

# Welcome to SeqAfrica Bioinformatics Community of Practice Final Session

Hosted by Niamh Lacy-Roberts

05.03.26



# Bioinformatics CoP Overview

- First session 4th April 2024
- Today is our final session!
- 23 sessions together
- Hosted by Niamh Lacy-Roberts and Marco van Zwetselaar
- Average of 18 participants per session
- 13 guest speakers, often from our community

# Overview of presentations

- Speakers from Ghana, South Africa, Senegal, Zimbabwe, Rwanda, France, Spain, Denmark, Tanzania
- Topics covering AMR, virus, phages, outbreaks, phylogeny, bioinformatics tools, nextflow pipelines, sequencing and so on
- Demonstration of tools and sharing results from papers

# Overview of presentations

- Demonstration of AMRomics
- Demonstration of hARMonize
- Demonstration of IPD in-house pipeline
- Presentation of Masters project on P1 plasmid/phage
- GPT Africa paper
- GPT "back-office"
- SeqAfrica Hackathon in Senegal
- Outbreak response using Genomics: The case of the Marburg virus outbreak in Rwanda
- SNPs in Vibrio cholera datasets
- Sustainability of CoP and ABI CoP
- LIN code for diphtheria and the attached functionality
- Pan-genome work on *S. Typhi*
- SeqAfrica hackathon update: EPI2ME pipeline with AMR Trinity
- Zimbabwe CG: Genomic analysis of country data (cholera and/or *S. enterica*)
- Nextflow pipeline based on Illumina for AMR

## Tools shared

- <https://github.com/amromics/amromics>
- <https://github.com/pha4ge/hAMRonization>
- [https://github.com/zwets/hAMRonization\\_workflow](https://github.com/zwets/hAMRonization_workflow)
- <https://github.com/zwets/cge-bap>
- <https://github.com/Osadio95/bacterial-workflow>
- [https://github.com/Shaedeycool/Vibrio\\_SNPs](https://github.com/Shaedeycool/Vibrio_SNPs)
- <https://github.com/stanikae/jekesa>
- <https://gitlab.pasteur.fr/GIPhy/LINtree/>

# Publications

Butera, Y., Mutesa, L., Parker, E. *et al.* Genomic and transmission dynamics of the 2024 Marburg virus outbreak in Rwanda. *Nat Med* **31**, 422–426 (2025). <https://doi.org/10.1038/s41591-024-03459-9>



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# **What's next for our community of practice?**

# African Bioinformatics Institute (ABI)

<https://www.bioinformaticsinstitute.africa>



Expanding African **expertise and capacity in bioinformatics** and data science

Facilitating knowledge exchange and the sharing of data and insights to **strengthen global health and protect biodiversity**

Improving access to high-quality bioinformatics infrastructure to support **pandemic preparedness**

Connecting **bioinformaticians and researchers** across Africa and beyond

Supporting the **development and application of One Health approaches** on the continent.

Delivering targeted **training for a diverse range of users and professionals in bioinformatics**

Images taken from <https://www.bioinformaticsinstitute.africa>

# ABI Communities of Practice



**Artificial  
Intelligence**



**Psychiatry,  
Neuroinformatics  
& Mental Health**



**Pathogen  
Surveillance &  
Antimicrobial  
Resistance**



**Human Genomics  
& Genomic  
Medicine**



**Rare Diseases**

Images taken from <https://www.bioinformaticsinstitute.africa>

[Home](#) > [Community](#) > [Communities of Practice](#) > [Pathogen Surveillance Antimicrobial Resistance](#)

## Community of Practice: Pathogen Surveillance & Antimicrobial Resistance



This community brings together experts across human, animal, plant, and environmental health to tackle antimicrobial resistance (AMR) in Africa. It connects professionals to share knowledge, strengthen skills, and collaborate on research and interventions. By combining genomics, bioinformatics, and epidemiology, the group works to understand AMR mechanisms, transmission pathways, and drivers of resistance. It also promotes best practices in diagnostics, stewardship, and climate-aware approaches—fostering African-led solutions that are globally relevant.

