

Opportunity Title: USDA-ARS Postdoctoral Fellowship in Biology & Gene Editing

Opportunity Reference Code: USDA-ARS-SEA-2026-0079

Organization U.S. Department of Agriculture (USDA)

Reference Code USDA-ARS-SEA-2026-0079

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 4/10/2026 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 Canal Point, Florida.

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 unique opportunity offers hands-on experience in cutting-edge sugarcane research, focusing on gene editing and molecular breeding techniques. While flowering in sugarcane is an undesirable trait for Florida farmers, it plays a crucial role in crossing and breeding. Through this learning experience, participants will contribute to innovative research aimed at utilizing gene editing to knock out specific flowering genes in advanced sugarcane varieties. These advancements will support breeding efforts and optimize agronomic performance on U.S. farms.

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The participant will gain valuable knowledge and skills in areas such as sugarcane gene editing, transformation biotechnology, genetics, genomics, and molecular breeding. Key learning activities include:

- Designing and conducting experiments in plant tissue culture, regeneration, genetic engineering, and genome editing of sugarcane.
- Developing expertise in molecular cloning and large-scale transformation experiments.
- Creating recombinant DNA constructs, performing plant transformations, and analyzing transformed plants for gene expression.
- Collecting, organizing, and conducting preliminary analyses of experimental data.
- Preparing scientific technical reports, documenting research progress, and contributing to publications.
- Learning methodologies and tools for transformation analysis.
- Conducting phenotype trials related to sugarcane genetics and genomics.
- Helping scientists with trials for CP sugarcane breeding and flower synchronization.
- Staying informed about scientific advancements by engaging with literature, attending supervisor-approved meetings, workshops, and conferences.
- Collaborating across disciplines to integrate functional genomics research into sugarcane breeding.

This opportunity is ideal for individuals eager to expand their knowledge and practical skills in plant biotechnology and genetics, while contributing to impactful research that supports sustainable agriculture. Participants will work alongside experienced scientists and engage in collaborative, interdisciplinary research to deepen their understanding of sugarcane breeding and molecular biology.

Learning Objectives: As a result of this experience, the participant will:

- Learn methods to conduct transformation of sugarcane,
- Learn genomics, bioinformatic methods to identify and characterize candidate genes of interest,
- Learn methods to conduct induced gene editing of candidate genes of interest, and;
- Develop skills in conducting, writing and presenting research.

Mentor(s): The mentor for this opportunity is Aliya Momotaz (aliya.momotaz@usda.gov). If you have questions about the nature of the research, please contact the mentor(s).

Anticipated Appointment Start Date: June 1, 2026. 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.

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Level of Participation: The appointment is full time.

Participant Stipend: The participant will receive a monthly stipend commensurate with educational level and experience. **The anticipated stipend is \$77, 274 annually, plus a health insurance supplement.**

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.Southeast@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 (Plant Biology, Genetics, Molecular Biology, Biotechnology, or a related discipline). Degree must have been received within the past five years.

Preferred skills:

- Molecular biology, tissue culture, and genetic engineering lead efforts in advancing genome editing platforms for recalcitrant crop species.
- Demonstrated experience in advanced molecular cloning, plant tissue culture, and/or genome editing (e.g., CRISPR/Cas systems).
- Experience with recalcitrant crops is highly desirable.
- Strong record of peer-reviewed publications, effective communication skills, and ability to perform both independently and collaboratively
- Research experience related to QTL mapping and transcriptome biology is desirable.

Stipend \$77,274.00 Yearly

Point of Contact [Sara Beth](#)

- Eligibility Requirements**
- **Citizenship:** U.S. Citizen Only
 - **Degree:** Doctoral Degree.
 - **Discipline(s):**
 - **Life Health and Medical Sciences** ([9](#) )
 - **Veteran Status:** Veterans Preference, degree received within the last 120 month(s).