

Opportunity Title: USDA-ARS Research Assistant Internship in Entomology

Opportunity Reference Code: USDA-ARS-SE-2023-0009

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

Reference Code USDA-ARS-SE-2023-0009

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<u>Store</u> or <u>Google Play Store</u> to help you stay engaged, connected, and informed during your ORISE experience and beyond!

A complete application consists of:

- An application
- Transcripts 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.

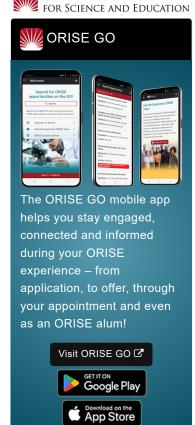
## Application Deadline 3/20/2023 3:00:00 PM Eastern Time Zone

## Description \*Applications are reviewed on a rolling-basis and this posting could close before the deadline.

ARS Office/Lab and Location: A technical assistant (insect) opportunity is currently available with the U.S. Department of Agriculture (USDA), Agricultural Research Service (ARS), Subtropical Horticulture Research Station located 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 the agency is to provide global leadership in agricultural discoveries through scientific excellence.

Research Project: The research will develop components and integrated pest management (IPM) strategies for invasive insects, such as tephritid fruit flies, ambrosia beetles, the hibiscus bud weevil, etc., that pose a threat to subtropical agriculture. The project will focus on the biology and chemical ecology of target pests to determine commodities at risk and identify semiochemicals that alter insect behavior and physiology, including attractants, repellents, and oviposition deterrents. In addition, toxicological studies will be conducted to detect, identify, and understand the development of insecticide resistance in tephritid fruit flies. The primary goal of the project is to develop comprehensive tools to improve detection and suppression of target pests. The participant will join a multidisciplinary team of researchers to (1) determine toxicity of plant extracted essential oils against insect pests, (2) conduct behavioral testing of volatiles emitted from microbes, host plants and protein food, (3) maintain critical insect



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colonies for resistance selection and chemical ecology bioassays, and (4) conduct field testing of developed lures and baits.

**Learning Objectives**: Under the guidance of a mentor, the participant will be encouraged to develop protocols to optimize insect rearing, maintain insect colonies to guarantee research needs for the project, conduct laboratory bioassays to determine toxicities of selected insecticidal chemicals, and collect, prepare, evaluate, and verify samples and supporting records.

Mentor(s): The mentor for this opportunity is Xiangbing Yang (xiangbing.yang@usda.gov). If you have questions about the nature of the research, please contact the mentor(s).

Anticipated Appointment Start Date: 2023. 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.

<u>Citizenship Requirements</u>: 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@orau.org and include the reference code for this opportunity.

Qualifications The qualified candidate should have received a bachelor's degree in one of the relevant fields or be currently pursuing the degree with completion by June 1, 2023. Degree must have been received within the past five years.

## Eligibility Requirements

• Degree: Bachelor's Degree received within the last 60 months or anticipated to be received by 6/1/2023 11:59:00 PM.

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- Discipline(s):
  - Life Health and Medical Sciences (<u>7</u>.

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