

Opportunity Title: USDA-ARS Postdoctoral Opportunity in Molecular Plant Pathogen Research
Opportunity Reference Code: USDA-ARS-SEA-2026-0310

Organization U.S. Department of Agriculture (USDA)

Reference Code USDA-ARS-SEA-2026-0310

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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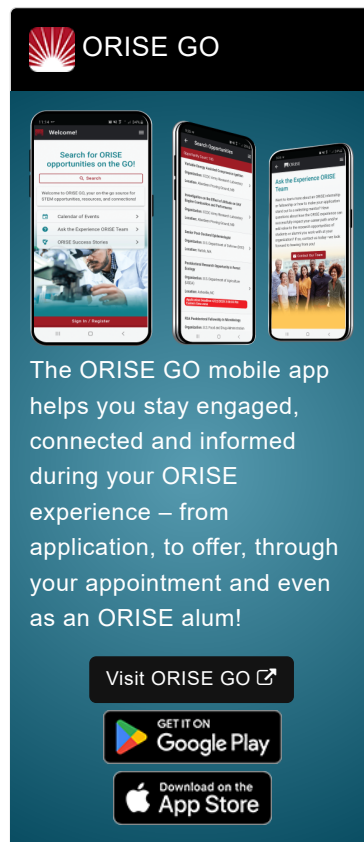
Application Deadline 10/9/2026 3:00:00 PM Eastern Time Zone

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 New Orleans, Louisiana.

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: Under the guidance of a mentor, you will engage in research aimed at elucidating the molecular, biochemical and metabolomic mechanisms driving pathogenic virulence and plant resistance. The interaction between biotic and abiotic factors that contribute to virulence/host resistance will also be addressed. The research will combine experiments conducted in a laboratory setting with greenhouse, plant growth chamber, and field trial research. Successful experimentation will rely on combinations of biology, chemistry, biochemistry, molecular biology, and plant physiology. This research will include growing transgenic, hybrid, and/or commercially relevant crops for conducting pathogenic infection assays under a variety of environmental conditions to examine the impact of multiple field-



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relevant interacting variables. Plant defense/resistance response mechanisms will be evaluated through conducting molecular-based assays such as ddPCR and/or qPCR, and biochemical analyses via chemical extractions and collaboration with unit Chemists.

Data collected from these experiments will contribute to the USDA Food Safety Program's development of an AI-powered, publicly accessible database integrating genetic, phenotypic and biotechnological information. Successful outcomes will enhance the profitability and global competitiveness of the U.S. farming industry through creation of enhanced maize genetic resources.

Learning Objectives: You will gain experience within a collaborative, multi-disciplinary research program that includes bioinformaticists, chemists, geneticists, and plant physiologists. Over the course of this opportunity, you will develop a thorough understanding of maize physiology, fungal pathophysiology, plant infection assays and molecular quantification techniques. You will be provided with opportunities to present research findings to stakeholders and academic conferences. This experience will provide hands-on learning in a team environment and exposure to research objectives aimed at solving various challenges unique to maize, or common to other food and feed related industries.

Mentor(s): The mentor for this opportunity is Matthew Gilbert, PhD (matthew.gilbert@usda.gov). If you have questions about the nature of the research, please contact the mentor(s).

Anticipated Appointment Start Date: October 2026. 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.

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.Southeast@orau.org and include the reference code for this opportunity.

Qualifications The qualified candidate should be currently pursuing or have received a doctoral degree in the one of the relevant fields (e.g. Molecular Biology, Plant Biology, Biochemistry, Microbiology, Agronomy, or closely related field).

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Preferred skills:

- Experience with DNA extractions and PCR technology.
- Experience in a greenhouse and/or plant growth chambers. Some technical understanding of plant irrigation/fertilization systems is a plus.
- Experience with Microbiological techniques, such as spore counting, plating, making agar plates and liquid media, and metabolic extractions, etc. is a plus.
- Proficient with Microsoft Office Software.
- Experience in multidisciplinary research teams, excellent communication skills, and an enthusiastic, solution-oriented approach to troubleshooting technical or analytical challenges is highly desirable.

Stipend \$6,223.17 Monthly

Point of Contact [Sara Beth](#)

Eligibility • **Citizenship:** U.S. Citizen Only

Requirements • **Degree:** Doctoral Degree.

- **Discipline(s):**
 - **Chemistry and Materials Sciences** (2👁)
 - **Earth and Geosciences** (1👁)
 - **Engineering** (2👁)
 - **Environmental and Marine Sciences** (4👁)
 - **Life Health and Medical Sciences** (18👁)