

Opportunity Title: USDA-ARS Biological Science Research Opportunity

Opportunity Reference Code: USDA-ARS-2022-0422

Organization U.S. Department of Agriculture (USDA)

Reference Code USDA-ARS-2022-0422

How to Apply **Connect with ORISE...on the GO!** Download the new ORISE GO mobile app in the [Apple App Store](#) or [Google Play Store](#) to help you stay engaged, connected, and informed during your ORISE experience and beyond!

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.

Application Deadline 2/6/2023 3:00:00 PM Eastern Time Zone

Description ***Applications may be 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), within the Crop Bio-protection Research Unit at the 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.

Research Project: The ORISE participant will be learning in the Crop Bio-protection Research Unit at the National Center for Agricultural Utilization Research, which aims to develop bioproducts to protect and improve the performance of agricultural products. The specific research project for this opportunity will be to isolate and genome sequence microbes associated with bees. The participant will gain exposure to all microbiology, molecular biology and bioinformatics research.

Learning Objectives: During the course of research, the participant will be mentored by a scientist to carry out a variety of activities: reading background literature, designing and planning experiments, collecting data,



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analyzing data and presenting data summaries and interpretations. The participant will learn and become familiar with numerous technical skills, including using sterile technique, setting up and carrying out microbial cultivations, preparing culture media, sampling, DNA extraction, DNA sequencing library preparation and DNA sequencing. Typical experiments may include microbial isolations, microbial culturing, DNA extraction and quantification, PCR and qPCR assays, gel electrophoresis, DNA sequencing and bioinformatics.

Mentor(s): The mentor for this opportunity is Christopher Dunlap (christopher.dunlap@usda.gov). If you have questions about the nature of the research please contact the mentor(s).

Anticipated Appointment Start Date: 2022 or early 2023. 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 will receive a monthly stipend commensurate with educational level and experience.

Citizenship Requirements: This opportunity is available to U.S. citizens and Lawful Permanent Residents (LPR).

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 have received a bachelor's degree in one of the relevant fields, or be currently pursuing the degree with completion before July 1, 2023.

- Eligibility Requirements**
- **Citizenship:** LPR or U.S. Citizen
 - **Degree:** Bachelor's Degree received within the last 60 months or anticipated to be received by 7/1/2023 12:00:00 AM.
 - **Discipline(s):**
 - **Chemistry and Materials Sciences** ([12](#)👁)
 - **Engineering** ([3](#)👁)

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- **Environmental and Marine Sciences** ([5](#) )
- **Life Health and Medical Sciences** ([48](#) )
- **Mathematics and Statistics** ([11](#) )