

Postdoctoral Research Associates – Genomics/Bioinformatics

Two Postdoctoral Research Associate positions are available at the Biodesign Institute at Arizona State University (ASU). The Postdoctoral Research Associates will be part of the Cartwright lab (<https://cartwrig.ht/>) located in the Biodesign Center for Personalized Diagnostics. The lab is focused on evolutionary research related to mutation and population variation, as well as developing statistical software to process large, genomic datasets to identify and study somatic and germline mutation patterns. Successful candidates will participate in three federally funded research programs: (1) analysis of mutation accumulation lines from the ciliate, *Tetrahymena thermophila*, (2) development of DeNovoGear, a general toolkit for the study of mutation rates from next-gen sequencing of related individuals and cells, and (3) development of phylogenomic methods to reconstruct phylogenies from whole-genome sequencing. Corresponding projects in the lab involve the study of somatic and germline mutations in humans, chimps, trees, bacteria, bees, mice, and cancer.

In particular, under guidance from Dr. Cartwright, the candidate is expected to:

1. Work both independently and closely with other members of the lab
2. Map and/or assemble next-generation sequencing data
3. Adapt existing genomic techniques to non-model organisms
4. Develop novel, high-throughput methodologies to identify de novo mutations by comparing related individuals and somatic samples.
5. Present the results of research at meetings, in publications, etc.

Requirements

- PhD in bioinformatics, computational biology, biostatistics, genomics, molecular biology or related fields
- Proficiency in scientific computing and programming/scripting languages in UNIX platforms (e.g. Bash, Python, C/C++)
- Experience in statistical computing (e.g. R/Bioconductor and Biopython)

Desired Qualifications

- Experience in development/maintenance of scientific software
- Experience in next-generation sequencing data processing and analysis
- Experience in statistical analysis and method development
- Experience in high-performance parallel computing
- Experience in collecting and processing large-scale scientific data

Instructions to Apply

The position will remain open until filled. To apply, please send cover letter, CV, summary of past work, and the names and email addresses of three references to Dr. Cartwright at cartwright@asu.edu. Preference will be given to candidates who apply by **February 20, 2017**. Please put "Postdoctoral Research Associate" in the subject line of your email.

The Cartwright Lab (<https://cartwrig.ht/>) offers a productive environment, in which researchers are given the freedom to explore new ways of solving scientific problems. There are opportunities to work with a large number of collaborators at both ASU and worldwide. We are located in the Valley of the Sun (Phoenix, AZ, USA), home to 4.5 million people, and short driving distances from numerous outdoor activities in the Sonoran Desert. Biking, hiking, mountain climbing, and bird watching are all popular activities in the area.

The Biodesign Institute Mission

The Biodesign Institute at ASU addresses today's critical global challenges in healthcare, sustainability and security by developing solutions inspired from natural systems and translating those solutions into commercially viable products and clinical practices.

Arizona State University is a VEVRAA Federal Contractor and Equal Opportunity/Affirmative Action Employer. All qualified applicants will be considered without regard to race, color, sex, religion, national origin, disability protected veteran status, or any other basis protected by law.

ASU's full nondiscrimination statement: <https://www.asu.edu/aad/manuals/acd/acd401.html>

Title IX statement: <https://www.asu.edu/titleIX/>