



ASSOCIAÇÃO ENTRE ANTIFÚNGICOS E CARVACROL CONTRA *Rhodotorula spp.*

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RESUMO

Este trabalho teve como objetivo determinar a concentração inibitória mínima (CIM) do carvacrol e de antifúngicos (anfotericina B, cetoconazol, fluconazol e itraconazol) contra *Rhodotorula spp.*, assim como avaliar a eficácia dos agentes antifúngicos quando associados ao carvacrol. As determinações das CIMs foram realizadas utilizando o método da microdiluição e as associações do carvacrol com os antifúngicos foram realizadas pelo método *Checkerboard*. As CIMs do carvacrol contra as cepas de *Rhodotorula spp.* variaram entre 8µg/mL e 128µg/mL. As CIMs da anfotericina B, do cetoconazol, do fluconazol e do itraconazol foram 2µg/mL, entre 2 e 32µg/mL, > 1024µg/mL e 64µg/mL, respectivamente. A associação entre o carvacrol e a anfotericina B contra *Rhodotorula spp.* foi indiferente para todas as cepas testadas e a combinação do carvacrol com o cetoconazol foi sinérgica para uma cepa e indiferente para as demais. Já a combinação entre o carvacrol e o fluconazol foi antagônica para uma cepa e indiferente para as outras, e a associação entre carvacrol e itraconazol foi indiferente para uma e aditiva para as demais cepas. A associação de substâncias oriundas de plantas, como componentes de óleos essenciais, com antifúngicos podem ser promissores no combate de microrganismos causadores de infecções em seres humanos, como a *Rhodotorula spp.*

Palavras-chave: Antifúngicos, *Checkerboard*, Combinação.

ASSOCIATION BETWEEN ANTIFUNGAL AND CARVACROL AGAINST *RHODOTORULA SPP.*

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ABSTRACT

This study aimed to determine the minimum inhibitory concentration (MIC) of carvacrol and antifungals (amphotericin B, ketoconazole, fluconazole and itraconazole) against *Rhodotorula spp.*, as well as evaluate the effectiveness of antifungal agents when combined with carvacrol. The determination of MICs was performed using a microdilution method and the associations of carvacrol with antifungal agents were performed by checkerboard method. MICs carvacrol against strains of *Rhodotorula spp.* ranged from 8µg/mL to 128µg/mL. The MICs of amphotericin B, ketoconazole, fluconazole and itraconazole were 2µg/mL, ranged from 2 to 32µg/mL, > 1024µg/mL and 64µg/mL, respectively. The association between carvacrol and amphotericin B against *Rhodotorula spp.* was indifferent to all strains tested and the combination of carvacrol with ketoconazole was synergistic to one strain and indifferent to others. The combination of carvacrol and fluconazole was antagonistic to one strain and indifferent to others, and the association between carvacrol and itraconazole was indifferent to one and additive to other strains. The association of substances originating from plants, such as constituents of essential oils, with antifungal agents may be promising in fighting infectious agents in humans such as *Rhodotorula spp.*

Keywords: Antifungals, *Checkerboard*, Combination.

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