

Physikalisches Kolloquium

Viola Vogel, ETH Zürich

»Mechanics by which macrophages pick up their prey«

Einführung: H. v. Löhneysen

Many strategies have been applied by mankind to fight bacterial infections, primarily designed to either kill bacteria via antibiotics or more recently to prevent their adhesion to surfaces and host tissues. Little attention though has been given to ask how these strategies might affect the ability of our immune cells to pick up bacteria from surfaces. To clear pathogens from host tissues or biomaterial surfaces, macrophages have to contact and hold on to their prey and then generate sufficient force to break a large cluster of adhesive bonds by which bacteria tightly bind to surfaces or tissue fibers. Unexpectedly, novel insights into nanomechanical aspects also revealed some adverse and unanticipated side effects how common antibacterial drugs impair the ability of our immune cells to fight infections.

Donnerstag, 27.11.2014, 17:30 Uhr,

KIT, Campus Süd,

Otto-Lehmann-Hörsaal, Physik-Flachbau (Geb. 30.22).

Anschließend Nachsitzung im Gastdozentenhaus „Heinrich Hertz“