

Opportunity Title: USDA-ARS Postdoctoral Fellowship in Maize Genomics

Opportunity Reference Code: USDA-ARS-2022-0261

Organization U.S. Department of Agriculture (USDA)

Reference Code USDA-ARS-2022-0261

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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 9/7/2022 3:00:00 PM Eastern Time Zone

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

ARS Office/Lab and Location: A postdoctoral research opportunity is available with the U.S. Department of Agriculture (USDA), Agricultural Research Service (ARS), Corn Insects and Crop Genetics Research Unit, located in Ames, Iowa.

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 research opportunity will be part of the MaizeGDB Database ARS research project within the Corn Insects and Crop Genetics Research Unit. MaizeGDB is the world's primary and most comprehensive source for maize genetic and genomic data. Under the guidance of a mentor, the participant will gain experience in curating multi-omic datasets and developing pipelines for analysis. The participant will collaborate with scientists and support staff to implement data mining approaches to identify maize publications that will enhance maize functional genome annotation with an emphasis on the targeted curation of traits related to abiotic and biotic stress and climate change. This appointment will also include opportunities to contribute to maize computational biological research and tool development resulting in peer-reviewed publications. Throughout this



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research project, the participant will gain experience developing and using pipelines on high-performance computing clusters (HPC).

Learning Objectives: The participant will learn biology associated with maize genetics, genomics, and breeding as well as statistical and computational methods used in the analysis. There are opportunities for discovery science related both to the underlying biology, and to the computational and analytical methods. Opportunities for professional development will include interactions with breeders and other researchers working on maize biology, through existing and planned collaborations; and to a broader swath of plant- and computational-biologists at research meetings and seminars. Participation in outreach and leadership roles will be encouraged.

USDA-ARS Contact: If you have questions about the nature of the research, please contact Carson Andorf (carson.andorf@usda.gov).

Anticipated Appointment Start Date: August 1, 2022. 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 the mentor and ARS, and is contingent on the availability of funds.

Level of Participation: The appointment is full-time.

Participant Stipend: The participant(s) will receive a monthly stipend commensurate with educational level and experience.

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](#). If you have additional questions about the application process please email USDA-ARS@ornl.gov and include the reference code for this opportunity.

Qualifications The qualified candidate should have received a doctoral degree in one of the relevant fields listed below, or be currently pursuing the degree with completion by December 31, 2022. Degree must have been received within the past five years.

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Preferred skills:

- Experience working with genetics and genomic data
- Experience working with large, diverse datasets and data-mining approaches
- Experience with relational databases
- Experience installing and running complex software programs using the command line
- Familiar with Linux, computational programming, and high performance computing clusters
- Familiar with concepts such as plant gene mutation, gene functional characterization, and ontologies
- Strong oral and written communication skills

**Eligibility
Requirements**

- **Degree:** Doctoral Degree received within the last 60 months or anticipated to be received by 12/31/2022 12:00:00 AM.
- **Discipline(s):**
 - **Computer, Information, and Data Sciences** ([5](#) 👁)
 - **Life Health and Medical Sciences** ([48](#) 👁)
 - **Mathematics and Statistics** ([2](#) 👁)
- **Veteran Status:** Veterans Preference, degree received within the last 120 month(s).