



UNIVERSITEIT VAN PRETORIA  
UNIVERSITY OF PRETORIA  
YUNIBESITHI YA PRETORIA  

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Faculty of Veterinary Science

Virology Post-doctoral fellowship available in the Department Veterinary Tropical Diseases

**Project title:** Molecular characterization of arboviruses in South African Livestock

**Study duration:** Starting immediately until August 2024)

**Minimum academic requirements:** PhD degree in molecular biology/biochemistry/genetics

**Restriction:** This position is open for national and international applicants

**Added advantage and preference:** Experience in insect collection. Must have RSA drivers licence

**Funding:** Research funds available. Stipend up to R300 000 pa depending on experience.

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**Aim of the project:** The aim of the project is to develop and apply new technology to detect and characterize arboviruses present in South Africa that could pose emerging animal disease threats and develop a baseline of virus population variability. Study areas will be selected to inform predictive models regarding how climate change and encroachment of livestock into wild areas effect arbovirus emergence.

#### Approach

Mosquito collection sites will be selected to represent different geographical areas including area near a livestock/wildlife interface. This will assess geographical variation and impact of animal livestock encroachment into wild areas. Also sampling these habitats over time will allow for modelling of how virus circulation (host-vector-virus) interactions will change in a changing climate. Mosquitoes will be sorted by species and new diagnostic tools developed to quickly identify and characterize viruses. A panel of family specific RT-qPCR assays for alphaviruses, bunyaviruses, flaviviruses, orbiviruses and rhabdoviruses will be developed. Multiplex assays will be developed where scientifically reasonable and technically possible. Metagenomic sequencing will be used to generate baseline data for arbovirus prevalence and virus population variability. The project will also involve field work for which a valid RSA drivers licence will be required.

- **CONTACT PERSON:** Prof. Jannie Crafford, Department Veterinary Tropical Diseases; E-mail: [jannie.crafford@up.ac.za](mailto:jannie.crafford@up.ac.za) Telephone: +27 (0)12 529 8229
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Please send your CV, certified academic records and a motivational letter to the above-mentioned contact person. Two academic reference letters will be an advantage in the selection of the successful candidate

**Deadline for submission of applications: 28 March 2022**