

# Opportunity Title: USDA-ARS Postdoctoral Fellowship in Insect Biocontrol and

### Behavior

Opportunity Reference Code: USDA-ARS-NE-2023-0208A

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

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A complete application consists of:

- An application
- Transcripts <u>Click here for detailed information about acceptable transcripts</u>
- 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 7/19/2024 11:59:00 PM Eastern Time Zone

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

ARS Office/Lab and Location: A postdoctoral research opportunity is currently available with the U.S. Department of Agriculture (USDA), Agricultural Research Service (ARS), within the Invasive Insect Biocontrol and Behavior Laboratory (IIBBL) located in Beltsville, Maryland.

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.

<u>Research Project</u>: Researching the development of Sustainable Green Pesticides to Control Arthropods of Medical and Agricultural Importance.

The mission of the Invasive Insect Biocontrol and Behavior Laboratory is to conduct research on arthropod pests of agriculture and mitigate their threats to our Nation's food and fiber by developing cost-effective and sustainable strategies for controlling native insect pests and invasive species. An additional focus of the IIBBL is the discovery and development of methods to protect people from disease pathogens transmitted by medically important insects and biting arthropods.

The participant should be a motivated, adaptable, and responsible biological/entomological candidate with a genuine interest in tackling crucial challenges to modern agricultural/medical production enterprises. Particularly, the participant will conduct research with the long-term goal of helping to develop unique behavioral and biological pest management strategies based on semiochemicals, such as mass trapping, attract & kill,

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push & pull, mating disruption, to interfere with fundamental behaviors feeding and mating for managing the population of agricultural insect pests and other important arthropods, reducing impacts of synthetic chemical effects on wildlife to protect the ecosystem and public health.

<u>Learning Objectives</u>: This postdoctoral fellowship offers a training opportunity for the participant to demonstrate and refine existing biological/entomological skills and to develop new capabilities and professional experience.

<u>Mentor(s)</u>: The mentor for this opportunity is Aijun Zhang (<u>aijun.zhang@usda.gov</u>). If you have questions about the nature of the research please contact the mentor(s).

<u>Anticipated Appointment Start Date</u>: May 1, 2024. Start date is flexible and will depend on a variety of factors.

<u>Appointment Length</u>: 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.

**<u>Participant Stipend</u>**: The participant will receive a stipend of \$82,764 per year and a health insurance stipend supplement.

<u>Citizenship Requirements</u>: This opportunity is available to U.S. citizens and Lawful Permanent Residents (LPR).

**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.

<u>Questions</u>: Please visit our <u>Program Website</u>. After reading, if you have additional questions about the application process please email <u>ORISE.ARS.Northeast@orau.org</u> and include the reference code for this opportunity.

**Qualifications** The qualified candidate should have received a doctoral degree in one of the relevant fields. Degree must have been received within the past five years.

Preferred Skills/Experience:

- Proficiency in entomological/chemical ecology field:
  - A working knowledge of insect laboratory behavior and field trials.
  - Familiarity with statistical analysis is a plus.
  - Although not necessary, familiarity with chemical analysis and organic synthesis is highly appreciated.
- Experience related to the stated research project and may include research performed in laboratory behavior bioassay involving attraction for feeding, mating, oviposition, or repulsion for avoiding competition, escape natural enemies (e.g., Petri dish, flight tunnel, olfactometer, EthoVision, and toxicology assays for feeding deterrent/repellent/toxin);



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insect rearing to establish laboratory colonies; experimental design; analysis of data and interpretation; drafting manuscript and presentation; and development of application tools for pest management with the intent to derive novel biological knowledge.

Eligibility • C Requirements • D

• Citizenship: LPR or U.S. Citizen

- Degree: Doctoral Degree received within the last 60 month(s).
  - Discipline(s):

    - Life Health and Medical Sciences (9.)
  - Veteran Status: Veterans Preference, degree received within the last 120 month(s).