GHPP Global Health Protection Programme

Celesta

Genomic surveillance of viral haemorrhagic fevers and other outbreak-prone viral diseases in sub-Saharan Africa

Context

The COVID-19 pandemic and various other viral infectious disease outbreaks in recent years highlight the need for strong laboratory preparedness and capacities to ensure an effective national response to public health emergencies. The World Health Assembly has therefore made genomic surveillance a key priority because this technology offers a unique opportunity to identify, track, monitor and characterise viral pathogens in a timely manner, which results in improved public health decision-making. During the COVID-19 pandemic, efforts were made to establish SARS-CoV-2-specific sequencing capacities in sub-Saharan Africa. It is, however, crucial to expand such capacities to cover a broad range of viral pathogens so that these countries are well-prepared to deal with infectious disease threats. Collaborating with its long-term partners, the project aims to improve genomic surveillance capacities for viral haemorrhagic fevers (VHFs) and other outbreak-prone viral diseases. The project focuses on Nigeria and Guinea and works closely with local laboratory staff. It will not only reinforce the capacities of national surveillance laboratories, but also provide a global solution enabling these countries to prepare for and rapidly respond to future outbreaks.

Objective

Establishing sequencing capacity for life-threatening viral pathogens, where needed, to improve pathogen identification and outbreak preparedness and response.

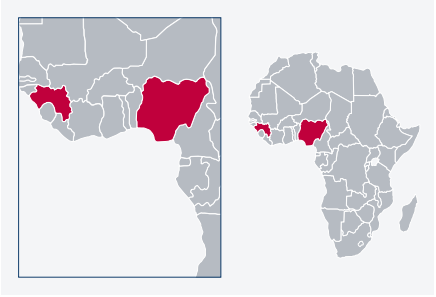
Key facts

Duration
1 January 2023 to 31 December 2025

Budget
~ EUR 2.3 million

Partner countries
Nigeria, Guinea

Region
Western Africa



Implemented by
Bernhard Nocht Institute for Tropical Medicine (BNITM)

Commissioning party
German Federal Ministry of Health (BMG)

Thematic focus

Strengthening of public health systems | Outbreak management | Surveillance and reporting | Laboratory diagnostics | One Health

Activities

CAPACITY DEVELOPMENT

Establishing sequencing capacity in three laboratories; supporting the implementation of bioinformatics processing and analysis of sequencing data (hardware and software); introducing quality management systems to ensure delivery of quality genomic sequencing data

TRAINING AND COMPETENCE DEVELOPMENT

Training of laboratory staff to perform diagnostics, next-generation sequencing, informatics analysis, molecular epidemiology and research

PROCUREMENT OF GOODS AND INFRASTRUCTURE DEVELOPMENT

Setting up fixed and mobile genomic surveillance laboratories

In cooperation with

- Irrua Specialist Teaching Hospital (ISTH), Nigeria
- Centre de Recherches en Virologie – Laboratoire des Fièvres Hémorragiques Virales de Guinée (LFHVG), Guinea
- Université Gamal Abdel Nasser (UGANC), Guinea
- Laboratoire des Fièvres Hémorragiques Virales de Gueckédou (LFHV Gueckédou), Guinea
- Laboratoire des Fièvres Hémorragiques Virales, N'Zérékoré regional hospital (HRNZE), Guinea
- Evolutionary and Computational Virology, Katholieke Universiteit Leuven (KU Leuven), Belgium
- Ministries of health (Nigeria and Guinea)
- World Health Organization (WHO), Switzerland
- Global Outbreak Alert and Response Network (GOARN)

Contact

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GHPP, the Global Health Protection Programme of the German Federal Ministry of Health, promotes networking, exchange and cooperation between specialized German and international public health actors. By reducing health risks and strengthening health systems at the national, regional and international level, in particular relating to pandemic and epidemic preparedness and response, the GHPP fosters public health protection – worldwide.

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