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THE SAHLGRENSKA ACADEMY
INSTITUTE OF MEDICINE

Department of Rheumatology and inflammation research
Administrator: Louise Winslow
Telephone No:031-786 6583
E-mail address: louise.winslow@gu.se

Announcement - scholarship at undergraduate/advanced level

Training Plan (max. one A4 page)

Subject: Unraveling the interplay between extracellular adenosine generation and immune evasion in B-cell malignancies

Background: This project is centered on understanding the adenosinergic pathways in B-cell cancers, emphasizing how adenosine acts as an immunosuppressive agent in the tumor microenvironment. The project will delve into the enzymatic pathways that generate adenosine and its impact on immune cells, particularly focusing on the implications for B-cell malignancies.

Purpose: The aim is to provide students with comprehensive training in conducting advanced wet-lab experiments, focusing on cell culturing, flow cytometry, and the study of adenosinergic pathways in B-cell malignancies.

Method: The training will combine theoretical knowledge with practical laboratory skills. Students will gain hands-on experience in isolating cells, maintaining cell cultures, and analyzing these cells using flow cytometry. They will also learn to interpret the resulting data and understand its relevance to B-cell cancers.

Time plan:

Months 1-3:

- Introduction to the basics of cell culture, wet-lab safety, and standard practices.
- Overview of B-cell malignancies and the significance of adenosinergic pathways.
- Basic training in flow cytometry, including instrument setup, sample preparation, and data acquisition.

Months 4-6:

Advanced cell culturing techniques, focusing on the cultivation of B cells and the maintenance of cell lines relevant to B-cell cancers.

Hands-on training in using flow cytometry for analyzing immune cell populations, with an emphasis on detecting markers relevant to adenosinergic signaling.

Months 7-9:

Practical application, conducting experiments to study the effects of adenosine on immune cells in the context of B-cell malignancies.

In-depth analysis of flow cytometry data, focusing on the phenotypic and functional analysis of immune and cancer cells.

Months 10-12:

Compilation of experimental data, focusing on the role of adenosinergic pathways in immune evasion.

Preparation of a detailed report summarizing the findings and developing a presentation to communicate the results effectively.

Learning outcome:

By the end of this training project, students will have developed:

Developed hands-on expertise in advanced cell culturing techniques and flow cytometry, crucial for studying B-cell malignancies.

Gained a comprehensive understanding of the role of adenosinergic pathways in immune evasion and their implications for B-cell cancers.

Acquired the ability to conduct detailed experimental analyses, interpret complex data, and articulate their findings clearly in both written and oral formats.

The ability to communicate complex scientific data effectively.

A foundation for future research work or advanced studies in the field of oncology.

Period
2024-06-01 to 2025-05-31

Financing
4 payments of 45000 SEK. A total of 180000 SEK for the whole period.

If you require any further information, please contact Alessandro Camponeschi, alessandro.camponeschi@rheuma.gu.se, supervisor.

Application
To apply please fill out the form “Scholarship application” and send it to Alessandro Camponeschi alessandro.camponeschi@rheuma.gu.se, supervisor.

To be eligible for a scholarship you must be a registered student at undergraduate or advanced level 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. The certificate must demonstrate that you are a registered student throughout the scholarship period.

Closing date is 2024-04-30.