

Opportunity Title: USDA-ARS Research Molecular Biologist Fellowship

Opportunity Reference Code: USDA-ARS-2022-0155

Organization U.S. Department of Agriculture (USDA)

Reference Code USDA-ARS-2022-0155

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 12/22/2022 3:00:00 PM Eastern Time Zone

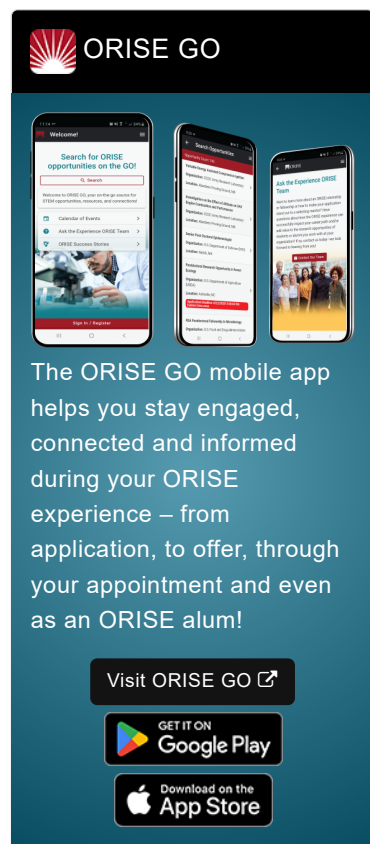
Description *Applications are reviewed on a rolling-basis.

ARS Office/Lab and Location: A research opportunity is available with 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: This project examines the relationship between gene expression, gene function, and malting quality. The participant will focus on characterizing genes that are associated with malting quality traits. Gene characterization will be accomplished by utilizing molecular techniques to determine the spatial and temporal expression patterns. Additionally, novel genes will be further explored to determine if they produce a functional enzyme. Project activities include nucleic acid purification, RT-qPCR, cloning, sequencing, heterologous protein expression, protein purification, enzyme assays, western blots, sample collection, and data analyses.

Learning Objectives: As a result of this research experience, the participant will learn and increase their expertise in the process of experimental design, data collection, data analyses and data presentation



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(oral and written).

Mentor: The mentor for this opportunity is Marcus Vinje (marcus.vinje@usda.gov). If you have questions about the nature of the research, please contact the mentor.

Anticipated Appointment Start Date: 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. **The current yearly stipend amount for this opportunity ranges from \$40,000 - \$55,000 depending on education and experience.**

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 USDA-ARS@ornl.gov and include the reference code for this opportunity.

Qualifications The qualified candidate should have received a bachelor's or master's degree in one of the relevant fields (e.g. Agronomy, Biochemistry, Biology, Botany, Chemistry, Genetics), or be currently pursuing one of the degrees with completion by the appointment start date.

Preferred skills:

- Previous experience using common molecular biology techniques (e.g. DNA/RNA extraction, cloning, DNA sequencing, PCR, RT-qPCR)
- Previous experience using advanced molecular biology techniques (e.g. heterologous protein expression, construct assembly)
- Previous experience using common protein techniques (e.g. Enzyme assays, Western Blot)

Eligibility Requirements

- **Citizenship:** U.S. Citizen Only
- **Degree:** Bachelor's Degree or Master's Degree.
- **Discipline(s):**
 - **Life Health and Medical Sciences** ([48](#) )