

Research to enhance protection of livestock against Foot and Mouth Disease

By Lvs

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During the official opening of the Hans Hoheisen Wildlife Research Station (HHWRS) in August 2010, Peace Parks Foundation (PPF) made available R1 million towards priority research concerning veterinary issues in trans-frontier conservation areas. With Foot and Mouth disease (FMD) making the headlines regularly throughout southern Africa, it was no surprise that this disease was chosen as the topic for the research project. Two students have recently been appointed to pursue these objectives through Master's degrees at University of Pretoria's (UP) Departments of Veterinary Tropical Diseases and Production Animal Studies.

A conceptual framework for the project was drawn up in consultation with a number of FMD experts, regulatory authorities and researchers from the region. The project, coordinated by the Faculty of Veterinary Science, UP, will look specifically at ways to improve protection of livestock against FMD, through development of more effective vaccination schedules using the currently available vaccine as well as improving diagnostic tests to monitor vaccination and exposure status of livestock. The field component of the study will be conducted in the Mnisi Communal area, a rural area adjacent to the Kruger National Park and its adjoining private and provincial nature reserves. The 30000 hectare area, of which 80% is bordering on conservation areas that are endemically infected with FMD, contains about 12000 cattle that are regularly vaccinated against FMD.



Dr Iolanda Anahory, one of the Master's candidates, is a veterinarian and junior researcher at the Central Veterinary Laboratory (CVL), Directorate of Animal Science, Maputo Province, Mozambique. She will be working on the improvement of a southern African Territories Type 3 FMD virus diagnostic test (a so-called Liquid Phase Blocking ELISA). Iolanda will spend most of her time working under the supervision of senior researchers at the ARC-Onderstepoort Veterinary Institute's Trans-boundary Animal Diseases Programme, through their affiliation with the UP's Department of Veterinary Tropical Diseases. After the two year project, Iolanda will be returning home to her husband and eight year old daughter as well as her job at the CVL, where she is involved in monitoring of animal health, research and diagnosis of viral diseases, disease outbreak investigations and the setting up of molecular diagnostics. The skills and experience gained through her post-graduate studies at UP should enable her to contribute a great deal more to animal health in Mozambique.

Dr David Lazarus, the second Master's candidate in the project, hails from Nigeria, where he is a senior veterinary research officer at the FMD Research Centre, National Veterinary Research Institute in the city of Vom. David has a great interest in the epidemiology and ecology of trans-boundary and emerging infectious animal diseases. David's focus will be on the improvement of the vaccination schedule applied using the currently available FMD vaccine in the region. Under supervision of the UP's Department of Production Animal Studies, David will be heavily involved in the collection of blood samples from cattle in the Mnisi communal farming area, through an intricate sampling strategy in which he will be assessing vaccination efficacy. He will be based at the HHWRS, where he will be preparing the samples for transfer to Onderstepoort under the bio-security measures required to move samples from the infected parts of South Africa to the non-infected areas, such as Onderstepoort. David's wife, Pati, will hopefully be joining him in South Africa soon for his extended stay in the country.



Both students are currently finalising their project protocols for approval by UP's research and ethics committees.