Opportunity Title: USDA-ARS Postdoctoral Research in Plant Systems Biology
Opportunity Reference Code: USDA-ARS-2021-0039

Organization U.S. Department of Agriculture (USDA)

Reference Code USDA-ARS-2021-0039

How to Apply

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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 3/1/2021 3:00:00 PM Eastern Time Zone

Description

***Applications will be 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) located in Urbana, Illinois.

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 the agency is to provide global leadership in agricultural discoveries through scientific excellence.

Research Project: The project aims to systematically characterize the gene regulatory network that coordinates photosynthesis and nitrogen use efficiency. Because of their critical roles in central metabolism, these two processes must be tightly controlled to balance energy generation and energy use. A tight relationship between nitrogen use and photosynthesis has been recognized at a physiological level for decades, and this project aims to now identify and characterize the regulatory factors that are responsible.

Learning Objectives: The selected participant will perform laboratory experiments to characterize the regulatory networks that respond to light and nitrogen availability. The participant will grow plants, measure photosynthetic and nitrogen use traits, and extract RNA for gene expression profiling. The participant will learn how to analyze

and integrate genomic and physiological data to generate informative gene regulatory networks. Transgenics and mutants in putative regulators that are identified by this approach will be used to confirm their role in balancing photosynthesis to nitrogen availability.

Mentor(s): The mentor for this opportunity is Matthew Brooks (matthew.d.brooks@usda.gov). If you have questions about the nature of the research please contact the mentor(s).

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

Appointment Length: The appointment(s) 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, Lawful Permanent Residents (LPR), and foreign nationals. Non-U.S. citizen applicants should refer to the Guidelines for Non-U.S. Citizens Details page of the program website for information about the valid immigration statuses that are acceptable for program participation.

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@orau.org and include the reference code for this opportunity.

Qualifications

The qualified candidate should have received a doctoral degree in one of the relevant fields. Degree must have been received within five years of the appointment start date.

Eligibility Requirements

- **Degree:** Doctoral Degree received within the last 60 month(s).
- **Discipline(s):**
  - **Life Health and Medical Sciences** (9 👁)
- **Veteran Status:** Veterans Preference, degree received within the last 120 month(s).