

**Opportunity Title:** USDA-ARS Postdoctoral Fellowship in Soybean Post-Genomics and Molecular Biology

**Opportunity Reference Code:** USDA-ARS-MWA-2024-0396

**Organization** U.S. Department of Agriculture (USDA)

**Reference Code** USDA-ARS-MWA-2024-0396

**How to Apply** *To submit your application, scroll to the bottom of this opportunity and click **APPLY**.*

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

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

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**Application Deadline** 7/4/2025 3:00:00 PM Eastern Time Zone

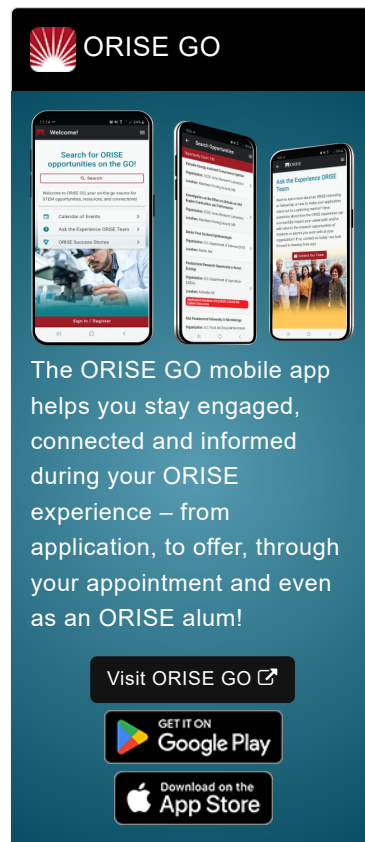
**Description** \*Applications are reviewed on a rolling-basis.

**ARS Office/Lab and Location:** A plant science research opportunity is available with the U.S. Department of Agriculture (USDA), Agricultural Research Service (ARS), within the Donald Danforth Plant Science Center located in Saint Louis, Missouri.

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 host laboratory is located in [Danforth Plant Science Center](#), St. Louis, MO, a hub of plant science research surrounded by Bayer Crop Science Headquarter and Washington University, and other education institutes and agricultural companies.

**Research Project:** The overarching goals of the An Lab (<https://www.ars.usda.gov/people-locations/person/?person-id=43793>) are to:

1. Integrate multi-disciplinary approaches and bioinformatic tools to mine



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multi-omics data (mainly on genetic, genome and transcriptome sequencing and phenotypic data) to discover genes and biological networks for improving soybean seed composition and resilience to environmental stresses.

2. Apply molecular and physiological techniques to develop and characterize edited plants to illustrate molecular mechanism of seed storage reserve production for seed quality and yield improvement.

Under the guidance of a mentor, the fellow will collaborate with a team with diverse experience in bioinformatics, quantitative genetics, systems biology, molecular biology and plant physiology to mine multi-omics data for discovering candidate genes and to characterize transgenic plants for understanding gene function and their underlying mode of action.

**Learning Objectives:**

1. Learn about leadership of an independent scientific research project in any scientific field.
2. Gain new skills and experience for the “next-generation” research and job market.

**Mentor(s):** The mentor for this opportunity is Yong-qiang An ([yong-qiang.an@usda.gov](mailto:yong-qiang.an@usda.gov)). If you have questions about the nature of the research, please contact the mentor(s).

**Anticipated Appointment Start Date: Spring 2025.** 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, 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. Foreign national candidates may have a mandatory in-person requirement depending on visa status.

**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

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through ORISE.






**Questions:** Please visit our [Program Website](#). After reading, if you have additional questions about the application process, please email [ORISE.ARS.Midwest@ornl.gov](mailto:ORISE.ARS.Midwest@ornl.gov) 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 in the past five years or is anticipated to be received near start of appointment.

**Preferred skills:**

- Background and experience with structural and functional genomics, large-scale data analysis, molecular biology, systems biology, seed biology, population genetics, and crop genetics, crop physiology, molecular evolution, and model plant and soybean biology, oil metabolism and transgenic biology.

**Point of Contact** [Shantra Joynes](#)

- Eligibility Requirements**
- **Degree:** Doctoral Degree received within the last 60 months or currently pursuing.
  - **Discipline(s):**
    - **Chemistry and Materials Sciences** ([12](#) )
    - **Computer, Information, and Data Sciences** ([17](#) )
    - **Environmental and Marine Sciences** ([14](#) )
    - **Life Health and Medical Sciences** ([51](#) )
    - **Mathematics and Statistics** ([11](#) )

**Affirmation** I affirm that:

I am a US Citizen, OR;  
I am a non-US citizen currently living in the United States