

FEMS-2440 Poster Discussion: Social interactions between microbes

CANDIDA GLABRATA BIOFILMS RESPONSE TO AMPHOTERICIN B

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Background: *Candida* species are responsible for recurrent human infections, mostly in immunocompromised patients, due to their high vulnerability. *Candida glabrata* has been showing to have a major role in these infections being the second most prevalent species involved in human fungemia. Amphotericin B (AmB), a common antifungal drug, is a hospital-environment exclusive polyene, normally being efficient when used to fight candidiasis.

Objectives: The main goal of this work was to infer about the influence of AmB in *Candida glabrata* biofilms formation and its effect on matrix composition and ERG genes expression.

Methods: *Candida glabrata* biofilms were formed in the presence of AmB and analyzed by dry weight. Moreover, ERG genes expression was evaluated by qRT-PCR and matrix was analyzed in terms of composition in carbohydrates, proteins, beta-glucans and a new finding: ergosterol.

Conclusions: In addition to an inefficient reduction of the *C. glabrata* biofilms, this work showed that ERG genes seem to be less involved than the matrix composition in *C. glabrata* biofilms response to AmB. Specifically, *C. glabrata* biofilms matrices respond with an increase of carbohydrates, particularly beta-1,3 glucans, and with a decrease of total proteins. The ergosterol values did not expressively changed in the presence of AmB. The present work support the theory of multifaceted mechanisms developed by *C. glabrata* biofilms as response to the presence of AmB.