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ORIGINAL ARTICLE

Photodynamic antimicrobial chemotherapy (PACT) with methylene blue increases membrane permeability in *Candida albicans*

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Abstract Photodynamic antimicrobial chemotherapy (PACT) is a potential antimicrobial therapy that combines light and a photosensitizing drug, promoting a phototoxic effect on the treated cells, in general via oxidative damage. In this work we studied the effect of PACT, using methylene blue (MB), on the permeability of *Candida albicans* membrane. Our results demonstrated that the combination of MB and laser (684 nm) promoted a decrease in Candida growth. The inhibition was more pronounced in the presence of 0.05 mg/ml MB and with an energy density of 28 J/cm^2. The decrease in Candida growth was associated with an increase in membrane permeabilization. Thus, we suggest that a PACT mechanism using MB can be related to damage in the plasma membranes of the cells.