Opportunity Title: USDA-ARS Postdoctoral Fellowship in Analytical Chemistry
Opportunity Reference Code: USDA-ARS-SEA-2026-0429

Organization U.S. Department of Agriculture (USDA)

Reference Code USDA-ARS-SEA-2026-0429

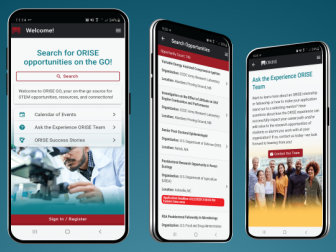
How to Apply ***To submit your application, scroll to the bottom of this opportunity and click APPLY.***

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 1/15/2027 3:00:00 PM Eastern Time Zone

Description ***Applications are reviewed on a rolling-basis and applications may close before the deadline.**

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 New Orleans, Louisiana.

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: You will engage in research utilizing advanced analytical chemistry techniques to investigate off-flavor compounds in water and food systems. With mentor guidance, you will learn how to develop optimized sample preparation workflows and instrumental quantification methods to enhance analytical capabilities within the Food Processing and Sensory Quality (FPSQ) Research Unit. Training will include solid-phase microextraction (SPME and SPME Arrow) techniques, GC-MS method development, calibration strategies, and data analysis for semi-volatile

compounds.

You will be a part of a collaborative research program focused on understanding the dynamics of off-flavors in salmonid aquaculture and related food matrices. Results generated through this project will be communicated to the scientific community through conference presentations and peer-reviewed publications

Learning Objectives: This experience will provide hands-on learning in multidisciplinary team environments and exposure to real-world research challenges in food quality and chemistry. You will develop competencies in advanced sample-preparation workflows, SPME/Arrow extraction, GC–MS quantification, calibration modeling, and data analysis for semi-volatile compounds

Under the guidance of a mentor, you will:

1. Master method development and validation principles (LOD/LOQ, accuracy, precision, matrix effects).
2. Troubleshoot analytical instrumentation and optimizing extraction efficiency for complex food and water matrices.
3. Interprete chromatographic and mass-spectral data, including chemometric approaches for quantifying off-flavor compounds.
4. Understand biological and environmental drivers of off-flavor formation in aquaculture systems.
5. Develope scientific communication skills through presentations and manuscript preparation.

Mentor(s): The mentor for this opportunity is Brennan Smith (brennan.smith@usda.gov). If you have questions about the nature of the research, please contact the mentor(s).

Anticipated Appointment Start Date: February 2027. 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.

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

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additional questions about the application process, please email ORISE.ARS.Southeast@orau.org and include the reference code for this opportunity.

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

Preferred skills:

- Strong experience in semi-volatile organic compound characterization using GC-MS, including sample preparation, method development, and data interpretation.
- Demonstrated proficiency in analytical chemistry, mass spectrometry, and quantitative method development is highly desired.
- Experience in multidisciplinary research teams, excellent communication skills, and a creative, solution-oriented approach to troubleshooting analytical challenges are highly desirable.
- Familiarity with SPME or SPME Arrow techniques, aroma/volatile analysis, or agricultural/food chemistry applications is considered a plus.

Stipend $74,678.00 Yearly

Point of Contact Janeen

Eligibility Requirements

- **Citizenship:** U.S. Citizen Only
- **Degree:** Doctoral Degree.
- **Discipline(s):**
  - **Chemistry and Materials Sciences** (5 👁)
  - **Life Health and Medical Sciences** (2 👁)