Computational / Experimental Postdoc Position

The Research Group "Computational Biology and Evolutionary Genomics" at the Max Planck Institute in Dresden, Germany has a Postdoc opening.

Project description

The postdoc will utilize numerous sequenced mammalian genomes to discover the genomic basis of repeatedly evolved phenotypic differences. By focusing on natural phenotypes that resemble human diseases, we aim at connecting basic evolutionary with translational research to identify novel genes associated with genetic disorders. The postdoc will apply and further develop our genomics methods, and analyze the results by integrating biomedical knowledge and functional genomics data. Promising candidate genes will be tested experimentally, either by the Postdoc or in collaboration. The Postdoc will work closely with other members of the lab and our institute on the computational and experimental aspects. Funding is according to the German TVöD scale.

Our group

We combine computational biology, comparative genomics and experiment to investigate how nature's fascinating phenotypic diversity evolved and how it is encoded in the genome. On the computational side, we generate high-quality genome alignments, apply comparative methods to discover key differences in genes and regulatory elements, and use statistical approaches to associate genomic to phenotypic differences. On the experimental side, we use RNA-seq, ATAC-seq, functional assays and CRISPR-Cas9 to reveal the molecular function of genomic regions and to test causality between genomic and phenotypic differences.

Our group is located at the Max Planck Institute of Molecular Cell Biology and Genetics (MPI-CBG) and we are jointly affiliated with the Max Planck Institute for the Physics of Complex Systems (MPI-PKS), both in Dresden. Both institutes are highly interactive and interdisciplinary workplaces, provide an international atmosphere with English as working language and access to cutting-edge computational and experimental infrastructure and facilities. The MPI-CBG was awarded one of the "Best Places To Work for Postdocs" in 2011.

Requirements

Applicants with a background in both computational and biological sciences are encouraged to apply.
Applicants with a computational background should have a strong interest in integrating experiments in their research and a desire to deeply understand the biology underlying

mammalian phenotypes and human disease. Applicants with a biological background should be experienced in using text file processing tools in a Linux shell environment and should have good programming skills, for example in a scripting language. Excellent communication skills and a strong publication record is expected. Previous experience in large-scale genomic data analysis is an advantage.

How to apply

If interested, please email (i) your CV including publication list and contact information for at least two references and (ii) a summary of previous research experience (max 1 page) to Michael Hiller (hiller@mpi-cbg.de).

Further information: https://www.mpi-cbg.de/hiller