



Postdoctoral Fellowship in Animal Disease Research

Organization

U.S. Department of Agriculture (USDA)

Reference Code

USDA-ARS-2022-0043

How to Apply

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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. All transcripts must be in English or include an official English translation. [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.

Application Deadline

1/24/2022 3:00:00 PM Eastern Time Zone

Description

*Applications are reviewed on a rolling-basis and this posting could close before the deadline.

ARS Office/Lab and Location: A research opportunity is available with the U.S. Department of Agriculture (USDA), Agricultural Research Service (ARS), Animal Disease Research Unit located in Pullman, Washington.

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.

The USDA-ARS Animal Disease Research Unit performs research on infectious diseases of agricultural animals to provide solutions to problems that have significant economic impact on livestock industries of the United States. For that, ADRU conducts research on multiple projects, including the development of an effective strategy to control bovine and equine theileriosis, caused by the intracellular tick-borne pathogens, *Theileria orientalis*, *Theileria equi*, and *Theileria haneyi*.

Research Project: The primary goals of the project are to: 1) Characterize competence of U.S. tick species to acquire and transmit *T. orientalis*; 2) Characterize parasite virulence factors and immune correlates of protection and disease during acute and persistent equine and bovine theileriosis using immune function assays and comparative genomics and transcriptomics; 3) Develop an improved serologic assay for the diagnosis of *T. orientalis*; and 4) Characterize the *in vitro* and *in vivo* drug susceptibility profiles of equine and bovine *Theileria sp.* The project will include training opportunities in functional immunology assays, advanced molecular biology techniques, and comparative genomics and transcriptomics. Under the guidance of a mentor, participant activities will include:

- Performing laboratory and animal research related to candidate drug screening

- Performing laboratory and animal research related to vaccine and diagnostic assay development

- Receiving mentoring in scientific writing

- Presentation of research results at scientific conferences.

Learning Objectives: The participant will develop and expand his/her professional knowledge of molecular biology, immunology and vaccinology by performing hands-on experiments. The participant will have the opportunity of publishing scientific articles describing: 1. The competence of U.S. tick species to acquire and transmit *T. orientalis*; 2. Parasite virulence factors and immune correlates of protection and disease during acute and persistent equine and bovine theileriosis 3. The development and validation of an improved serologic assay for the diagnosis of *T. orientalis*; and 4. The *in vitro* and *in vivo* drug susceptibility profiles of equine and bovine *Theileria sp.* Moreover, this project will enhance the participant's capability to work collaboratively to design, plan, and implement approaches to solve livestock problems, which will give them expertise that can be used in different but related research fields.

Mentor(s): The mentor for this opportunity is Lindsay Fry (Lindsay.fry@usda.gov). If you have questions about the nature of the research, please contact the mentor(s).

Anticipated Appointment Start Date: Winter or Spring 2022. 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.

Participant Stipend: The participant(s) will receive a monthly stipend commensurate with educational level and experience.

Citizenship Requirements: This opportunity is available to U.S. citizens, Lawful Permanent Residents (LPR), and foreign nationals. Non-U.S. citizen applicants should refer to the Guidelines for Non-U.S. Citizens Details page of the program website for information about the valid immigration statuses that are acceptable for program participation.

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 USDA-ARS@ornl.gov and include the reference code for this opportunity.