



Stellenbosch

UNIVERSITY
IYUNIVESITHI
UNIVERSITEIT

SCIENCE
EYENZULULWAZI NGEZENDALO
NATUURWETENSKAPPE

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

Postdoctoral Fellowship (Department of Biochemistry)

A postdoctoral fellowship in the SARChI project: “Mechanistic modelling of health and epidemiology” is currently available in the field of modelling of peripheral steroid hormone metabolism.

Applications from suitable candidates are invited for this post for a period of one year, which may renewable for a further year (two years total) based on satisfactory performance (annual performance reviews will be held) and the availability of funds. Appointments will be made at R320 000 per annum, being a non-taxable award.

Project Title: Modelling of peripheral steroid hormone metabolism

The successful applicant will be involved in generating enzyme kinetic data for the construction, validation and analysis of mathematical models of steroid hormone metabolism in peripheral tissue. A specific focus will be on investigating the overlap in the peripheral metabolism of 11-oxygenated androgens, classic androgens and glucocorticoids. The model will be applied to human clinical data as to better describe the role of peripheral steroid metabolism in health and disease.

The major focus of the postdoctoral fellow is to perform the enzyme assays in the human cell line HEK293 as to generate progress curves for the determination of kinetic parameters to be included in the model. In addition, the successful applicant will be required to perform experiments required for the validation of the model. These will include reconstructing parts of the various steroid metabolising pathways *in vitro* by recombining cells expressing different steroid metabolising enzymes at different ratios, as well as by measuring steroid metabolism in cell lined endogenously expressing a mix of different enzymes. The postdoctoral fellow will also be involved in the training and supervision of postgraduate students.

Host: Department of Biochemistry at Stellenbosch University.

Requirements: A PhD degree in Biochemistry, obtained within the last five years (or proof that the requirements for the degree have been satisfied). Candidates with PhD degrees in other fields but with appropriate experience might also be considered. The successful candidate will have demonstrable experience in mammalian cell culture, transient transfections and enzyme assays. The applicant should also have experience in targeted mass spectrometry analyses. A background in steroid hormones is also recommended. The applicant will not be required to conduct any of the computational modelling themselves, but should be willing to work closely with the team performing the computational modelling.

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 10 July 2024. The starting date will be as soon as possible thereafter.

Application procedure: Submit a detailed CV and academic and publication record, as well as the names of two contactable references, by e-mail to Prof Jacky Snoep (jls@sun.ac.za). Candidates should include a cover letter which highlights the match between their skills and those that are required. Enquiries can be made at the same address.

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.