Post-doc position available:

**McCallion Lab**  
Andrew S. McCallion Ph.D.  
McKusick-Nathans Institute of Genetic Medicine  
Johns Hopkins University School of Medicine  

Email: [andy@jhmi.edu](mailto:andy@jhmi.edu)

My group studies how transcriptional regulatory control is encrypted in genomic sequence, and how variation in regulatory sequences may contribute to phenotype variation and disease risk/presentation. In this work my group employs cutting edge genomic and functional genetic approaches in mice, zebrafish and in vitro, integrating them with computational biology. Regulatory sequences underlie the cellular diversity that arises during human development. Regulatory mutations underlie an array of human diseases. They play a significant role in disease susceptibility and they form the basis of cellular response to insult, aging and stress.

Efforts in our lab are currently directed at developing cell-type dependent regulatory sequence catalogs and applying them in human population-based studies to predict, identify and validate likely functional variation that associates with disease. Our efforts are now focused on the development, validation and application of regulatory sequence catalog information in central neuronal populations disease-relevance.

In recent years, we have taken significant strides in characterizing regulatory control at specific neurogenic loci by generating, validating and publicly depositing huge catalogs of neuronal enhancers. We have developed and implemented computational strategies to identify key motif combinations that recognize neuronal enhancers, and used them to develop sequence-based vocabularies (classifiers) for neuroanatomical domains (forebrain, midbrain, hindbrain) and homogenous isolated cell populations. By integrating our experiences in functional and computational genetics and genomics we have already been able to indict several disease-associated variants in pertinent biological processes. *The successful candidate will be expected to take a leading role in the implementation of studies to explore the genesis and application of chromatin catalogs and regulatory vocabularies for specific neuronal subtypes, and their application to understanding the impact of disease-associated variation.*

Candidates will be encouraged to seek independent fellowship funding but this is not a requirement for selection. The PI has a strong track record of mentoring successful young scientists and is committed to career development and success of all his trainees. The successful applicant will be committed, curious and driven to achieve their full potential and seek the same for the people with whom they work.

Please reach out to the PI by email at the above address for further information.