Date: 2022-05-06
Reg. No.: GU 2022/

THE SAHLGRENSKA ACADEMY
INSTITUE OF NEUROSCIENCE AND PHYSIOLOGY

Department of physiology
Administrator: Johanna Dahlberg Larsson
Telephone No: 031-7863878
E-mail address: Johanna.dahlberg.larsson@gu.se

Announcement - scholarship at undergraduate level

The Department of Physiology, Institute of Neuroscience and Physiology, hereby announces a vacant scholarship at undergraduate level in mucosal biology/mucosal immunology.

Training Plan

Subject: Intestinal physiology/mucosal immunology

Background: Ulcerative colitis (UC) is a chronic inflammatory disease that affects the colon. The pathogenesis of UC is still unknown, however the inflammatory response is thought to be directed towards the intestinal microbiota. We have previously shown that colonic goblet cells (GCs) play an essential role in regulation of the colonic barrier both by providing the protective mucus layer and by sampling and delivering luminal antigens to the immune system. The importance of the mucus layer for colonic health is exemplified in studies showing that mice lacking colonic mucus develop spontaneous colitis. However, why the colon does not manage to maintain homeostasis in the absence of the mucus barrier is unknown.

Purpose: In this project we will explore the role of the mucus barrier in regulation of antigen uptake by colonic GCs.

Method: We will explore antigen uptake by colonic GC, and GC – immune cell interactions in the C1galt1 model of colitis. Antigen uptake and GC – immune cell interactions will be analyzed by immunohistochemistry. The project also involves collection and preparation of tissue samples for immunohistochemistry, as well as genotyping of genetically modified mice.

Time plan: The first week of the project will be dedicated to training the student in the respective methods and data analysis. During the remaining time the student is expected to work independently with the project.

Learning outcome: Following completion of the project the student will have obtained practical and theoretical training in gastrointestinal physiology and mucosal biology. The practical experience includes immunohistochemistry, fluorescence microscopy, PCR, and gel electrophoresis. The theoretical aspects of the project focuses on GC biology. This training position comes with a stipend that covers living expenses. The stipend does not represent a salary and the activities performed by the student is not regarded as work.

Period
2022-06-06 to 2022-07-06

Financing
1 payment of 12000 SEK. A total of 12000 SEK for the whole period.

If you require any further information, please contact Jenny Gustafsson, jenny.gustafsson@gu.se, supervisor.

Application
To apply please fill out the form “Scholarship application” and send it to jenny.gustafsson@gu.se, supervisor.

Please attach a copy of:

CV
Letter of motivation
Registration certificate

Closing date is 2022-05-27.