

Opportunity Title: USDA-ARS Postdoctoral Fellowship in Plant Physiology

Opportunity Reference Code: USDA-ARS-2022-0238

Organization U.S. Department of Agriculture (USDA)

Reference Code USDA-ARS-2022-0238

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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 10/3/2022 3:00:00 PM Eastern Time Zone

Description *Applications are reviewed on a rolling-basis.

ARS Office/Lab and Location: A research opportunity is currently available with the U.S. Department of Agriculture (USDA), Agricultural Research Service (ARS), Natural Products Utilization Research Unit (NPURU) resided at the National Center for Natural Products Research on the campus of the University of Mississippi located in Oxford, Mississippi.

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 Natural Products Utilization Research Unit (NPURU) is a research laboratory focused on the discovery of natural products and their application in agriculture. As the number of herbicide-resistant weed species are rapidly rising, the demand for new sustainable sources of compounds with herbicidal activity is greatly needed. At NPURU, a pipeline for discovery and development of natural products as herbicides and bioherbicides involves novel compound isolation from plants, bacteria, and fungi and testing their phytotoxic properties. This strategy enables the identification of potentially promising lead compounds and further investigation on their mode-of-action. To generate and analyze data for this purpose, we are now looking for a postdoc to join our research team. The participant will be part of a team of scientists responsible for evaluating compounds that are bioactive against model plants such as *Lemna paucicostata*, *Agrostis stolonifera*, and *Arabidopsis thaliana* or unicellular algae, e.g., *Chlamydomonas reinhardtii*. Further investigation by the participant involves elucidating potential molecular target sites of active compounds in plant cells. In this process, the participant will select and apply specific methods to identify and understand the mode-of-action of the chemical. Depending on the effects and characteristics of the compound(s), diverse methods of plant physiology, biochemistry and/or molecular biology will be applied.

Learning Objectives: Through the course of active involvement in the research

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project, the participant will gain valuable experience which will strongly support their future research career in the agroindustry or academia.

Mentor(s): The mentor for this opportunity is Joanna Bajsa-Hirschel (Joanna.bajsa-hirsche@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 two years, 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@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.

Experience in plant physiology, biochemistry, and molecular biology techniques is preferred.

- Eligibility Requirements**
- **Degree:** Doctoral Degree.
 - **Discipline(s):**
 - **Life Health and Medical Sciences** ([10](#))