Postdoctoral scholar: Developing and applying multispecies metagenomic assessments in Pacific Northwest forests.

Position Description

We are seeking a skilled and enthusiastic post-doctoral research scholar to provide bioinformatics and genomics leadership on a project developing multi-species metabarcoding approaches for assessing diversity and health in forest riparian ecosystems in the Pacific Northwest of North America. The goal of the project is to develop and apply multigene multiplexing approaches that characterize and quantify species-level diversity of target organisms that are found in streams (fish; amphibians; molluscs; insects) and adjacent riparian habitats (amphibians; plant pathogens). The postdoctoral scholar will be responsible for developing, testing, and evaluating analytical pipelines that convert next-generation sequencing data into count data that describe presence/absence, abundance, and spatial genetic diversity of target organisms. For most studies, molecular results are matched with traditional field assessments so that molecular data can be validated, and so that false positive/negative rates can be estimated.

This full-time position (Postdoctoral Scholar, 1.0 FTE, salary $52,000/year with health care benefits) requires a one-year commitment, with the potential of a one-year extension, starting as early as November 1, 2017. The position will be based in Tiffany Garcia’s research group (http://garcia.fw.oregonstate.edu/) in Nash Hall, Department of Fisheries and Wildlife, at Oregon State University (OSU). Applicants must have been awarded a Ph.D. ≤5 years ago.

The postdoctoral scholar will work with Dr. Garcia and collaborators at the US Forest Service (co-PIs Dr. Brooke Penaluna, Dr. Richard Cronn) to develop and test the most appropriate approaches, share in the preparation of required reports for grant-related activity (interim reports; final reports), and share in the development of manuscripts suitable peer-reviewed journals. A mentorship plan will be developed in collaboration with the postdoctoral scholar, under the direction of Dr. Garcia and co-PIs.

Qualifications: A Ph.D. in a relevant field (computational biology, bioinformatics, phylogenomics, fish/plant/microbial genomics, or evolutionary genomics) is required, as is expertise with Unix and one or more programming languages (e.g., Perl, Python, C++), excellent quantitative skills, and a demonstrated ability to publish research in peer-reviewed journals. Experience with designing genomics experiments based on high throughput genomic technologies is preferred.

Link to application site: https://jobs.oregonstate.edu/postings/47598
Position duties:

40% Coordinate and facilitate activities relating to managing, analyzing, and summarizing next-generation sequencing data from multispecies metagenomics samples. This includes coordinating with field and laboratory staff to collect and manage metadata; develop required databases for read mapping and taxonomic ID; managing computing resources, programs, and dependencies; summarizing metadata for submission to sequence archives (e.g., NCBI SRA).

30% Project management: summarizing results and preparing reports for collaborators, granting agencies, and for scientific meetings and publications.

20% Development of standardized sample and data processing pipelines that can be used for stream metagenomics projects for collaborating agencies (e.g., US Forest Service).

10% Advise collaborators and students; participate in lab meetings; participate in Oregon State University community working groups (e.g., http://cgrb.oregonstate.edu/training/bioinformatics-users-group-bug).

Minimum/Required Qualifications

- Ph.D. in computational biology, bioinformatics, phylogenomics, fish/plant/microbial genomics, or evolutionary genomics, or relevant field.
- Demonstrated computing skills, including at least one programming language (e.g., perl, python, C++) and R statistical software.
- Demonstrated proficiency in managing and archiving next-generation sequencing data for a genomics or metagenomics project.
- Demonstrated proficiency in writing peer reviewed publications or scientific reports.
- This position requires driving a University vehicle or a personal vehicle on behalf of the University; therefore, the incumbent must successfully complete a Motor Vehicle History Check, possess and maintain a current, valid driver’s license in their state of residence, be determined to be position qualified and self-report convictions (as per Voluntary and Compulsory Driver Standards OSU Standard 125-155-0200) as per OSU 576-056-0000 et seq.

Preferred (Special) Qualifications

- Familiarity with aquatic organisms or plant pathogens, especially from the Pacific Northwest region of North America.
- Strong leadership and organizational skills.
- A commitment to promoting and enhancing diversity and inclusion.

Conditions / Work Schedule

This work requires daily use of a computer and involves working on campus primarily during business hours. Periodic travel will be required to attend meetings that are a long distance and
require overnight stays. If desired, the incumbent also has the option to participate in field sample collections, which requires foot travel over steep terrain, carrying heavy equipment (up to 40 pounds), and can be performed in inclement weather (rain; heat).

**Recruitment**

Competitive / External - open to ALL qualified applicants

**Special Instructions**

When applying you will be required to attach the following electronic documents:
1) A resume/CV with the names of at least three professional references, their e-mail addresses and telephone numbers; and
2) A cover letter indicating how your interest, qualifications and experience have prepared you for this position.

**Documents Needed to Apply**

Required Documents
1. Cover Letter
2. Curriculum Vitae
3. Professional References

OSU commits to inclusive excellence by advancing equity and diversity in all that we do. We are an Affirmative Action/Equal Opportunity employer, and particularly encourage applications from members of historically underrepresented racial/ethnic groups, women, individuals with disabilities, veterans, LGBTQ community members, and others who demonstrate the ability to help us achieve our vision of a diverse and inclusive community.

For additional information, please contact both: Tiffany Garcia (tiffany.garcia@oregonstate.edu) and Brooke Penaluna (brooke.penaluna@oregonstate.edu)