

Opportunity Title: USDA-ARS Postdoctoral Fellowship in Grapevine Abiotic Stress Physiology and Genetics
Opportunity Reference Code: USDA-ARS-NEA-2026-0358

Organization U.S. Department of Agriculture (USDA)

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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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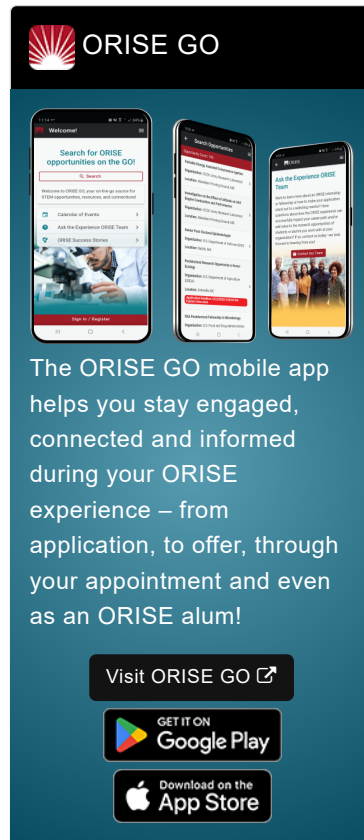
Application Deadline 11/20/2026 3:00:00 PM Eastern Time Zone

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), located in Geneva, New York.

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: This appointment is part of the Abiotic Stress Laboratory at Grape Genetics Research Unit (GGRU), USDA aimed to understand the grapevine response to environmental stresses like cold/freezing, drought, heat, and nutrient stresses. The research goal is to expedite research findings on understanding fundamental plant growth and developmental processes. You will advance your physiological and phenological knowledge on grapevine stress responses and enable identifying grapevines tolerant to adverse growing conditions. You will have an opportunity to gain experience in plant measurements on leaf gas



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exchange, plant water/nutrient hydraulics, chlorophyll fluorescence, and root system architecture trait identification.

The overall objectives of the project include:

1. Deep understanding of plant water relations to extreme environmental stresses.
2. Hands-on experience in measuring leaf gas exchange, plant water/nutrient hydraulics, chlorophyll fluorescence, and root system architecture adaptation.
3. Controlled (greenhouse/glass house/growth chambers) and field research experience.
4. Comprehensive understanding of biochemical, microscopical, and high throughput phenotyping technologies with plant stress research.

Under the guidance of a mentor, you will have the opportunity to utilize existing populations and germplasm for characterizing traits of interest and their underlying physiological mechanisms through experiments and integrate desirable traits/mechanisms into pre-breeding lines to support the process of continuous germplasm improvement, discovery trait research and methodology optimization to reach greater breeding efficiency. The general research technologies/methodologies and approaches are derived from plant breeding, genomics, quantitative genetics, physiology, biotechnology, computational biology, and horticulture. You will be encouraged to establish robust collaborations with faculty at Cornell University, Cornell Agri-tech (Geneva Campus), and USDA-ARS scientists and produce quality research that will be published in open-access, peer-reviewed journals relevant to the field, as well as communicate with research networks within the scientific community.

Learning Objectives: As part of this learning experience, you may:

- Learn how grapevine populations and germplasm are evaluated to identify traits associated with tolerance to adverse growing conditions.
- Develop an understanding of how physiological mechanisms are connected to observable plant stress-response traits.
- Gain exposure to plant breeding, genomics, quantitative genetics, biotechnology, horticulture, and pre-breeding approaches used to improve stress tolerance in grapevine breeding lines.
- Learn how researchers make crosses, evaluate trait performance, select plants, and advance breeding generations to improve breeding efficiency.
- Build experience documenting, communicating, and sharing research findings while collaborating with USDA-ARS, Cornell University, and Cornell AgriTech researchers and professional scientific networks.

Mentor(s): The mentor for this opportunity is Silvas Kirubakaran (silvas.kirubakaran@usda.gov). If you have questions about the nature of the research, please contact the mentor(s).

Anticipated Appointment Start Date: Fall 2026. Start date is flexible and

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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.

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 be currently pursuing or have received a doctoral degree in the one of the relevant fields.

Preferred skills:

- Deep understanding of plant water relations to extreme environmental stresses.
- Hands-on experience in measuring leaf gas exchange (LICor 6800XT) , plant water/nutrient hydraulics, chlorophyll fluorescence, and root system architecture adaptation.
- Designing experiments, performing measurements in the laboratory and field sites,
- Controlled (greenhouse/glass house/growth chambers) and field research experience.
- Comprehensive understanding of biochemical, microscopical, and high throughput phenotyping technologies with plant stress research.
- Hands-on experience in the use state of art physiological instrumentation, genetic/genomic analysis, data collection, and visualization.
- Experience in assessing whole-plant stress physiology responses in laboratory and field with various physiological instruments and genetic analysis.

Stipend \$72,000.00 – \$74,000.00 Yearly

Point of Contact [Janeen](#)

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- Eligibility Requirements**

- **Citizenship:** U.S. Citizen Only
 - **Degree:** Doctoral Degree.
 - **Discipline(s):**
 - **Life Health and Medical Sciences** ([8](#) 👁)