Opportunity Title: USDA-ARS Postdoctoral Research Fellow
Opportunity Reference Code: USDA-ARS-MWA-2026-0303

Organization U.S. Department of Agriculture (USDA)

Reference Code USDA-ARS-MWA-2026-0303

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

A complete application consists of:

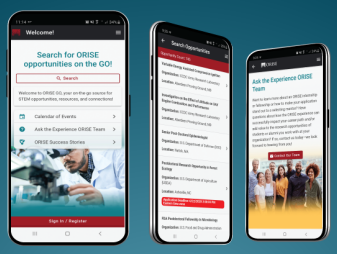
- An application
- Transcript(s) – For this opportunity, an unofficial transcript or copy of the student academic records printed by the applicant or by academic advisors from internal institution systems may be submitted.
  Click here for detailed information about acceptable transcripts.
- A current 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 2/26/2027 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), National Center for Agricultural Utilization Research located in Peoria, Illinois.

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 National Center for Agricultural Utilization Research (NCAUR) is among the largest agricultural research centers in the United States. The center has an interdisciplinary team of scientists dedicated to research on improving agricultural production, food safety and public health, economic development, and environmental quality.

Research Project: This research project focuses on the discovery and characterization of novel pathogens affecting managed honey bees (*Apis mellifera*) colonies across Illinois. This will be done alongside comprehensive surveillance of known pathogens circulating at local and

regional apiaries. An important component of this opportunity is the characterization of honey bee viromes through Next Generation Sequencing technologies (NGS) to uncover previously undescribed viral and other microbial threats to bee health. This unique opportunity combines molecular laboratory methods with collaborative field surveillance to advance the understanding of honey bee disease epidemiology and inform strategies for colony protection in Illinois.

You will help evaluate microbial-derived compounds for biological activity against honey bee pathogens and Varroa mites, aiming to identify novel candidates for sustainable colony protection. You will be involved in statewide monitoring efforts in close collaboration with Illinois State Apiary inspectors and local beekeeping operations to detect, identify, and characterize pathogens affecting managed honey bee colonies. Fellowship activities may include: collecting adult bee, brood, and hive samples, identifying and characterizing bacterial, fungal and viral pathogens, discovering and describing novel and uncharacterized pathogens, confirming and characterizing novel agents, evaluating candidate biocontrol compounds, and assessing pathogen impacts on colony health indicators.

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

- Design and conduct field surveillance studies in collaboration with state apiary inspectors and beekeeping partners.
- Apply molecular and sequencing-based methods (qPCR, Sanger sequencing, NGS metagenomics) to detect, quantify, and characterize known and novel honey bee pathogens.
- Apply classical microbiological techniques to isolate and characterize bacterial and fungal pathogens.
- Gain experience designing and running bioassays to evaluate candidate compounds against honey bee pathogens and Varroa mites.
- Evaluate the impact of pathogen infection, including newly discovered agents, on bee physiology and colony health.
- Analyze complex biological datasets and communicate findings through presentations and peer-reviewed manuscripts.

Mentor(s): The mentor for this opportunity is Jose Luis Ramirez (jose.ramirez2@usda.gov). If you have questions about the nature of the research, please contact the mentor(s).

Anticipated Appointment Start Date: October 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.

Participant Stipend: The participant will receive a monthly stipend commensurate with educational level and experience. **The anticipated stipend range is $74,678.00 yearly plus a supplement to offset a health**

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insurance premium.

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.

Preferred skills:

- Hands-on experience with insects/arthropod field collection and laboratory techniques.
- Experience with honey bees or other managed or wild bee species, including apicultural practices.
- Interest in or experience to bioassay methods, antimicrobial screening, or biocontrol research involving microbial-derived compounds is advantageous.
- Familiarity with molecular biology techniques, including DNA/RNA extraction, PCR and real-time quantitative PCR (qPCR), RNAi. Prior hands-on experience is a plus.
- Experience with metagenomic approaches (shotgun sequencing and amplicon sequencing)
- Familiarity with statistical analysis or bioinformatic software (R, Python, QIIME2, BLAST-based workflows etc.).
- Scientific writing (i.e. thesis chapters, manuscripts.)

Stipend $74,678.00 Yearly

Point of Contact Michele

Eligibility Requirements

- **Citizenship:** U.S. Citizen Only
- **Degree:** Doctoral Degree.
- **Discipline(s):**
  - **Life Health and Medical Sciences** (24 👁)