Opportunity Title: USDA-ARS Plant Genetics and Genomics Program Fellowship
Opportunity Reference Code: USDA-ARS-SEA-2025-0201

Organization U.S. Department of Agriculture (USDA)

Reference Code USDA-ARS-SEA-2025-0201

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.

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 4/24/2026 3:00:00 PM Eastern Time Zone

Description ***Applications are reviewed on a rolling-basis.**

ARS Office/Lab and Location: A plant science research opportunity is available with the U.S. Department of Agriculture (USDA), Agricultural Research Service (ARS), at the Subtropical Horticulture Research Station (SHRS) in Miami, Florida.

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 supported by the USDA-ARS Ornamental Research Program in Miami, FL. The fellow will participate in a team effort to maintain and characterize Ornamental Genetic Resources (OGRs) by discovering molecular resources using biochemical and computational biology approaches. Specific project objectives include:

- Conducting field-lab research, characterizing molecular and biological traits in OGR;

- Handling and analyzing multi-omics data sets to assess ornamental plants for their economic traits and their genetic relationships;
- Analyzing and publishing research outcomes as scientific articles to help mitigate the agricultural problems.

Methodologies used by the fellow range from those requiring considerable modification to routine, and include plant genetics, molecular biology techniques, computational biology/bioinformatics, statistics, and field-lab approaches.

Learning Objectives: The participant will receive training in plant molecular biology, genetics, and genomics. This research is expected to result in increased learning and knowledge of the genetic-genomic-transcriptomic basis and their relationships to ornamental plant(s) maintenance, management, and efficient US national germplasm collection improvements. This knowledge will contribute to the development of more efficient breeding methods, which will be applied to genetic data mining of the USDA National Plant Genetic ornamental germplasm collections and their hybrid families, and clone trials currently established in the SHRS, Miami, FL. Learning opportunities on the analysis of genetic diversity, comparative genomics, metabolomics, and phylogenetic relationships of ornamental plants will help in the US national germplasm collection and its improvement. Additionally, the participant will gain experience by collaborating with national and international scientists working on OGRs.

Mentor(s): The mentor for this opportunity is Madhugiri Nageswara-Rao (Madhugiri.Nageswara-Rao@usda.gov). If you have questions about the nature of the research, please contact the mentor(s).

Anticipated Appointment Start Date: March 2026. The 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 each year 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 anticipated stipend range is $53,208 - $69,422 annually.**

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

Opportunity Title: USDA-ARS Plant Genetics and Genomics Program Fellowship
Opportunity Reference Code: USDA-ARS-SEA-2025-0201

through ORISE.

Questions: Please visit our Program Website. After reading, if you have additional questions about the application process, please email ORISE.ARS.Southeast@orau.org and include the reference code for this opportunity.

Qualifications

The qualified candidate should be currently pursuing or have received a master's or doctoral degree in the one of the relevant fields (e.g., Plant Genetics, Molecular Biology, Bioinformatics, and/or a related discipline).

Preferred skills:

- Knowledge of plant computational biology, molecular biology, genetics, statistical analysis, and multi-omics analytical skills.
- Knowledge of field research is helpful for collaboration with plant scientists in screening experimental germplasm.
- Experiences and expertise in performing DNA, RNA extractions, polymerase chain reactions, and gel electrophoresis.
- Experience in performing Sanger and Next Generation Sequencing.
- Analyze resulting data using bioinformatic tools.
- Experience in data organization and preparation for manuscript publishing.
- Experience in addressing biological hypotheses through statistical inference with computational approaches is helpful.
- An optimal research approach would benefit from proficiency in using languages such as Python, Bash, R, SQL, and UNIX shell scripting.
- The project goals would benefit from knowledge and experience with statistical modeling and inference using large, biological datasets and Next Generation Sequencing efforts.

Stipend $53,208.00 – $69,422.00 Yearly

Point of Contact Janeen

Eligibility Requirements

- **Citizenship:** U.S. Citizen Only
- **Degree:** Master's Degree or Doctoral Degree.
- **Discipline(s):**
  - **Chemistry and Materials Sciences** (2)
  - **Computer, Information, and Data Sciences** (8)
  - **Earth and Geosciences** (1)
  - **Environmental and Marine Sciences** (5)
  - **Life Health and Medical Sciences** (18)
  - **Mathematics and Statistics** (3)