

**Opportunity Title:** USFS Postdoctoral Fellowship for the Integration of Microbiome, Disease, and Climate Factors Associated with Southern Pine Species  
**Opportunity Reference Code:** USDA-USFS-SRS-2024-0153

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

**Reference Code** USDA-USFS-SRS-2024-0153

**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 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. Click [Here](#) for detailed information about acceptable transcripts.
- A current resume/CV
- Two educational or professional recommendations. At least one recommendation must be submitted in order for the mentor to view your application.

All documents must be in English or include an official English translation.

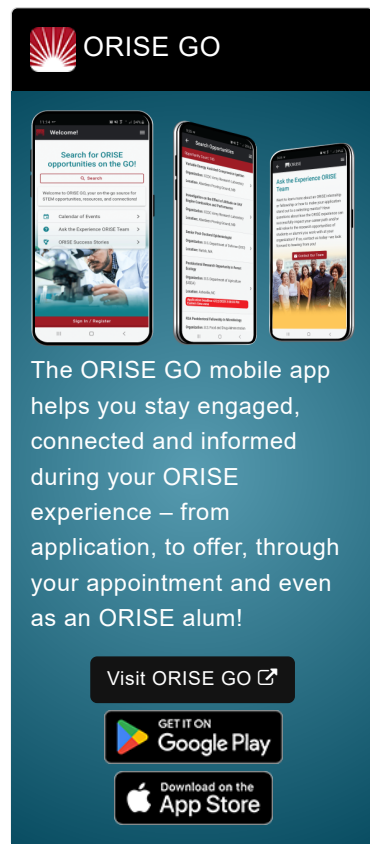
**Description** \*Applications will be reviewed on a rolling-basis.

**USFS Office/Lab and Location:** A fellowship opportunity is available with the US Department of Agriculture (USDA) Forest Service (USFS) within the Rocky Mountain Research Station (RMRS) located in Fort Collins, Colorado.

At the heart of the U.S. Forest Service's mission is their purpose. Everything they do is intended to help sustain forests and grasslands for present and future generations. Why? Because their stewardship work supports nature in sustaining life. This is the purpose that drives the agency's mission and motivates their work across the agency. It's been there from the agency's very beginning, and it still drives them. To advance the mission and serve their purpose, the U.S. Forest Service balances the short and long-term needs of people and nature by: working in collaboration with communities and our partners; providing access to resources and experiences that promote economic, ecological, and social vitality; connecting people to the land and one another; and delivering world-class science, technology and land management.


**Research Project:** The project will focus on characterizing factors that are associated with high severity levels of brown spot needle blight, caused by the pathogen *Lecanosticta acicola* in several southern pine species. This project will integrate field-based measurements, including site factors, tree health, weather parameters with molecular approaches that allow for detection of the pathogens as well characterize the microbial communities associated with various site factors and tree health.


The participant is a Postdoctoral Research Fellow at USDA-FS Southern Research Station stationed at Colorado State University in Fort Collins, Colorado. The assigned research area will focus on characterizing site and environmental factors, and needle microbial communities, (bacteria and




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fungi) that are associated with healthy and brown spot infected southern pine species. This research is part of a larger team investigating increasing severity and mortality of loblolly pine from brown spot needle blight.

Evaluations will include collecting needle samples from various locations in the southeast, conducting site surveys, and performing molecular biology techniques, including RNA and DNA extractions, microbial sequencing, and associated analyses.

**Learning Objectives:** As a result of this training the participant will improve their skills in microbial communities (microbiome), bioinformatic analyses with of integration of disease and climate data, sample preparation and analysis, and scientific writing.

**Mentor:** The mentors for this opportunity are Rabiou Olatinwo ([rabiou.o.olatinwo@usda.gov](mailto:rabiou.o.olatinwo@usda.gov)) and Jane Stewart ([Jane.Stewart@colostate.edu](mailto:Jane.Stewart@colostate.edu)). If you have questions about the nature of the research, please contact Rabiou or Jane.

**Anticipated Appointment Start Date:** June 10, 2024. Start date is flexible and will depend on a variety of factors.

**Appointment Length:** The appointment will initially be for two years but may be extended upon recommendation of USFS and is contingent on the availability of funds.

**Level of Participation:** The appointment is full time.

**Participant Stipend:** The participant 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 USFS. Participants do not become employees of USDA, USFS, 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 [ORISE.USFS.RMRS@orau.org](mailto:ORISE.USFS.RMRS@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 (e.g., Plant Pathology, Microbiology, Forest Pathology, Genetics), or be currently pursuing the degree with completion before May 31, 2024. Degree must have been received in the past five years.

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**Preferred Skills:**

- Experience with molecular biology techniques, population genomics, and metagenomics
- Experience with microscopy and microbial biology techniques
- Experience with greenhouse experiments and fungal inoculations
- Experience in collecting field samples and integrating environmental and site factors, with genetic data
- Ability to research in field conditions

**Eligibility Requirements**

- **Citizenship:** LPR or U.S. Citizen
- **Degree:** Doctoral Degree received within the last 60 months or anticipated to be received by 5/31/2024 12:00:00 AM.
- **Discipline(s):**
  - **Environmental and Marine Sciences** ([2](#))
  - **Life Health and Medical Sciences** ([6](#))