Vacancy announcement: Undergraduate Scholarship in Understanding Dendritic Cell Diversity by Direct Cell Reprogramming

Scholarship
Dendritic cells (DCs) are professional antigen presenting cells capable of promoting T-cell responses and comprise two major branches: plasmacytoid DCs, responsible for type 1 interferons production, and conventional DCs (cDCs), which can be further divided into cDC1s and cDC2s. However, DC diversity is only starting to be fully appreciated and their ontogeny remains poorly understood. Our group has identified the optimal combination of transcription factors, PU.1, IRF8, and BATF3, to reprogram fibroblasts into induced dendritic cells that resemble type 1 DCs. Through a similar approach, using cell fate reprogramming approaches, we aim to define the transcription factors required for reprogramming mouse embryonic fibroblasts into functional pDCs and cDC2. We will build on the minimal transcription factor network to induce DC1s and modify to instruct cDC2 and pDC cell fates. Once the optimal transcription factor combination is identified, we will further explore induced pDCs and cDC2 specification, function, phenotypic and gene expression profile of these induced cells. We will functionally characterize the induced cell’s ability to secrete cytokines such as type I interferons and antigen presenting capabilities. To transcriptionally profile these cells, we will perform single cell RNA throughout different stages of the reprogramming process. This combination of approaches will advance our understanding of the diversity and heterogeneity of dendritic cells.

Qualifications required
The applicant should have a MSc degree with training in at least one of the following: molecular biology, cellular biology, biochemistry or biotechnology. Experience in cellular reprogramming is preferential. The applicant should not have been employed by Lund University within the last two years in order to be able to receive a scholarship.
A requirement for being able to receive an undergraduate scholarship is that you are admitted to an education at a university or college at the undergraduate or advanced level.

**Placing:** Molecular Medicine and Gene Therapy, BMC A12  
**Diary number:** V 2022/622  
**Duration:** 6 months  
**Start date:** 2022-04-01  
**Last day of application:** 2022-04-05  

**For further information, please contact:**  
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**Other**  
Lund University encourages both men and women to apply for the position.

**Information regarding Undergraduate Scholarships at Lund University**  
- The scholarship amounts to 11.100 SEK/month and is paid monthly.
- The scholarship is intended for the recipient’s own education and does not constitute compensation for work carried out for the University.
- The scholarship is a grant and therefore not subjected to tax deduction.
- The scholarship does not entitle the recipient to compensation in case of illness.
- The scholarship does not constitute a pensionable income.
- The scholarship does not entitle the recipient to vacation.
- Insurance issues should be considered.
- The scholarship does not include financial compensation for parental leave.
- The scholarship does not entitle the recipient to allowance during travels in the line of duty.
- Scholarships set up by Lund University for any individual may not run for a period of more than 24 months.
- The scholarship follows the regulations established by the Vice-Chancellor of Lund University (130627 Dnr PE 2013/356).
Application
Application stating the reference number V 2022/622 and containing a CV, an application letter, copy of passport/residence permit, registration certificate for course during the entire period and relevant documents should be addressed to: filipe.pereira@med.lu.se.

Last day of application is 2022-04-05