Opportunity Title: USFS Conservation Genomics Internship
Opportunity Reference Code: USDA-USFS-2022-0350

Organization U.S. Department of Agriculture (USDA)

Reference Code USDA-USFS-2022-0350

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. Click **Here** for detailed information about acceptable transcripts.
- A current resume/CV
- Two educational or professional recommendations. Applications need at least one recommendation submitted in order to be viewed by the mentor.

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

Application Deadline 5/1/2023 3:00:00 PM Eastern Time Zone

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

USFS Office/Lab and Location: A research opportunity is available with the U.S. Department of Agriculture (USDA) Forest Service (USFS) at the National Genomics Center for Wildlife and Fish Conservation located in Missoula, Montana.

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 National Genomics Center for Wildlife and Fish Conservation is a state-of-the art facility for advanced research providing expertise in DNA sequencing and environmental and forensic DNA sampling. The Center is designed for cross-agency partnerships to provide cost-effective and reliable genetic and genomic data for species monitoring. The Genomics Center has its roots in the genetics laboratory managed by the USDA Forest Service's Rocky Mountain Research Station and is located on the University of Montana campus in Missoula. Scientists conduct research at the genetics laboratory with a focus on delivering science that addresses the needs of land managers. Founded in 1998, the laboratory has grown into a national resource for states, tribes, universities, and private groups that need answers to pressing wildlife management

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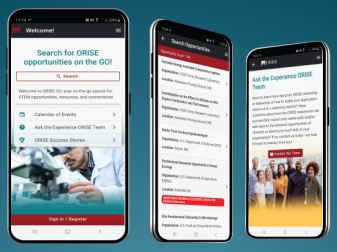
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questions for more than 60 species, including wolverines, lynx, and sage grouse. https://www.fs.usda.gov/rmrs/ngc

The participant will be mentored as they conduct independent research on a project to test environmental DNA (eDNA; detection of organism presence from genetic material in the environment) sampling of soil for ESA-listed Eastern indigo snake (Drymarchon couperi) in Georgia, Alabama, and Florida. The participant will collaborate with National Genomics Center scientists as well as resource managers at the Department of Defense, US Fish and Wildlife Service, the National Forest System, and non-profit organizations to refine study design for this project, conduct field and laboratory experiments, analyze resulting data, and prepare oral and written reports and peer-reviewed manuscripts based on study outcomes.

Learning Objectives: Through this experience, the participant will receive training in molecular genetic tools, particularly those relevant to non-invasive wildlife genetics, study design, statistical data analysis, and preparing oral and written communications for diverse audiences.

Mentor: The mentor for this opportunity is Taylor Wilcox (taylor.wilcox@usda.gov). If you have questions about the nature of the research please contact the mentor.

Anticipated Appointment Start Date: May 2023. Start date is flexible and negotiable, and will depend on a variety of factors.

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

Level of Participation: The appointment is full-time. **Those currently pursuing their degree could negotiate for part-time during the semester and full-time during the summer.**

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 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 USForestService@orise.orau.gov and include the reference code for this opportunity.

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Qualifications

The qualified candidate should have received a bachelor's, master's, or doctoral degree in one of the relevant fields, or be currently pursuing one of the degrees with completion before May 22, 2023. Most recent degree must have been received within the past five years.

Preferred skills:

- Some experience with ecological sampling and study design, strong communication skills, and training in statistical data analysis.
- Some experience with molecular genetics, particularly non-invasive genetics/eDNA sampling
- Comfortability working in an office, laboratory, and field environment.

Eligibility Requirements

- **Citizenship:** U.S. Citizen Only
- **Degree:** Bachelor's Degree, Master's Degree, or Doctoral Degree received within the last 60 months or anticipated to be received by 5/22/2023 3:00:00 PM.
- **Discipline(s):**
  - **Chemistry and Materials Sciences** (12)
  - **Communications and Graphics Design** (2)
  - **Computer, Information, and Data Sciences** (17)
  - **Earth and Geosciences** (21)
  - **Engineering** (27)
  - **Environmental and Marine Sciences** (14)
  - **Life Health and Medical Sciences** (48)
  - **Mathematics and Statistics** (11)
  - **Physics** (16)
  - **Science & Engineering-related** (2)
  - **Social and Behavioral Sciences** (28)
- **Veteran Status:** Veterans Preference, degree received within the last 120 month(s).