# Bioinformatician

The African Centre of Excellence for Genomics of Infectious Diseases (ACEGID), based at Redeemer's University, Nigeria, is focused on driving innovation in viral genomics research, outbreak response, diagnostic development, and capacity building. Established in 2013 and supported by the World Bank and the National Institutes of Health's (NIH), H3Africa consortium, among other funders, the ACEGID platform is building genomics pipelines, advancing our understanding of microbial threats, and training the next generation of African scientists how to identify, manage and control these threats. ACEGID is built upon strong collaborations forged across West Africa (Nigeria, Senegal, and Sierra Leone) and beyond (United States, United Kingdom) allowing for increased reach and scalability of its innovations.

**Project Description**

To reach the ambitious goal of malaria elimination, surveillance systems need to be strengthened, and tools are needed to improve diagnosis of infection, track drug resistance, improve the characterization of the parasite reservoir, and better assess transmission to provide precise and robust data for surveillance. Integrating molecular and genomic data as part of Nigeria's surveillance effort will provide a sensitive approach and will give a more detailed picture on parasite population structure and contextualized data that could help customize interventions. As a result, we are carrying out malaria molecular surveillance in Nigeria, in collaboration with the National Malaria Elimination Program (NMEP). This project will utilize whole genome sequencing (WGS) to provide an informative, accurate, more detailed, and comprehensive approach to surveillance. We will use genomic data to provide information about the parasite population structure at the local level, track drug resistance and HR2/3 deletion, detect foci of transmission, investigate genetic diversity, and characterize connectivity and transmission of different parasite strains.

Molecular data collected will be translated to an easily understandable reporting tool that the NMEP will use to detect drug resistance and prevent the spread- especially the emergence and transmission of a potential large-scale artemisinin resistance. This project is harnessing and simplifying genomics for malaria eradication. It will strengthen and expand the types of data collected by integrating molecular surveillance into malaria control and elimination in Nigeria through the Malaria Indictor Survey (MIS), thereby aiding the NMEP in using genomic data to inform decision making targeted at interventions.

We are looking for highly motivated and passionate individuals to join our team. We are directly involved in all aspects of data generation and analysis including field work, generating laboratory data, communicating directly with the National Malaria Elimination Program, and helping build research capacity. Competitive salary including benefits will be provided commensurate with experience and qualifications and the post offers ample opportunities for career development.

## Job Description
The role involves using computational tools to analyze sequenced data and development of algorithms to detect mutations in the genomes. The bioinformatician will assist in data analysis to provide drug resistance haplotype frequency, HRP2 deletion data, and data on *P. falciparum* genetic diversity within infections in Nigeria.

**Employment Type**
Full-time

**Date posted**
October 17, 2024

**Valid through**
14.11.2024

## Requirements

- PhD or equivalent in a relevant field
- Experience with next generation sequencing technologies
- Experience in pathogen genomics (malaria)
- Strong statistical, bioinformatic, and computational skills
- Ability to work well as member of a team
- Excellent written and oral communication skills
- Background in basic biology, population genetics, immunology, ecology, and/or epidemiology
- Experience in analysis/modeling of infectious diseases
- Programming experience
- Analyse and evaluate sequencing data with existing tools, and with new tools generated in house

## Essential Skills

- The position will involve both data analysis and programming
- Good knowledge of programming, demonstrated by a Masters (with years of experience evidenced by publications) or PhD degree in Computer Science or Bioinformatics, or PhD in another discipline (such as physics, maths or biology) with a large component of computational work
- Must have experience in Java, Perl or Python programming and driving projects to completion

## Ideal Skills

- Experience with genome and next generation sequencing analysis or a background in malaria biology

## To apply

Qualified applicants should send a resume and cover letter to