Opportunity Title: USDA-ARS Postdoctoral Research Fellowship in Plant-Pathogen Interactions
Opportunity Reference Code: USDA-ARS-NE-2024-0238

Organization U.S. Department of Agriculture (USDA)

Reference Code USDA-ARS-NE-2024-0238

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
- A copy of an abstract or reprint of an article

All documents must be in English or include an official English translation.

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!"

Application Deadline 8/2/2024 11:59:00 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 Beltsville, Maryland. **Remote participation may be available.**

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 Genetic Improvement for Fruits and Vegetables Lab conducts research on bacterial, fungal, and viral pathogens of potato, pepper, and tomato to develop novel disease management tools and host resistance. The participant will join a collaborative group studying major pathogens including Streptomyces bacteria that cause potato common scab and Colletotrichum fungi that cause tomato and pepper anthracnose.

Learning Objectives: Under the guidance of a mentor, the participant will

have specific learning opportunities to include:

- Genomic analysis and characterization of diverse populations of Streptomyces plant pathogens. Analyses will include identification of novel species, modeling of extent of horizontal gene transfer across species within mixed field populations, and classification of virulence gene repertoires.
- Analysis of transcriptomic datasets of plant-pathogen interactions following various treatment conditions.
- Investigating the molecular basis of resistance or susceptibility of pepper and tomato to diverse lineages of Colletotrichum.

Mentor(s): The mentor for this opportunity is Christopher Clarke (christopher.clarke@usda.gov). If you have questions about the nature of the research, please contact the mentor(s).

Anticipated Appointment Start Date: August 1, 2024. 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 part time (4 hours a week).

Participant Stipend: The participant will receive a monthly stipend commensurate with educational level and experience.

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

Qualifications The qualified candidate should have received a doctoral degree in one of the relevant fields (e.g. Plant Pathology, Plant Sciences, Microbiology, Molecular Biology).

Preferred skills:

- Knowledge of genomics, plant pathology, molecular biology, genetics, and microbiology.

Opportunity Title: USDA-ARS Postdoctoral Research Fellowship in Plant-Pathogen Interactions
Opportunity Reference Code: USDA-ARS-NE-2024-0238

- Demonstrated skill and practical experience in bioinformatics (e.g.,RNA-seq and genomic sequencing).
- Demonstrated experience in plant pathology and molecular biology techniques (e.g., isolation and culture of bacterial and fungal plant pathogens; plant infections, nucleic acid extractions and molecular cloning).
- Demonstrated experience in design of experiments and development of laboratory protocols.
- Ability to recognize the significance of unexpected results, and to make minor modifications to ensure validity of testing and data.
- Ability to perform under the guidance of a mentor as well as part of a team, with good communication skills to keep team members informed.

Eligibility Requirements

- **Citizenship:** U.S. Citizen Only
- **Degree:** Doctoral Degree received within the last 60 month(s).
- **Discipline(s):**
  - **Life Health and Medical Sciences** (51 👁)
- **Veteran Status:** Veterans Preference, degree received within the last 120 month(s).