

Opportunity Title: USDA-ARS Postdoctoral Fellowship on Barley and Oat

Genetics/Molecular Biology

Opportunity Reference Code: USDA-ARS-PWA-2026-0379

Organization U.S. Department of Agriculture (USDA)

Reference Code USDA-ARS-PWA-2026-0379

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 4/9/2027 3:00:00 PM Eastern Time Zone

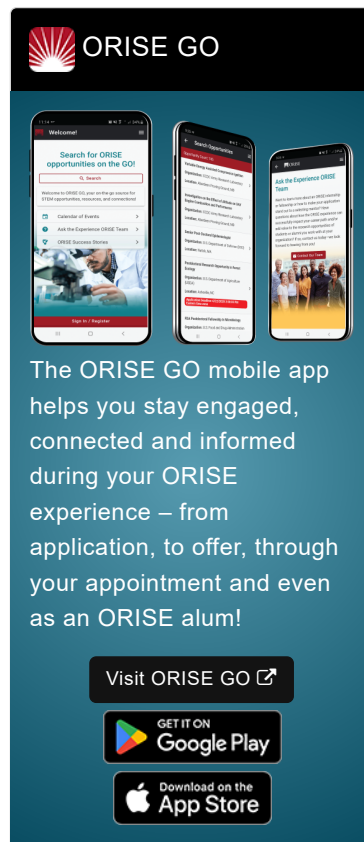
Description ***Applications are reviewed on a rolling-basis.**

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 Aberdeen, Idaho.

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 appointment is supported by the USDA-ARS barley and oat research project in Aberdeen which goals are to enhance barley and oat productivity, quality, and stress resilience by combining traditional, molecular, and genomics methods. You will collaborate with other scientists in the unit and other institutes to develop genetic, genomic and molecular resources for for supporting the barley and oat research.

Research Project: You will be involved with one of the two research projects: I. Barley genetics and genomics and II. Barley and oat molecular biology.



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For the first project, you will help conduct genetic analysis of resistance to stripe rust and hessian fly in barley and map the key genes or QTLs related to barley disease and pest resistance or other interesting traits. You will also assist in performing genome-wide association studies to identify genomic regions or candidate genes associated with disease resistance and grain quality in wild and cultivated barley populations. In addition, you will also participate in the collaborative wild barley genomics project and characterize useful genes in wild barley species. For the second project, you will contribute to cloning the genes controlling stripe rust resistance and grain quality in barley, investigating the molecular functions of the candidate genes and validating the gene functions with transformation and molecular experiments. Lastly, you will assist in analyzing the gene-edited plants to improve grain quality in barley and oat.

Learning Objectives: You will receive training in plant genetics and breeding, plant genomics, molecular biology and gene editing, and will gain experience collaborating with national and international scientists on plant pathology, bioinformatics, comparative evolution and other areas. You will also have opportunities to attend scientific conferences for presenting the research results and establish collaborative networks. Additionally, you will get a chance to learn barley and oat molecular biology and understand the needs of the stakeholders. Lastly, you gain skills relating to writing manuscripts, book chapters, project reports and presenting research at scientific conferences.

Mentor(s): The mentor for this opportunity is Dongying Gao (dongying.gao@usda.gov). If you have questions about the nature of the research, please contact the mentor.

Anticipated Appointment Start Date: December 1, 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.

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

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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 have received a doctoral degree in one of the relevant fields (e.g., Plant Genetics and Breeding, Plant Biology, Genomics, Evolutionary Biology), or currently be pursuing the degree to be received by January 1, 2027. Degree must have been received within five years of the appointment start date unless currently pursuing.

Preferred Skills:

- Strong background in genetic analysis, linkage map, QTL analysis, GWAS, and marker development.
- Experiences to analyze high through put data sets including short- and long-read genomic and transcriptomic data, and develop or apply related software for data mining.
- Familiar with Linux and R and have good skills in statistics and data summary.
- Excellent experiences with molecular experiments.
- Experience in disease or pest evaluation in field or under controlled conditions.

Stipend \$74,678.00 – \$79,658.00 Yearly

Point of Contact [Janeen](#)

- Eligibility**
- **Citizenship:** U.S. Citizen Only
- Requirements**
- **Degree:** Doctoral Degree received within the last 60 months or anticipated to be received by 1/1/2027 12:00:00 AM.
 - **Discipline(s):**
 - **Life Health and Medical Sciences** ([13](#) )
 - **Veteran Status:** Veterans Preference, degree received within the last 120 month(s).