Cellular interactions of *Candida albicans* with human oral epithelial cells and enterocytes.

Dalle F, Wächtler B, L'Ollivier C, Holland G, Bannert N, Wilson D, Labruère C, Bonnin A, Hube B (2010) Cellular interactions of *Candida albicans* with human oral epithelial cells and enterocytes. *Cell Microbiol* 12(2), 248-271.

Abstract

The human pathogenic fungus Candida albicans can cause systemic infections by invading epithelial barriers to gain access to the bloodstream. One of the main reservoirs of C. albicans is the gastrointestinal tract and systemic infections predominantly originate from this niche. In this study, we used scanning electron and fluorescence microscopy, adhesion, invasion and damage assays, fungal mutants and a set of fungal and host cell inhibitors to investigate the interactions of C. albicans with oral epithelial cells and enterocytes. Our data demonstrate that adhesion, invasion and damage by C. albicans depend not only on fungal morphology and activity, but also on the epithelial cell type and the differentiation stage of the epithelial cells, indicating that epithelial cells differ in their susceptibility to the fungus. C. albicans can invade epithelial cells by induced endocytosis and/or active penetration. However, depending on the host cell faced by the fungus, these routes are exploited to a different extent. While invasion into oral cells occurs via both routes, invasion into intestinal cells occurs only via active penetration.

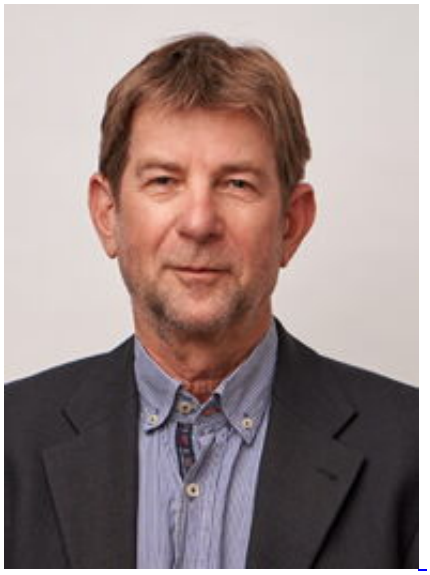
Beteiligte Forschungseinheiten

Mikrobielle Pathogenitätsmechanismen Bernhard Hube Mehr erfahren

Leibniz-HKI-Autor*innen

Betty Hebecker

Details



Bernhard Hube

Details

Duncan Wilson

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Themenfelder

Pathomechanismen an der Epithelbarriere

Awards

Selected cover picture for Cellular Microbiology Among Top 10 Most Cited Research Articles published in Cellular Microbiology in the last ten years

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