

PHD Student in Bioinformatics

This PhD position will provide sophisticated bioinformatics analysis for a new project initiative, FibroOmics, which aims to accelerate improvements in the understanding and treatment of lung fibrosis. This project involves cutting edge molecular and analytical techniques, including single cell RNA sequencing (scRNA-seq), signal deconvolution, therapeutic target discovery, and interactive software development. FibroOmics has strong translational relevance and unique access to patient samples for Omics studies.

The successful candidate will apply and develop sophisticated bioinformatics algorithms, drawing on methodologies of the domains of statistics, computer science and machine learning. Previously published methodologies will be utilized as a starting point, but it should be emphasized that there will be a need for novel algorithm development.

The position will be located at Hannover Medical School (MHH) in the context of its membership in the German Center for Lung Research (DZL, Deutsche Zentrum für Lungenforschung), an association of the leading university and non-university institutions dedicated to translational lung research in Germany. At the DZL site in Hannover (BREATH) biomedical researchers utilize the full spectrum of high throughput molecular techniques ("Omics") metagenomics, whole genome and exome sequencing, RNA-seq, among others to lung diseases such as cystic fibrosis, chronic obstructive pulmonary disease, idiopathic pulmonary fibrosis, lung transplantation as well as rare genetic disorders. This combination of proximity to the clinic with cutting edge Omics applications makes the BREATH site a unique workplace for bioinformaticians to help impacting patient outcomes.

Basic Requirements

- Master's degree in Bioinformatics, Molecular Biology, Computer Sciences, Statistics or Mathematics or other related field.
- Analytical ability founded either in statistics, mathematics, or computer science principles
- Proficiency in at least one programming / scripting language such as python, c/c++, Java, R, perl etc.

Desired Qualifications

- Previous experience in Bioinformatics (desired, but optional)
- Experience working with Next Generation Sequencing technologies (desired, but optional)
- Expertise in at least one of the relevant interdisciplinary pillars: genetics, molecular biology, machine learning, statistics, computer science, mathematics (at least one is required)

Important Characteristics

- Strong drive and interest in interdisciplinary approaches
- A thirst for knowledge
- Enjoyment of working in a team
- A desire to hold one's self to the highest standards of professional and academic excellence

This position offers:

- A doctoral degree in the natural sciences – Dr. rer. nat. upon successful completion and ample opportunities for writing publications.
- Salary is in accordance with the *Tarifvertrag für den Öffentlichen Dienst der Länder* (TV-L)
- An interdisciplinary and collaborative work environment
- Comprehensive health-promotion programs
- Reliable family services, including emergency child care

The position start date is planned for October 1st, 2019.

The MHH is committed to supporting the professional careers of women and applications from women are particularly desired. People with disabilities will be preferred when their qualifications match or exceed those of other applicants.

Please direct inquiries to Dr. David DeLuca, Tel. +49 511-532 7873 and send your applications by email to DeLuca.David@mh-hannover.de or by mail to

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