

Opportunity Title: USDA-ARS Phytoplasma Disease Detection and Management

in Forestry, Ornamentals, and Crops

Opportunity Reference Code: USDA-ARS-NEA-2024-0397

Organization U.S. Department of Agriculture (USDA)

Reference Code USDA-ARS-NEA-2024-0397

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 2/28/2025 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 Beltsville, 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.

Research Project: The project aims to research the challenges of managing plant diseases caused by phytoplasma infections by identifying potential solutions. Phytoplasmas are bacteria that lack a cell wall and can invade plant phloem sieve cells, causing diseases in agriculturally important crops. Early disease diagnosis and sensitive detection of pathogens are essential for effective management of phytoplasma diseases. The objective of this study is to discover molecular and physiological markers that can improve early detection of phytoplasmas and help mitigate phytoplasma diseases.



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**Learning Objectives:** Under the guidance of a mentor, the fellow will have the opportunity to learn how to:

- Gain insights into the unique genomic and pathological features of phytoplasmas,
- Explore the physiological signals and gene pathways that regulate phytoplasma virulence and plant defense, and
- Select and evaluate suitable molecular markers for detecting phytoplasmas during the early stages of the disease before the appearance of symptoms.

**Mentor(s):** The mentor for this opportunity is Wei Wei (<a href="wei@usda.gov">wei@usda.gov</a>). If you have questions about the nature of the research, please contact the mentor(s).

Anticipated Appointment Start Date: February 10, 2025. Start date is flexible and will depend on a variety of factors.

**Appointment Length:** The appointment will initially be for two years but may be renewed upon recommendation of ARS and is contingent on the availability of funds.

**Level of Participation:** The appointment is part time or full time (between 16 to 40 hours a week).

Participant Stipend: The participant will receive a monthly stipend commensurate with educational level and experience. The current stipend range for pursuing students is \$40,000 - \$50,000 year for 40 hours a week.

Citizenship Requirements: This opportunity is available to U.S. citizens, Lawful Permanent Residents (LPR), and foreign nationals. Non-U.S. citizen applicants should refer to the <u>Guidelines for Non-U.S. Citizens</u> <u>Details page</u> of the program website for information about the valid immigration statuses that are acceptable for program participation. Foreign national candidates may have a mandatory in-person requirement depending on visa status.

**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 <u>Program Website</u>. After reading, if you have additional questions about the application process, please email <u>ORISE.ARS.Northeast@orau.org</u> and include the reference code for this opportunity.

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Qualifications The qualified candidate should be currently pursuing an associate's,

bachelor's, master's, or doctoral degree in the one of the relevant fields (such as molecular biology, cell biology, microbiology, plant pathology, plant physiology, genetics, or bioinformatics).

Point of Contact Janeen Pointer

Requirements

- Eligibility Degree: Currently pursuing an Associate's Degree, Bachelor's Degree, Master's Degree, or Doctoral Degree.
  - Discipline(s):
    - Life Health and Medical Sciences (<u>18</u> ●)

Affirmation I affirm that:

I am a US Citizen, OR;

I am a non-US citizen currently living in the United States

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