

Opportunity Title: USDA-ARS Research Opportunity in Host Immune Responses

Opportunity Reference Code: USDA-ARS-2020-0196

Organization U.S. Department of Agriculture (USDA)

Reference Code USDA-ARS-2020-0196

How to Apply A complete application package 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. Selected candidate must provide proof of completion of the degree before the appointment can start. Proof must be sent to ORISE directly from the academic institution including graduation date and degree awarded. All transcripts must be in English or include an official English translation. Click [Here](#) for detailed information about acceptable transcripts.
- A current resume/CV
- Two educational or professional recommendations

If you have questions, send an email to USDA-ARS@oraui.org. Please include the reference code for this opportunity in your email.

Application Deadline 2/15/2021 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), Beltsville Agricultural Research Center (BARC), Animal Parasitic Diseases Laboratory (APDL) in Beltsville, Maryland.

Research Project: Gastrointestinal (GI) nematode infections cause significant losses to the US cattle producers. Currently, parasite control primarily relies on the use of chemical drugs. However, drug resistance is emerging rapidly. Thus, our current research focuses on better understanding of host immune responses to GI nematodes and the identification and testing of potential vaccine candidates. Under the guidance of a mentor, the research participant will receive training in and have the opportunity to perform bench research on parasitology, livestock immunology and immunoregulation, gene/protein profiling and characterization, vaccine development and characterization/testing.

BARC has fully equipped modern laboratories located on a 6,000-acre campus only 12 miles from Washington, D.C. There are hundreds of scientists conducting agricultural research at the center. The center at Beltsville is one of many centers located throughout the United States. Our laboratory has access to a 120 dairy cow research herd located within one mile from the main laboratory. We also have fully equipped facilities housing small and large experimental animals. The University of Maryland at College Park, MD is located 4 miles from our research facility. In addition, the National Institutes of Health, American University, Johns Hopkins University, and Catholic University are in close proximity to our laboratory. This allows access to professional advice on scientific matters, to equipment, and availability to a full array of seminars, workshops, and conferences.

Learning Objectives: Throughout the course of this research project, the participant will improve his/her knowledge of parasitology, livestock immunology and immunoregulation, gene/protein profiling and characterization, vaccine development and characterization/testing. The participant will also be encouraged to present the results at scientific meetings.



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Mentor(s): The mentor for this opportunity is Wenbin Tuo (wenbin.tuo@usda.gov). If you have questions about the nature of the research please contact the mentor(s).

Anticipated Appointment Start Date: Fall 2020. 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.

Qualifications The qualified candidate should have received a master's or doctoral degree in veterinary medicine, immunology, infectious diseases, vaccine development, and/or parasitology in livestock species, or be currently pursuing one of the degree and will reach completion by the start date of the appointment.

Preferred Skills/Experience in:

- Cell biology (cell isolation, cell culture and maintenance; in particular, immune cell isolation, phenotyping, maintenance, and functional characterization)
- Molecular cloning and protein expression/characterization (gene cloning, protein expression, purification and characterization using cell-free and cell-based assays) and bioinformatics (knowledge and experience in genome and transcriptome sequencing, analysis, assembly and annotation)

- Eligibility Requirements**
- **Degree:** Master's Degree or Doctoral Degree.
 - **Discipline(s):**
 - **Communications and Graphics Design** ([1](#) )
 - **Computer, Information, and Data Sciences** ([1](#) )
 - **Life Health and Medical Sciences** ([12](#) )