

Opportunity Title: USDA-ARS Microbial Safety of Fresh Produce

Opportunity Reference Code: USDA-ARS-NEA-2026-0174

Organization U.S. Department of Agriculture (USDA)

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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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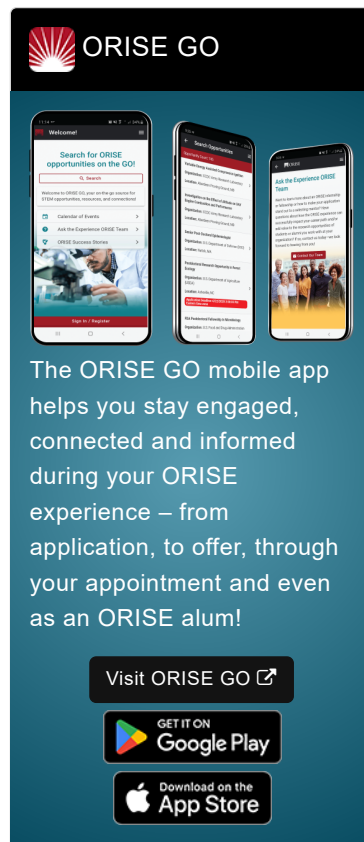
Application Deadline 6/19/2026 3:00:00 PM Eastern Time Zone

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), Eastern Regional Research Center, Microbial and Chemical Food Safety Research Unit (MCFS), located in Philadelphia, Pennsylvania.


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.


Eastern Regional Research Center (ERRC) conducts fundamental, applied and developmental research on a broad spectrum of agricultural commodities with the following major thrusts: i) chemical and microbial food safety and food preservation technologies, ii) sustainable bioenergy and agricultural practices, iii) advanced dairy and food processing technologies, iv) edible films and active packaging technologies, v) bioactive ingredients and functional foods, and vi) biobased products. At ERRC, we strive to develop new knowledge and technologies, and we transfer our scientific


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discoveries to stakeholders and clients in both private and public sectors through strategic partnerships. The mission of ERRC Microbial and Chemical Food Safety Research Unit is to conduct research to reduce foodborne illness and chemical contaminants by developing effective and environment-friendly intervention technologies and treatments. The USDA ARS MCFS research unit is located in Eastern Regional Research Center (ERRC) in the suburb of Philadelphia, PA.

Research Project:

The microbial safety of fresh produce continues to be a major concern in the United States. Therefore, reducing the risk associated with foodborne pathogens in fresh produce is extremely important to public health. Traditionally, fresh produce industry relies on flume systems to sanitize fresh and fresh-cut fruits and vegetables to eliminate pathogens on the surface in packinghouses. However, washing fresh produce may result in pathogen cross contamination of fresh produce when the effective concentrations of sanitizer (often chlorine) in the flumes are not maintained. The objectives of the project are to study the antimicrobial efficacy of cold plasma-activated antimicrobial aerosol as an overhead spray system, and investigate quality changes of treated fresh produce during storage. Inoculated pathogens and spoilage microorganisms along with food quality attributes will be monitored during processing and storage of fresh produce in response to chemical, and physical interventions.

During the appointment, you will contribute by examining issues related to post-harvest intervention technologies against foodborne pathogens on fresh and fresh-cut produce. You will also assist in designing and conducting all aspects of the experiment under the direction of ARS scientists. This includes evaluation of the survival of various foodborne pathogens on selected fresh and fresh-cut produce items as affected by advance oxidation processing, and storage. Furthermore, changes in quality parameters of fresh produce such as texture, color and nutrients will be determined and data will be analyzed using statistical tools.

Learning Objectives:

During the appointment, you will have the opportunity to learn;

- Methods to inoculate and isolate bacterial pathogens from various fresh produce items, and estimation of bacterial injury and survival.
- Various techniques to analyze food quality attributes to evaluate the feasibility of advanced oxidation processing.
- Statistical analysis techniques if desired, and gain experience with conducting multi-disciplinary project.
- Designing and theory of cold plasma and advanced oxidation processing, and their applications on food safety-related areas.
- Knowledge, skills, and abilities related to microbiological analyses and shelf-life of food.

You will also have the benefit of networking with and learning from contacts

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and the scientists researching on these projects. ERRC has a strong history of collaborating with many different academic institutions and U.S. federal government agencies. ORISE fellows who have previously participated at ERRC have had success in using their experience to gain different opportunities at the state and federal government levels, and with trade associations and in private industry.

Mentor(s): The mentor for this opportunity is Xuetong Fan (Xuetong.Fan@usda.gov), 215-836-3785. If you have questions about the nature of the research, please contact the mentor(s).

Anticipated Appointment Start Date: May 17, 2026. Start date is flexible and will depend on a variety of factors.

Appointment Length: The appointment will initially be for six 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. **The anticipated stipend range is \$5,900 monthly, plus health insurance.**

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

Qualifications The qualified candidate should be currently pursuing or have received a bachelor's, master's, or doctoral degree in the one of the relevant fields. Degree must have been received within the past five years, or be currently pursuing.

Preferred degree status:

- Received bachelor's or;
- Current master's or doctoral student

Stipend \$5,900.00 Monthly

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Point of Contact [Janeen](#)

Eligibility • **Citizenship:** U.S. Citizen Only

Requirements • **Degree:** Bachelor's Degree, Master's Degree, or Doctoral Degree received within the last 60 months or currently pursuing.

• **Discipline(s):**

◦ **Life Health and Medical Sciences** ([5](#) )

• **Veteran Status:** Veterans Preference, degree received within the last 120 month(s).