Opportunity Title: USDA-ARS Postdoctoral Research Computational Biology Fellowship
Opportunity Reference Code: USDA-ARS-SEA-2026-0302

Organization U.S. Department of Agriculture (USDA)

Reference Code USDA-ARS-SEA-2026-0302

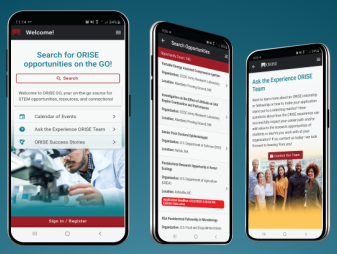
How to Apply ***To submit your application, scroll to the bottom of this opportunity and click APPLY.***

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 3/1/2027 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 Byron, Georgia.

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: Research will be focused on the development of bioinformatic and genomics tools to characterize the structure and function of plant, insect, and fungal genomes related to pecan cultivar development. Application of sequence resources from plants, pests, and pathogens will be directed towards accelerating the improvement of pecan cultivars through the discovery of novel genetic variation, development of genomic-assisted management techniques, or other applications of genomic technology in pecan production systems. Under the guidance of a mentor, you will have the opportunity to be involved in the following aspects of the

project:

- Developing and customizing pipelines for automation of data processing required for genome assembly and pangenomes using a combination of short- and long-read technology, including chromosome confirmation capture sequences.
- Developing genome annotation pipelines from existing methods to apply to genomic resources, or to develop novel genome annotation methods to apply towards existing genomic resources.
- Developing and customizing pipelines for automation of data processing required for discovering genetic (e.g., SNP, CNV) and epigenetic (e.g., DNA methylation) variations to support eco-evolutionary studies, QTL mapping, or other applications of genomic sequence variation.

Learning Objectives: By the end of this training/research experience, you will be able to:

- Explain the structure and functional organization of plant, insect, and/or fungal genomes and describe how genomic tools are used to characterize genetic and epigenetic variation.
- Identify and differentiate types of genomic variation (e.g., SNPs, CNVs, DNA methylation patterns) and functional genomic elements (e.g., enhancers, promoters) in focal species.
- Customize bioinformatics pipelines for automated processing and analysis of short- and long-read sequencing data.
- Apply computational approaches to detect genetic and epigenetic variation from sequencing datasets in focal species.
- Generate genome assemblies from long-read sequence data and build pangenomes.
- Design and implement statistical methods for QTL mapping and association studies, and interpret their results in the context of economically important traits.
- Evaluate and improve genomic prediction models for use in cultivar development programs.
- Gain experience generating genome assembly pipelines for use in focal species.

Mentor(s): The mentor for this opportunity is Karl Fetter (karl.fetter@usda.gov). If you have questions about the nature of the research, please contact the mentor(s).

Anticipated Appointment Start Date: Spring/Summer 2027. 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.

Participant Stipend: The participant will receive a monthly stipend commensurate with educational level and experience. **The anticipated stipend is $5,845 monthly, with a $1,945.35 health insurance**

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supplement and $3,000 for travel.

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.Southeast@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. The degree must have been received within the past five years or is currently pursuing.

Preferred skills:

- A strong background in at least one of the following areas: bioinformatics, quantitative genetics, or molecular engineering.
- Organismal and/or genomic knowledge pertaining to at least one of the following areas of study: plant biology, entomology, or plant pathology.

Stipend $5,845.00 Monthly

Point of Contact Janeen

Eligibility Requirements

- **Citizenship:** U.S. Citizen Only
- **Degree:** Doctoral Degree received within the last 60 months or currently pursuing.
- **Discipline(s):**
  - **Computer, Information, and Data Sciences** (4 👁)
  - **Life Health and Medical Sciences** (3 👁)
- **Veteran Status:** Veterans Preference, degree received within the last 120 month(s).