

**Opportunity Title:** USDA-ARS Research Opportunity in Food Science and Technology

**Opportunity Reference Code:** USDA-ARS-2022-0040

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

**Reference Code** USDA-ARS-2022-0040

**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. 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** 1/4/2022 3:00:00 PM Eastern Time Zone

**Description** \*Applications are reviewed on a rolling-basis and this posting could close before the deadline.

**ARS Office/Lab and Location:** A research opportunity is 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:** The participant will perform research pertaining to USDA-ARS Project 6054-43440-050-00D entitled "Improving Product Quality in Farm-Raised Catfish". Objectives of the project include:

- Determine the effects of intensive aeration production systems parameters on fillet flavor and texture.
- Utilize a multispecies comparison in a variety of aquaculture settings to determine causative factors of off-flavor production in aquaculture products and determine the best practices to resolve these issues.

Specifically, the participant will be assessing physical and biochemical properties of catfish and other species to determine how production



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practices and post-harvest treatments affect eating quality. Completed, this research will determine the causative factors and identify possible solutions to off-flavor and other quality issues of food products from aquaculture.

**Learning Objectives:** The participant will develop an understanding of HPLC, FTIR, various forms of spectroscopy, analysis of proteins, analysis of off-flavor compounds using GC-MS, and physical characterization of food products. Learning opportunities for sensory science and food processing will also occur. When completed, the participant will have a thorough understanding of the US catfish industry from farm to table. To accomplish this, the participant will collaborate in a research team that includes chemists, food technologists, and a sensory scientist.

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

**Anticipated Appointment Start Date:** January 2022. 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(s) will receive a monthly stipend commensurate with educational level and experience.

**Citizenship Requirements:** This opportunity is available to U.S. citizens and Lawful Permanent Residents (LPR) 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 [USDA-ARS@ornl.gov](mailto:USDA-ARS@ornl.gov) and include the reference code for this opportunity.

**Qualifications** The qualified candidate should be currently pursuing or have received a doctoral degree in Food Science and Technology or related field of study.

The assigned project will be bridging the gap between food science, material science, and chemistry to find solutions to common issues with fish muscle quality and off-flavors. Any applicant meeting the educational requirements that can make meaning contributions to the project will be considered.

**Eligibility** • **Citizenship:** LPR or U.S. Citizen

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- Requirements**
- **Degree:** Doctoral Degree.
  - **Discipline(s):**
    - **Chemistry and Materials Sciences** ([2](#) 👁)
    - **Life Health and Medical Sciences** ([3](#) 👁)