

**Opportunity Title:** USDA-ARS Postdoctoral Fellowship in Systematics and Taxonomy of Fungal Plant Pathogens in the Mycosphaerellaceae  
**Opportunity Reference Code:** USDA-ARS-NE-2023-0437

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

**Reference Code** USDA-ARS-NE-2023-0437

**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
- 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** 3/15/2024 3:00:00 PM Eastern Time Zone

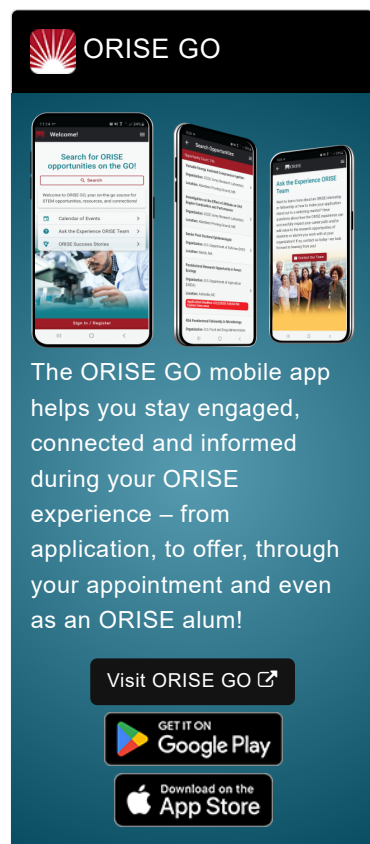
**Description** \*Applications are reviewed on a rolling-basis.

**ARS Office/Lab and Location:** A postdoctoral research opportunity is currently available with the U.S. Department of Agriculture (USDA), Agricultural Research Service (ARS) located in Beltsville, Maryland.

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 goal of this project is to gain a comprehensive view of the *Mycosphaerellaceae* fungal species occurring on plant material screened by Plant Protection and Quarantine PPQ staff at the ports of entry and delivered to the Mycology National Identification Specialists (USDA APHIS PPQ NIS) in Beltsville MD. The overall goal of this project is to enhance the accurate identification and detection of *Mycosphaerellaceae* species in plants and plant products including, but not restricted to, those in the U.S. Regulated Plant Pest List. Knowledge of the fungal diversity present in plants and plant products is fundamental to making well-informed decisions about the entry of agricultural commodities into the U.S. and into other countries in the world. This project is a collaborative effort between the Agriculture Research Service (ARS) and Animal and Plant Health Inspection Services (APHIS) from the United States Department of Agriculture.

**Learning Objectives:** This opportunity is designed to provide the participant with specialized training in morphological and molecular identification of



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fungal plant pathogens. Training activities include but are not limited to the following:

- Familiarity with diversity of fungal plant pathogens in the family *Mycosphaerellaceae*, and occasionally other taxonomic groups.
- Familiarity with scientific classification and rules and recommendations for the scientific naming of fungi, governed by the International Code of Nomenclature for algae, fungi, and plants.
- Develop expertise in the isolation of fungi from plant disease samples.
- Develop expertise on the morphological study of plant disease specimens and fungal cultures using traditional techniques, including specimen sectioning, and microscope image analyses.
- Proficiency with distinct DNA extraction methods, PCR procedures and Sanger sequencing using preserved plant disease specimens, often with scant fungal material.
- Gain proficiency with de novo genome sequencing using next-generation sequencing technologies such as Illumina and Oxford Nanopore.
- Accumulate experience in processing and analysis of genome sequences.
- Familiarity with preparation of scientific publications in the taxonomy and other fields related to the goal of project.

**Mentor(s):** The mentor for this opportunity is Catalina Salgado-Salazar ([catalina.salgado@usda.gov](mailto:catalina.salgado@usda.gov)). If you have questions about the nature of the research please contact the mentor.

**Anticipated Appointment Start Date:** As soon as a qualified candidate is identified. 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 \$72,000 per year.**

**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 [ORISE.ARS.Northeast@orau.org](mailto:ORISE.ARS.Northeast@orau.org) and include the reference code for this opportunity.

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**Qualifications** The qualified candidate should have received a Ph.D. in a relevant field of study (e.g. Plant Pathology, Plant Sciences, Microbiology, Mycology), or be currently pursuing the degree with completion before the appointment start date. Degree must have been received within the past ten years.

While participants will not enter an employment relationship with ARS, this appointment requires a pre-appointment check and a full background investigation.

Preferred Skills:

- Knowledge of plant pathology, molecular biology, genetics, microbiology, and genomics.
- Demonstrated skill and practical experience in molecular biology techniques (e.g., nucleic acid purification, gene amplification, RNA-seq, genome sequencing, bioinformatics).
- Demonstrated experience in isolation and culture of fungal plant pathogens.
- Ability to recognize the significance of unexpected results, and to make minor modifications to ensure validity of testing and data.
- Ability to perform independently as well as part of a team, with good communication skills to keep team members informed and disseminate results at meetings and in refereed journals.

- Eligibility Requirements**
- **Citizenship:** LPR or U.S. Citizen
  - **Degree:** Doctoral Degree received within the last 120 months or anticipated to be received by 12/31/2023 12:00:00 AM.
  - **Discipline(s):**
    - **Life Health and Medical Sciences** ([10](#) )