

Post-Doctoral Researcher in Bacterial Genomics

Description

We are seeking a highly motivated and skilled **Post-Doctoral Researcher in Bacterial Genomics** to join our multidisciplinary team working on the Data Science for **Combating Antimicrobial Resistance in Africa (CAMRA) project**. This position will play a crucial role in investigating the molecular epidemiology of antimicrobial resistance (AMR) in Nigeria and Rwanda, contributing to genomic surveillance efforts and developing innovative approaches to combat resistant bacterial pathogens.

The successful candidate will work closely with leading experts in bacterial genomics, bioinformatics, microbiology, and infectious diseases to analyze bacterial isolates from diverse clinical settings, identify novel AMR mechanisms, and support capacity-building efforts in the region.

In addition to core responsibilities, the position will also involve contributing to other IGH zoonotic surveillance efforts to support their bacterial genomic components, such as the Sentinel project: <https://www.broadinstitute.org/news/new-viral-surveillance-system-west-africa-showing-world-how-prevent-next-pandemic>

About the Project

The **CAMRA project** focuses on addressing the urgent global health challenge posed by antimicrobial-resistant bacterial infections in Africa. By leveraging **bacterial genomics, bioinformatics, and molecular epidemiology**, our research aims to uncover **novel AMR genetic markers**, improve diagnostic capabilities, and inform **policy interventions** for antibiotic stewardship. The project is a collaboration between researchers from Nigeria, Rwanda, and international partners, integrating a **One Health approach** to tackle AMR across human, animal, and environmental interfaces.

Responsibilities

- Use **whole-genome sequencing (WGS)** and bioinformatics tools to characterize bacterial pathogens, identify AMR genes, and investigate their evolutionary dynamics.
- Collaborate with microbiologists, clinicians, and data scientists to integrate **genomic, phenotypic, epidemiological, and clinical data** for actionable insights.
- Contribute to the **development of AMR surveillance databases** and antibiograms to guide empirical antibiotic use.
- Explore innovative approaches to combat AMR, including evaluating the potential of **novel antimicrobial agents**.
- Support the implementation of a **One Health approach**, investigating the interconnectedness of AMR in human, animal, and environmental reservoirs.
- Participate in training and mentoring African scientists in bacterial genomics, bioinformatics, and microbiological methods.
- Work closely with **government agencies, healthcare institutions, and international collaborators** to translate research findings into public health policies and interventions.

Hiring organization

ACEGID

Employment Type

Full-time

Job Location

Institute of Genomics and Global Health, Redeemer's University, Ede, Osun State, Nigeria

Date posted

March 3, 2025

Valid through

31.03.2025

- Support for other IGH zoonotic surveillance projects, including the Sentinel project

Qualifications

- PhD in Bioinformatics, Bacterial Genomics, Molecular Biology with comprehensive computational experience, or a related field.
- Strong experience in bacterial whole-genome sequencing (WGS) and analysis of large-scale genomic datasets, phylogenetics, and common-line bioinformatics analysis.
- Strong programming and data analysis skills (Python, R, or equivalent).
- Familiarity with antimicrobial resistance mechanisms and molecular epidemiology of bacterial pathogens is highly desirable.
- Experience working with global health initiatives is highly desirable.
- Excellent scientific writing and communication skills.
- Ability to work independently as well as collaboratively in a diverse, multidisciplinary environment.

Job Benefits

- Work on a cutting-edge project with global health impact in **combating antimicrobial resistance**.
- Collaborate with a network of **leading scientists and institutions** across Africa, Europe, and the U.S.
- Access to **state-of-the-art genomics facilities** and bioinformatics training.
- Opportunities for career development, including **mentorship, conference participation, and potential leadership roles**.

Contacts

Application Process

Interested candidates should submit the following documents:

- A **cover letter** of not more than 2 pages outlining their research interests, relevant experience, and career goals.
- A **detailed CV** including a list of publications and relevant research experience.
- Contact information for **three academic/professional references**.

Submit applications to: hr*****@ru*.ng

For inquiries about the position, please contact: hr*****@ru*.ng