

Opportunity Title: USDA-ARS Food Technologist Postdoctoral Fellowship

Opportunity Reference Code: USDA-ARS-2022-0284

Organization U.S. Department of Agriculture (USDA)

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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 9/23/2022 3:00:00 PM Eastern Time Zone

Description *Applications may be 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), Horticultural Research Laboratory located in Fort Pierce, Florida. The selected participant will be part of the Citrus and Other Subtropical Products Research Unit at the USDA-ARS Horticultural Research Laboratory [Citrus and Other Subtropical Products Research : USDA ARS](#).

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.

Research Project: The selected fellow will be involved in a research project to develop juices from low sugar and/or high nutritional/functional fruits and vegetables. The goal is to develop low sugar juice or drinks to improve public health. There is sufficient scientific research reporting that decreasing sugar-sweetened beverage intake will reduce the prevalence of obesity. By contrast, increasing evidence shows that increased fruit and vegetable intake lowers the risk of serious health problems, such as cardiovascular diseases and various types of cancer. It has also been shown that fruit juice has a similar energy density and sugar



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content compared to sugar-sweetened beverages and high fruit juice intake is associated with an increased risk of diabetes despite the fact that fruit juices also contain vitamins, fibers, and minerals. Thus, the search for low-sugar juices and drinks is motivated by public health concerns. Jicama is a starchy root vegetable like a potato or turnip. The tuberous root tastes slightly sweet, but it is low in sugar, making it a good carbohydrate choice for people with diabetes and others attempting to employ a low-sugar diet. Our preliminary research has established that jicama tissue is nearly 90% juice and the juice is stable in cloud and color. Activities across our crop production, juice extraction, and juice quality evaluation teams will be mutually reinforcing.

Learning Objectives: Under the guidance of a mentor, the fellow will have the following training opportunities:

- Conceive and plan a project from the academic/practical challenges to literature review
- Manage juice processing and analytical skills to take measurements in horticultural food research
- Properly handle the experiment data
- Write reports for extension and/or scientific journal publication

Mentor(s): The mentor for this opportunity is Jinhe Bai (jinhe.bai@usda.gov). If you have questions about the nature of the research please contact the mentor(s).

Anticipated Appointment Start Date: **October 3, 2022.** Start date is flexible and will depend on a variety of factors.

Appointment Length: The appointment will initially be for eight months, 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.

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Qualifications The qualified candidate should have received a doctoral degree in one of the relevant fields, or be currently pursuing the degree with completion before July 22, 2024. Degree must have been received within two years of the appointment start date.

Preferred Skills:

- Analytical chemistry experience
- Experience in GC-MS
- Experience in LC-MS/MS
- Knowledge in transcriptomics and metabolomics
- Experience in food science

Eligibility Requirements

- **Degree:** Doctoral Degree received within the last 24 months or anticipated to be received by 7/22/2024 12:00:00 AM.
- **Discipline(s):**
 - **Life Health and Medical Sciences** ([8](#) 👁)