

Opportunity Title: USDA-ARS Fellowship on Cacao Genomics Assisted Breeding

Opportunity Reference Code: USDA-ARS-SE-2024-0221

Organization U.S. Department of Agriculture (USDA)

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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 7/19/2024 11:59:00 PM Eastern Time Zone

Description **ARS Office/Lab and Location:** A plant science research opportunity is available with the U.S. Department of Agriculture (USDA), Agricultural Research Service (ARS), at the Subtropical Horticulture Research Station (SHRS) in Miami, 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 appointment is supported by the USDA-ARS cacao research project in Miami, FL whose main objective is the development high-yielding cultivars with excellent quality attributes and resistant to diseases and pest as well as tolerant to environmental stresses using a combination of traditional, molecular, and genomics approaches. The fellow will participate as a team member under the mentorship of the Research Geneticist/ Lead Scientist in all phases of the cacao breeding program, and will collaborate with other scientists in universities and other institutes in countries focusing on cacao genomics and assisted breeding methodologies. The research activities the selected candidate will be involved with include:



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- Conduct screening of cacao accessions and breeding populations for the presence of Badnaviruses and Poleroviruses using genomic tools.
- Perform Sanger and Next Generation Sequencing
- Analyze resulting data using bioinformatic tools.
- Participate in the writing of manuscripts and presentations of research at scientific conferences.

Learning Objectives: The participant will receive training in cacao genomics and breeding as well as plant virology and will gain experience by collaborating with national and international scientists focusing on the screening of viruses present on cacao germplasm. Additionally, the participant will get a chance to learn cacao breeding and understand the effects of viruses on cacao production.

Mentor: The mentor for this opportunity is Osman Gutierrez (osman.gutierrez@usda.gov). If you have questions about the nature of the research, please contact the mentor.

Anticipated Appointment Start Date: July 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. The current stipend range for this opportunity is \$63,867 - \$83,027 per year.

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](#). After reading, if you have additional questions about the application process, please email ORISE.ARS.Southeast@ornl.gov and include the reference code for this opportunity.

Qualifications The qualified candidate should have received a master's degree in one of

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the relevant fields (e.g., Biology, Plant Genetics, Genomics or related field). Degree must have been received within five years of the appointment start date.

Preferred Skills include:

- Experience in performing DNA extractions, RNA extractions, polymerase chain reaction, and gel electrophoresis.
- Experience in performing Sanger and Next Generation Sequencing, and analyzing resulting data using bioinformatic tools.
- Experience in data organization and preparation for manuscript publishing.

- Eligibility Requirements**
- **Degree:** Master's Degree received within the last 60 month(s).
 - **Discipline(s):**
 - **Environmental and Marine Sciences** ([1](#) 👁)
 - **Life Health and Medical Sciences** ([12](#) 👁)

Affirmation I affirm that:

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