Stellenbosch UNIVERSITY IYUNIVESITHI UNIVERSITEIT

ACTI
Africa Centre for Therapeutics Innovation

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

Senior Postdoctoral Fellowship

Gram Negative Antibacterial Drug Discovery and Development

Africa Centre for Therapeutics Innovation (ACTI)
Department of Biochemistry at Stellenbosch University (SU)

Position

Applications from suitable candidates are invited for a senior postdoctoral position for an initial period of one year, which may be renewable for a further two years (three years total) based on satisfactory performance (annual performance reviews will be held) and the continued availability of funds.

Project and team

Prof Erick Strauss (Project leader, SU) will be leading a multi-site, African-based drug discovery project with co-investigators Prof Adrienne Edkins (Rhodes University), Prof Andrew Whitelaw (SU) and Dr Miquel Duran-Frigola (Ersilia Open Source Initiative), as well as collaborators from SU, University of Johannesburg and University of Cape Town. This three-year project forms part of **The Gram-Negative Antibiotic Discovery Innovator (Gr-ADI)**, a first-of-its-kind consortium funded by The Gates Foundation, Novo Nordisk Foundation, and the Wellcome Trust. Gr-ADI will bring together 18 research teams from across the world will openly share data and learnings and work collectively to accelerate the discovery of urgently needed antibacterials for the treatment of infections by Gram-negative bacteria, one of the leading drivers of AMR-related deaths worldwide

The successful candidate will form an integral part in the establishment of a multidisciplinary team that will pursue the discovery and development of novel Gram-negative antimicrobials that induce the targeted degradation of high-value proteins in *Klebsiella spp*. and potentially other *Enterobacteriaceae*.

Roles and responsibilities

The incumbent will be involved overseeing the team of postdoctoral fellows and postgraduate students who are actively involved in the *in vitro* biology aspects of the project, including:

- the heterologous expression and purification of target proteins, with the appropriate tags.
- development and execution of biophysical, spectrophotometric and immunological assays to determine the *in vitro* binding and interaction of high-value proteins with target engaging ligands.
- studying the *in vitro* and intracellular degradation of targets by the target organism's protein degradation machinery.
- developing and implementing enzyme activity and inhibitor characterisation assays as needed.
- structural characterisation of ligand-protein interactions, e.g. via crystallography.
- developing and implementing cellular target engagement assays in the target organisms (Gram-negative bacteria).

The preferred incumbent will therefore have experience in supervising junior researchers, and in managing projects with the view of meeting specific milestones. The incumbent will form part of the project leadership team, assisting the project manager and the project leader in directing the project across its various sites.

Requirements

- PhD degree in Biochemistry, Chemical Biology, Microbiology, Genetics or Immunology. Candidates with PhD degrees in other fields but with appropriate experience might also be considered.
- At least three years of experience as a postdoctoral researcher.
- Experience in the formal supervision of postgraduate students at PhD level; the supervision must preferably have been on a level that was institutionally recognised.

- Demonstrable experience in enzyme characterization, including heterologous protein expression, protein purification, conducting and developing assays towards their biophysical characterization.
- Experience in advanced data analysis using Excel or Python (preferred).
- Experience with protein binding, immunological and kinetic characterization would be highly advantageous, as well as experience in Gram-negative drug discovery and development, and BSL1 and BSL2 bacterial cell culture.
- Strong communication skills to ensure effective presentation of results and progress to other members of the team, as well as the translation of necessary skills to those team members focussing on different research areas.
- Excellent skills related to time management, teamwork, problem solving and independent thinking.
- Good record keeping and use of online and/or electronic platforms to store, document and manage data, experiments and samples will also be required.
- Experience in Gram-negative drug discovery and cellular target engagement assays would be a distinct advantage.

Eligibility: Only applicants who have at least three years of experience as postdoctoral researchers will be considered. Applicants from African countries in general and South Africa in particular will receive preference.

Location: The position will be at Stellenbosch University in the department of Biochemistry in Stellenbosch, South Africa, with additional work to be performed in the department of Medical Microbiology on the Tygerberg campus. Some travel between these and the sites of other consortium partners may be required.

Award: The appointment will be made at R400 000–450 000 per annum, based on the applicant's experience. The award is non-taxable.

Deadline and starting date: Applications for the positions must be received by **6 March 2026**. The starting date will be from **1 April 2026** or as soon as possible thereafter.

Application procedure

- All applications should be made through completion of an online form:
  - For **internal** applicants from Stellenbosch University: https://forms.office.com/r/DWNxfq7ndZ
  - For **external** applicants from outside Stellenbosch University: https://forms.gle/BaXVLQa9y9KwtbFc9
- As part of the application, a cover letter should be submitted that summarises your background, future plans, interests and how your skills match those required for the project.
- A detailed CV that shows your academic and publication record, and the names of at least two contactable references should be included.
- Enquiries can be made to Dr Konrad Mostert (project manager) at kjmostert@sun.ac.za, or to Prof Erick Strauss at estrauss@sun.ac.za.

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 to NOT make an appointment if suitable candidates do not apply.