wet-lab pathogen genomics data production.
 - o Adapting protocols.
 - o Pathogen genomic bioinformatics.
 - o Basic Phylogenetic analysis.
 - o Reporting sequencing results and communicating findings for public health application.
- Fellows' perspective:
 - o Acquisition of specialized skills and advanced knowledge.
 - o Genomic surveillance of pathogens, real-time detection, and communication of results.
 - o Revolution of NGS
 - o Networking and collaboration
- Limitations
- Knowledge transfer.
- Professor Molalegne Bitew shared his experience on local capacity building and training at Hands on training on multiple SARS-CoV-2 detection methods and further application of sequencing and associated bioinformatic tools held in late July 2023.
- Participants were from East Africa
- The way forward for Africa.
- New sequencing facilities or genomics center at national levels

- Strengthening and prioritizing partnerships in Africa.
- Under-representation in human genetics and genomic studies.
- Take home message.
- A Talk by Professor Tulio de Oliveira on investing in Africa's scientific future by increasing genomics capacity and the challenges of retaining skilled personnel.
- Professor Tulio de Oliveira started the discussion with a quote "By empowering African Scientists and Building a strong genomic infrastructure, we can collectively pave the way to a healthier future for all" - Tulio de Oliveira and Cheryl Baxter
- Professor Tulio highlighted on the following topics:
 - o Capacity development and training
 - o Funding and training costs
 - o Capacity development of future researchers and scientists
 - o Lucious Chabuka – long term fellow and his contributions to genomics in Africa.
 - o New strain of Chikungunya identified in Senegal.
 - o Sharing knowledge and learning from one another.
 - o Journal club and seminars held at CERI and collaborators.
 - o Oxford-Africa Scholarship application.
 - o African Career Acceleration Fellowship
 - o Public and social media engagement.
- Dr Monika Moir opened the floor for questions.
- John Silitoe from the Sanger Institute had briefly highlighted the importance on securing funding and supporting capacity building.
- Further support and discussions on Metagenomics for disease identification.
- Sharing of protocols (<https://github.com/CERI-KRISP/CLIMADE/tree/master/Protocols>)
- Request for CERI to help set up genomic facility in Zimbabwe.

Adjournment and Closing points.

1. Dr Monika Moir Dr. Eric Agboli and Professor Molalegne Bitew for sharing their training experience. The meeting was adjourned at 13:09 p.m. (SAST).
2. Climade meeting will be held every last Tuesday of the month.

Next Meeting

February 27th, 2024, at 12:00 p.m. (SAST).

Submitted by: Yajna Ramphal

Approved By: Monika Moir