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Opportunity Title: USDA-ARS Infectious Disease Epidemiology Modeling in Support of ARS Animal Health Goals
Opportunity Reference Code: USDA-ARS-SEA-2026-0411

Organization U.S. Department of Agriculture (USDA)

Reference Code USDA-ARS-SEA-2026-0411

How to Apply ***To submit your application, scroll to the bottom of this opportunity and click APPLY.***

A complete application consists of:

- An application
- Transcript(s) – For this opportunity, an unofficial transcript or copy of the student academic records printed by the applicant or by academic advisors from internal institution systems may be submitted. Click here for detailed information about acceptable transcripts.
- A current resume/CV, including academic history, employment history, relevant experiences, and publication list
- Two educational or professional recommendations

All documents must be in English or include an official English translation.

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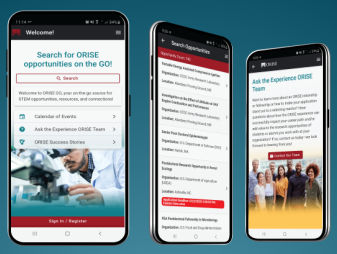
Application Deadline 1/1/2027 3:00:00 PM Eastern Time Zone

Description ***Applications are reviewed on a rolling-basis and applications may close before the deadline.**

ARS Office/Lab and Location: A research opportunity is currently available with the U.S. Department of Agriculture (USDA), Agricultural Research Service (ARS), located in Starkville, Mississippi. It is expected that the individual will travel to other research and production sites to become familiar with the system and overall research goals of these collaborators.

The Agricultural Research Service (ARS) is the U.S. Department of Agriculture's chief scientific in-house research agency with a mission to find solutions to agricultural problems that affect Americans every day from field to table. ARS will deliver cutting-edge, scientific tools and innovative solutions for American farmers, producers, industry, and communities to support the nourishment and well-being of all people; sustain our nation's agroecosystems and natural resources; and ensure the economic competitiveness and excellence of our agriculture. The vision of the agency is to provide global leadership in agricultural discoveries through scientific excellence.

Research Project: You will be mentored by a collaborative research team in the US Department of Agriculture's Agricultural Research Service at the Geospatial and Environmental Epidemiologic Research Unit (GEERU), Office of National Programs (ONP), and the Foreign Animal Disease Research Unit (FADRU). You will learn to develop mathematical and statistical models to investigate transmission and spread of infectious diseases of livestock, poultry, and farmed cervids, with studies initially focused on highly pathogenic avian influenza.

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Collaborations with other USDA Agricultural Research Service unit scientists and Mississippi State University faculty will be expected. You will learn from an interdisciplinary team which includes disease ecologists, bacteriologists, virologist, and computation biologists. Peer-reviewed publication of research findings will be encouraged and supported.

Learning Objectives: You will have the opportunity to gain or expand skillsets over a range of computational epidemiological techniques and exposure to diverse production systems. More specifically:

1. Model Development: Design and implement advanced statistical and mathematical models to support understanding of disease transmission, spread, and persistence.
2. Incorporation of environmental, surface characteristic, and meteorologic data into models to enhance accuracy of results.
3. Software/Code Development: Build reproducible workflows, functions, and R or Python packages; develop visualization tools and open-source applications; and share code through collaborative platforms such as GitHub.
4. Scientific Communication: Produce reproducible analyses, publish findings in peer-reviewed journals, and present results at scientific conferences and stakeholder meetings.
5. Collaboration and Communication: Work effectively within interdisciplinary teams and engage with researchers, veterinarians, and industry stakeholders to address complex questions in animal disease management.

Mentor(s): The mentor for this opportunity is Joseph Purswell (joseph.purswell@usda.gov). If you have questions about the nature of the research, please contact the mentor(s).

Anticipated Appointment Start Date: January - February 2027. Start date is flexible and will depend on a variety of factors.

Appointment Length: The appointment will initially be for one year, but may be renewed upon recommendation of ARS and is contingent on the availability of funds.

Level of Participation: The appointment is full time.

Citizenship Requirements: This opportunity is available to U.S. citizens only.

ORISE Information: This program, administered by ORAU through its contract with the U.S. Department of Energy (DOE) to manage the Oak Ridge Institute for Science and Education (ORISE), was established through an interagency agreement between DOE and ARS. Participants do not become employees of USDA, ARS, DOE or the program administrator, and there are no employment-related benefits. Proof of health insurance is required for participation in this program. Health insurance can be obtained through ORISE.

Questions: Please visit our Program Website. After reading, if you have

additional questions about the application process, please email ORISE.ARS.Southeast@orau.org and include the reference code for this opportunity.

Qualifications

The qualified candidate should be currently pursuing or have received a master's or doctoral degree (PhD preferred, ideally also with a DVM) in the one of the relevant fields. Degree must have been received within the past five years, or anticipated to be received by 6/1/2027.

Preferred skills:

- Proficiency in developing epidemiologic study designs to optimize validity and control bias.
- Proficiency in using at least one common statistical program (e.g., R, SPSS, SAS, JMP, Stata, etc.).
- Demonstrated skills in developing statistical approaches for regression analysis and exposure to spatiotemporal analysis.
- Knowledge of livestock infectious disease and their general epidemiology, with a focus on influenza
- Exposure and understanding of disease modeling.
- Ability to effectively collaborate with others.
- Demonstrated strong oral and written communication skills.
- Ability to use common statistical software and modeling programs, be familiar with data management, and well-versed in infectious disease epidemiology.

Stipend $62,107.00 – $74,361.00 Yearly

Point of Contact Janeen

Eligibility Requirements

- **Citizenship:** U.S. Citizen Only
- **Degree:** Master's Degree or Doctoral Degree received within the last 60 months or anticipated to be received by 6/1/2027 11:59:00 PM.
- **Discipline(s):**
  - **Computer, Information, and Data Sciences** (4 👁)
  - **Earth and Geosciences** (5 👁)
  - **Environmental and Marine Sciences** (4 👁)
  - **Life Health and Medical Sciences** (7 👁)
  - **Mathematics and Statistics** (3 👁)