

Opportunity Title: USDA-ARS Adaptation and Speciation in Maize and Its Wild

Relatives Fellowship

Opportunity Reference Code: USDA-ARS-CERCA-2024-0095

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 App Store](#) 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. 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
- A copy of an abstract or reprint of an article

All documents must be in English or include an official English translation.

Application Deadline 5/24/2024 3:00:00 PM Eastern Time Zone

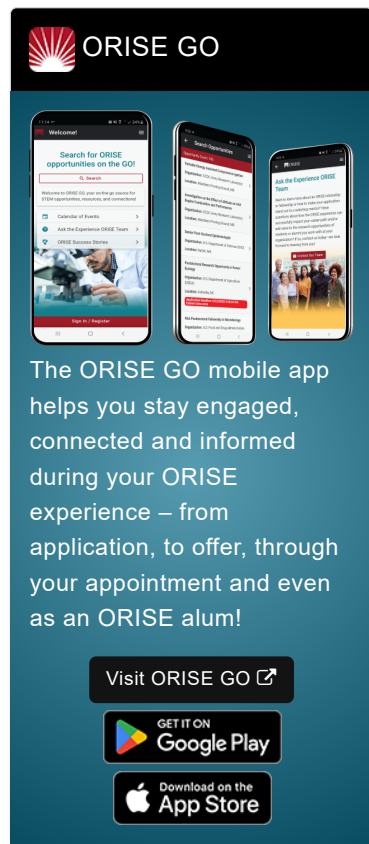
Description *Applications are reviewed on a rolling-basis.

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 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 postdoctoral learning opportunity will be part of the "Circular Economy that Reimagines Corn Agriculture (CERCA)" project that seeks to build a new ideotype of Corn Belt maize by incorporating adaptations from diverse varieties of maize and its wild relatives. This ideotype is designed to reduce greenhouse gas production and soil erosion, thus sustainability of food production. These studies will provide experience in computational analysis of complex genome sequences of maize and its wild relatives. Additionally, studies will be conducted on incipient speciation loci in subspecies of *Zea mays* with adaptations relevant to the project.

Learning Objectives: The participant will be trained in comparative genomic and population genetic analyses to identify adaptive loci



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underlying cold tolerance and the shift to an annual growth habit from a perennial ancestral state. The participant will receive training in team research, publication of research findings and making scientific presentations.

Mentor(s): The mentor for this opportunity is Marvin Scott (paul.scott@usda.gov). If you have questions about the nature of the research, please contact the mentor(s).

Anticipated Appointment Start Date: 2024. 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.

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 additional questions about the application process, please email ORISE.ARS.CERCA@orau.org and include the reference code for this opportunity.

Qualifications The qualified candidate should be currently pursuing or have received a doctoral degree in the one of the relevant fields. Degree must have been received within the past four years or anticipated to be received by start of appointment.

Preferred skills:

- Understanding of basic principles of genetics and evolutionary biology
- Research experience in bioinformatics and genomic analysis

- Eligibility Requirements**
- **Citizenship:** U.S. Citizen Only
 - **Degree:** Doctoral Degree received within the last 48 months or currently pursuing.
 - **Academic Level(s):** Postdoctoral or Post-Master's.
 - **Discipline(s):**

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