

INTERACTION BETWEEN CANDIDA ALBICANS AND CANDIDA KRUSEI: IN VIVO STUDY USING GALLERIA MELLONELLA AND IMMUNOSUPPRESSED MICE AS A MODEL HOSTS

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Background: Whereas the high incidence of mixed infections of candidiasis, it becomes necessary to develop *in vivo* models in order to characterize the interactions among *Candida* species. **Objective:** Evaluate *in vivo* interactions between *C. albicans* and *C. krusei* by inducing experimental candidiasis in *G. mellonella* larvae and immunosuppressed mice. **Methods:** For the induction of experimental candidiasis, the animals were inoculated with homotypic or heterotypic microbial suspensions of the strains *C. albicans* (ATCC 18804) and *C. krusei* (ATCC 6258). The experimental candidiasis in *G. mellonella* was evaluated by survival rate using Log-rank (Mantel-Cox) test. In the mice, experimental candidiasis was studied in the oral cavity by counting CFU/mL and the data were analysed by ANOVA and Tukey test. **Results:** In the *G. mellonella* model, 100% of the larvae died within 18h of infection with *C. albicans*. However, when *G. mellonella* larvae were infected by *C. albicans* and *C. krusei* was necessary 96h to achieve 100% of mortality ($p=0.0001$). Analyzing *C. albicans* in single and mixed infections in the immunosuppressed mice model, the number of CFU/mL recovered from oral cavity was significantly lower ($p=0.017$) for the mixed infection ($5.32 \log_{10}$) compared to single infection ($5.72 \log_{10}$). For *C. krusei*, it was recovered $6.18 \log_{10}$ for the single infection and $5.71 \log_{10}$ for the mixed infection ($p=0.008$). **Conclusion:** In both infection models studied, the interaction group had a lower rate of infection, suggesting that *C. albicans* and *C. krusei* are competitive when they are associated.

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P 203

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