The mission of the Berlin Institute of Health at Charité (BIH) is medical translation: transferring biomedical research findings into novel approaches to personalized prediction, prevention, diagnostics and therapies and, conversely, using clinical observations to develop new research ideas. The aim is to deliver relevant medical benefits to patients and the population at large. The BIH was founded in 2013 and is funded 90 percent by the Federal Ministry of Education and Research (BMBF) and 10 percent by the State of Berlin. Since 2021 the BIH has been integrated into Charité as its so-called third pillar.

From 01.09.2023 limited until 31.08.2026 the BIH is looking for a

PhD Position in Computational Immunology with Translational Focus (f/m/d)

The research group for „Personalized infectious disease medicine“ by Prof. Dr. Leif Erik Sander at the BIH Center for Regenerative Therapies aims to decipher host and pathogen interactions in humans. Furthermore we want to understand the mechanisms that determine protective immunity elicited by infections and vaccines. We are particularly interested in the earliest events of the immune response and how they shape protective immunity. One focus of our work lies in the systems biology of infectious diseases supported by computational research of omics data.

Job description:

- The successful candidate will work on unique high-dimensional datasets from clinical and laboratory studies, develop novel computational methods for their analysis and become a part of the thriving computational biology and data science community in Berlin. We will make your professional development our priority and provide you with a skill set in high demand in academic and industrial careers alike.

- Our group collaborates with experimentalists and clinicians on translational infectious disease & fundamental immunology research projects and develops computational tools for the analysis of omics data. Candidates are expected to contribute to both areas, but can set their own emphasis according to their interests and skills.

- Your research will include analyzing, modeling, and interpreting high-dimensional biomedical datasets, comprising single-cell or bulk omics assays, spatial assays, clinical data and more. Approaches you will employ and develop may include - but are not limited to - mathematical models, computer simulations, and machine learning methods. Collaboration opportunities include immune responses, therapeutic interventions and vaccine design against respiratory infections, nosocomial infections, HIV and tuberculosis.

- In computational method development, our primary objective is to create tools that facilitate the informative fusion of data from various sources, such as different modalities, technologies or diseases. Your research will include developing and prototyping ideas, benchmarking competing approaches as well as productionizing and maintaining your software. Perform sample acquisition, data analysis, results documentation and backing-up of data for the Core Facility users.

Requirements:

- We are looking for candidates with a master's degree in a quantitative discipline (physics, mathematics, computer science, computational biology, bioinformatics or similar) with a desire to apply their skills to biomedical research questions. Good command of at least one programming language (e.g. python, R, Julia) is required. Candidates with a master’s degree in a life science (biology, biomedicine, biochemistry or similar) are welcome to apply if they have a strong analytical side and the desire to expand their theoretical and computational skills.

- Prior experience with any of the following is considered a plus: omics data analysis, mathematical modeling, machine learning, spatial or temporal data analysis, software development principles and biological wet-lab work. Candidates should be curious, willing to work in a multidisciplinary team, and have a strong sense of ownership for their projects. Fluency in English is required (B2-C1). High level of technical understanding and willingness to learn new technologies.

We offer:

- Working in an international environment with a translational focus
• Remuneration up to E13 according to TVöD VKA-K: The grouping takes into consideration the qualifications and the personal circumstances of the candidate. We actively encourage continuing education.
• A part-time position (25,35h/week)
• Appointment duration: 3 years
• 30 vacation days per year (with a five-day week)
• Additional benefits customary in the public sector (e.g. annual bonus, VBL, Gym Pass, Jobrad, discounts,...)

We live diversity!
BIH strongly encourages qualified women to apply.

Applications from people with an immigrant background who meet the hiring requirements are expressly encouraged. Severely disabled applicants and those with equal status will be given preferential consideration in cases of equal suitability.

Please submit your application via the BIH Career portal https://jobs.bihealth.org by 31.07.2023, quoting the reference number BIH-67.23. We are looking forward to hear from you!

Please note: If you have a foreign university degree, we would like to draw your attention to the fact that you may need to obtain a certificate from the ZAB. You can find more information at: https://www.kmk.org/zab/zentralstelle-fuer-auslaendisches-bildungswesen.html

The recruitment requirement for those born after 1970 is proof of measles immunity / measles vaccination.

You can find more information about BIH at https://www.bihealth.org/en/