

# PhD student in diabetes research

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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 45,000 students, more than 7,000 employees and a turnover of around SEK 7 billion.

The Department of Medical Cell Biology at Uppsala University is a strong and international research environment. The department has more than 100 employees, of which about 25 are doctoral students, 10 postdoctoral fellows, and 40 researchers, teachers and professors.

Diabetes is one of the world's major health problems. Its consequences have a considerable impact on patients' quality of life and more research on diabetes is desperately needed. Consequently, the Uppsala Diabetes Center, an interdisciplinary diabetes research centre at Uppsala University and the Swedish University of Agricultural Sciences, was founded to coordinate and focus on the universities' broad expertise with the aim of understanding, preventing and treating diabetes. We want to inspire cooperation and collaboration between all relevant actors in academia, healthcare, business and society. For better health and improved wellbeing with diabetes - <https://uu.se/forskning/udc/>.

[Read more about our benefits and what it is like to work at Uppsala University](#)

## Work environment

The project is standing at the intersection between many scientific fields and the candidate will benefit from the specific and complementary expertise in each domain from teams already collaborating with Mia Phillipson.

The research group of Professor Mia Phillipson is an international dynamic and very enthusiastic research team with a well-established collaborative network and strong funding. The conducted research is aiming to uncover novel roles of immune cells and to find means to regulate their specific functions in settings spanning from organ development and regulation of homeostasis to tissue healing, angiogenesis and inflammation. The laboratory is equipped with or have access to advanced technical tools and technology.

### **Duties**

Genetic composition and lifestyle are known risk factors for type 2 diabetes but cannot explain all cases. At the time of birth, pancreatic islets undergo neogenesis and functional maturation to become metabolically competent and acquire the ability to fine-tune blood glucose levels. We and others have found that this maturation coincides with a transient peak in macrophage density in the neonate pancreas.

Based on recent results from the lab, the PhD project aims at identifying mechanisms by which pancreatic macrophages promote islet maturation, and how postnatal infections and diet impair this process and if it may predispose for the development of type 2 diabetes later in life. Means to target these mechanisms will be tested and specifically the treatment with live biotherapeutics (probiotics). The impact of infections in early life will also be extended to other diseases. Generated knowledge will allow for interventions that either influence the pancreatic microenvironment to enhance macrophage promoted islet maturation, or counteract the long term consequences of infections.

The candidate will work with animal models and will use a large variety of powerful tools in all covered domains, like spatial multi-omics combined with in vivo imaging, transcriptomics, immunology, molecular and cellular biology, microbiology as well as assessment of islet function and development of different diabetes complications.

### **Requirements**

Undergraduate academic degree such as a master's degree in **a relevant field such as** immunology, endocrinology, microbiology, molecular, cell biology or physiology. Excellent spoken and written English language skills.

We are seeking a highly motivated PhD student, enthusiastic about both leading projects and collaborating in the other projects of the group. Emphasis will be placed

on previous work in laboratory environment and research experience. Experience and knowledge in molecular biology, microbiology, as well as imaging techniques, such as intravital fluorescence and confocal microscopy is considered meritorious for applicants when filling the position. The project involves experiments with mice and experience in mouse handling and treatment is welcomed. Personal qualifications will be of great significance in the evaluation process.

The application should contain a brief description of research interests and relevant experiences, CV, copies of diplomas and transcripts, and the applicant's thesis (or a draft). If available, please also submit letters of reference or contact information of previous research supervisors.

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:** Mia Phillipson, mia.phillipson@mcb.uu.se.

**Please submit your application by 22 February 2022, UFV-PA 2022/146.**

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 Medical Cell Biology

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

**Pay:** Fixed salary

**Number of positions:** 1

**Working hours:** 100 %

**Town:** Uppsala

**County:** Uppsala län

**Country:** Sweden

**Union representative:** ST/TCO tco@fackorg.uu.se

Seko Universitetsklubben seko@uadm.uu.se

Saco-rådet sacco@uadm.uu.se

**Number of reference:** UFV-PA 2022/146

**Last application date:** 2022-02-22

**Login and apply**