Thriving within the host: *Candida* spp. interactions with phagocytic cells.

Miramón P, Kasper L, Hube B (2013) Thriving within the host: *Candida* spp. interactions with phagocytic cells. *Med Microbiol Immunol* 202(3), 183-195. (Review)

Abstract

Certain Candida spp. (e.g. C. albicans, C. tropicalis, C. parapsilosis and C. glabrata) are not only well-adapted fungal commensals of humans, but are also able to cause superficial mucosal infections or even systemic disease. Professional phagocytes (neutrophils, macrophages and dendritic cells) constitute the first line of defence against Candida spp. Here, we review the interactions of phagocytes with pathogenic Candida spp., focusing on macrophages and neutrophils. We discuss the mechanisms involved in recognition, uptake and killing of these fungi. We go on to analyse the cellular responses of these yeasts towards phagocyte-imposed stresses, including metabolic flexibility, robust oxidative stress response and ability to cope with nitrosative stress. Finally, we address strategies that allow these opportunistic pathogens to thrive within the host, evading and escaping from the phagocyte attack.

Involved units

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Topics

Interactions with immune cells (MPM)

Identifier

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