

**Post-Doctoral Fellows,
Medical Virology, Zoonoses Research Unit**

About the unit: The Zoonoses research unit (ZRU), is a dynamic team of virologist and ecologist funded through the Global disease detection programme, Centres for disease control and prevention (GDD/CDC) at the forefront of zoonotic infectious disease research. The ZRU is part of the IRT for Animal health and Zoonoses and runs an exciting programme on emerging vector borne and zoonotic viruses causing disease in humans and animals.

More information: www.zoonosesresearchunit.up.ac.za

We invite **senior postdoctoral fellows** to apply within our unit for the NRF **career advancement fellowship** (PhD plus 2 years but less than 8 years since obtaining their PhDs).

http://www.nrf.ac.za/funding_overview.php?fid=216

(Closing date 15 October 2013)

or more **junior postdocs and recipients of the UP Vice Chancellor's OR NRF postdoctoral fellowships**, to join our unit on one of the projects funded in the unit.

We will also consider excellent postdoctoral candidates without funding for funding through the GDD programme.

Location: Department Medical Virology, Zoonoses Research Unit, Faculty of Health, University of Pretoria,

Full/Part Time: Full time

- Senior Career advancement programme NRF: 5 years (R350 000 (taxable) plus R100 000 research and travel grant)
- 1 year postdoc contract, renewable for up to 3 years (tax free)

The University of Pretoria's commitment to quality makes us one of the top research Universities in the country and gives us a competitive advantage in international science and technology development.

RESPONSIBILITIES:

The clusters of responsibility this incumbent will have are as follows:

There are currently 3 major projects available and incumbents will be selected according to experience and suitability per project:

1.) Investigation of the role of emerging arboviruses as causes of febrile and neurological disease in animals in Africa.

The individual will play a key role in running a molecular surveillance and virus discovery programme in collaboration with veterinarians across Southern Africa. Febrile, neurological or haemorrhagic fever symptoms in horses, livestock and wildlife will be investigated by realtime PCR and Serological investigations to describe the epidemiology and pathogenesis of known and emerging arboviruses in South Africa. The individual should have a background in molecular epidemiology and virology and serology and be able to develop and accredit new

molecular diagnostic tests and conduct sequencing and phylogenetic analysis on identified pathogens as well as serological investigations to define sero and molecular-epidemiology. Experience with BSL-3 laboratories and laboratory animals will be beneficial.

2.) Development of a Taqman array card for detection of zoonotic arboviruses in humans, animals and vectors.

The individual involved in this project will be expected to master the Vii7 Life technologies realtime system and develop new cards for differential diagnosis of arboviruses and zoonotic diseases for use in humans and animals. This will feed into the surveillance programme funded by the Global Disease detection programme of the Centres of Disease Control and Prevention for emerging zoonotic diseases and help to define the role of known pathogens and identify novel viruses that will be investigated further using next generation sequencing techniques for virus discovery.

3.) Molecular and pathogenic characterisation of Shuni and Middelburgvirus using reverse genetics in vitro and in-vivo models.

Shuni and Middelburgvirus have been identified as important causes of neurological disease in animals. In order to characterise these viruses a reverse genetics approach will be used to knockout genes and study the growth kinetics in vitro and the tissue tropism relative to wildtype in mice and other model animals such as farmed crocodile by immunohistochemistry. Investigation of the host range will be conducted through sero-survey in livestock, wildlife and human specimens.

Other duties: Participate in the general running of the laboratory, quality endurance and good laboratory practice. Participate in supervision of junior staff members and students.

Senior Fellow: Senior Fellows will be expected to contribute to the management of the unit and BSL-3 laboratory; application for funding and reporting to funders and work towards NRF rating.

Registration with the HPCSA: Candidates that is not already registered will be expected to complete an intern programme to be registered as Medical Virologists with HPCSA or .

4.)

MINIMUM REQUIREMENTS:

PhD in microbiology, molecular biology, genetics, biotechnology or related discipline with a strong molecular background and an interest in virology and zoonotic diseases. A background in virology is preferred.

Experience in molecular techniques, DNA extraction, PCR, sequencing, cloning, next generation sequencing.

Experience with serological techniques.

Virus isolation/Cell culture

BSL-2 training preferred and willingness to be trained and work in a BSL-3 laboratory

Registration with HPCSA and or SAVC is preferred.

Computer literacy, Excel, Access, PowerPoint, Word; Bioinformatics programmes.

In application for these positions, please **Attach:**

- Comprehensive CV, including formal qualification certificates;
- A record of all research publications;
- Names and contact details (email and telephone particulars) of 3 contactable referees

CLOSING DATE: 7 October 2013

No application will be considered after the closing date, or if it does not comply with at least the minimum requirements.

ENQUIRIES: Prof M Venter : marietjiev@nicd.ac.za

The University of Pretoria is committed to equality, employment equity and diversity. In accordance with the Employment Equity Plan of the University and its Employment Equity goals and targets, preference may be given, but is not limited to candidates from under represented designated groups.

All candidates who comply with the requirements for appointment are invited to apply. The University of Pretoria reserves the right not to make an appointment to the posts as advertised.