

02 June 2026

PhD and Master's Research Opportunities (2 PhD + 2 Master's Positions)

Four exciting postgraduate research opportunities (2 PhD and 2 Master's) are available in the field of pathogen genomics and genomic surveillance at the **University of the Free State Next-Generation Sequencing Unit** (UFS-NGS Unit), School of Biomedical Sciences, Faculty of Health Sciences. The successful candidates will join the **UFS Research Chair in Genomic Surveillance of Respiratory and Enteric Pathogens from Children in South Africa**, a flagship initiative led by Prof. Martin Nyaga. The project applies next-generation sequencing (NGS) and metagenomics to characterise respiratory and enteric viral pathogens, antimicrobial resistance genes (ARGs), vaccine efficacy, and transmission dynamics in children under five years across three provinces.

Position Details We are accepting applications for:

- ☒ **2 PhD positions** (3 years)
- ☒ **2 Master's positions** (2 years)

NOTE: The positions offer competitive annual tuition and stipends.

Key Responsibilities

Successful candidates will be responsible for:

- ☒ Conducting laboratory-based research involving sample processing, nucleic acid extraction, library preparation, and NGS sequencing on the Illumina NextSeq 2000 platform.
- ☒ Performing metagenomic analysis, whole-genome sequencing, phylogenetic studies, and antimicrobial resistance gene profiling of respiratory and enteric viruses.
- ☒ Collecting and analysing clinical/epidemiological data from hospital sites in Free State, KwaZulu-Natal, and Northern Cape provinces.
- ☒ Contributing to the development of a centralised paediatric pathogen genomic database.
- ☒ Preparing manuscripts for publication and presenting findings at scientific meetings.
- ☒ Participating in capacity-building activities, including bioinformatics workshops and school outreach programmes.

Requirements

For **PhD positions**: A completed MSc/M.MedSc degree in Virology, Microbiology, Molecular Biology or a closely related field.

For **Master's positions**: A completed Honours/BSc Hons degree in Microbiology, Virology, Molecular Biology or a related discipline with an average pass mark of 65% or higher.

Additional Requirements

- ☒ Strong interest in viral genomics, metagenomics, or molecular epidemiology.
- ☒ Previous laboratory experience in molecular biology techniques will be a strong advantage.
- ☒ Good academic record and strong written and verbal communication skills.
- ☒ Ability to work independently as well as part of a team.

Eligibility

South African citizens and candidates from other countries are welcome to apply. Candidates with experience or strong interest in paediatric infectious diseases, respiratory/enteric pathogens, or genomic surveillance will be prioritised.

Deadline and Starting Date

Applications for the positions must be received by **Friday, 20 June 2026**. The preferred starting date is **01 July 2026** or as soon as possible thereafter (subject to UFS registration deadlines).

Host Information

The successful candidates will be hosted and supervised by **Prof. Martin Nyaga**, Head of the Next Generation Sequencing (NGS) Unit and Research Chair holder, at the University of the Free State, Bloemfontein, South Africa. Candidates will have full access to state-of-the-art facility.

Application Procedure Submit (email to Mamello Maku (MakuM@ufs.ac.za) the following:

- A cover letter clearly indicating whether you are applying for a PhD or Master's position, summarising your background, research interests, and how your skills align with the project.
- A detailed CV including academic record and any previous research experience.
- Certified copies of academic transcripts and degree certificates.
- Contact details of two academic referees who can comment on your suitability.

Note

These are full-time study positions. The University reserves the right NOT to make an appointment if suitable candidates do not apply. Incomplete applications will not be accepted.