

**Opportunity Title:** USDA-ARS Postdoctoral Biology Fellowship

**Opportunity Reference Code:** USDA-ARS-SEA-2025-0099

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

**Reference Code** USDA-ARS-SEA-2025-0099

**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** 10/24/2025 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:**

- The fellow will be involved in bioinformatics and statistical analysis in genetics, genomics, and molecular breeding research.
- The fellow will help develop an extensible pipeline for NGS based whole genome sequencing, and genotyping for highly polyploid and complex genome sugarcane using both DNA and RNA.
- The fellow will perform analysis related to genomic selection, QTL mapping, genome wide association study (GWAS), and transcriptome



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analysis using the latest bioinformatics and statistical software.

**Learning Objectives:**

- Learn about the implementation of the application of machine learning methodologies in plant phenotyping and genotyping for the sugarcane molecular biology lab.
- Learn about technical support in computational analysis using bioinformatics and statistical tools.
- Learn about conducting phenotype trials related to sugarcane genetics and genomics.
- Learn about conducting trials for CP sugarcane breeding genotype selection.
- Learn about preparation of data for scientific technical reports and manuscripts.
- Learn about current scientific advancement by reading literature, review articles, and attending supervisor approved meetings, workshops, and conferences.
- Under a mentor, participate in lab research related to sugarcane molecular biology.

**Mentor(s):** The mentor for this opportunity is Md Islam ([md.islam@usda.gov](mailto:md.islam@usda.gov)). If you have questions about the nature of the research, please contact the mentor(s).

**Anticipated Appointment Start Date: November 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. May be extended up to four years.

**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 annual stipend is \$77,274 with 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

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email [ORISE.ARS.Southeast@ornl.gov](mailto:ORISE.ARS.Southeast@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 (e.g. Biological Sciences, Genetics, Agriculture, Natural Resource Management, Chemistry or a related field of study). Degree should have already been completed or is anticipated to be completed by the appointment start date.

**Preferred skills:**

- Knowledge and experience in multiple programming languages and platforms (eg Python, perl, C/C++, R, and SAS).
- Familiarity with NGS based sequence analysis including cleaning, alignment, variant calling, and filtering is highly desirable.
- Experience on R scripting, analytical pipeline developing, and interpreting is desirable.
- Skills in GWAS, QTL, genomic selection, and transcriptome analysis.
- Research experience related to genetics, genomics, and molecular biology will be a plus.

**Stipend** \$77,274.00 Yearly

**Point of Contact** [Janeen](#)

- Eligibility**
- **Citizenship:** U.S. Citizen Only
- Requirements**
- **Degree:** Doctoral Degree.
  - **Discipline(s):**
    - **Computer, Information, and Data Sciences** ([6](#) )
    - **Life Health and Medical Sciences** ([11](#) )
    - **Mathematics and Statistics** ([2](#) )