



**THE SAHLGRENKA ACADEMY**  
**INSTITUTE OF NEUROSCIENCE AND PHYSIOLOGY**

Department of  
Administrator:  
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## **Announcement - scholarship at undergraduate/advanced level**

The Department of Neurochemistry and Psychiatry, Institute of Neuroscience and Physiology, hereby announces a vacant scholarship at undergraduate/advanced level in Alzheimer's disease research.

### **Training plan**

#### Subject

The link between herpesvirus infection and Alzheimer's disease.

#### Background

Around 50 million people are living with dementia worldwide, with Alzheimer's disease (AD) comprising the majority of cases. Growing evidence supports the link between herpesvirus infection, the leading cause of viral encephalitis in the Western world, and AD by triggering amyloid deposition.

#### Purpose

By deciphering the mechanistic link between herpesvirus infection and AD, we hope to contribute to a better understanding of the underlying cause of AD. This would add significant value to our knowledge of how AD can be treated.

#### Method

We will investigate link between herpesvirus infection and Alzheimer's disease by using human induced pluripotent stem cell-derived microglia cell cultures. We plan to quantify beta-amyloid accumulation in herpesvirus-infected microglia using FACS and immunocytochemistry.

#### Time plan

Week 35-37: learning of stem cell culturing; microglial differentiation; working with viruses  
Week 38-42: beta-amyloid labeling techniques and FACS/immunocytochemistry introduction  
Week 43-48: experiments to assess beta-amyloid accumulation in herpesvirus-infected microglia

#### Learning outcome

The student will be able to handle human stem cells and differentiate them into microglia. At the end of the training, the student will be able to apply basic laboratory methods (gene knockdown, FACS, immunocytochemistry), to interpret experimental results, and to plan follow-up experiments accordingly.

**Period**

2024-09-01 to 2024-11-30

**Financing**

3 payments of 15000 SEK. A total of 45000 SEK for the whole period.

If you require any further information, please contact Stefanie Fruhwürth, [Stefanie.fruhwurth@gu.se](mailto:Stefanie.fruhwurth@gu.se), supervisor.

**Application**

To apply please fill out the form “Scholarship application” and send it to Stefanie Fruhwürth, [stefanie.fruhwurth@gu.se](mailto:stefanie.fruhwurth@gu.se), supervisor.

If, during the stipend period, you are a registered student at the University of Gothenburg, other Swedish university or an international university with which the University of Gothenburg has a collaboration agreement – Please attach a copy of your registration certificate with your application.

Closing date is 2024-09-10.