[Terms of Reference](#)

[Join this community](#)

<https://www.bioinformaticsinstitute.africa/communities-practice/Pathogen-Surveillance-Antimicrobial-Resistance>



# DATA GOVERNANCE WEBINAR SERIES

Building Capacity for Bioinformatics Data Management in Africa

## SERIES OVERVIEW

This webinar series explores the critical importance of data governance in African Bioinformatics. We will discuss best practices, policies, and frameworks to ensure effective, ethical, and secure management of genomic, biodiversity, and health data, aiming to empower researchers and institutions across the continent.



## THIS MONTH'S SPEAKER



**Professor Nicki Tiffin**

SANBI, University of the Western Cape

**THEME: FOUNDATIONS OF DATA  
GOVERNANCE**

## REGISTRATION



[https://zoom.us/meeting/register/  
9uV3fvZUQfCQQt8\\_BX1Q2w](https://zoom.us/join/zoom/register/9uV3fvZUQfCQQt8_BX1Q2w)

Or Scan QR Code

## CONTACT INFORMATION



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**Professor Nicki Tiffin**

SANBI, University of the Western Cape

## From Principles to Practice: Operationalising Data Governance for Africa

### Abstract

The need for ethical, lawful, and equitable data use is now well established in African research and health data contexts. As data governance considerations increasingly shape research collaboration and the secondary use of data, practical applications can help translate principles of data governance into practice. This talk presents a framework that brings together the principles of data governance, and introduces tools and approaches to facilitate their implementation.

### Speaker Biography

Professor Nicki Tiffin works at the South African National Bioinformatics Institute at the University of the Western Cape, where she leads a research group exploring the intersection of data from health genomics, epidemiological and routine health data, using bioinformatics approaches to better understand the disease state in African populations and building tools to address related governance and ethics issues. She holds a Calestous Juma Science Leadership Fellowship from the Gates Foundation, which supported the development of the African Data and Biospecimen Exchange and the Data Sharing License by ADBEx.

**Date:** 26 February 2026

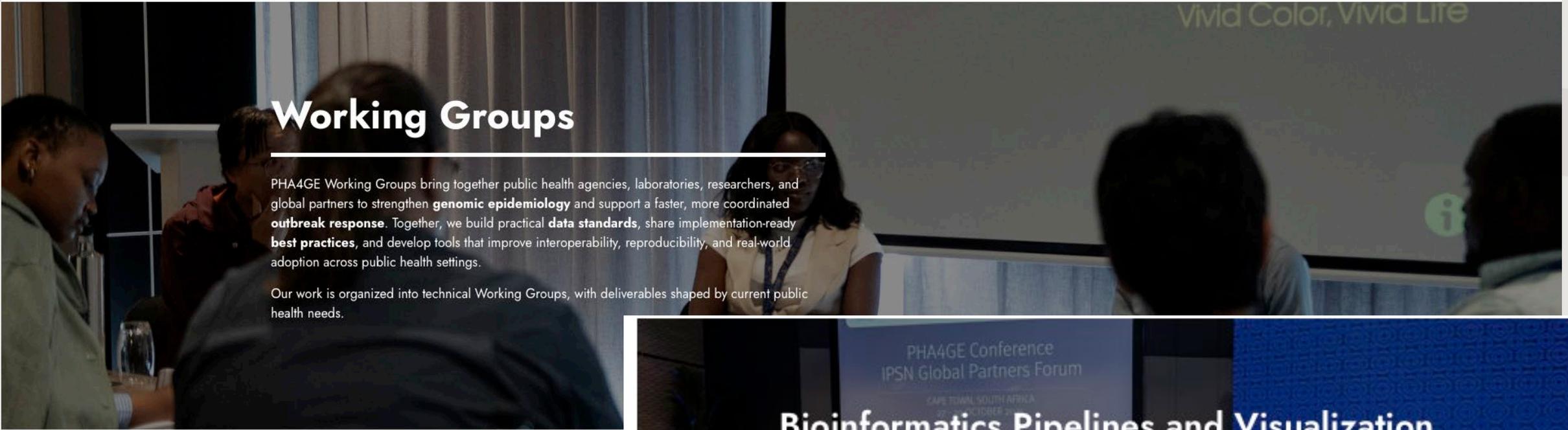
**Time:** 3 pm CAT

**Registration:** [Click Here](#)



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# Alternatives to ABI



## Working Groups

PHA4GE Working Groups bring together public health agencies, laboratories, researchers, and global partners to strengthen **genomic epidemiology** and support a faster, more coordinated **outbreak response**. Together, we build practical **data standards**, share implementation-ready **best practices**, and develop tools that improve interoperability, reproducibility, and real-world adoption across public health settings.

