The Africa Pathogen Genomics Initiative (Africa PGI)

Integrated Genomic Surveillance for Outbreak Detection (DETECT)

Co-funded by the European Union

In collaboration with: Africa Public Health Foundation
Background

Africa CDC Institute of Pathogen Genomics (IPG) was launched in November 2019 and operates under the Division of Laboratory Systems and Networks. IPG coordinate the implementation of molecular diagnostics, pathogen genomics and bioinformatics in National Public Health Institutions (NPHIs) and/or Reference Laboratories (NRLs) across Africa.

Africa CDC and APHF are coordinating a continental initiative to maximize the benefits of molecular approaches and pathogen genomics for more effective outbreak preparedness, prevention, response, and for the control and elimination of endemic diseases in Africa. One of Africa CDC’s flagship initiative is the Africa Pathogen Genomics Initiative (Africa PGI), a partnership that aims to strengthen laboratory systems and enhance genomic surveillance by equipping the continent’s public health institutions with the tools, training, and data infrastructure.

About the Project

In 2023, 166 outbreaks and public health events were reported in Africa. This calls for a resilient laboratory systems for timely detection and reporting of current and future outbreaks. This project aims to scale up molecular diagnostic and genomic sequencing-based detection and characterization of outbreaks.

Africa CDC is working with Member States to develop guidance, diagnostic algorithm, training and capacity building to enable outbreak detection, and reporting to inform public health response.

Project objectives

- to develop operational framework for the implementation of molecular and genomic-based detection of pathogens of epidemic and pandemic potential
- to strengthen molecular diagnostic, multiplexed approaches and next-generation sequencing based outbreak detection capacity in 12 AU Member States
Theory of Change

List of high priority pathogens → Technical Guidance → Diagnostics algorithm, training, and capacity building

Intermediate Outcomes
- Operational framework for the implementation of molecular and genomic-based detection priority pathogens
- Strengthened capacity and increased number of skilled staff
- Increased use of multiplexed molecular diagnostics and NGS technologies to detect outbreaks

Impact
Timely detection and reporting of outbreaks
Participating Member States

Cluster #1: Southern Africa
- NICD, South Africa
- Public Health Institute of Malawi (PHIM), Malawi
- Zambia National Public Health Institute (ZNPHI), Zambia

Cluster #2: Eastern Africa
- UNHLS, Uganda
- National Public Health Laboratories (NPHL), Comoros
- National Reference Laboratories (NRL), Tanzania

Cluster #3: Central Africa
- INRB, DRC
- National Reference Laboratories (NRL), Congo
- National Reference Laboratories (NRL), Cameroon

Cluster #4: Western Africa
- IPD, Senegal
- National Institute of Public Health, Burkina Faso
- Institut National de Santé Publique, Mali

Contact us

Email: africapgi@africacdc.org