Influence of Various Ultraviolet Light Intensities on Pathogenic Determinants of *Candida albicans*

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ABSTRACT

The effect of pretreatment of *Candida albicans* with different UV light (360 nm) intensities (4, 6 and 10 W m^{-2}) at different time intervals (6, 12, 24 and 48 h) in an attempt to investigate its influence on proteinase and phospholipase activities in correlation with ***in vitro*** adherence to Buccal Epithelial Cells (BECs) and lethality to mice were studied. Irradiated *C. albicans* cells were found to be less virulent than non-irradiated. Exposure of *C. albicans* to various doses of radiation led to a reduction in adherence between 6.8 and 66.7% of the control value. This reduction was dose intensity and time related. The secretion of extracellular proteinase and phospholipase was also reduced to statistically significant between irradiated and non-irradiated *C. albicans*. Experimental mouse groups were intraperitonialy injected with irradiated *C. albicans* and a statistically significant difference was observed between irradiated and non-irradiated *C. albicans* cells from kidneys, spleen, stomach and whole intestine, while no significant difference was found between both groups of *C. albicans* isolated from the liver. These results clearly demonstrated the significant role of ultraviolet light on phospholipase and proteinase activities and on adherence of *C. albicans* and their overall influence on the pathogenesis of *Candida* species.

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