

Opportunity Title: USDA-ARS Animal Disease Research Fellowship

Opportunity Reference Code: USDA-ARS-2022-0146

Organization U.S. Department of Agriculture (USDA)

Reference Code USDA-ARS-2022-0146

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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 7/29/2022 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 currently available with the U.S. Department of Agriculture (USDA), Agricultural Research Service (ARS) at the Animal Disease Research Unit located in Pullman, Washington.

Research Project: 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 babesiosis, caused by the obligate, intracellular tick-borne pathogen, *Babesia spp.*

The primary goal of the project is to determine the ability of novel chemotherapeutic compounds to eliminate *Babesia* parasites and disrupt transmission in *Babesia*-infected cattle through: 1) Determining the inhibitory dose (IC₁₀₀) and the most effective route of treatment; 2) Study pharmacokinetics and pharmacodynamics relationships; and 3) Elimination of transmission risk by drug treatment. The project has a training opportunity in veterinary pharmacology, advanced molecular biology tools for parasite detection, and data analysis. Under the guidance of a mentor, participant activities will include:

- Performing animal research related to experimental infection of cattle with *Babesia* parasites tick infestation, pharmacodynamics, and chemotherapeutic approaches.
- Performing laboratory and animal research related to the detection of parasite infection in cattle and ticks using molecular and serological



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methods.

- 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, pharmacology and parasite clearance treatments, diagnostic techniques, immunology, apicomplexan and tick biology, and by performing hands-on experiments. The participant will have the opportunity of publishing scientific articles describing: 1) the development of novel chemotherapeutic means to treat cattle babesiosis; 2) the development of novel diagnostic methods for bovine babesiosis, and 3) controlling parasite transmission upon parasite clearance in Babesia infected cattle. 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 Carlos E. Suarez (carlos.suarez@usda.gov). If you have questions about the nature of the research, please contact the mentor(s).

Anticipated Appointment Start Date: Summer 2022. Start date is flexible and will depend on a variety of factors.

Appointment Length: The appointment will initially be for two years, 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. However, this position requires a pre-employment check and a full background investigation. Proof of health insurance is required for participation in this program. Health insurance can be obtained through ORISE.

This is an equal opportunity program open to all qualified individuals without regard to race, color, age, sex, religion, national origin, mental or physical disability, genetic information, sexual orientation, or covered veteran's status.

Questions: Please visit our [Program Website](#). After reading, if you have additional questions about the application process please email USDA-ARS@orau.org and include the reference code for this opportunity.

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Qualifications The qualified candidate should be currently pursuing or received a doctoral degree in one of the relevant fields.

Preferred skills:

- Ability to perform animal research related to experimental infection of cattle with Babesia parasites tick infections.
- Experience with pharmacodynamics and chemotherapeutic approaches
- Ability to perform laboratory and animal research related to the detection of parasite infection in cattle and ticks
- Experience with molecular and serological methods
- Experience with data analytics using statistical tools
- Strong background in molecular biology and veterinary pharmacology

- Eligibility Requirements**
- **Degree:** Doctoral Degree received within the last 60 months or anticipated to be received by 7/29/2022 11:59:00 PM.
 - **Discipline(s):**
 - **Life Health and Medical Sciences** ([10](#) 👁)
 - **Mathematics and Statistics** ([1](#) 👁)