Stellenbosch
UNIVERSITY
IYUNIVESITHI
UNIVERSITEIT

SCIENCE
EYENZULULWAZI NGEZENDALO
NATUURWETENSKAPPE

UNIVERSITY of the
WESTERN CAPE

Department of Physiological Sciences
Department of Microbiology

Faculty of Natural Sciences
School of Pharmacy

POSTDOCTURAL FELLOWSHIP

Hosts
Prof Bertie Fielding (Dean: Faculty of Science and Professor: Department of Microbiology)
Dr Sanjeev Rambharose (Senior Lecturer: Department of Physiological Sciences)
Prof Admire Dube (Professor: School of Pharmacy, University of the Western Cape (UWC))

It is our pleasure to advertise a postdoc fellowship for the Rambharose-lab at the Department of Physiological Sciences, Faculty of Science, Stellenbosch University and the Dube-lab at the School of Pharmacy, University of the Western Cape (UWC).

Duration
The duration is 24 months.
R300 000 per annum (tax-free stipend), renewable for up to two years based on satisfactory progress.

Scope of Research:
Infectious viral diseases remain a major global threat, especially with the emergence of new viruses and drug-resistant strains. Traditional antiviral therapies offer limited efficacy and do not provide lasting immunity against these challenges. Consequently, there is an increasing demand for innovative therapeutic strategies that not only target infections but also strengthen the host's immune defences. Host-directed therapies, or immunotherapy, present a promising solution for the prevention and treatment of viral infections by targeting host pathways rather than the virus itself. This strategy reduces the likelihood of drug resistance and enhances the body's natural immune response. We are seeking a postdoctoral researcher to develop immunotherapeutic nanoparticles for combating viral infections, with a focus on critical diseases such as HIV, Hepatitis B, and viral respiratory infections, including coronaviruses. These conditions continue to have a significant impact on global health, particularly in Africa, where the burden of HIV and Hepatitis B is high, and pandemic preparedness is essential. In addition to immunotherapy, this research will investigate advanced nanomedicine systems, such as siRNA-loaded nanoparticles and nanoparticle-based drug delivery platforms, designed to modulate host cell responses or deliver antiviral agents directly to infected cells. The successful candidate will collaborate with leading experts in virology and nanomedicine on innovative approaches to tackling viral infections.

Requirements and Essential Experience:
A PhD completed in a related field within the last three years. Excellent writing and communication skills with a track record of high-quality publications. Research experience in nanoparticle synthesis, virology, and/or immunotherapy, and/or infectious diseases. Ability to work independently and ‘think outside the box’.

<u>The ideal candidate should have experience in the following areas:</u>

- Experience with molecular biology techniques relevant to viruses or infectious disease pathogens

- Developing immunotherapies for infectious diseases.
- Synthesis and characterization of nanoparticles for therapeutic application.
- Generate high-quality research outputs, including peer-reviewed publications.
- Write and submit proposals for funding.
- Mentor and provide guidance to junior researchers and graduate students in the laboratory.

Attributes:

- Ability to work independently, as well as in a collaborative team environment.
- Strong organizational and multitasking skills.
- Attention to detail and excellent problem-solving skills.
- Enthusiasm for learning new techniques and developing innovative approaches to research.

How to Apply:

Send a letter of application, via email, accompanied by a comprehensive curriculum vitae, including list of publications and the names and contact details of at least two referees, to Dr. Sanjeev Rambharose (**sanjeevr@sun.ac.za**) and Prof. Admire Dube (adube@uwc.ac.za).

In your email heading please state **APPLICATION FOR POSTDOC: NANO-THERAPEUTICS.**

Please note that postdoctoral fellows are not appointed as employees, and their fellowships are awarded tax-free. They are therefore not eligible for employee benefits.

Closing date: 30 October 2024

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