

Project 8: Cell surface regulation in *Candida albicans* by the Ace2 signaling pathway

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Summary

Candida albicans is the most important fungal pathogen for humans, causing frequent superficial and life-threatening systemic infections. Its cell wall functions as a scaffold determining fungal morphology, as a protective shield and as an interface for cells and molecules of the human host. Main cell wall components are glucans and glycoproteins, which are modified by protein-O-mannosyl transferases (Pmt). In previous studies we identified the Ace2 transcription factor, which regulates *PMT* gene expression and the integrity of fungal cells in a yet unknown manner. In the project we plan to study Ace2-dependent regulation of *PMT* genes and other target genes yet to be identified. On the other hand, signal transduction pathways triggering Ace2 activation will be clarified. Because Ace2 signaling is essential for *C. albicans* virulence it may present targets for novel classes of antifungal compounds.