Interaction with immune cells

Phagocytes such as macrophages and neutrophils are key players of the innate immune system and thus constitute the first line of defense against pathogenic Candida species such as \textit{C. albicans} and \textit{C. glabrata}. Recognition of \textit{Candida} cells by phagocytes leads to cytokine production, phagocytosis and the activation of antimicrobial effector functions to induce killing of the fungus. On the other hand, pathogenic \textit{Candida} spp. are well adapted to their host and have developed mechanisms to evade or counteract the antimicrobial activities of phagocytes. Both fungi are, for example, able to not only survive phagocytosis by macrophages, but even proliferate intracellularly and escape.

We want to characterize the interaction of \textit{C. albicans} and \textit{C. glabrata} with phagocytes. We are especially interested in the fungal factors and activities that help \textit{Candida} to cope with these immune cells and survive.

Visualising the maturation of \textit{C. glabrata}-containing vacuoles. \textit{C. glabrata} resides and replicates within macrophages by modifying the maturation of their phagosomal compartment.

Single cell profiling. \textit{C. albicans} counteracts the harsh environment of the neutrophil phagosome by expressing a nitric oxide dioxygenase.

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