Opportunity Title: USDA-ARS Postdoctoral Fellowship in Plant Pathology/Crop Biodefense
Opportunity Reference Code: USDA-ARS-NEA-2026-0215

Organization U.S. Department of Agriculture (USDA)

Reference Code USDA-ARS-NEA-2026-0215

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 7/17/2026 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), Foreign Disease-Weed Science Research Unit (FDWSRU), located at Fort Detrick U.S. Army installation in Frederick, 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.

The FDWSRU is one of the nation's few high-containment laboratories equipped to safely manage exotic plant pathogens. Our lab group at the FDWSRU focuses on creating resources and knowledge about foreign fungal and oomycete pathogens using comparative genomics, development of diagnostic tools, and transcriptomics/host range studies within BSL-3 facilities.

Research Project: We are seeking a highly motivated Postdoctoral Fellow for a biodefense project targeting *Claviceps gigantea*, a foreign fungal pathogen representing a high-consequence, low-visibility threat to U.S. corn. This pathogen produces toxic ergot

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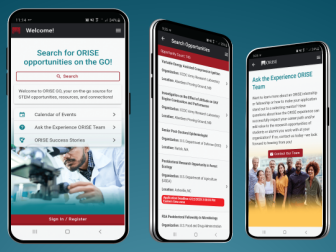

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alkaloids, yet the U.S. currently suffers from a preparedness deficit due to the profound lack of foundational molecular and biological resources, including viable cultures, genomic data, and validated diagnostic tools. The successful candidate will conduct research to close these gaps. Key activities involve developing novel methods for long-term biological material storage, investigating the pathogen's challenging culturability, generating and analyzing its first genome data, and identifying candidate molecular diagnostic targets. This fellowship offers unique opportunities for high-impact science instrumental for national preparedness, including collaboration with interagency partners and contributions to broader lab projects on emerging foreign plant pathogens.

Learning Objectives:

- Learn the biology, epidemiology, and biodefense significance of *Claviceps gigantea* as a high-consequence foreign plant pathogen threatening U.S. corn production.
- Learn to develop and optimize methods for long-term storage and preservation of challenging fungal biological materials.
- Learn to investigate and overcome barriers to fungal culturability through applied microbiological and molecular approaches.
- Learn to generate, assemble, and analyze whole-genome sequence data to establish foundational genomic resources.
- Learn to identify and validate candidate molecular targets for the development of sensitive and specific diagnostic tools.
- Learn to address preparedness gaps by building essential biological, genomic, and diagnostic resources for national biosecurity.
- Learn to collaborate with interagency partners on biodefense initiatives and contribute to coordinated responses to emerging foreign plant pathogens.
- Learn to conduct high-impact, translational research that strengthens agricultural resilience and national preparedness.

Mentor(s): The mentor for this opportunity is Jo Anne Crouch (joanne.crouch@usda.gov). If you have questions about the nature of the research, please contact the mentor(s).

Anticipated Appointment Start Date: September 1, 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 is $84,601 annually.**

Citizenship Requirements: This opportunity is available to U.S. citizens only.

ORISE Information: This program, administered by ORAU through its

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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 and include the reference code for this

Qualifications The qualified candidate should be currently pursuing or have received a doctoral degree in the one of the relevant fields. Degree must have been received within the past five years or is anticipated to be received by 12/31/2026.

Preferred skills:

- Demonstrated hands-on experience in molecular biology techniques.
- Strong understanding and practical experience with bioinformatics tools for genomic analysis, including *de novo* assembly and comparative genomics.
- Proven experience or a strong willingness and ability to quickly adapt to researching safely and effectively in BSL-2 and/or high-containment (BSL-3 or equivalent) laboratory environments.
- Excellent written and oral communication skills, with a proven track record of contributing to scientific publications and presentations.
- Ability to research both independently and collaboratively as part of a diverse research team.
- Experience with *Claviceps* species, other sclerotia-forming fungi, or pathogens that are difficult to culture.
- Experience managing and archiving biological samples.
- Experience with long-read sequencing technologies (e.g., Oxford Nanopore).

Stipend $84,601.00 Yearly

Point of Contact Janeen

Eligibility Requirements

- **Citizenship:** U.S. Citizen Only
- **Degree:** Doctoral Degree received within the last 60 months or anticipated to be received by 12/31/2026 12:00:00 AM.
- **Discipline(s):**
  - **Life Health and Medical Sciences** (51 👁)
- **Veteran Status:** Veterans Preference, degree received within the last 120 month(s).