

**Opportunity Title:** USDA-ARS Postdoctoral Fellowship  
**Opportunity Reference Code:** USDA-ARS-MWA-2024-0336

**Organization** U.S. Department of Agriculture (USDA)

**Reference Code** USDA-ARS-MWA-2024-0336

**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
- A copy of an abstract or reprint of an article

All documents must be in English or include an official English translation.

**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!"

**Application Deadline** 4/25/2025 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 alternative strategies to control white mold infection, a devastating disease for crops, mainly all dicots. The project's goal is to overexpress genes encoding putative antifungal activities in plants or external application provide opportunities and flexibilities to researchers for adopting genetic engineering strategies to expedite translational genomics towards plant biotic resistance enhancement. The goal of this project is to screen a library of novel small proteins that exhibit antifungal activities against *Sclerotinia sclerotiorum* and deploy them as biological pesticides or



**ORISE GO**

The ORISE GO mobile app helps you stay engaged, connected and informed during your ORISE experience – from application, to offer, through your appointment and even as an ORISE alum!

Visit ORISE GO 

GET IT ON  
 **Google Play**

Download on the  
 **App Store**

**Opportunity Title:** USDA-ARS Postdoctoral Fellowship

**Opportunity Reference Code:** USDA-ARS-MWA-2024-0336

through transgenic approaches. To achieve this, we propose to:

1. Compare the antifungal activities of selected plant-derived molecules through transient expression in plants;
2. Establish the plant gene expression system for the expression of promising proteins; and
3. Test the efficacy of the expressed proteins as sprays in the greenhouse and evaluate the gene-stacking or pyramiding in transgenic plants for resistance.

**Learning Objectives:** The mentee will have significant learning opportunities in the one or more of the following areas: microbial genomics, fungal biology, and molecular genetics. The mentee 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](mailto:shinyi.marzano@usda.gov)). If you have questions about the nature of the research, please contact the mentor(s).

**Anticipated Appointment Start Date: April 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, 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. 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](mailto:ORISE.ARS.Midwest@orau.org) and include the reference code for this opportunity.

**Qualifications** The qualified candidate should have received a doctoral degree in one of the relevant fields. Degree must have been received within the past four

**Opportunity Title:** USDA-ARS Postdoctoral Fellowship  
**Opportunity Reference Code:** USDA-ARS-MWA-2024-0336

years.

- Eligibility Requirements**
- **Degree:** Doctoral Degree received within the last 48 month(s).
  - **Discipline(s):**
    - **Life Health and Medical Sciences** ([9](#) 👁)
    - **Mathematics and Statistics** ([1](#) 👁)

**Affirmation** I affirm that:

I am a US Citizen, OR;  
I am a non-US citizen currently living in the United States