



Der Vorsitzende des Promotionsausschusses

EINLADUNG

Hiermit lade ich ein zum öffentlichen Promotionskolloquium von

Frau M. Sc. **Galia Montalvo Berau**
Experimentalphysik
(Prof. Dr. Franziska Lautenschläger)

am

Montag, 3. Februar 2025, 9:00 Uhr s.t.

per Videokonferenz; Link für MS Teams: <https://tinyurl.com/GaliaMontalvo>
Raum für die Prüfung: Campus D2.5, Leibniz-Saal, 5. Etage.

Thema der Dissertation:

Targeting the microtubules to improve the searching efficiency of cytotoxic T lymphocytes in 3D environments

How do immune cells navigate complex environments to locate and eliminate their targets? What defines search efficiency for cytotoxic T lymphocytes (CTL) in challenging 3D environments like tumors? During my PhD project, I investigated how the cytoskeleton and cell mechanics influence CTL motility. I discovered that disrupting the microtubule network with Pretubulysin enhances CTL migration, infiltration, and killing efficiency by promoting localized actomyosin accumulation at the uropod. This alters cell mechanics, favoring stronger contraction at the rear and resulting in faster, more persistent migration. Our findings highlight the potential of microtubule-disassembling agents like Pretubulysin to optimize immunotherapies.

Saarbrücken, 20. Januar 2025

Prof. Dr. Uli Kazmaier