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EFFECT OF FARNESOL FROM CANDIDA
ALBICANS AND CANDIDA DUBLINIENSIS
ON CANDIDA DUBLINIENSIS
MORPHOLOGY

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Farnesol is now accepted as one of *Candida albicans* quorum sensing molecules. It was first described as affecting *C. albicans* morphology, inhibiting hyphae formation. However, it was also shown that farnesol affects *Candida dubliniensis* hyphae

and pseudohyphae formation as well. *C. dubliniensis* was first recovered from the oral cavity of HIV patients after being mismatched with *C. albicans* for years. The infections caused by non *C. albicans* *Candida* species are emerging, so it is of utmost importance the study of the mechanisms of infection of this new species. Quorum sensing molecules are responsible for cell-cell signalling and are released by cells as metabolites, either in planktonic and biofilm forms. So, the main aim of this work is the study of the influence of *C. albicans* and *C. dubliniensis* planktonic and biofilm supernatants, containing farnesol, on *C. dubliniensis* morphology. *C. dubliniensis* and *C. albicans* cells were grown in both suspended and biofilm forms in RPMI. After 24, 48, 72 and 96h supernatants were recovered and used to grow *C. dubliniensis* overnight. Cell morphology was analysed by contrast phase microscopy and the % of pseudohyphae inhibition was determined. The amount of farnesol present on the supernatants was determined by GC-MS after SPME extraction. From the results obtained it was possible to conclude that planktonic and biofilm supernatants of both species affect *C. dubliniensis* morphology. The effect of the supernatants of planktonic cells on cell morphology increases with time. This evolution was not so notorious with biofilm supernatants. It was possible to observe that both planktonic and biofilm supernatants of *C. albicans* caused more inhibition than the ones of *C. dubliniensis*, especially those recovered at 72 and 96 h.