

Postdoctoral Position in Complex Disease Genetics

Johns Hopkins University School of Medicine, Baltimore, MD

Postdoctoral positions are available immediately in the Arking laboratory at the Johns Hopkins University McKusick-Nathans Department of Genetic Medicine in the area of complex disease genetics. Candidates will apply methods of genome analysis to large-scale human datasets (genetics, methylomics, transcriptomic, proteomics, metabolomics) and cell culture systems with the primary goal of identifying and characterizing genetic variants and molecular mechanisms that modify risk for human disease. The Arking Lab is actively involved in researching cardiovascular genomics with a focus on electrophysiology and sudden cardiac death. In addition, a large focus of the lab's research efforts centers on the analysis of mitochondrial DNA copy number and heteroplasmy as they pertain to human aging-related disease. Candidates will also be actively involved in mentoring both graduate and undergraduate students.

Position Type 1: Computational biology (Bioinformatics focus) - We are seeking motivated individuals to analyze data from advanced molecular technologies including genomic microarrays and next-generation sequencing data with a focus on integrating multi-omics data to identify gene regulatory networks. The candidate should have relevant expertise in human genetics/genomics and/or computational biology. The ideal applicant would be experienced in relevant coding languages (R, Unix, Perl, Python, etc.), next-gen sequencing, genetic data analysis and/or basic statistics.

Position Type 2: Molecular Biology (Experimental/functional focus) – We are seeking motivated individuals to characterize the molecular mechanisms and pathways resulting from changes to the number of copies of mitochondrial DNA and/or mitochondrial sequence variations and how these changes relate to disease outcomes. The ideal candidate should have relevant expertise in wet lab bench work and experience with qPCR, ddPCR, cell culture techniques, luciferase assays, mitochondrial assays, gene over-expression, and/or gene-editing techniques (e.g. CRISPR/Cas9).

Candidates who wish to work on projects which intersect both areas are also encouraged to apply.

The applicant should be a highly motivated, independent researcher who has completed their PhD within the last 2 years in a relevant field (Biology, Bioinformatics, Computational Biology, Human Genetics/Genomics, Molecular Biology, Statistical Genetics).

The Department of Genetic Medicine is a leading and innovative, state-of-the-art facility located in Baltimore, Maryland with a focus on the use of genetic medicine to treat and prevent disease.

Interested applicants should send a cover letter and curriculum vitae as well as the names of 3 references to arking@jhmi.edu.

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