

Título: SYNERGISTIC ACTIVITY AMONG FLUCONAZOL/AMPHOTERICIN B AND A BIOACTIVE OF VEGETAL ORIGIN AGAINST BIOFILMS OF *Candida albicans* AND *Candida krusei*.

Autores: Bornelli, P.A.¹, Cantore, M.S.¹, Silva, N.C.¹, Santos, M.H.², Dias, A.L.T.¹.

Instituição¹ UNIFAL-MG – Universidade Federal de Alfenas (Rua Gabriel Monteiro da Silva, 700, Centro, 37130000, Alfenas, MG), ² UFV- Universidade Federal de Viçosa - Departamento de Química, Sala 416, Avenida Peter Henry Rolfs,s/n, campus universitário, 36570000 - Viçosa, MG)

Resumo:

Due to the ability of *Candida* spp. to form biofilm and the emergence of resistant strains to conventional antifungals agents such as fluconazole and amphotericin B it has been necessary the looking for new substances and alternatives in the combat to infections caused by these species. It was evaluated the synergistic effect between fluconazole/ amphotericin B and the bioactive Guttiferone A against biofilms of standard strains of *Candida albicans* ATCC 10231 e *Candida krusei* ATCC 6258. The association of the compounds against biofilms was evaluated in two situations, before and after biofilm formation. Drug and Guttiferone A dilutions were added alone and in combination to 96-wells polystyrene microtitre plates with biofilms in formation after the initial cell adhesion and formed ones after 24h of their formation. The microplates were maintained at 37°C. The antibiofilm activity was evaluated by the reduction of metabolic activity through the reduction of the XTT tetrazolium salt assay at 490 nm. The effect generated by combination of the compounds was calculated based on the values of the fractional inhibitory concentration (FIC) and a synergic effect was considered to FIC values under 0,5. It was observed synergism in the association between fluconazole and Guttiferone A against the biofilm formation of *C. albicans* (FIC=0.05) and *C. krusei* (FIC=0,04). The synergism in the association between amphotericin B and Guttiferone A was only seen to formed biofilms of *C. albicans* (FIC=0.04) and *C. krusei* (FIC=0.5). The results indicate that associations of compounds may be an alternative in the treatment of infections caused by *Candida* spp., especially by the possibility of reduce clinical dosages and therefore the side effects.

Palavras-chaves: *Candida* spp., biofilms, synergistic activity.

Agência de Fomento: FAPEMIG