



Der Vorsitzende des Promotionsausschusses

EINLADUNG

Hiermit lade ich ein zum öffentlichen Promotionskolloquium von

Frau M.Sc. Arefeh Kardani
Pharmazeutische Biologie
(Prof. Dr. Alexandra K. Kiemer)

am

Donnerstag, 10. Juli 2025, 15:00 Uhr s.t.

per Videokonferenz: Link für MS Teams: <https://bit.ly/4mZtb57>

Raum für die Prüfung: Gebäude C1.7, Raum 0.07

Thema der Dissertation:

Investigating extracellular vesicle-mediated interactions between *Enterococcus faecalis*, monocyte-derived macrophages, and endothelial cells

This study investigated the bidirectional communication between *Enterococcus faecalis*, as a common cause of hospital-acquired bloodstream infections, and host cells and via extracellular vesicles (EVs). To explore its interaction with the host, EVs secreted by *E. faecalis* were isolated, purified, and characterized. These EVs were shown to be internalized by primary human macrophages (HMDMs) and endothelial cells (HUVECs), and induced a pro-inflammatory gene expression profile in host cells through a TLR2-dependent mechanism. Next, to study host-derived EVs, endothelial cells were cultured under laminar flow using a hollow fiber cartridge system. EVs from both static and flow conditions were analyzed, revealing distinct differences in their cargo. Finally, endothelial EVs were shown to modulate the expression of bacterial virulence genes, highlighting the reciprocal influence between host and pathogen via EVs.

Saarbrücken, 25. Juni 2025

Prof. Dr. Uli Kazmaier