



## University of Washington — Institute for Systems Biology

### Joint Postdoctoral Fellow

#### Computational Identification of Molecular Determinants of Cancer Therapeutic Response

**Contact:**

Prof. Ray Monnat (UW) [monnat@u.washington.edu](mailto:monnat@u.washington.edu)

Prof. Ilya Shmulevich (ISB) [ilya.shmulevich@systemsbiology.org](mailto:ilya.shmulevich@systemsbiology.org)

We are recruiting a new computationally-oriented Postdoctoral Fellow to work as part of a multidisciplinary NCI-funded Program grant focused on developing better ways to treat adult acute myelogenous leukemia (AML) and glioblastoma multiforme (GBM). Both of these tumors are therapeutically challenging, often rapidly lethal and in need of new and better therapies.

**Position background:** This position is jointly funded by UW and ISB-based members of an NCI Program grant. The successful applicant will work with an interdisciplinary team of computational biologists, basic scientists and clinicians to leverage large scale cancer genomics data and tools to:

- Integrate and analyze genomic data on AML and GBM produced by The Cancer Genome Atlas (TCGA) with tumor genomics data available in other public resources, including mutation databases and cancer cell line screening datasets, in order to guide project research focused on these tumors.
- Integrate and interpret project-generated data, such as expression profiling, copy number variation, mutation typing, and drug screen data in the context of TCGA tumor type-specific and pan-cancer data.

Experimental work within the Program group is focused on the role of clonal and subclonal mutations as determinants of response and treatment outcomes; the role of DNA replication abnormalities in AML and GBM genomic instability and therapeutic response; and chemical and genomic strategies to identify new markers of response and more effective linked therapies. This work utilizes cell lines, xenografts and patient tissues as resources. Analyses of locally generated data using these resources will incorporate data from TCGA and will leverage computational tools that have been developed at ISB in their role as a TCGA Genome Data Analysis Center.

***This position will provide an excellent opportunity to work and train as part of a highly motivated interdisciplinary team in the rapidly developing areas of cancer genomics and precision cancer care.***

***The ISB and UW, both based in Seattle, are leading research institutions in the fields of computational and systems biology, basic science and clinical care.***

***Who should apply?*** Successful candidates will have a PhD in computational biology or a related field. Preference will be given to candidates who have at least 2 years experience in

computational biology, including the design and implementation of algorithms applied to the analysis of biological data.

Strong analytical, programming and communication skills are essential. Experience with common bioinformatics methods, tools, websites and data resources is essential, in particular high-throughput data analysis tools and techniques, genome sequence analysis, and experience retrieving, manipulating and managing data from public data repositories such as TCGA, ENCODE, NCBI and Ensembl.

Knowledge of statistics and the ability to work with a variety of different biological data types are highly desired. Experience working with cancer genomics data from patient samples, mouse models or cancer cell lines is also a clear plus.

The successful candidate will work with interdisciplinary team members at the ISB and the UW. You need not be a US citizen or permanent resident to apply. ***We anticipate the start date of this position will be on or before 1 January 2016.***

***How to apply:*** Interested applicants should send a resume and a brief (1-2 paragraph) statement summarizing her/his research interests to:

Ray Monnat  
Professor of Pathology and Genome Sciences  
University of Washington  
monnat@u.washington.edu

and/or

Ilya Shmulevich  
Professor  
Institute for Systems Biology  
ilya.shmulevich@systemsbiology.org

#### **About the Institute for Systems Biology**

ISB is a premier, nonprofit research organization located in the heart of Seattle's emerging biotech sector of South Lake Union, in Seattle, WA. Established as a non-traditional, multidisciplinary environment, ISB was co-founded in 2000 by Dr. Leroy Hood, a world-renowned systems biologist who was recently awarded the National Medal of Science. ISB pioneered systems biology, which harnesses and integrates the respective insights of biologists, geneticists, computer scientists, chemists, engineers, mathematicians, immunologists and others to answer some of society's most challenging questions related to health and the environment.

ISB employee benefits include flexible work arrangements and schedules, generous vacation and sick time, a 403(b) with matching contributions, health and dental plans with 100% employee coverage, opportunities to attend and/or present at research conferences, and annual lab and Institute retreats.

#### **About the University of Washington**

The University of Washington is the premier higher educational institution in the Pacific Northwest, and an internationally recognized biomedical research center that has a strong focus on human genetics and human disease research including cancer biology. The University of Washington, together with Seattle Children's and the Fred Hutchinson Cancer Center constitute the Seattle Cancer Care Alliance (SCCA). The SCCA provides a common focus for the diagnosis, treatment and investigation of cancer in adults and children serving the greater Seattle area and the Pacific Northwest. An NCI Comprehensive Cancer Center is based at the FHCRRC, adjacent to the ISB campus and the UW's Institute for Stem Cell and Regenerative Medicine (ISCRM).

The UW is an equal opportunity employer, and provides employees with benefits that include flexible work schedules, vacation and sick time, a 403(b) program with matching contributions, health and dental insurance, and opportunities to participate in a wide range of institutional and Departmental activities including research conferences, seminars and retreats.