

Opportunity Title: USDA-ARS Postdoctoral Fellowship in Plant Pathology

Opportunity Reference Code: USDA-ARS-2022-0120

Organization U.S. Department of Agriculture (USDA)

Reference Code USDA-ARS-2022-0120

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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. All transcripts must be in English or include an official English translation. 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 9/30/2022 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 research opportunity is currently available with the U.S. Department of Agriculture (USDA), Agricultural Research Service (ARS) at the Tropical Plant Genetic Resources and Disease Research Unit (TPGRDRU), US Pacific Basin Agricultural Research Center in Hilo, Hawaii.

Research Project: Throughout the course of this research project, the participant will participate in a macadamia health initiative to characterize Phytophthora and other diseases in Hawaii and assist in developing and evaluating potential management strategies for control. The participant will participate in all aspects of detection, evaluation, prevention, and control for macadamia diseases such as macadamia quick decline (MQD) and the interaction they may have with macadamia felted coccid (MFC). Experimental research includes field, greenhouse, growth chamber and laboratory experiments towards determining the means and conditions by which these pathogens develop and spread. Specific activities may include the isolation, culturing and maintenance of pathogen cultures and culture collections; the use of traditional (cultural, morphological) and nucleic acid [polymerase chain reaction (PCR), real-time PCR, and sequencing] techniques for pathogen identification; the use of leaf bioassays and inoculation of seedlings and trees for pathogenicity testing and resistance screening; developing or using disease ratings; and determining and evaluating management techniques.

Learning Objectives: The participant will participate in planning, experimental design, method development, implementation, and data analysis of these investigations as well as contribute towards writing manuscripts and publications. Additionally, the participant will attend meetings with growers and participate in



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outreach. This opportunity will provide exposure to methods development in cutting-edge diagnostic, resistance screening and management techniques and approaches, including testing new procedures to improve macadamia nut production, providing the participant with excellent training in these areas.

Mentor(s): The mentor for this opportunity is Lisa Keith (lisa.keith@usda.gov). If you have questions about the nature of the research please contact the mentor(s).

Anticipated Appointment Start Date: As soon as a qualified candidate is identified. 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.

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@orau.org 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 anticipated appointment start date.

Preferred skills:


- Research experience in designing and implementing plant pathology research methods, conducting field diagnosis and management of agricultural pathogens.
- Research experience in collecting, processing, and analyzing fungal samples using both culturing techniques and molecular DNA (deoxyribonucleic acid) approaches in the laboratory.
- Experience with leaf bioassays and inoculation of seedlings and trees for pathogenicity testing and resistance screening; disease ratings; and determination and evaluation of management techniques.

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- Knowledge of invasive threats to agriculture, including plant pathogens, clean laboratory microbial culturing techniques and molecular DNA tests, Microsoft Word and Excel, database programs and mapping systems (e.g., ArcView), and Global Positioning System (GPS).
- Strong interpersonal skills.
- Excellent oral and written communication skills.

**Eligibility
Requirements**

- **Degree:** Doctoral Degree.
- **Discipline(s):**
 - **Life Health and Medical Sciences** (7 )