

Cologne Evolution Colloquium

Ana Rita Brochado

Julius-Maximilians-Universität Würzburg

Deciphering antimicrobial drug interactions using high-throughput approaches

Prevalent and widespread antibiotic resistance urges the development of new efficient strategies against infectious diseases. Antibiotic combinations provide an attractive alternative for overcoming the current antibacterial crisis. We recently profiled drug combinations in a high-throughput manner against several Gram-negative pathogens, including high priority pathogens such as *Pseudomonas aeruginosa*. In this study we revealed a number of general principles driving drug interactions, and illustrated how to use such a large dataset to uncover molecular mechanisms underlying drug interactions and drug mode of action. Finally we demonstrated the clinical relevance of our study by exposing a handful of novel synergies active against multi-drug resistant clinical isolates (Brochado *et al*, *Nature* 2018).

Wednesday, January 23, 2019, 17:00

University of Cologne

Institute for Biological Physics, Zùlpicher Str. 77a

Seminar Room 0.03, Ground Floor

Hosted by Tobias Bollenbach