



UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Faculty of Veterinary Science

Research project in virology available in the Department Veterinary Tropical Diseases

Project title: Subclinical detection of foot-and-mouth disease virus, Rift Valley fever phlebovirus and bovine alphaherpesvirus 1 by *in situ* hybridization

Degree: PhD (Veterinary Science)

Study duration: 3 years (starting date: immediately)

Minimum academic requirements: Masters degree or equivalent in a relevant field. Experience in and knowledge of molecular biology is an advantage

Restriction: This call is restricted to South African applicants

Funding: Research funds are available, does not include living costs/stipend

Background: Foot-and-mouth disease (FMD) virus can infect all cloven-hoofed species, causing large-scale outbreaks that limits livestock trade. In South Africa, buffalo in the Kruger National Park (KNP) and surrounding areas are carriers of FMD virus. Due to the extremely infectious nature of the virus this necessitated the establishment of a FMD Control Zone in the KNP and eastern Limpopo and Mpumalanga provinces, and northern KwaZulu-Natal. Rift Valley fever (RVF) and infectious bovine rhinotracheitis (IBR) can cause severe economic losses through morbidity and abortions that are likely underdiagnosed in the FMD Control Zone of South Africa.

Because FMD virus can persist in the oropharynx of exposed animals or tissue samples for months and the highly contagious nature of the virus, movement of tissue samples for research from the FMD Control Zone is strictly controlled and the ability to study diseases in this area in BSL-1 laboratories is restricted. Recent technological advances has made it possible to study viruses in formalin fixed tissues. These methods include *in situ* nucleic acid hybridization, PCR, sequencing and molecular phylogeny.

Aim of the project: The aim of this project is to contribute to knowledge regarding the epidemiology of FMD, RVF and IBR in livestock in the FMD Control Zone, through the detection of sub-clinical disease and the identification of the silent circulation of these high impact viruses.

- **CONTACT PERSON:** Prof. Melvyn Quan, Department Veterinary Tropical Diseases; E-mail: melvyn.quan@up.ac.za Telephone: +27 (0)12 529 8142
-

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: 23 February 2021