

Opportunity Title: USDA-ARS Summer Internship for Undergraduate Student Participants

Opportunity Reference Code: USDA-ARS-MWA-2025-0070

Organization U.S. Department of Agriculture (USDA)

Reference Code USDA-ARS-MWA-2025-0070

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 9/12/2025 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 Toledo, Ohio.

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: This is an opportunity to participate in a USDA-funded project on developing a symbiont technology to control an emerging disease called Neopestalotiopsis in strawberry. The project aims to understand how endophytic colonizing microbes of plants confer to biotic stress resistance, i.e., a fungal infection, at a microbial genomics level in the context of breeding for strawberries is very challenging and takes a long time. The project will utilize a set of known resistant cultivars characterized by a breeder to transfer their endophytic microbes to susceptible cultivars, akin to the “fecal transplant” concept. Once the microbial symbiont is



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isolated that contributes to disease resistance, methods to increase resistance will be developed. The specific objectives are to use a combination of greenhouse experiments, molecular, and in vitro studies to identify genes, proteins, and metabolites expressed in response to disease pressure and consequences for disease resistance. Under the guidance of a mentor, additional opportunities to develop independent research projects within the framework of the grant will be available.

Learning Objectives:

- The student will have significant learning opportunities in the one or more of the following areas: microbial genomics, fungal biology, and molecular genetics.
- The student will learn to utilize molecular techniques, microbial culturing, metabolomics, proteomics or bioinformatics/statistics skills.

Mentor(s): The mentor for this opportunity is Shin-Yi Marzano (shinyi.marzano@usda.gov). If you have questions about the nature of the research, please contact the mentor(s).

Anticipated Appointment Start Date: **July 2025.** 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 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 an associate's or bachelor's degree in one of the relevant fields.


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Preferred skills:

- One completed year of undergraduate degree

Point of Contact [Janeen](#)

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| Eligibility | <ul style="list-style-type: none">• Citizenship: U.S. Citizen Only |
| Requirements | <ul style="list-style-type: none">• Degree: Currently pursuing an Associate's Degree or Bachelor's Degree.• Discipline(s):<ul style="list-style-type: none">◦ Life Health and Medical Sciences (12 ) |