PhD student in bioinformatics / single-cell genomics

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Uppsala University is a comprehensive research-intensive university with a strong international standing. Our mission is to pursue top-quality research and education and to interact constructively with 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 46,000 students, 7,300 employees and a turnover of SEK 7.3 billion.

The Department of Medical Sciences is a large clinical institution with more than 250 employees and over 300 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.

Duties/Project description: A vacant PhD student position is open for a motivated person with an interest in genomics in the research group for Molecular Precision Medicine, led by Dr. Jessica Nordlund at Uppsala University, Department of Medical Sciences (IMV). The research project will be carried out in close collaboration with the Neuropediatrics/Pediatric Oncology group led by Professor Arja Harila-Saari at the Department of Women’s and Children’s Health, the Molecular Medicine research group led by Professor Ann-Christine Syvänen (IMV), as well as the Uppsala node of the National Genomics Infrastructure at SciLifeLab (www.sequencing.se). The purpose of the PhD project is to determine the molecular profiles of individual cells from patients with pediatric leukemia before and after a drug intervention. Leukemia
cells treated with different drugs will be analyzed using novel single-cell sequencing technologies such as whole-genome sequencing, RNA sequencing and epigenetic analysis. The goal of the project will be to use established and develop new bioinformatics approaches to detect cell-specific phenotypes and correlate the findings to responses to treatment response and prognosis.

**Requirements:** A suitable background for applicants is a master’s degree in bioinformatics, genetics, computer science, computational biology, biostatistics or other equivalent education. Applicants should have a strong interest in and documented experience with programming and computer-based analyses and be able to express themselves well, both orally and in writing, in English. Emphasis will be placed on personal qualities such as positive attitude, problem solving skills, and attention to detail.

Furthermore, the following is required:

1. Documented experience with working in the Unix/Linux environment, as well as in R, Python, and Bash.
2. Basic knowledge of and experience working with next generation sequencing data.
3. The project requires that you can work independently, but that you also have good collaborative abilities as the project will be carried out in close collaboration with other researchers and clinicians within and outside of the research group.

**Additional qualifications:**

1. Experience with machine learning methods.
2. Experience working with very large datasets.

Rules governing PhD students are set out in the Higher Education Ordinance chapter 5, §§ 1-7 and in Uppsala University's rules and guidelines [http://regler.uu.se/?languageId=1](http://regler.uu.se/?languageId=1).

**Salary:** According to local agreement for PhD students.

**Starting date:** 01-08-2020 or as otherwise agreed.

**Type of employment:** Temporary position according to the Higher Education Ordinance chapter 5 § 7.
Scope of employment: 100 %

For further information about the position please contact: Jessica Nordlund, 070-4250806, Jessica.Nordlund@medsci.uu.se

Please submit your application by 28 May 2020, UFV-PA 2020/1367.

Are you considering moving to Sweden to work at Uppsala University? If so, you will find a lot of information about working and living in Sweden at www.uu.se/joinus. You are also welcome to contact International Faculty and Staff Services at ifss@uadm.uu.se.

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
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 saco@uadm.uu.se
Number of reference: UFV-PA 2020/1367
Last application date: 2020-05-28

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