

Opportunity Title: USDA-ARS Postdoctoral Fellowship in Genomic Selection of Horticultural Crops

Opportunity Reference Code: USDA-ARS-PW-2023-0378

Organization U.S. Department of Agriculture (USDA)

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How to Apply *Connect with ORISE...on the GO!* Download the new ORISE GO mobile app in the Apple or Google Play Store to help you stay engaged, connected, and informed during your ORISE experience and beyond!

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. All transcripts must be in English or include an official English translation. 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 10/13/2023 3:00:00 PM Eastern Time Zone

Description ***Applications will be reviewed on a rolling-basis and this opportunity will remain open until filled.**

ARS Office/Lab and Location: A postdoctoral research opportunity is currently available with the U.S. Department of Agriculture (USDA), Agricultural Research Service (ARS), Horticultural Crops Research Unit (HCRU) 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.

USDA-ARS-HCRU offices and laboratories are located on Oregon State University campus and the mission of our unit is to develop fundamental and applied knowledge used to enhance plant health and quality, environmental stewardship, and economic sustainability for the efficient production of horticultural crops. We focus on the Pacific Northwest small fruit and nursery industries using multi-disciplinary approaches to research and varietal development. The participant will be involved with the small fruits plant breeding programs and will focus on blueberry.

Research Project: The primary research project focus will be to evaluate the potential of blueberry genetic markers for implementing genomic prediction and selection for fruit quality,



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ripening season and disease resistance in the USDA-ARS-HCPGIRU blueberry breeding program. Specifically, this opportunity will involve 1) the collection of phenotypic data from blueberry breeding populations including fruit quality traits and plant developmental traits; 2) using blueberry genetic marker platforms developed by the USDA-ARS Breeding Insight initiative and *Vaccinium* Coordinated Agricultural Project (VacCAP) for trait mapping and genomic prediction; 3) determining the accuracy and effectiveness of genomic prediction for accelerating blueberry breeding; 4) aid in other small fruit breeding efforts including blackberry and raspberry. The participant will be mentored by Dr. Michael Hardigan (Research Geneticist and caneberry breeder) and have further opportunities to develop skills in applied breeding, genetics, and bioinformatics by participating in or designing other studies, publishing peer-reviewed papers, collaborating with other scientists at the USDA-ARS, Oregon State University, and other institutions nationally and internationally, and attending and presenting research at professional meetings.

Learning Objectives: By the end of this program, expected learning outcomes are: implement genomic prediction and selection in the blueberry breeding program, design and carry out experiments and data analysis, and share scientific results through presentations and publications.

Mentor(s): The mentor for this opportunity is Michael Hardigan (michael.hardigan@usda.gov). If you have questions about the nature of the research please contact the mentor.

Anticipated Appointment Start Date: As soon as a qualified candidate is identified. 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 an additional 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 participant will receive an annual stipend of \$74,137.**

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 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, or be currently pursuing the degree with completion by

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September 30, 2023. Degree must have been received within the last five years.

Preferred skills:

- Experience in design, conduct, and statistical analysis of experiments and management of large data sets
- Scientific writing skills via publication record
- Excellent interpersonal communication and organizational skills
- Ability to work independently and as part of a team with diverse perspectives
- Experience in phenotypic evaluation plant traits
- Experience analyzing molecular marker data, basic coding in R and Python or Perl, and familiarity with current statistical genetic software programs
- Demonstrated organizational skills and project management experience including field and lab based projects

Eligibility Requirements

- **Degree:** Doctoral Degree received within the last 60 months or anticipated to be received by 9/30/2023 11:59:00 PM.
- **Discipline(s):**
 - **Earth and Geosciences** ([1](#) )
 - **Environmental and Marine Sciences** ([14](#) )
 - **Life Health and Medical Sciences** ([46](#) )
 - **Mathematics and Statistics** ([1](#) )
- **Veteran Status:** Veterans Preference, degree received within the last 120 month(s).