**Opportunity Title:** USDA-ARS Postdoctoral Fellowship in Cranberry Chemistry
**Opportunity Reference Code:** USDA-ARS-MW-2024-0020

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

**Reference Code** USDA-ARS-MW-2024-0020

**How to Apply** ***Connect with ORISE...on the GO!*** Download the new ORISE GO mobile app in the Apple App Store or Google Play Store to help you stay engaged, connected, and informed during your ORISE experience and beyond!

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. 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
- A copy of an abstract or reprint of an article

All documents must be in English or include an official English translation.

**Description** ***Applications may be reviewed on a rolling-basis.**

**ARS Office/Lab and Location:** A research opportunity is currently available within the U.S. Department of Agriculture (USDA), Agricultural Research Service (ARS), located in Madison, Wisconsin.

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:** Cranberry is a high value crop on a per acre basis and its production in the U.S. represents over 75% of the world's supply. Our goal is to contribute to the development of novel strategies for improving cranberry production and crop utilization along with evaluating and broadening the knowledge base of cranberries, focusing on characterizing fruit composition and quality and developing new value-added products.

Specifically, this project will focus on to elucidate how cranberry fruit quality and composition are related to the quality and composition of sweetened dried cranberry (SDC), which is currently a high priority product for the U.S. cranberry industry. The participant will analyze the chemical composition of the cranberry fruit and key fruit quality traits such as size, shape, color, firmness, and internal structure, prepare mock SDC products in the laboratory, and evaluate the quality and composition of the laboratory-

prepared SDC to establish the relationship between the quality and composition of cranberry fruits and SDC products.

**Learning Objectives:** The participant will learn basic knowledge of fruit processing and develop various experimental skills to study chemical and physical properties of biological materials, including imaging and mechanical data collection and analyses. The participant will also learn scientific communication skills to collaborate in a multidisciplinary environment through the interaction with cranberry growers and processors as well as scientists of various other disciplines relevant to this project.

**Mentor(s):** The mentor(s) for this opportunity is Shinya Ikeda (Shinya.Ikeda@usda.gov). If you have questions about the nature of the research project, please contact the mentor(s).

**Anticipated Appointment Start Date: June 2024.** 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 ORISE.ARS.Midwest@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.

**Eligibility Requirements**

- **Degree:** Doctoral Degree.
- **Discipline(s):**

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- **Chemistry and Materials Sciences** (8 👁)
- **Engineering** (5 👁)
- **Life Health and Medical Sciences** (4 👁)
- **Physics** (4 👁)