

## Full-time PhD position: Impact of climate change on bovine trematode snail-borne

This PhD fellow will be part of the South African team implementing an EU-funded project, PREPARE4VBDs (A Cross-Disciplinary Alliance to Identify, **PRE**dict and **prePARE** for Emerging Vector-Borne Diseases). The project is managed by KwaZulu-Natal Ecohealth Program (KEP).

### Context of work to be done

The ongoing change in climate and its projected rise will influence several biological systems, particularly those that are temperature-dependent. Therefore, understanding the impact of temperature, especially rising temperature on the transmission of infectious diseases is critical.

Food-borne trematode infections are important public health socioeconomic problems. These infections including liver flukes, lung flukes and intestinal flukes are common in developing countries, and temperature rise has been predicted to alter the frequency and transmission dynamics of these trematode infections.

Through an array of laboratory experiments, the proposed project will understand how species involved in the transmission of *Fasciola* are likely to respond to a rise in temperature.. Understanding the impact of temperature on the hosts and trematodes, its influence on hosts survival, growth, fecundity, development rate of the parasite within the host, parasite survival will help in predicting the impact of future environmental changes on the spread of fasciola infections. The project will take a multidisciplinary approach, combining ecology, modeling, and quantitative methods to understand the impact of temperature on trematode intermediate hosts snails.

### Research

The successful candidate will expand high-quality scientific research by working with experts in the field of ecology and modeling. The candidate will participate in ongoing research PREPARE4VBDs activities managed by KEP. The candidate will participate in local and international academic conferences to disseminate the results of their project and also participate in the mentoring of MSc students.

### Profile

The preferred candidates must

- Hold an MSc in Laboratory medical science, Zoology, Biology or Public Health a related discipline linked to the profile (e.g. epidemiology, ecology, parasitology)
- Have a good knowledge about statistical approaches to describe various effects of temperature on the parasite-snail interaction
- Have a broad range of experience in conducting animal laboratory experiments or able to design an experiment
- Be able to work in a dynamic and multi-discipline and multi-cultural team.
- Have research interests are in line with the proposed project (availed to interested candidates)
- Must pay attention to quality, integrity, creativity, and cooperation.

**Who should apply and how should the application be made?** Although this is an open call for candidates from any country in Africa, South African citizens and those with South Africa Permanent Residence will be preferred. Applications should be submitted through email to [kep@ukzn.ac.za](mailto:kep@ukzn.ac.za) by April 15, 2022 (by midnight CAT). Academic enquiries can also be directed to [kep@ukzn.ac.za](mailto:kep@ukzn.ac.za)