

Postdoc Research Associate

August 1, 2017

A postdoctoral position is available in the Mitreva Laboratory at The McDonnell Genome Institute at Washington University School of Medicine in St. Louis. The candidate will be part of an established and successful research group focused on integrating 'multi-omics' approaches aimed at understanding parasitic nematodes and platyhelminthes at a molecular level. The position requires working collaboratively with a team of programmers, analysts and computational biologists focused on integrating multidimensional biological data to better understand parasites biology, ecology, host-parasite interaction etc. and will be responsible for evaluate existing and develop novel algorithms and approaches for bioinformatics analysis, statistical analysis, and data visualization and interpretation.

Early access to omics data, by virtue of onsite data generation, allows for a first look at the genetic blueprint of that targeted species. Furthermore, our world-class informatics infrastructure allows for the examination of the many properties of a particular genome. Our group is dynamic and interactive, and most projects require close teamwork among senior scientists, postdocs, and staff promoting excellent opportunities for acquiring new skills. It is an exciting era to be a scientist, in which we can utilize high-throughput techniques to address biological questions that were previously unanswerable. If you would like to join this team please apply for this position as quickly as possible.

The McDonnell Genome Institute (<http://genome.wustl.edu/>) has been at the forefront of genome research since its inception in 1993. As one of only three NIH-funded large-scale genome centers in the United States, we are a world-leader in genomics research as it applies to the study of model organisms and human biology, infections, genetic diseases and the field of personalized medicine. We provide a value-added biologically and clinically-relevant sequence analysis, and foster public understanding of science through various educational and outreach efforts.

Projects' Description

The candidate will work on a project that has a main goal to facilitate and promote knowledge based discovery and development of novel interventions to control and/or prevent parasitic infections, and reduce their associated morbidity and mortality. This will be achieved by studying several aspects that are critical determinants governing a pathogen's development/growth, infectivity, maintenance and virulence including parasite genomes and their evolution, gene expression and regulation, host response to infection, and identification of pan-phylum conserved targets which are subsequently tested and optimized to increase their selectivity and demonstrate their potential for a broad parasite control. Parasitic nematodes infect more than two billion people and are a leading cause of human morbidity and maintenance of poverty.

Publications reflecting the research portfolio of Mitreva Lab:

<https://www.ncbi.nlm.nih.gov/pubmed?cmd=search&term=mitreva+m+or+mitreva-dautova+m>

Job Qualifications

Applicants should be outstanding in their drive, eagerness and scientific imagination, as well as organized and self-motivated. Applications from individuals with (but not limited to) experience in genomics and bioinformatics, experience in computational biology and especially biostatistics are particularly encouraged. Lab experience is a plus. Applicants are expected to be familiar with frequently used bioinformatic tools (NGS aligners, GATK package, NCBI website tools,

Ensembl, UCSC genome browser, DEseq), programming languages (MATLAB, C#, and R), programs useful for high-throughput analysis (e.g. cytoscape), databases (MySQL, Oracle), Perl scripting language, and to be comfortable working on UNIX/Linux platform. Excellence in interpreting omics-based datasets is required.

Education and Experience Requirements

Graduate degree (PhD) in bioinformatics, computational biology or related field with a solid background in programming and biostatistics.

Please send a letter of interest and curriculum vitae to:

Makedonka Mitreva, PhD

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