The Grunwald lab (USDA Agricultural Research Service) in Corvallis OR is hiring a USDA postdoctoral research associate for a **two-year** appointment to **develop computational pipelines for pathogen biosurveillance in agriculture**. This is a unique opportunity to work in a highly collaborative group applying and developing novel population genomic tools and approaches to study pathogen emergence. Pathogens present significant impediments to food biosecurity. Monitoring emerging and reemerging pathogens requires regular biosurveillance. Biosurveillance can detect novel variants, strains, races, or species. We are developing a computational pipeline to monitor pathogens based on whole genome sequences (WGS). However, analysis of WGS data is challenging and requires substantial skills.

We are developing novel capabilities for pandemic preparedness and biosecurity using nextflow: https://nf-co.re/pathogensurveillance/dev. The candidate will implement novel workflows in **nf-core/pathogensurveillance**, which is a population genomic pipeline for pathogen diagnosis, variant detection, and biosurveillance. Significant features will include the ability to analyze unidentified eukaryotic and prokaryotic samples, creation of reports for multiple user-defined groupings of samples, automated discovery and downloading of reference assemblies from NCBI RefSeq, computational phenotyping (e.g. antimicrobial resistance, mating type, toxins, effectors, etc.) and rapid variant identification using core genome phylogenies.

The postdoc will work closely with collaborators in the Department of Botany and Plant Pathology at Oregon State University. This position provides opportunities to work with a network of highly productive and skilled postdocs and collaborators in the US and worldwide, attend professional training opportunities for skillset development and attend both in- and out-of-state meetings. The candidate will have the opportunity to be involved in grant writing and management. **Citizenship restrictions apply.**

Duties and Responsibilities:
- Coordinate and implement novel approaches for the **nf-core/pathogensurveillance** pipeline.
- Collaborate and communicate with a diverse team of researchers locally and globally.
- Prepare and edit manuscripts for publication and write reports.
- Supervise and mentor student workers and participate in mentoring graduate students.

Required qualifications:
- Applicants need to be U.S. Citizens or Permanent Residents.
- Ph.D. in Bioinformatics, Evolution, Genetics, Microbiology, Plant Pathology, or a closely related field.
- Experience in computational biology and development of computational pipelines.
- Proficiency in programming in R or python and handling big data.
- Demonstrated productivity, capacity for independent research, and intellectual creativity.
- A record of peer-reviewed publications.
- Ability to work both independently and with a diverse team.

Preferred qualifications:
- Demonstrated leadership and effectiveness in working collaboratively.
- Excellent oral and written communication skills.

Anticipated starting date: Open until filled.
Position grade: GS11
If interested in this position, please send a cover letter, CV, and the names of three references (including contact information and relationship) to Nik Grunwald (nik.grunwald@usda.gov).

Applicants will be reviewed immediately until the position is filled.

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