Opportunity Title: USDA-ARS Postdoctoral Fellowship in Plant Protein Research
Opportunity Reference Code: USDA-ARS-MWA-2026-0380

Organization U.S. Department of Agriculture (USDA)

Reference Code USDA-ARS-MWA-2026-0380

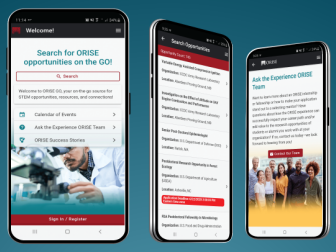
How to Apply ***To submit your application, scroll to the bottom of this opportunity and click APPLY.***

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

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

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Application Deadline 12/31/2026 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), located in Peoria, Illinois.

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.

The Functional Foods Research (FFR) unit in Peoria, Illinois aims at developing bioactive food ingredients that provide health benefits; and creating value-added food and nonfood products from low value agricultural resources. Scientists at FFR develop new processing, chemical, physical, and enzymatic technologies to modify food plants and enhance the use and performance of agricultural materials.

Research Project: The ORISE participant will be a part of a collaborative research initiative focused on the processing and food applications of

proteins derived from plant sources such as alfalfa and legumes. Through this appointment, the participant will gain firsthand experience in how interdisciplinary scientific approaches are used to address real-world challenges in the food industry. The participant will collaborate with chemists, material scientists, plant scientists, and food engineers to build a comprehensive understanding of the utilization of oils, proteins, and phytochemicals from major and emerging U.S. crops. The participant will have access to a state-of-the-art pilot plant for seed and food processing, along with advanced analytical instrumentation such as HPLC, texture analyzers, FT-IR spectrometers, zeta potential and particle size analyzers, differential scanning calorimeters, and supercritical CO2 extractors. Hands-on training will be provided in the characterization of plant proteins, including assessment of secondary structure, surface charge and hydrophobicity, thermal properties, digestibility, texture profile, and other key techno-functional properties.

Learning Objectives: Under the guidance of a mentor, the participant will learn to: develop and optimize procedures for extracting plant proteins with high purity, improved color, and desirable sensory attributes; conduct analyses of the structural, nutritional, and functional properties of extracted plant proteins; characterize interactions between plant proteins and co-factors, including phenolics and volatile flavor compounds; and evaluate the effects of pre-harvest factors (e.g., light exposure) and post-harvest treatments (e.g., hydrothermal processing) on protein structure and functionality.

Mentor(s): The mentor for this opportunity is Zi Teng (zi.teng@usda.gov). If you have questions about the nature of the research, please contact the mentor(s).

Anticipated Appointment Start Date: 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. **The anticipated stipend range is $74,678 annually.**

Citizenship Requirements: This opportunity is available to U.S. citizens only.

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

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email ORISE.ARS.Midwest@orau.org and include the reference code for this opportunity.

Qualifications The qualified candidate should have received or be currently pursuing a doctoral degree in one of the relevant fields.

Preferred skills

- Knowledge of food chemistry, food engineering, biochemistry, and plant physiology.
- Knowledge and/or experience in purification, characterization, modification, and structure-function relationships of proteins, the principles of physical and chemical analyses relevant to food and nutrition, and the handling and analysis of plant tissues
- Problem-solving skills.
- Interpersonal and teamwork skills
- Communication skills (oral and written).

Stipend $74,678.00 Yearly

Point of Contact Michele

Eligibility Requirements

- **Citizenship:** U.S. Citizen Only
- **Degree:** Doctoral Degree.
- **Discipline(s):**
  - **Chemistry and Materials Sciences** (5 👁)
  - **Life Health and Medical Sciences** (7 👁)