PhD Positions in Wildlife Disease Ecology and Evolution

Two graduate student positions are available as part of an NSF-funded project on the evolution and transmission of *Bacillus anthracis*, the causative agent of anthrax, in two endemic systems in southern Africa. The project is a collaboration between Wendy Turner at the University at Albany (www.wendyturner.org), Pauline Kamath at the University of Maine (https://kamathlab.weebly.com/), and Henriette van Heerden at the University of Pretoria (www.up.ac.za/veterinary-tropical-diseases/article/1945572/h-van-heerden).

**Project Background:** Anthrax is a globally distributed disease of wildlife, livestock, and humans that can vary in its ecology and epidemiology among geographic areas. These differences in how and when outbreaks occur has served as a stumbling block, limiting understanding of this disease and the ability to predict, and hence respond to, outbreaks in animals and humans. This project will compare two areas in southern Africa that have very different anthrax outbreak dynamics: Etosha National Park, Namibia, where smaller outbreaks occur annually in grazing herbivores in wet seasons, and Kruger National Park, South Africa, where larger outbreaks occur on roughly a decadal scale in browsing herbivores in dry seasons. This collaborative project will consider the roles of host, pathogen, and environment in contributing to the differences in the patterns of anthrax occurrence observed between the two study areas, which are representative of the differences seen among anthrax systems world-wide. The collaborative project team is studying pathogen landscape genomics over decades in each system, host immunogenetics and ecoimmunology, host movement and foraging ecology, population density, and environment, host and pathogen influences on outbreak dynamics.

1. **Ph.D. position: Theoretical/Quantitative Disease Ecology**
   The Turner lab (www.wendyturner.org) at the University at Albany, SUNY seeks a highly motivated Ph.D. student in theoretical or quantitative disease ecology, to start Fall (or Spring) 2019. This Ph.D. project will study ecological and evolutionary interactions between *Bacillus anthracis* and its herbivorous hosts, contrasting two ecosystems varying in anthrax outbreak dynamics, Etosha National Park, Namibia and Kruger National Park, South Africa. Competitive applicants will have previous research experience, a strong quantitative background with the skills to confront models with data (programming, statistical modeling, and/or theoretical modeling), an interest in conducting fieldwork on charismatic megafauna in African savannas, and the ability to work independently and as part of a diverse team. Interested applicants should contact Dr. Wendy Turner (wcturner@albany.edu). Applications must be submitted through UAlbany’s Biology department (https://www.albany.edu/biology/graduate/phd-biology-eeb.shtml); the application deadline for fall admission is January 15th.

   A graduate student position is available in the Kamath Lab (https://kamathlab.weebly.com/) at the University of Maine, starting in the Spring, Summer, or Fall 2019. The Ph.D. assistantship will focus on host-pathogen evolutionary dynamics and the genetic basis for heterogeneity in susceptibility to *B. anthracis* in ungulate hosts of Etosha National Park, Namibia, and Kruger National Park, South Africa. Preferred qualifications include previous research experience in population genomic approaches, field skills, and a demonstrated ability to work both independently and in a team. Interested qualified applicants should send a cover letter, current CV, unofficial transcripts, a publication or writing sample, and the names and contact information for three references to Pauline Kamath at pauline.kamath@maine.edu. The cover letter should describe interest in the project and in graduate study, relevant coursework, research experience, and other qualifications. Review of applications will begin on December 20th, but applications will be accepted on a rolling basis thereafter until the position is filled.

Both the University at Albany and the University of Maine are EEO/AA employers. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, national origin, sexual orientation, age, disability, protected veteran status, or any other characteristic protected by law.