Opportunity Title: USDA-ARS Postdoctoral Research in Plant Genetics
Opportunity Reference Code: USDA-ARS-PWA-2026-0233

Organization U.S. Department of Agriculture (USDA)

Reference Code USDA-ARS-PWA-2026-0233

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 7/31/2026 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 Corvallis, Oregon.

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.

This specific opportunity is part of the ARS's Forage Seed and Cereal Research Unit in Corvallis, Oregon and the focus is on hop breeding and genetics.

Research Project: The project seeks to develop molecular resources to advance breeding efforts for resistance to powdery mildew in hop (Humulus lupulus L.). The participant will analyze readily available phenotypic and genotypic datasets from populations segregating for disease resistance. One population is a large, structured multi-parent population, and another is a bi-parental population. The fellow will develop a consensus genetic map, identify marker-trait associations, determine the effectiveness of various methods to collect phenotypic data on

marker-trait-associations, and conduct marker validation (also using existing datasets) and write publications for submission to peer-reviewed journals. The participant will build upon existing genomics and genetics data analysis skills to troubleshoot a complex dataset in an obligately outcrossing, highly heterozygous species.

Learning Objectives: Under the guidance of a mentor, the participant will learn how to:

- Develop molecular resources that support breeding for powdery mildew resistance in hop (*Humulus lupulus* L.).
- Analyze complex phenotypic and genotypic datasets from multi-parent and bi-parental populations segregating for disease resistance.
- Construct consensus genetic maps integrating data from structured and biparental populations.
- Identify marker–trait associations linked to powdery mildew resistance using appropriate statistical and genomic approaches.
- Evaluate and compare phenotyping methods for their effectiveness in detecting reliable marker–trait associations.
- Conduct marker validation using existing datasets to confirm robustness and applicability in breeding programs.
- Troubleshoot and analyze complex genomic datasets in an obligately outcrossing, highly heterozygous species.
- Communicate research findings through preparation and submission of manuscripts to peer-reviewed scientific journals.

Mentor(s): The mentor for this opportunity is Kayla Altendorf (kayla.altendorf@usda.gov). If you have questions about the nature of the research, please contact the mentor(s).

Anticipated Appointment Start Date: Summer 2026. 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 anticipated stipend range is $6,705.42 - $7,152.50 monthly.**

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

Opportunity Title: USDA-ARS Postdoctoral Research in Plant Genetics
Opportunity Reference Code: USDA-ARS-PWA-2026-0233

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.PacificWest@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 (e.g. plant breeding, genetics, applied plant science, plant biology, genetics, plant pathology, biostatistics, bioinformatics, genomics, or a related field).

Preferred skills:

- Experience with managing large-scale genomic and phenotypic datasets, preparing figures and manuscripts for peer-reviewed publications or theses/dissertation, experience with using common genomics and genetics programs, experience with programming in R, Python, or similar.
- Experience with basic computer programs such as Microsoft.
- Experience with genetic data from outcrossing, highly heterozygous species, or in constructing genetic maps is preferred.

Stipend

$6,705.42 – $7,152.50 Monthly

Point of Contact

Janeen

Eligibility Requirements

- **Citizenship:** U.S. Citizen Only
- **Degree:** Doctoral Degree.
- **Discipline(s):**
  - **Computer, Information, and Data Sciences** (4 👁)
  - **Engineering** (3 👁)
  - **Environmental and Marine Sciences** (6 👁)
  - **Life Health and Medical Sciences** (18 👁)
  - **Mathematics and Statistics** (3 👁)