

Opportunity Title: Plant Molecular Biology Research Opportunity
Opportunity Reference Code: ARS-NPURU-2016-0143

Organization U.S. Department of Agriculture (USDA)

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How to Apply A complete application package consists of:

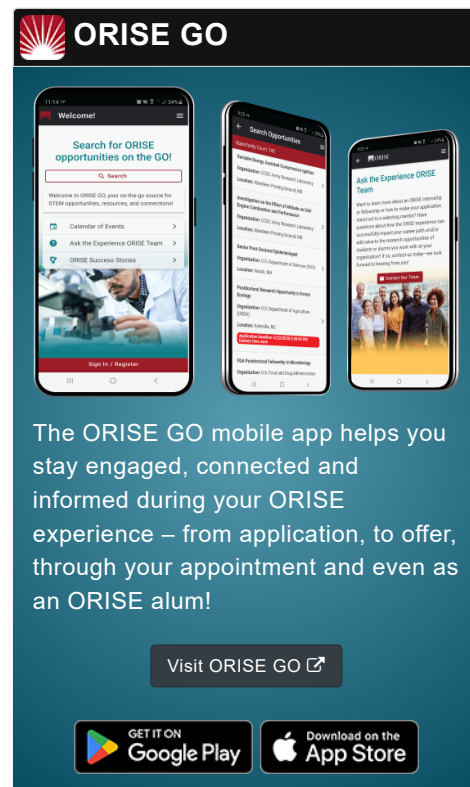
- An application
- Transcript(s) – For this opportunity, an unofficial transcript or copy of the student academic records printed by the applicant or by academic advisors from internal institution systems may be submitted. Selected candidate must provide proof of completion of the degree before the appointment can start. Proof must be sent to ORISE directly from the academic institution including graduation date and degree awarded. All transcripts must be in English or include an official English translation.
- A current resume/CV

If you have questions, send an email to USDA-ARS@orau.org. Please include the reference code for this opportunity in your email.

Description A postdoctoral research opportunity is available with the U.S. Department of Agriculture (USDA) Agricultural Research Service (ARS) Natural Products Utilization Research Unit (NPURU) in Oxford, Mississippi.

The opportunity primarily focuses on developing natural-based and plant-incorporated bioherbicide for effective and environmental friendly management of weeds. The research approach will be to introduce transgenes or employ other molecular genetic manipulation of the allelochemical pathway to establish proof of concept by heterologous expression of an entire biosynthetic pathway in tobacco plants. Proof of concept testing will include vector construction, molecular, metabolic and physiological characterization of greenhouse grown plants followed by monitoring gene expression and the transcriptomic response of the host plants. The incumbent will also contribute as member of multi-laboratory team to achieve the overall goal of our research unit.

The appointment is full-time for one year and may be renewed based upon recommendation of the ARS and availability of funding. The selected applicant will receive a stipend as support for their living and other expenses during this appointment. Stipend rates are determined by ARS officials, and are based on the applicant's academic and professional background. The participant must show proof of health and medical insurance. Health insurance can be obtained through ORISE. The participant will not enter into an employee/employer relationship with ORISE, ORAU, USDA, ARS, or any other office or agency. Instead, the participant will be affiliated with ORISE for the



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administration of the appointment through the ORISE appointment letter and Terms of Appointment.

While participants will not enter into an employment relationship with ARS, this position requires a pre-employment check and a full background investigation.

This opportunity is available to U.S. citizens and Lawful Permanent Residents (LPR).

This is an equal opportunity program open to all qualified individuals without regard to race, color, age, religion, sex, sexual orientation, gender identity, national origin, mental or physical disability, covered veteran's status or genetic information.

For more information about the ARS Research Participation Program, please visit the [Program Website](#).

Qualifications To be eligible, applicants must have received a doctorate degree in molecular biology/plant physiology within five years of the desired starting date. Postgraduate research experience is preferred. Equivalent molecular training in prokaryotic/eukaryotic systems with a preference toward plant molecular biology and plant physiology is desired as are peer reviewed published work utilizing this expertise. Demonstrated background in methods, photosynthesis, respiration or photorespiration is desirable. Experience with transcriptomic and proteomic methods is highly desirable.

Preferred skills include:

- Experience as part of a team performing current methods of molecular biology/plant physiology including next-generation sequence (NGS) analysis for characterization of cellular RNA expression, molecular analyses of the photosynthetic, respiratory and/or photo respiratory pathways.
- Ability to work independently and cooperatively.
- Skills in bioinformatics, gene expression analysis, metabolic profiling, and plant physiology/biochemistry.

Eligibility Requirements

- **Citizenship:** LPR or U.S. Citizen
- **Degree:** Doctoral Degree.
- **Discipline(s):**
 - **Life Health and Medical Sciences** (5 👁)