Postdoctoral Scholar: LONG-DISTANCE DISEASE SPREAD

LONG-DISTANCE DISEASE SPREAD: THEORY AND MODELING Postdoctoral Scholar Position Reopened
Oregon State University, Corvallis, OR, USA

The Scholar will be a contributing member of a multi-investigator project using empirical data and modeling approaches to study effects of fundamental epidemiological parameters (e.g., basic reproduction number and initial disease prevalence) and common control tactics (e.g., reactive ring culling, reactive ring vaccination or chemotherapeutic applications, timing and extent of reactive ring treatments, and broad-scale population protection) on the spread of disease caused by pathogens demonstrating long-distance dispersal. The project is funded by the USDA National Institute of Food and Agriculture through the NSF/NIH/USDA/BBSRC Ecology and Evolution of Infectious Disease Program. Salary will be based on Oregon State University guidelines for postdoctoral scholars.

The incumbent will be responsible for developing generalized theory and models to predict “rules-of-thumb” for the control of diseases caused by pathogens with long-distance dispersal. Modeling studies of wheat stripe rust, foot-and-mouth disease, sudden oak death, and livestock/human arboviruses are underway by individual research teams. The incumbent will conduct extensive comparative modeling through factorial combinations of models and input data among the different diseases. Modeling results will be compared with data from natural experiments with sudden oak death and foot-and-mouth disease, and manipulative experiments with wheat stripe rust, for model validation/verification.

There will be regular electronic and in-person meetings among all project personnel, incorporating studies on FMD, wheat stripe rust, sudden oak death, and arboviruses of livestock and humans. All project personnel will be involved in activities to evaluate commonalities and differences among disease systems.

Though the position is based at Oregon State University (where Chris Mundt functions as leader of the overall project), the conceptual leaders of this part of the project will be Mike Tildesley and Matt Keeling (University of Warwick), who will have regular electronic communication with the Scholar. In addition, the Scholar will spend approximately one month per year in the UK (all expenses paid by the grant) and interact with the laboratories of Professors Tildesley and Keeling.

Required Qualifications and Experience: Candidates should be highly motivated and possess a recent Ph.D. in ecology, epidemiology, or a related field. Knowledge of ecological theory, programming, and modeling skills are required, as are strong writing and verbal communication skills.

Preferred Qualifications and Experience: Experience in disease ecology

Open: August 6, 2018
Close: September 6, 2018 or until filled

Application Process: E-mail a letter of interest, curriculum vitae, and contact information for three references to:

Dr. Chris Mundt
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