



POSTDOCTORAL RESEARCHER Position # 9851 **WILDLIFE GENOMICS, POPULATION GENETICS, and DISEASE ECOLOGY**

A post-doctoral research position is available to research wildlife population genetics & genomics. The position will be primarily lab-based within the Ernest Wildlife Genomics and Disease Ecology Laboratory in the Department of Veterinary Sciences which has affiliations with the University of Wyoming (UW) Graduate Program in Ecology.

Apply as soon as possible, applications will be reviewed as they are received. See instructions below

The postdoc will be responsible for lab work, including assisting other lab members with research and responsibilities may include supervising and mentoring undergraduate students. Research and lab work will involve genomic (next gen sequence data generation and analysis) and genetic (microsatellite) to examine landscape-level genetic diversity, population structure, and population health/disease of wildlife species in the Rocky Mountain West and California. Projects will involve species of current focus in our lab (see our website). This position will contribute to graduate students' and lab's research on genomics and population health of pronghorn, mule deer, hummingbird, sea otter, black bear, and/or other species, as well as aspects of wildlife population health and/or disease ecology. Responsibilities will include data analysis, manuscript writing for peer-reviewed publication, grant-writing, and development of oral and poster presentations of research. Desire to work in lab management is a plus.

The Ernest Wildlife Genomics and Disease Ecology Laboratory <http://www.wildlifegenetichealth.org/> is a dynamic and highly collaborative lab at UW. We work with other academic institutions, as well as state, federal, and non-governmental agencies toward wildlife conservation and management. There are many opportunities to work with recognized leaders who apply excellence in science toward wildlife conservation and management. Quality mentorship of trainees of all educational levels is a priority for the laboratory. University of Wyoming hosts excellent wildlife and ecology science and a collegial academic atmosphere. Laramie is a wonderful college town of ~ 30,000 and offers easy access to the Rocky Mountains and outdoor activities including skiing, hiking, climbing, birding, and fishing & hunting.

The work requires the ability to read and interpret very small print and subtle visual differences such as in data readouts, lifting of objects up to 30 pounds, potentially having rabies vaccination series (if needed for work with samples from carnivores and bats), and occasional field work involving hiking and work in potentially harsh outdoors environments (see below, under requirements) with or without a reasonable accommodation.

Qualifications: The successful candidate will have:

- 1) A Ph.D. in wildlife biology, ecology, genetics, genomics, bioinformatics, or related field; and with PhD work that involved laboratory and data analysis in wildlife population genetics or genomics. (required)
- 2) Demonstrated knowledge, skills, and abilities in the following areas: laboratory bench work with organism sample preparation for DNA analysis and archiving, DNA extraction from multiple sample types (such as any of tissue, liquid blood, dried blood, saliva, feces, etc), PCR, preparation of samples for DNA sequencing and/or DNA genotyping (SNP and/or microsatellite); excellent pipetting and laboratory fluid handling skills for large (liters) and small (1 microliter, for example) volumes. Working knowledge of DNA capillary gel electrophoresis. Documented research laboratory and computer file organization skills and abilities. (required)
- 3) Quantitative skills as demonstrated through documented knowledge, skills, and abilities with R environment, and software that are used in population genetic analysis (required)
- 4) Documented interest in applied conservation-oriented research in wildlife genetics, non-invasive DNA analysis, population genomics, and ecology of wildlife. (required)
- 5) Demonstrated track record of collegiality, interpersonal skills, communication, creative leadership and problem-solving abilities that promote a positive team work atmosphere. Demonstrated ability to work both independently and in teams, and ability to respond and adjust to difficult situations. Demonstrated ability to work with and communicate with wide diversity of stakeholders, staff, students, field biologists, and members of the public. (required)

- 6) Documented evidence of conference research presentations and peer-review science publication in wildlife population genetics. (required)
- 7) Demonstrated ability to conduct wildlife field work (up to 2-3 times a year) that may involve harsh environmental conditions (cold, hot, windy, steep, rocky, etc.), sampling wildlife (blood, tissues, feces, potential for exposure to disease organisms that can cause illness in people, etc.), and hiking over rough terrain with heavy gear. (required)
- 8) Demonstrated ability to work or travel occasionally (up to a 2-3 times a year) for periods of time (such as a few days or up to a week) and including weekends, holidays, and evenings; a valid driver's license. (required).

Additional preferred documented skills, knowledge, and abilities include the following (in priority order):

1. Next Generation Sequencing DNA library preparation and construction techniques and equipment (such as dd-RAD techniques, Pippin size selection, DNA fragment analyzer, etc.), and next generation sequencing (NGS; Illumina or similar) data. (preferred).
2. Bioinformatics for genomics; such as Linux-based computing and programming; programming language used in genetic and/or genomic data analysis (such as Python, Perl). (preferred).
3. Demonstrated knowledge, skills, and abilities in computational analysis of genotypic DNA data (such as microsatellites and SNPs), Sanger DNA sequence, mitochondrial DNA, and/or immunogenetics, non-invasive (fecal, hair, etc.) DNA laboratory techniques, construction and maintenance of SQL/relational databases for large data sets. (preferred)
4. Experience with lab management or lab upkeep including: equipment maintenance, lab safety regulations, creating and organization of standard operating procedures, ordering reagents/supplies, lab financial budgeting, guiding and helping with lab activities of other lab members and undergraduate interns, etc. (preferred)
5. Excellent communication with the public and wildlife professionals and abilities to translate complex genomic concepts to every day understandable language. (preferred).
6. Experience with wildlife field work that involved repeated handling of free-ranging wildlife animals in challenging environmental conditions. (preferred).
7. Wild mammalian mark-recapture study design, field work, telemetry data analysis, tracking, and/or non-invasive DNA analysis. (preferred).
8. Quantitative skills as demonstrated through documented knowledge, skills, and abilities with mark-recapture analysis (such as MARK, SECR, and/or CAPWIRE and similar programs), statistics, computational modeling. (preferred).
9. Laboratory disease diagnostic testing including pathogen PCR testing, ELISA, or other techniques.
10. Geographic Information Systems (GIS) knowledge, skills, and abilities including ESRI Inc. programs such as ArcGIS and/or other geospatial analysis packages in R; data analysis, map and publication-quality figure creation using GIS. (preferred).

To apply for this position please submit an online application for **Position # 9851: at <https://goo.gl/K3pyve>** (or click "academic job listings" here, <http://www.uwyo.edu/hr/prospective/index.html> then click on the postdoc position ID 9851). Please make sure to include a cover letter stating research interests, C.V., and specifically list how all of the "required" and any of the "preferred" qualifications are met, and the contact information (name, position, email, phone, institutional affiliation, and research area) for at least three work-related references.

Position is offered by Dr. Holly Ernest, Professor and Wyoming Excellence Chair in Disease Ecology, Department of Veterinary Sciences, University of Wyoming. **Preferred start date is August/September 2018 or as soon as possible.** Applications will be reviewed as they come in and will remain open until July 25, 2018 and until filled.

The University is committed to equal opportunity for all persons in all facets of the University's operations and is an Equal Opportunity/Affirmative Action Employer. The University will provide all applicants for admissions, employment and all University employees with equal opportunity without regard to race, gender, religion, color, national origin, disability, age, protected veteran status, sexual orientation, gender identity, genetic information, creed, ancestry, political belief, or any other applicable protected category or participation in any protected activity. For more details see www.uwyo.edu/diversity/fairness. We conduct background investigations for all final candidates being considered for employment. Offers of employment are contingent upon the completion of the background check.