

Opportunity Title: USDA-ARS Plant Pathology (Oomycete and Virus) Student Research Opportunity

Opportunity Reference Code: USDA-ARS-NEA-2024-0326

Organization U.S. Department of Agriculture (USDA)

Reference Code USDA-ARS-NEA-2024-0326

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 12/6/2024 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 in Frederick, Maryland, at Ft. Detrick.

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 participant will collaborate with the mentor to identify the infection status of plants using qPCR and conventional PCR. The participant will also assist with pathogen collections and the cultivating of plants in a greenhouse for epidemiological studies.

Learning Objectives: This is an opportunity to learn about oomycete and viral plant pathogens causing disease on potato, tomato, and fruit trees. The participant will also learn molecular biology skills while engaging with these pathogens, including DNA extraction, PCR amplification, gel



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electrophoresis, PCR product cleanup, and sequencing. Through these activities, the participant will also be exposed to experimental design and data analysis.

Mentor(s): The mentor for this opportunity is Alina Puig (alina.puig@usda.gov). If you have questions about the nature of the research, please contact the mentor(s).

Anticipated Appointment Start Date: November 2024. Start date is flexible and will depend on a variety of factors.

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

Level of Participation: The appointment is part time.

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 and Lawful Permanent Residents (LPR) 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 be currently pursuing a bachelor's degree in the one of the relevant fields and should have at least 12 earned college credits in agricultural, life, or physical sciences.

- Eligibility Requirements**
- **Citizenship:** LPR or U.S. Citizen
 - **Degree:** Currently pursuing a Bachelor's Degree.
 - **Discipline(s):**
 - **Chemistry and Materials Sciences** ([12](#))
 - **Communications and Graphics Design** ([2](#))
 - **Computer, Information, and Data Sciences** ([17](#))
 - **Earth and Geosciences** ([21](#))
 - **Engineering** ([27](#))
 - **Environmental and Marine Sciences** ([14](#))
 - **Life Health and Medical Sciences** ([51](#))
 - **Mathematics and Statistics** ([11](#))

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- **Physics** ([16](#) )
- **Science & Engineering-related** ([2](#) )
- **Social and Behavioral Sciences** ([29](#) )
- **Age:** Must be 18 years of age