

**Opportunity Title:** USDA-ARS Microbe-Insect Interaction Fellowship

**Opportunity Reference Code:** USDA-ARS-2020-0195

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

**Reference Code** USDA-ARS-2020-0195

**How to Apply** 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.

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**Application Deadline** 1/4/2021 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 postdoctoral research opportunity is currently available with the U.S. Department of Agriculture (USDA), Agricultural Research Service (ARS), US Pacific Basin Agricultural Research Center located in Hilo, Hawaii.

**Research Project:** The mission of the Tropical Crop and Commodity Protection Research Unit is to develop pre- and post-harvest technologies and management strategies for invasive pests, and to open and maintain market access and improved quality of tropical fruit, vegetable and ornamental crops grown in the Pacific Basin. The selected participant will participate in the team research to increase understanding of the microbial ecology of fruit flies to identify roles of microbes on insect behavior and fitness. One of main focus will be on identifying microbe-odor based chemical attractants and repellents for *Bactrocera* fruit flies and assist research activities to develop semiochemical based behavioral management tools for the fruit flies. Under the guidance of a mentor, specific participant activities will include:

- Identification and culture of microbes isolated from fruit flies and host plants of the flies
- Selective manipulation of microbes to determine the role of different microbes on fly behavior
- Collection and analysis of microbial volatiles
- Behavioral testing of identified volatiles for fly behavior.

**Learning Objectives:** Throughout the course of this research project the participant will learn planning, experimental design, method development, collection and analysis of data, and manuscript writing. This opportunity will provide exposure to cutting-edge techniques in chemical ecology, insect behavior, and insect-microbe interaction research, as well as experience with grant writing, providing the participant with excellent training in these areas.

**Mentor(s):** The mentor for this opportunity is Dong Cha ([dong.cha@usda.gov](mailto:dong.cha@usda.gov)). If you have questions about the nature of the research please contact the mentor(s).

**Anticipated Appointment Start Date:** December 2020. Start date is flexible and will depend on a variety of factors.



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**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(s) will receive a monthly stipend commensurate with educational level and experience.

**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 [USDA-ARS@ornl.gov](mailto:USDA-ARS@ornl.gov) and include the reference code for this opportunity.

**Qualifications** The qualified candidate should have received a doctoral degree in one of the relevant fields, or be currently pursuing the degree with completion by the appointment start date.

Preferred skills:

- Experience in isolation, identification and culture of microbes
- Experience in chemical ecology
- Experience in axenic insect production and manipulation
- Experience in identification of insect behavior modifying chemicals
- Experience in insect behavior
- Research experience in pest management, entomology, microbiology, agriculture
- Strong interpersonal skills
- Excellent oral and written communication skills

- Eligibility Requirements**

- **Degree:** Doctoral Degree.
  - **Discipline(s):**
    - **Environmental and Marine Sciences** (5👁)
    - **Life Health and Medical Sciences** (14👁)