



SFB1425 - Heterocellular Nature of Cardiac Lesions: Identities, Interactions, Implications

P07: PhD-Project

based at the

Department of Cardiology and Angiology I

Reticulated Platelets Enhance Myocardial Scarring After Ischaemia/ Reperfusion Injury

Background

The interventional reopening of an occluded vessel in the context of myocardial infarction (MI) induces myocardial ischaemia/ reperfusion injury (IR). The inflammatory reaction following IR involves platelets. Reticulated platelets (RP) are young and hyperreactive and we have found that RP are increased after MI and associated with adverse outcome. Therefore, we will investigate the role of RP in IR and identify potential RP-related pharmacological targets for the development of future therapies.

Project Description

The model of left anterior descending artery (LAD) ligation will be used to mimic myocardial infarction in a mouse model. In transfusion experiments and with the use of transgenic mice the contribution of RP to cardiac damage will be analysed. Using histology, flow cytometry, echocardiography and other state of the art methods cardiac outcome will be analysed regarding function, inflammation and remodelling. You will unravel new mechanisms of platelet action and identify interactions between RP and other lesion-associated cells (cardiomyocytes, immune cells), thereby discovering new drug target candidates in the context of MI.

Qualifications and Requirements

- University degree (Master) in life sciences
- Keen interest in cardiology
- Previous experience in rodent surgery or handling of advantage
- High motivation to learn various animal experimental methods
- Previous experience in flow cytometry is desirable
- Good skills in organization and communication
- English language proficiency at level B2 or higher

Research Areas

Platelets in inflammation, cardiology

Experimental Tasks

- Mouse handling and surgery
- Platelet isolation
- Flow cytometry
- Histology and microscopy

Student Background

Biology, biochemistry, molecular medicine or related

Starting Date

from 01/07-2020

PhD Advisor

Daniel Dürschmied, Department of Cardiology and Angiology I, University Freiburg

daniel.duerschmied@universitaets-herzzentrum.de

Joint project with Thomas Nührenberg, Department of Cardiology and Angiology II

Contact

info@sfb1425.uni-freiburg.de

Applications via

[SGBM portal](#)

Submission window: 08-30/06-2020

