

Opportunity Title: USDA-ARS Postdoctoral Research Opportunity in Applied

Microbiology

Opportunity Reference Code: USDA-ARS-2021-0057

Organization U.S. Department of Agriculture (USDA)

Reference Code USDA-ARS-2021-0057

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. All transcripts must be in English or include an official English translation. 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 4/16/2021 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), Mycotoxin Prevention and Applied Microbiology (MPM) Research Unit, National Center for Agricultural Utilization Research (NCAUR) 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 the agency is to provide global leadership in agricultural discoveries through scientific excellence.

Research Project: Under the guidance of a mentor, the selected participant will conduct research to understand the molecular mechanism involved during Fusarium and plant (wheat and barley) interactions and identify novel methods to reduce Fusarium head blight and mycotoxin contamination. The project objectives include: 1) Identify and functionally characterize virulence genes that are essential for Fusarium graminearum initial infection and 2) Use novel technology to reduce disease development and mycotoxin contamination. MPM scientists conduct research in genetics, microbiology, chemistry and plant pathology to produce information and technologies to enhance food safety and crop production in the U.S. and around the world. The participant will have opportunities to collaborate with a diverse group of scientists. During the appointment, there will be occasional travel to



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professional meetings.

Learning Objectives: The participant will learn fungal mutagenesis and plant disease assays, understand the role of effectors and toxins in Fusarium pathogenesis and expand the knowledge of plant and fungal interactions.

Mentor(s): The mentor for this opportunity is Guixia Hao (guixia.hao@usda.gov). If you have questions about the nature of the research please contact the mentor(s).

Anticipated Appointment Start Date: Summer 2021. 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. **The participant will receive an annual stipend of \$64,000. A health insurance and travel allowance will be provided. Some allowance for relocation will also be provided.**

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

Preferred skills:

- Demonstrated proficiency in molecular work and cutting-edge techniques such as RNAi and CRISPR.
- Excellent interpersonal communication skills
- Ability to communicate effectively in English, and ability to work independently and in a team environment
- Proficiency in both written and oral English

**Eligibility
Requirements**

- **Citizenship:** LPR or U.S. Citizen
- **Degree:** Doctoral Degree.
- **Discipline(s):**

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- **Life Health and Medical Sciences** (7 )