

Opportunity Title: USDA Postdoctoral Fellowship in *Aspergillus* Genomics and Transcriptomics

Opportunity Reference Code: USDA-ARS-PW-2023-0419

Organization U.S. Department of Agriculture (USDA)

Reference Code USDA-ARS-PW-2023-0419

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A complete application consists of:

- An application
- Transcripts – [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 3/1/2024 3:00:00 PM Eastern Time Zone

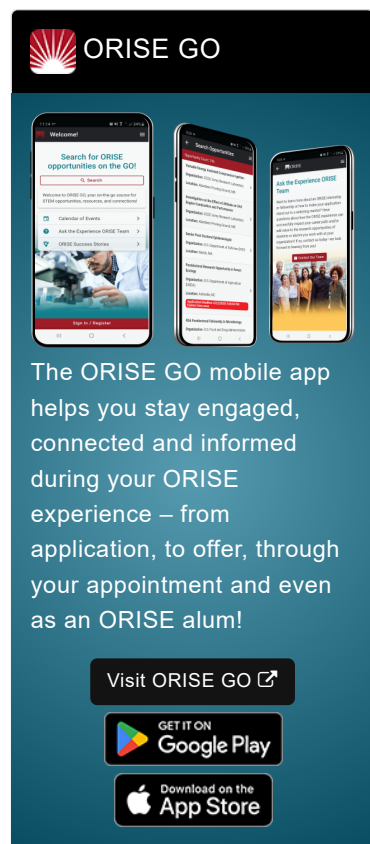
Description *Applications may be reviewed on a rolling-basis.

ARS Office/Lab and Location: A postdoctoral research opportunity is available with the U.S. Department of Agriculture (USDA), Agricultural Research Service (ARS) within the Tucson Aflatoxin Biocontrol Lab, a part of the Pest Management and Biocontrol Research Unit, located in Tucson, Arizona.

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: Aflatoxin, a mycotoxin produced by *Aspergillus flavus* and its close relatives, contaminates food grown in warm regions and can lead to liver cancer, immune system and growth suppression, and death. The Tucson Aflatoxin Reduction lab studies ways to improve aflatoxin biocontrol through selection of non-aflatoxigenic *A. flavus* isolates that possess genetic and genomic traits associated with decreased crop aflatoxin contamination, which may be due to competitive ability or aflatoxin degradation.


The participant will cooperatively design and conduct experiments to understand degradation pathways of aflatoxin in non-aflatoxigenic *A. flavus* isolates, analyze genomic and transcriptomic data of *Aspergillus* isolates, and communicate those findings through conference presentations and peer-reviewed articles. There will be additional opportunities to study competition among *Aspergillus* section *Flavi* isolates,




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which may lead to additional publication opportunities.

Learning Objectives: The participant will learn how to (1) conduct research with *Aspergillus*, (2) analyze fungal genomic and transcriptomic data, and (3) effectively communicate scientific findings. Additionally, the appointee will learn the mechanisms and relative benefits of aflatoxin biocontrol and perform competition experiments among fungal isolates.

Mentor: The mentor for this opportunity is Kenneth Callicott (ken.callicott@usda.gov). If you have questions about the nature of the research, please contact the mentor.

Anticipated Appointment Start Date: November 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. **The current stipend for this opportunity is \$70,234 - \$73,746 per year.**

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.PacificWest@ornl.gov and include the reference code for this opportunity.


Qualifications The qualified candidate should have received a doctoral degree in one of the relevant fields, or be currently pursuing the degree with completion before January 1, 2024.

Preferred Skills include:

- Experience in designing and analyzing genomic and transcriptomic data generated by long-read and short-read sequencing methods.
- Analyzing data in a High Performance Computing environment.

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- Eligibility**
- Requirements**
 - **Degree:** Doctoral Degree.
 - **Discipline(s):**
 - **Life Health and Medical Sciences** ([11](#) )