Opportunity Title: USDA-ARS Research Plant Pathology Fellow
Opportunity Reference Code: USDA-ARS-SEA-2026-0159

Organization U.S. Department of Agriculture (USDA)

Reference Code USDA-ARS-SEA-2026-0159

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 6/5/2026 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), Dale Bumpers National Rice Research Center (DBNRRC) located in Stuttgart, Arkansas

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 USDA-ARS Dale Bumpers National Rice Research Center (DBNRRC) in Stuttgart, Arkansas, the largest and only dedicated rice research facility within the U.S. Department of Agriculture's Agricultural Research Service, is seeking applicants for a Postdoctoral Research Fellowship. This fellowship offers an exceptional opportunity to contribute to cutting-edge research in rice pathology, genetics, and data-driven agricultural innovation. The DBNRRC conducts nationally significant research to enhance the productivity, sustainability, and health benefits of

U.S. rice production, and this fellowship is designed for a fellow interested in learning about integrating traditional biological research with modern computational approaches.

The successful candidate will join an interdisciplinary team of plant pathologists, geneticists, molecular biologists, and computational scientists to understand and mitigate major disease threats to rice. Ongoing research addresses multiple pathogens and pests of economic importance, including rice blast, sheath blight, and bacterial diseases such as those caused by *Pantoea ananatis*. Additional research areas involve emerging or re-emerging threats, including delphacid insect vectors and hoja blanca virus, as well as the genetic and physiological basis of novel grain quality traits that have direct implications for human health and nutrition. Fellows will have the opportunity to gain experience on one or more of these topic areas.

This fellowship places a strong emphasis on the application of machine learning, artificial intelligence, and bioinformatics to solve complex biological problems. Potential research activities may include the development of predictive models for disease resistance, genome-wide association studies to uncover resistance loci, automated phenotyping approaches using image data, and integrative multi-omics analyses aimed at identifying genetic factors associated with pathogen response or grain nutritional properties. The fellow will be encouraged to explore innovative computational approaches that enhance the efficiency and resolution of biological discovery and to contribute to building advanced data pipelines.

Fellows will help in preparing project reports for internal and external stakeholders, synthesizing research progress, and documenting scientific findings. Presentation of research outcomes at national and international conferences is strongly encouraged, and the candidate will have full support to engage with the broader scientific community. The fellow will be a part of the preparation and submission of high-quality manuscripts for publication in peer-reviewed scientific journals. The DBNRRC maintains a strong publication record, and the fellow will be mentored in all aspects of scientific writing, experimental design, and data interpretation to support their career advancement.

Overall, this postdoctoral fellowship is well suited for candidates who are creative, self-driven, and enthusiastic about gaining experience in high-impact research that supports U.S. agriculture.

Learning Objectives: This fellowship provides a rich training environment for individuals seeking to develop expertise at the intersection of plant biology and data science. Fellows will gain experience with state-of-the-art laboratory techniques, modern sequencing technologies, advanced statistical and computational tools, and interdisciplinary teamwork.

Mentor(s): The mentor for this opportunity is Yulin Jia (yulin.jia@usda.gov). If you have questions about the nature of the research, please contact the

mentor(s).

Anticipated Appointment Start Date: June 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.

Participant Stipend: The participant will receive a monthly stipend commensurate with educational level and experience. **The anticipated stipend range is $70,000 - $80,000 annually.**

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. Plant Biology, Plant Pathology, Biochemistry, Plant Breeding, Agronomy, Computational Biology, or a related field).

Preferred skills:

- A strong research record in designing, conducting, and interpreting plant omics studies, including genomics, phenomics, ionomics, transcriptomics, or integrated multi-omics.
- Possess advanced statistical and computational skills for analyzing large, complex omics datasets and generating biologically meaningful insights.
- Experience with controlled or field-based plant phenotyping and evaluating plant disease resistance using pathological, biochemical, or molecular assays.
- Laboratory experience in plant pathology, molecular biology, protein biochemistry, or related areas is advantageous.
- Additional preference will be given to candidates with computational experience in protein structure–function prediction, metabolic or

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biochemical pathway analysis, machine learning applications in plant systems, and proficiency with statistical programming environments.
- Demonstrate strong written and oral communication skills, the ability to produce high-quality scientific manuscripts and presentations, and excellent organizational abilities.
- Attention to detail and the capacity to handle multiple concurrent research activities in a collaborative environment.
- Demonstrated experience or interest in machine learning, data analytics, or computational biology.
- The ability to research independently as well as collaboratively, and a record of scientific productivity.

Stipend $70,000.00 – $80,000.00 Yearly

Point of Contact Sara Beth

Eligibility Requirements
- **Citizenship:** U.S. Citizen Only
- **Degree:** Doctoral Degree.
- **Discipline(s):**
  - **Chemistry and Materials Sciences** (12)
  - **Communications and Graphics Design** (2)
  - **Computer, Information, and Data Sciences** (17)
  - **Earth and Geosciences** (21)
  - **Engineering** (29)
  - **Environmental and Marine Sciences** (14)
  - **Life Health and Medical Sciences** (51)
  - **Mathematics and Statistics** (11)
  - **Physics** (16)
  - **Science & Engineering-related** (2)
  - **Social and Behavioral Sciences** (29)