JG|U UNIVERSITÄTSmedizin. MAINZ

Hautklinik und Poliklinik

Department of Dermatology
Center for Thrombosis and Hemostasis (CTH)

PhD student (m/f/d)

Project:
The role of monocyte reprogramming in chronic venous thrombosis

Project description:
Deep vein thrombosis (DVT) and pulmonary embolism (PE) are two manifestations of venous thromboembolism (VTE). VTE leads to mortality and morbidity worldwide and especially as the population ages, the VTE incidence increases considerably. Despite initial management of symptomatic acute events, patients remain at high risk for recurrence and are predisposed to developing longer-term thrombo-inflammatory complications. The influences of the first event of DVT on the recurrence of VTE and thrombotic sequelae remain unknown. The inflammatory response induced by the thrombus formation recruits a significant number of circulating myeloid cells to the site of thrombotic damage. Recent advances suggest that the interactions of inflammatory processes with underlying cardiovascular disease may promote long-lasting functional changes in monocytes, specifically the appearance of so-called trained cells. In this project, we will study the effect of long-term chronic inflammation during clot growth and resolution on bone marrow myelopoiesis and monocyte profile. The experiments will involve animal models as well as high-dimensional flow cytometry, immunohistochemistry, in vitro cell culture, chromatin immunoprecipitation assays, and unbiased molecular (single-cell) profiling approaches.

Local embedding:
Our group is part of the Department of Dermatology in close collaboration with the Center for Thrombosis and Hemostasis (CTH), Medical Center of the Johannes Gutenberg-University Mainz. In addition, our research is embedded in the highly interactive Research Center for Immunotherapy (FZI), which provides further opportunities for scientific interaction and cooperation, as well as state-of-the-art core facilities.

Qualifications and skills:
You are a highly motivated graduate student with a strong interest in immunology and a background in molecular or cell biology, or a related field. You enjoy working independently as well as in a competitive research team. Relevant experience with murine models, flow cytometry, gene expression profiling, and cell culture would be advantageous. Fluent proficiency in written and oral communication in English is a prerequisite.

Terms of employment:
The position is available immediately and is initially limited to 3 years with the possibility of extension. We offer an interesting and challenging research project, individual supervision and working in a young, dynamic, international team. This project is funded by the German Research Foundation (DFG).

Application:
The University Medical Center is committed to promoting women in professional life and applications from women are particularly welcome. Handicapped applicants will be given preferential treatment if they have the same qualifications. Interested candidates can send their electronic application in German or English, including a detailed letter of motivation, Curriculum Vitae, and reference letters or reference contact information, to Dr. rer. nat. Fatemeh Shahneh, Fatemeh.Zare-Shahneh@unimedizin-mainz.de. The deadline for submission is October 20, 2022, or until the position is filled.