

Opportunity Title: USDA-ARS Food Safety: Plant-Pathogen Interactions in Wheat

Opportunity Reference Code: USDA-ARS-HQ-2026-0009

Organization U.S. Department of Agriculture (USDA)

Reference Code USDA-ARS-HQ-2026-0009

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 7/3/2026 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), National Center for Agricultural Utilization Research, located at 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 of the agency is to provide global leadership in agricultural discoveries through scientific excellence.

Research Project: The overarching goal of our USDA-ARS research lab is to enhance wheat resilience by improving nutritional integrity and disease resistance under abiotic stress conditions. Fusarium Head Blight (FHB) is one of the most devastating diseases affecting wheat globally, with significant impacts on yield, grain quality, and food safety. This project specifically focuses on evaluating the nutritional resilience and disease resistance of near isogenic wheat lines harboring key FHB resistance quantitative trait loci (QTLs) and grain protein enhancing traits under

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adverse growing conditions. The research aims to generate a transcriptomic dataset to accelerate wheat breeding strategies for adaptive plant defense and nutritional integrity. The participant will gain hands-on experience in plant physiology, nutrition assessment, disease severity evaluation, transcriptomic analysis, and data interpretation using advanced sequencing technologies and bioinformatics tools. These skills will contribute to the participant's understanding of plant genetics and breeding strategies for food security and safety. Learn more about the research being conducted at NCAUR: <https://www.ars.usda.gov/midwest-area/peoria-il/national-center-for-agricultural-utilization-research/mycotoxin-prevention-and-applied-microbiology-research/>

Learning Objectives: During this appointment, the participant will have the opportunity to:

- Develop bioinformatics skills
- Learn plant pathology, plant physiology methodology and skillset
- Learn to collaborate in a multi-disciplinary research group
- Develop presentation and speaking skills
- Refine problem solving skills

Mentor(s): The mentor for this opportunity is William Hay (william.hay@usda.gov). If you have questions about the nature of the research, please contact the mentor(s).

Anticipated Appointment Start Date: 2026. Start date is flexible and will depend on a variety of factors.

Appointment Length: The appointment will be for two years.

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 is \$74,678 minimum, 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.Midwest@orau.org and include the reference code for this opportunity.

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Qualifications The qualified candidate should be currently pursuing or have received a doctoral degree in the one of the relevant fields (e.g. Genetics, Plant Pathology or Plant Physiology, or a closely related field). If currently pursuing a doctoral degree, conferral should be anticipated in 2026.

Preferred skills:

- Molecular biology technique (e.g. qPCR, RNA/DNA extractions, aseptic technique)
- Bioinformatics, Computational Biology, or Statistics experience
- Experience handling fungal cultures in a research setting
- Strong problem-solving skills
- Strong interpersonal and teamwork skills – ability to be self-motivated and to excel both independently and in a team environment
- Demonstrated communication skills (oral and written)

Stipend \$74,678.00 Yearly

Point of Contact [Janeen](#)

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

Requirements • **Degree:** Doctoral Degree.

- **Discipline(s):**
 - **Life Health and Medical Sciences** ([51](#) )