

Opportunity Title: USDA-ARS Postdoctoral Fellowship on Barley Genomics and Bioinformatics

Opportunity Reference Code: USDA-ARS-PW-2023-0441

Organization U.S. Department of Agriculture (USDA)

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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 11/1/2024 3:00:00 PM Eastern Time Zone

Description ***Applications may be reviewed on a rolling-basis.**

ARS Office/Lab and Location: This postdoctoral research opportunity is currently available with the U.S. Department of Agriculture (USDA), Agricultural Research Service (ARS) at the Small Grains and Potato Germplasm Research Unit located in Aberdeen, Idaho. **However, the workplace may vary and is flexible.**

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 barley and oat research project in Aberdeen which goals are to enhance barley and oat productivity, quality, and stress resistance by combing traditional, molecular, and genomics methods. The incumbent will collaborate with other scientists in the unit and other institutes in the United States and other countries to develop genomic and bioinformatics resources for annotating and comparing the genomes of cultivated and wild barley and for supporting the barley genomics, genetics, and pre-breeding research. The research activities the selected candidate will be involved with include: 1. Conduct genome-wide annotation and comparison of assembled barley genomes. 2.




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Develop and/or utilize software for analyzing high through put genomic, transcriptomic and epigenomic data in barley and its relatives. 3. Create and design repeat database for public access. 4. Establish and maintain pipelines for barley genomics. 5. Write manuscripts and present research at scientific conferences.

Learning Objectives: The participant will receive training in plant genomics, plant genetics and breeding, and will gain experience to collaborate with national and international scientists in sequencing, assembling and comparatively analyzing plant genomes and in developing and maintaining plant genomic database. The participant will also have opportunities to attend scientific conferences for presenting their research data and establish collaborative networks. Additionally, the participant will get chance to learn barley and understand the needs of the stakeholders.

Mentor: 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: January 2024. Start date is flexible and will depend on a variety of factors.

Appointment Length: The appointment will initially be for two years, 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 current stipend range for this opportunity is \$69,107 - \$89,835 per year.**

Citizenship Requirements: This opportunity is available to U.S. citizens, Lawful Permanent Residents (LPR), and foreign nationals. Non-U.S. citizen applicants should refer to the [Guidelines for Non-U.S. Citizens Details](#) page of the program website for information about the valid immigration statuses that are acceptable for program participation.

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

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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 have received a doctoral degree in one of the relevant fields (e.g., Plant Genetics, Genomics, Bioinformatics, Evolutionary Biology), or currently be pursuing the degree to be received by February 1, 2024. Degree must have been received within five years of the appointment start date.

Preferred Skills include:

- Experiences and expertise to analyze high through put data sets including short- and long-read genomic and transcriptomic data, sRNA and DNA methylation data, and develop or apply new software for data mining.
- Familiar with Linux and R and have excellent programming skills with Perl, Python or other programming languages.
- Experiences with analyzing genomic data sets with the related pipelines.

Eligibility Requirements

- **Degree:** Doctoral Degree received within the last 60 months or anticipated to be received by 2/1/2024 12:00:00 AM.
- **Academic Level(s):** Graduate Students or Postdoctoral.
- **Discipline(s):**
 - **Computer, Information, and Data Sciences** (2 )
 - **Life Health and Medical Sciences** (8 )
- **Veteran Status:** Veterans Preference, degree received within the last 120 month(s).