

**Opportunity Title:** USDA-ARS Postdoctoral Fellowship in Virus-Induced Gene

Silencing in Plants

**Opportunity Reference Code:** USDA-ARS-NE-2023-0032

**Organization** U.S. Department of Agriculture (USDA)

**Reference Code** USDA-ARS-NE-2023-0032

**How to Apply** *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!

A complete application consists of:

- An application
- Transcripts – [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.

**Application Deadline** 3/27/2023 3:00:00 PM Eastern Time Zone

**Description** \*Applications are reviewed on a rolling-basis and this posting could close before the deadline.

**ARS Office/Lab and Location:** A postdoctoral research opportunity is currently available with the U.S. Department of Agriculture (USDA), Agricultural Research Service (ARS), Genetic Improvement for Fruits and Vegetables Laboratory (GIFVL) located in Chatsworth, New Jersey.

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 the agency is to provide global leadership in agricultural discoveries through scientific excellence.

**Research Project:** The project goal is to develop a vector system for virus induced gene silencing in *Vaccinium* spp. (blueberry and cranberry). Under the guidance of a mentor, the selected participant will be involved in all aspects of the project including selection of viruses to be modified for use as vectors, cloning of required targets, construction of the vectors including those to be used as positive controls, plant transformation using *Agrobacterium* spp. or Biolistics, and testing for targeted silencing using RT- qPCR or other methods as appropriate.

**Learning Objectives:** Design and construction of VIGs (virus-induced gene silencing) vectors, selection and cloning of target genes, plant tissue culture, transient plant transformation, Sanger sequencing, PCR , RT-PCR and Real Time RT-qPCR, basic bioinformatics.

**Mentor(s):** The mentor for this opportunity is James Polashock ([James.polashock@usda.gov](mailto:James.polashock@usda.gov)). If you have questions about the nature of the



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research please contact the mentor(s).

**Anticipated Appointment Start Date:** June 2023. 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 annual stipend will be \$56,747 and a health insurance and travel allowance will also be provided. No relocation funding is available.**

**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 [USDA-ARS@ornl.gov](mailto:USDA-ARS@ornl.gov) and include the reference code for this opportunity.


## Qualifications

The qualified candidate should have received a doctoral degree in one of the relevant fields, or be currently pursuing the degree with completion by May 31, 2023. Degree must have been received within the past five years.

Preferred skills:

- Solid background in plant molecular biology
- Experience in all general molecular techniques including, but not limited to: cloning, plasmid purification and vector construction, nucleic acid isolation and purification, sequencing, site-directed mutagenesis, PCR, RT-qPCR, and plant transformation
- Basic computational biology skills

## Eligibility Requirements

- **Citizenship:** LPR or U.S. Citizen
- **Degree:** Doctoral Degree received within the last 60 months or anticipated to be received by 5/31/2023 11:59:00 PM.
- **Discipline(s):**
  - **Life Health and Medical Sciences** (9 )
- **Veteran Status:** Veterans Preference, degree received within the last 120 month(s).