Post-doctoral Research Fellow – Sampson Lab
Division of Nephrology, Boston Children's Hospital & Harvard Medical School

Summary
The focus of the Sampson Lab at Boston Children's Hospital/Harvard Medical School is to discover the molecular basis of nephrotic syndrome through human genomics to inform mechanisms, treatments, and cures for this disease (http://sampsonlab.org). We integrate genomics data with other molecular and clinical datasets to discover the biological and clinical impact of the disease-associated genomic variants we discover. We also focus on using large Biobanks to empower genomic discovery for NS. Finally, we are also using new technologies and developing analytic strategies to make definitive genomic diagnoses for patients.

We now seek an intellectually curious and independent thinking post-doctoral fellow to drive forward projects in one or more of these broad research areas.

Specific projects available include:
- GWAS and blood and kidney eQTL/pQTL studies of immunosuppressive sensitive NS
- Genomic and single cell multiomic analysis of *APOL1* mediated kidney disease
- Transcriptome-driven genetic diagnosis of nephrotic syndrome
- Nephrotic syndrome discovery using population- and hospital-based Biobanks

We are most interested in applicants with excellent skills in biostatistics, as well as a strong understanding of human genetics, bioinformatics, and/or genome biology. They will use both well-established and newer methods for analysis of diverse types of genomic data, including genome and exome sequencing, and bulk and single cell transcriptomics. They will drive their own projects and also support the efforts of other members of the group.

The Sampson Lab is located at Boston Children's Hospital and is affiliated with Harvard Medical School, the Broad Institute of MIT and Harvard, and Brigham & Women's Hospital. It is well-funded through multiple Federal grants and other resources. It is a vibrant, highly collaborative, and multidisciplinary environment made up of nephrologists, computational geneticists, biostatisticians, and epidemiologists, and bench researchers.

Responsibilities
- Designing, troubleshooting, and analysis of diverse genomic discovery efforts using our own genomic & phenotypic data & those aggregated from publicly available resources.
- Independent thinking and decision making related to study design and analysis
- Demonstrate attention to detail and problem-solving skills.
- Excellent communication with external collaborators
- Preparation of manuscripts, grants, and presentations.

Minimum qualifications:
- PhD in biostatistics, biocomputing/bioinformatics, genetics/genomics, or a related field
- Experience in any of the following: GWAS, eQTL, single cell analysis, human genetics/genomics, variant calling, rare diseases

- Strong communication skills (writing and presenting)
- Programming experience in UNIX, R, and/or Python
- Familiarity with high-performance and/or cloud computing
- Evidence of prior publication(s) and conference/oral presentations
- Excellence in collaborating and interacting with others

Preferred qualifications:
- Working with bioinformatics analysis pipelines, code version control (e.g., git) tools and/or experience with standard bioinformatic tools (e.g., samtools, PLINK, bedtools)
- Familiarity with reproducible data science using Jupyter Notebook or RMarkdown or other
- An understanding of biological systems

Interested candidates should send a cover letter & CV to:
matthew.sampson@childrens.harvard.edu
Matt Sampson, MD MSCE ASCI
Warren E. Grupe Chair in Pediatric Nephrology, Boston Children's Hospital
Associate Professor of Pediatrics and Medicing, Harvard Medical School
Associate Member, Broad Institute
Research Faculty, Brigham and Women's Hospital