CSRS
Centre Suisse de Recherches Scientifiques en Côte d'Ivoire

Call for Fellowships Afrique One-ASPIRE

TTP2: Thematic Training Program on Brucellosis Control and Prevention

Ref: TTP2-Brucellosis-MSc6

Project Title: Molecular characterisation of *Brucella* species infecting livestock in northern Tanzania

Enrolment: The MSc fellow will be enrolled at NM-AIST, Tanzania.

Project Description: Brucellosis is a bacterial infection that systemically affects a wide variety of mammalian species, including humans. The disease occurs worldwide, both endemically and zoonotically to varying degrees, particularly in Africa. Brucellosis is caused by several different pathogen species, each of which has a complex multi-host epidemiology. Both *B. abortus* and *B. melitensis* have been detected in Tanzania; however, little is known about the presence or prevalence of these different pathogen species in different livestock hosts in northern Tanzania. Most data that have been collected to date are from serological samples. These reveal evidence of exposure to *Brucella* spp. but do not allow differentiation between *Brucella* species. The capacity for transmission of several *Brucella* species between different animal host species further complicates the interpretation of these data and the understanding of *Brucella* species-specific transmission patterns.

The MSc fellow will study the most effective ways to obtain and screen diagnostic samples for the molecular detection and typing of *Brucella* spp. in livestock. This project will involve field sample collection from livestock through links with field projects operating in the Ngorongoro Conservation Area and various districts in northern Tanzania. Targets for sampling may include individuals from herds with known *Brucella* infection status, individuals with recently reported abortion or parturition and animals that can be sampled at slaughter. Sample collection will include blood among other samples (to be specified), to enable PCR based detection of *Brucella* and typing at the species level. Data analyses will help determining which species and individuals are infected with which *Brucella* species and the risk factors for pathogen shedding.

Mentorship Team: Gabriel Shirima (NM-AIST); Jo Halliday and Dan Haydon, (UoG)

Qualifications: The candidate must be a citizen of an African country. Candidates from any discipline contributing to One Health (e.g. public health, veterinary and animal sciences, epidemiology and life sciences) will be considered. Candidates with an Undergraduate degree (GPA 3.5 and above) in a relevant field from recognised university are preferred.

Training: Training will be provided primarily in Tanzania, with opportunities for further training within the Afrique One-ASPIRE consortium elsewhere in Africa, depending on needs and internal budget considerations.

For more information, contact the Co-leads:

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