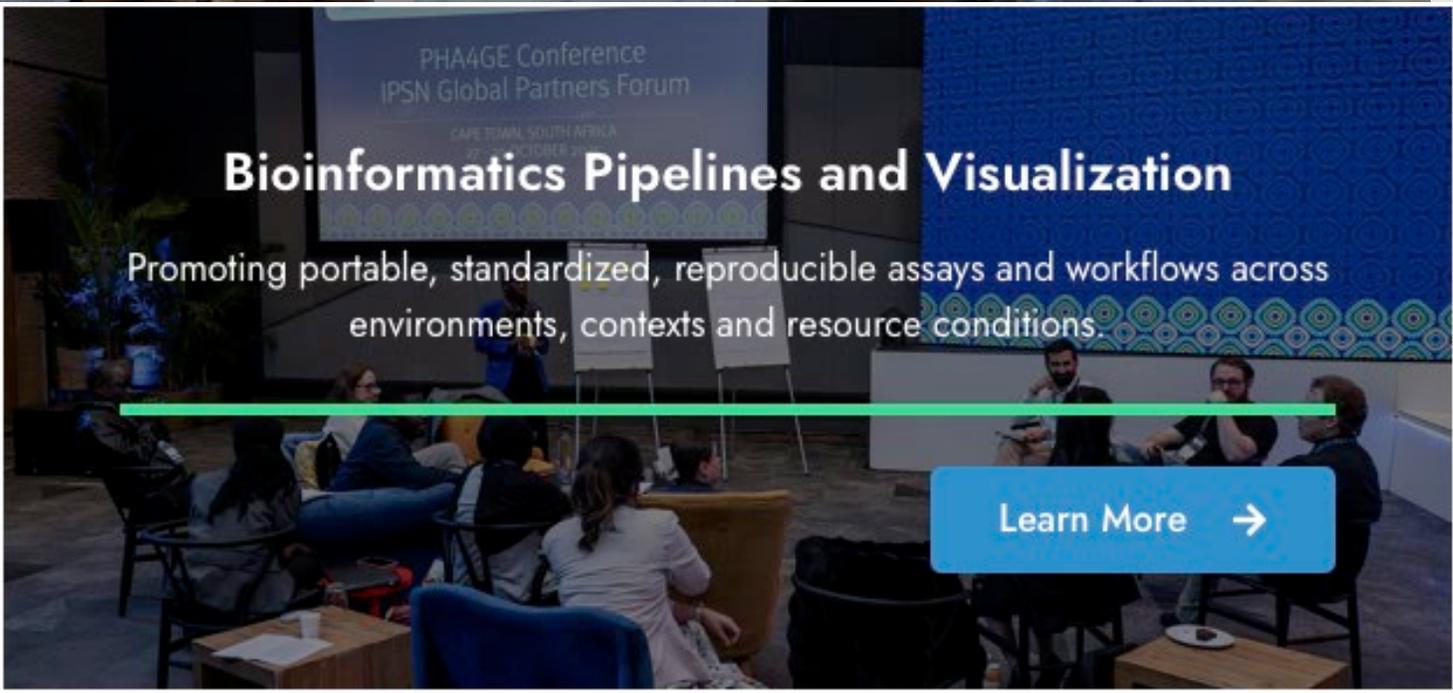
Our work is organized into technical Working Groups, with deliverables shaped by current public health needs.

## Explore PHA4GE Work



### Data Structures

Standardized data structures and formats are critical to the development of an open software ecosystem that will empower users to analyze their own data.



## Bioinformatics Pipelines and Visualization

Promoting portable, standardized, reproducible assays and workflows across environments, contexts and resource conditions.

[Learn More](#) →

# Thank you



This programme is being funded by the UK Department of Health and Social Care.  
The views expressed do not necessarily reflect the UK Government's official policies.