

Opportunity Title: USDA-ARS Postdoctoral Fellowship in Plant

Genetics/Bioinformatics

Opportunity Reference Code: USDA-ARS-2021-0233

Organization U.S. Department of Agriculture (USDA)

Reference Code USDA-ARS-2021-0233

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.

Description

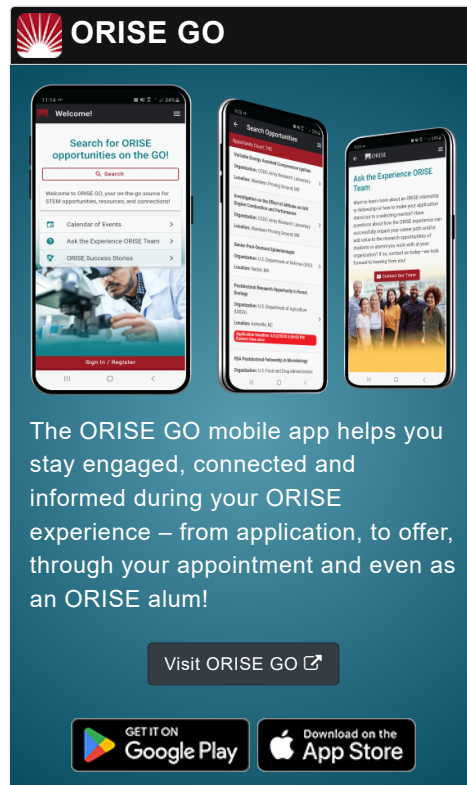
***Applications will be reviewed on a rolling-basis, and this opportunity will remain open until a qualified candidate is identified.**

ARS Office/Lab and Location: A postdoctoral research opportunity is currently available with the U.S. Department of Agriculture (USDA), Agricultural Research Service (ARS), Hard Winter Wheat Genetics Research Unit (HWWGRU) at the Center for Grain and Animal Health Research (CGAHR) located in Manhattan, Kansas (<https://www.ars.usda.gov/plains-area/mhk/cgahr/>). The research unit's laboratory is co-located on the Kansas State University campus.

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.

The mission of the laboratory is hard winter wheat germplasm enhancement for biotic and abiotic stress tolerance and improved nutritional quality and food safety. We pursue different aspects of germplasm enhancement, from gene tagging and pyramiding, to introgression of ancient ancestor chromatin into elite modern germplasm.

Research Project: Under the guidance of the mentor, and in collaboration with other scientists in the research unit and at Kansas State University, the participant will perform DNA library construction using a range of technologies to provide genomic



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sequence information for characterization of introgression germplasm derived from the ancient ancestors of cultivated bread wheat. The participant will conduct bioinformatic analysis of sequence information toward identifying potentially useful variants for phenotypic characterization. The participant also will analyze genetic and phenotypic data publication in scientific journals.

Learning Objectives: Throughout the course of this research project, the participant will improve their knowledge of development and analysis of genomic data to address questions of genetic diversity, introgression, population structure and/or breeding selection. The participant will have opportunities to collaborate with a rich array of scientists actively working in the field of wheat genomics.

Mentor(s): The mentor for this opportunity is Mary Guttieri (mary.guttieri@usda.gov). If you have questions about the nature of the research please contact the mentor(s).

Anticipated Appointment Start Date: December 1, 2021. 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 minimum annual stipend will be \$60,000. A health insurance allowance will be provided and up to \$5,000 to cover the costs of relocation, if needed, will also be provided.**

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 USDA-ARS@orau.org and include the reference code for this opportunity.

Qualifications

The qualified candidate should have received a doctoral degree in one of the

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relevant fields.

Preferred skills:

- Demonstrated skill in a scripting language (e.g. Python, Perl) and familiarity with bioinformatic workflows
- Knowledge of gene/QTL discovery techniques and marker development strategies
- Strong background in statistical analysis
- Experience with genomic laboratory techniques
- Academic training in plant genetics
- Command of written and spoken English language

**Eligibility
Requirements**

- **Degree:** Doctoral Degree.
- **Discipline(s):**
 - **Life Health and Medical Sciences** (8 👁)