Hiermit lade ich ein zum öffentlichen Promotionskolloquium von

**Frau M.Sc. Marwa Sleiman**  
Physiologie  
(Prof. Dr. Jens Rettig)

am

**Dienstag, 24. März 2020, 16:00 Uhr s.t.**  
CIPMM, Auditorium, Gebäude 48, Campus Homburg

Theme der Dissertation:

*The Function of Synaptotagmin VII in Mouse Cytotoxic T Lymphocytes*

Cytotoxic T lymphocytes (CTLs) kill tumor cells and virus-infected cells by secreting lytic components like perforin and granzymes contained in cytotoxic granules (CGs) which are lysosomal-related organelles. Exocytosis of CGs is calcium-dependent and might be regulated by synaptotagmins. Synaptotagmin 7 (Syt7) is a calcium-dependent isoform of synaptotagmins and has been shown to regulate lysosomal exocytosis as well as to influence killing in T cells. We determined the expression profile of the synaptotagmin family in mouse CTLs; four isoforms are expressed: Syt2, Syt7, Syt11, and Syt16; only Syt2 and Syt7 are calcium-dependent. We studied the function of Syt7 in CTLs and we found that Syt7 is localized on CGs; however, it is not required for early release in CTLs. Rather it is necessary for regenerated secretion under elevated calcium conditions. According to our results after protein downregulation by siRNA, we propose Syt2 as a major regulator of CG fusion in mouse CTLs.

Saarbrücken, 10. März 2020

Prof. Dr. Gregor Jung  
Vorsitzender des Promotionsausschusses