



UPPSALA
UNIVERSITET

Bioinformatics PhD position in leukemia biology and precision medicine

Published: 2023-01-13

Uppsala University is a comprehensive research-intensive university with a strong international standing. Our ultimate goal is to conduct education and research of the highest quality and relevance to make a long-term difference in society. Our most important assets are all the individuals whose curiosity and dedication make Uppsala University one of Sweden's most exciting workplaces. Uppsala University has over 54,000 students, more than 7,500 employees and a turnover of around SEK 8 billion.

The Department of Medical Sciences is a large clinical institution with more than 250 employees and over 900 additional coworkers connected via the Uppsala University Hospital. The Department of Medical Sciences has a broad research profile with strong research groups in a number of different areas. The research carried out at the department is performed in close connection with the clinical activities at the Uppsala University Hospital, which includes both basic studies on the causes of a variety of illnesses and the development and evaluation of improved diagnostics and new treatment methods. More information about the Department of Medical Sciences can be found at www.medsci.uu.se

Read more about our benefits and what it is like to work at Uppsala University: <https://www.uu.se/en/about-uu/join-us/>

Duties

We are looking for a PhD student with a bioinformatic-related background who wants to work in a translational and dynamic team consisting of basic and translational researchers, clinically active doctors and bioinformaticians. The doctoral project

intends to characterize epigenetic changes at the whole genome level in cells from patients with acute leukemia using cutting edge methods and based on these analyzes develop new precision medicine tools in the treatment of patients with acute myeloid leukemia (AML). The epigenetic profile will also be related to changes in the cells' genome, transcriptome and proteome, as well as the cells' sensitivity to various antileukemic treatments.

The sequencing in the project has largely already been completed, i.e. the data has been generated, which means that the PhD student in this project can immediately start with the analyses. The analyzes include RNA sequencing, DNA sequencing, proteomic studies and epigenetic analyzes in the form of ATAC-seq, ChIP-seq for several histone modifications and analyzes of DNA methylation. These analyzes are carried out on Swedish AML cohorts, which are among the most well-characterized and largest in the world. In selected cases, samples will also be analyzed for organization of the genome 3 dimensions using HiC technology. Multiomic data is analyzed individually and integrated using bioinformatics tools such as MOFA (multiomic factor analysis) and artificial intelligence.

The project is carried out within Sören Lehmann's group at Uppsala University and Karolinska Institutet in collaboration with other groups at SciLifeLab, Karolinska Institutet and Uppsala University. The group has extensive national and international collaborations. In addition to its own bioinformatician, the group collaborates with other bioinformaticians who support the studies in this project.

Requirements

Applicants should have a degree in the fields of bioinformatics, statistics or mathematics, alternatively a biological degree but where the applicant acquired advanced bioinformatics knowledge during the education. Some experience in the analysis of genome-wide sequencing data is a requirement. We expect that applicants have the ability to drive the project with energy and enthusiasm and have the will and ability to assimilate new knowledge about different types of data and analysis tools. Applicants should be thorough and show good cooperation skills.

Rules governing PhD students are set out in the Higher Education Ordinance chapter 5, §§ 1-7 and in Uppsala University's rules and guidelines.

About the employment

The employment is a temporary position according to the Higher Education Ordinance chapter 5 § 7. Scope of employment 100 %. Starting date as agreed.
Placement: Uppsala

For further information about the position, please contact: Professor Sören Lehmann, Email: Soren.Lehmann@medsci.uu.se

Please submit your application by February 2nd 2023, UFV-PA 2022/4148.

Are you considering moving to Sweden to work at Uppsala University? Find out more about what it's like to work and live in Sweden.

<https://www.uu.se/en/about-uu/join-us/advantages/>

Please do not send offers of recruitment or advertising services.

Submit your application through Uppsala University's recruitment system.

Placement: Department of Medical Sciences

Type of employment: Full time , Temporary position longer than 6 months

Pay: Fast lön

Number of positions: 1

Working hours: 100

Town: Uppsala

County: Uppsala län

Country: Sweden

Union representative: Seko Universitetsklubben seko@uadm.uu.se

ST/TCO tco@fackorg.uu.se

Saco-rådet sacco@uadm.uu.se

Number of reference: UFV-PA 2022/4148

Last application date: 2023-02-02

[Apply for position](#)