Farnesol signalling in *Candida albicans* - more than just communication.

Polke M, Leonhardt I, Kurzai O, Jacobsen ID (2018) Farnesol signalling in *Candida albicans* - more than just communication. *Crit Rev Microbiol* 44(2), 230-243. (Review)

Abstract

Candida albicans is a successful colonizer of the human host, which can, under certain circumstances cause a range of clinically diverse infections. Important virulence-associated traits of the fungus, such as the dimorphic switch and biofilm formation, are controlled by the quorum sensing molecule farnesol. Given the potential of farnesol as a novel antifungal drug, there has been increasing research into the mechanism underlying farnesol sensing and action in C. albicans. However, despite the identification of various factors involved in farnesol signalling, its exact mode of action remains largely unclear. This review provides an overview of the currently known aspects of farnesol production, sensing and action within C. albicans. We also illustrate the characteristic of C. albicans to simultaneously produce and tolerate high farnesol concentrations that are lethal to other microbes. Furthermore, we summarize new literature on the role of farnesol in the interaction of C. albicans with the human host and highlight its action as a potent immunomodulatory molecule.

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