PhD student in Cancer Systems Biology

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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 Immunology, Genetics and Pathology at Uppsala University has a broad research profile with strong research groups focused on cancer, autoimmune and genetic diseases. A fundamental idea at the department is to stimulate translational research and thereby closer interactions between medical research and health care. Research is presently conducted in the following areas: medical and clinical genetics, clinical immunology, pathology, neuro biology, neuro-oncology, vascular biology, radiation science and molecular tools. Department activities are also integrated with the units for Oncology, Clinical Genetics, Clinical Immunology, Clinical Pathology, and Hospital Physics at Akademiska sjukhuset, Uppsala. The department has teaching assignments in several education programmes, including Master Programmes, at the Faculty of Medicine, and at the Disciplinary Domain of Science and Technology. The department has a yearly turnover of around SEK 500 million, out of which more than half is made up of external funding. The staff amounts to approximately 345 employees, out of which 100 are PhD-students, and there are in total more than 700 affiliated people. Feel free to read more about the department's activities here: www.igp.uu.se

Read more about our benefits and what it is like to work at Uppsala University
**Duties**
Glioblastoma is the most common and aggressive malignant brain tumour in adults despite available treatments an average survival rate is only 15 months. The contributing factors to this poor prognosis are the highly invasive nature of glioblastoma cells enabling the invasion of the healthy brain tissue and therapy resistance. To facilitate development of better therapeutic strategies mechanisms of glioblastoma invasion need to be understood.

In this project, the PhD student will use zebrafish xenografts, the transplantation of human glioblastoma cells into zebrafish, to investigate the role of key factors regulating glioblastoma invasion. The zebrafish model has become increasingly popular for studying glioblastoma invasion as it provides a genetically tractable and transparent system for visualizing tumour growth and invasion in a live organism. By combining the high-resolution imaging of glioblastoma invasion in vivo with gene knock-out in the glioblastoma xenografts this project aims to determine the molecular mechanisms underlying glioblastoma invasion. To identify the inhibitors of glioblastoma this project will set up a drug testing screen. Thus, this project promising to contribute new knowledge to possible development of new therapeutic strategies.

This Ph.D. project aims to provide you with training in zebrafish cancer biology, vascular biology and insights in computational systems biology. You will be working in an exciting cross-disciplinary setting, in a large team. Associate Professor Kaska Koltowska is the main supervisor. Prof Sven Nelander and Dr Marleen Gloger are co-supervisors. In addition to the research project, you will take part in seminars, conferences, teaching. The Ph.D. project is supported by a 5-year grant from the Knut and Alice Wallenberg Foundation.

**Requirements**
To meet the entry requirements for doctoral studies, you must:

- hold a Master’s (second-cycle) degree in biology or neuroscience or biomedicine or a related field
- have completed at least 240 credits in higher education, with at least 60 credits at Master’s level including an independent project worth at least 15 credits, or have acquired substantially equivalent knowledge in some other way.
The successful applicant must also have:

- knowledge of cancer biology or developmental biology, vascular biology or neuroscience
- experience with animal models and/or *in vivo* imaging
- experience in wet lab
- have strong communication skills (oral and written English)
- have strong interpersonal skills consistent with working in a team.

**Additional qualifications**

Dry lab experience is advantageous

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:** Kaska Koltowska 0729999512, [kaska.koltowska@igp.uu.se](mailto:kaska.koltowska@igp.uu.se)

**Please submit your application by 11 August 2023, UFV-PA 2023/2021.**

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.

Please do not send offers of recruitment or advertising services.

Submit your application through Uppsala University’s recruitment system.

**Placement:** Department of Immunology, Genetics and Pathology  
**Type of employment:** Full time, Temporary position  
**Pay:** Fixed salary
Number of positions: 1
Working hours: 100%
Town: Uppsala
County: Uppland
Country: Sweden
Union representative: ST/TCO tco@fackorg.uu.se
Seko Universitetsklubben seko@uadm.uu.se
Saco-rådet saco@uadm.uu.se
Number of reference: UFV-PA 2023/2021
Last application date: 2023-08-11

Apply for position