

Post-doctoral Research Associates and Support Scientists

Members of a national SARS-CoV-2/cervid Targeted Surveillance Team (www.targetedsurveillance.com) are seeking three post-doctoral researchers and one master's level support scientist. The Team's overarching objective is to uncover the ecological conditions that generate spatial hotspots of SARS-CoV-2 transmission and persistence in free-ranging cervids. We are particularly excited about recruiting individuals with strong interests in interdisciplinary disease ecology and specific skills in spatial ecology, animal movement modeling, statistics, epidemiological modeling, and population modeling. The team will use movement and disease data across deer populations in the United States to i) develop new methods for movement-driven modeling of spatio-temporal infection risk ii) build and analyze movement-explicit epidemiological models to generate environmentally and behaviorally informed spatial maps of SARS-CoV-2 transmission potential and iii) use predicted transmission potential to identify shared drivers of SARS-CoV-2 spread and persistence across white-tailed deer populations. The work will be in collaboration with a broader team of researchers from seven universities collecting SARS-CoV-2 surveillance data in wildlife and the USDA, Wildlife Services, National Wildlife Research Center.

Research topics for the positions will include:

- 1) Postdoctoral Research Associate (UTK): Expansion of spatial epidemiological modeling theory that accounts for animal movement
- 2) Postdoctoral Research Associate (USU): Statistical frameworks for fitting spatial disease transmission models to animal movement and disease diagnostic data to estimate epidemiological parameters
- 3) Postdoctoral Research Associate (USU): Statistical modeling of animal movement data
- 4) Support Scientist (USU): Processing large amounts of animal movement data and developing data curation and automation of workflows for analysis of movement and disease data

The candidates will have the opportunity to interact closely with the multi-disciplinary team of movement, disease, and wildlife ecologists. The candidates will be expected to write manuscripts for academic journals, participate in regular collaboration meetings, and present results at meetings and academic conferences. These positions will begin as soon as a suitable candidate is identified for an initial term of one year with the possibility of extension, pending performance. The positions' start date can be negotiated. One position will be at the University of Tennessee, Knoxville, while others are at Utah State University, but the candidates will have the opportunity to work in other locations in our collaborative network across the United States and remote work will be considered for some positions.

Postdoctoral salary: \$62,000/year plus benefits

Support scientist salary: \$45,000/year

Application deadline: Review of applications will begin as soon as possible and will end when suitable candidates are identified.

REQUIREMENTS: (Postdoctoral fellows) PhD in ecology, epidemiology, statistics, movement ecology, population ecology, spatial ecology, mathematical biology, or other similar fields. Demonstrated experience building and analyzing mathematical and statistical models aimed at answering biological, ecological, or epidemiological questions and a publication record in peer reviewed journals. Demonstrated experience with programming languages R, Python, Matlab, or similar. (Support scientist) MS in ecology, wildlife biology, or a related field. Demonstrated experience with R, Python, or SQL required, and experience with wildlife data strongly preferred. Support scientist position will be located in Utah.

Questions regarding the positions can be directed to Dr. Mark Wilber (mwilber@utk.edu) for UTK position or Dr. Kezia Manlove (kezia.manlove@usu.edu) for USU positions.

TO APPLY: Submit a one-page cover letter summarizing research interests and experience with mathematical modeling, a curriculum vitae, copies of academic transcripts, and full contact information of three professional references.

University of Tennessee (UTK) position: mwilber@utk.edu

Utah State University (USU) positions: kezia.manlove@usu.edu