Opportunity Title: USDA-ARS Bioinformatic Analysis of Immune Responses to Intracellular Bacteria
Opportunity Reference Code: USDA-ARS-MWA-2026-0344

Organization U.S. Department of Agriculture (USDA)

Reference Code USDA-ARS-MWA-2026-0344

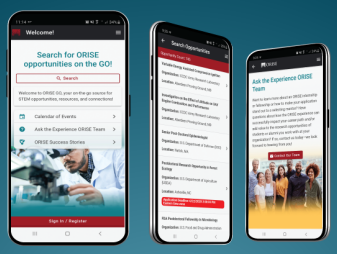
How to Apply ***To submit your application, scroll to the bottom of this opportunity and click APPLY.***

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 12/4/2026 3:00:00 PM Eastern Time Zone

Description ***Applications are reviewed on a rolling-basis.**

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 Ames, Iowa.

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 a part of research projects developing improved intervention strategies for preventing infections with intracellular bacteria (primarily tuberculosis and brucellosis) in domestic livestock and wildlife. This will include using bioinformatical (genomics and transcriptomics) and other techniques to characterize immunologic responses to vaccination or infection in an effort to develop better intervention strategies. In addition, experience will be gained in helping prepare immunologic samples for sequencing analysis. This may include participation in sampling for in vivo studies and laboratory

activities preparing samples for immunologic analysis. You will develop skills in immunologic techniques and various bioinformatic disciplines such as single cell transciptomics and genomic analysis.

Learning Objectives: Under the guidance of a mentor, you will have the opportunity to learn to:

- Conduct research on prevention and control strategies for intracellular bacterial infections, particularly tuberculosis and brucellosis, in livestock and wildlife.
- Utilize immunology, genomics, and transcriptomics to characterize host immune responses to infection and vaccination.
- Detail laboratory methods for collecting, processing, and preparing immunologic samples for sequencing-based analysis.
- Understand in vivo animal studies, including sample collection and research activities involving domestic livestock and wildlife.
- Apply genomic analysis, single-cell transcriptomics, and interpretation of immune-response data.

Mentor(s): The mentor for this opportunity is Dr. Darrell Bayles (darrell.bayles@usda.gov). If you have questions about the nature of the research, please contact the mentor(s).

Anticipated Appointment Start Date: November 2026. 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.Midwest@orau.org and include the reference code for this opportunity.

Qualifications The qualified candidate should be currently pursuing or have received a doctoral degree in the one of the relevant fields. Preference is on completed degrees, or degrees expected to be earned by December 2026.

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Preferred skills:

- Experience in bioinformatic analysis in areas such as transcriptomics and genome analysis.
- Background in immunology
- Good communication skills and the ability to collaborate in a team setting.

Stipend $87,000.00 – $99,000.00 Yearly

Point of Contact Michele

Eligibility Requirements

- **Citizenship:** U.S. Citizen Only
- **Degree:** Doctoral Degree.
- **Discipline(s):**
  - **Computer, Information, and Data Sciences** (2 👁)
  - **Life Health and Medical Sciences** (5 👁)