

Opportunity Title: USFS Conservation Genomics Internship

Opportunity Reference Code: USDA-USFS-2021-0038

Organization U.S. Department of Agriculture (USDA)

Reference Code USDA-USFS-2021-0038

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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. All transcripts must be in English or include an official English translation. Click [Here](#) for detailed information about acceptable transcripts.
- A current resume/CV
- Two educational or professional recommendations

If you have questions, send an email to USForestService@orise.orau.gov. Please include the reference code for this opportunity in your email.

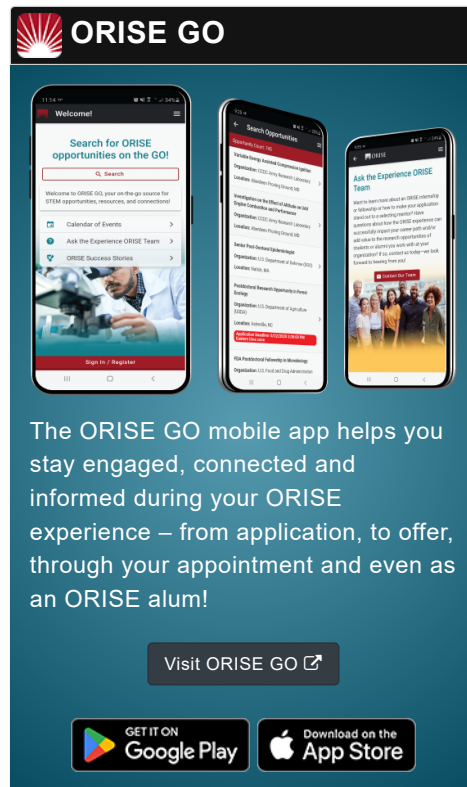
Application Deadline 2/5/2021 3:00:00 PM Eastern Time Zone

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

Two research opportunities are currently available at the U.S. Department of Agriculture (USDA), U.S. 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.

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



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answers to pressing wildlife management questions for more than 60 species, including wolverines, lynx, and sage grouse. <https://www.fs.usda.gov/rmrs/ngc>

The opportunity is to participate in ongoing research on wildlife genetics at the USFS Rocky Mountain Research Station's National Genomics Center for Wildlife and Fish Conservation. The participant will receive training in and contribute to research projects using genetic tools including qPCR, HT-qPCR, amplicon sequencing, and genotyping-by-sequencing to assess biodiversity from environmental samples, determine diet composition, and understand neutral and adaptive genetic structure in wild populations. In addition to these technical laboratory skills, the participant will have opportunities to practice and receive feedback on their ability to communicate complex topics, both written and oral. The participant's training program will be orchestrated by the mentor to match the participant's strengths, skills, and career development needs to available research projects at the National Genomics Center, but the participant will have the opportunity to collaborate with several research team members.

Anticipated Appointment Start Date: March 2021; start date is flexible

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. The initial appointment is for one year, but may be renewed upon recommendation of USFS and is contingent on the availability of funds. The participant will receive a monthly stipend commensurate with educational level and experience. Proof of health insurance is required for participation in this program. The appointment is full-time at USFS in the Missoula, Montana, area. Participants do not become employees of USDA, USFS, DOE or the program administrator, and there are no employment-related benefits.

This opportunity is available to U.S. citizens only.

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

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 by March 1, 2021. Degree must have been received within five years of the appointment start date.

The ideal applicant will have academic and laboratory experience that has prepared them to participate safely in a molecular biology laboratory. In order to benefit from this training, the applicant should have a strong background in genetics and molecular biology, including direct experience having done genetic analyses such as:

- Nucleic acid (DNA or RNA) extraction
- Polymerase chain reaction (PCR), including quantitative or digital PCR
- Designing custom PCR primers
- Preparing samples for Sanger sequencing
- Preparation of high throughput sequencing libraries
- Genotyping using microsatellite and SNP loci, especially genotype-by-sequencing approaches

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The ideal applicant will also have some more specialized skills which are relevant to projects operated at the National Genomics Center:

- Training in the analysis of low-quality genetic samples (e.g., environmental, ancient, or forensic DNA)
- Preparation of amplicon sequencing libraries
- Experience with bioinformatic processing of sequence data

Further, the participant should be able to communicate clearly with colleagues and a diverse suite of potential project partners from government agencies, tribal governments, non-profit organizations, academia, and industry.

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 3/1/2021 11:59:00 PM.
- **Discipline(s):**
 - **Chemistry and Materials Sciences** (12 )
 - **Communications and Graphics Design** (1 )
 - **Earth and Geosciences** (21 )
 - **Environmental and Marine Sciences** (14 )
 - **Life Health and Medical Sciences** (46 )
- **Veteran Status:** Veterans Preference, degree received within the last 120 month(s).