



**Stellenbosch**

UNIVERSITY  
IYUNIVESITHI  
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SCIENCE  
EYENZULULWAZI NGEZENDALO  
NATUURWETENSKAPPE

Department of Biochemistry |  
Isebe i-chemistry yobomi |  
Departement Biochemie

A postdoctoral fellowship opportunity is available in the field of malaria drug discovery. The candidate will contribute to a cross-disciplinary project aimed at investigating molecular chaperones in malaria parasites as potential therapeutic and diagnostic targets.

### Position Details

We are accepting applications for a one-year fellowship, with the possibility of extension for an additional year based on performance and funding availability (24 months maximum). The position offers a non-taxable stipend of ZAR 320,000 per year.

### Key Responsibilities

The successful candidate will be responsible for characterizing small molecules, with a focus on developing chemical probes or drug candidates targeting molecular chaperones in malaria parasites. The fellow will design and conduct experiments to assess the binding affinity and interaction of these compounds with protein targets using techniques such as single molecule FRET, and SPR.

Applicants should have expertise in chemical biology or organic chemistry, particularly in synthetic chemistry, and a strong background in assay development. The role will also involve general lab operations and mentoring postgraduate students.

### Requirements

- A PhD in Biochemistry, Chemical Biology, or closely related fields will be considered, obtained within the last five years (or proof of fulfilling the degree requirements). Relevant experience in related fields may also be considered.
- Strong background in enzyme characterization, including heterologous protein expression, purification, enzyme assays, and biophysical analysis of proteins, organic compound synthesis and characterization with advanced data analysis skills (preferably using Python).
- Expertise in small molecule synthesis, optimization, and characterization (e.g., NMR, HPLC, MS) with a focus on anti-parasitic agents will be an added advantage.
- Experience in structure-based drug design (SBDD) and structure-activity relationship (SAR) studies to optimize lead compounds.
- Familiarity with cheminformatics tools and molecular modelling software for drug design (e.g., Schrodinger, MOE) is a nice to have.
- Effective communication skills and ability to work independently and effectively in a collaborative, multi-disciplinary research environment is essential.
- Strong organizational and problem-solving abilities, time management, teamwork, and experience with digital platforms for recording and managing experiments and data are required.

## **Eligibility**

Applicants from South Africa in particular, but African countries in general, will receive preference.

## **Deadline and starting date**

Applications for the position must be received by Friday, 22 November 2024. The starting date will be from 01 February 2025 or as soon as possible thereafter.

## **Host Information**

The fellowship is under the supervision of Dr. Tawanda Zininga, Department of Biochemistry, Stellenbosch University, South Africa.

## **Application procedure**

Submit (email to [tzininga@sun.ac.za](mailto:tzininga@sun.ac.za)) a cover letter summarising your background and interests and how your skills match requirements for the project. Include a detailed CV and academic and publication record, and the names of two contactable references.

## **Note**

Postdoctoral fellows are not appointed as employees and as their fellowships are awarded tax free, they are not eligible for employee benefits. The University reserves the right NOT to make an appointment if suitable candidates do not apply.