

Postdoctoral Fellowship

**Department of Pathology, Division of Medical Microbiology,
Faculty of Medicine and Health Sciences, Stellenbosch University**

Scope of Research

This 3-year post-doctoral research fellowship at Stellenbosch University will support work by the NeoNET AFRICA and the KlebNET Genomic Surveillance Platform (KlebNET-GSP) to coordinate development of genomic surveillance capacity for neonatal sepsis with a focus on informing vaccine development to protect against *Klebsiella pneumoniae* neonatal sepsis. KlebNET-GSP research will focus on genomics platform and tool development; development of protocols, standards and certification; community development; and sero-epidemiology. The successful candidate will contribute to the development of a series of protocols and data standards to support implementation of genomic surveillance for *Klebsiella* and *E. coli*, with a particular focus on neonatal sepsis, including protocols for bacterial culture, species identification, and DNA extraction; recommendations on library preparation and sequencing strategies; contextual metadata standards and protocols for data processing, quality control, and assembly. Further, the candidate will support *Klebsiella* genomic surveillance in Africa and globally through KlebNET-GSP collaborative analyses and communities of practice, leading neonatal sepsis meta-analyses with topics selected by the network based on the priorities of members e.g. understanding risk factors for transmission and antimicrobial resistance mechanisms.

The fellowship is available for three years, dependent on satisfactory progress and funding availability. The value of the fellowship will be R400 000 per annum, which is not subject to taxation (provided the candidate adheres to certain conditions).

The postdoctoral researcher will be expected to:

- Develop protocols, standards and certification to support genomic epidemiology in LMIC
- Develop research project protocols for meta-analyses of KlebNET data, surveys and primary research
- Apply for relevant ethical, hospital and NHLS approval for the studies (as required)
- Apply for additional project funding
- Work closely with the NeoNET AFRICA data, clinical and laboratory scientists
- Co-ordinate, draft, edit and publish KlebNET – NeoNET AFRICA research outputs
- Develop and deliver training as needed to contribute to developing a genomics community of practice in Africa
- Develop additional networks within Africa to support KlebNet-GSP and NeoNET-Africa objectives

Requirements:

- PhD in Medical Microbiology or related field, obtained within the past 5 years
- Ability to work independently and with full ownership of research and development projects
- Experience in pathogen genomics, bioinformatics and biostatistics
- Proficiency in programming languages, such as Python and R
- Strong written and oral communication skills in English
- Excellent social and team working skills
- Open minded and a fast learner

Commencement of duties: 6 January 2025, or as soon as possible thereafter.

Closing date: 25 October 2024. Send a letter of application, accompanied by a comprehensive curriculum vitae, including list of publications and the names and contact details of at least two referees, to maen@sun.ac.za. Please note that communication will only be sent to shortlisted candidates.

Enquiries: Dr Mae Newton-Foot, maen@sun.ac.za