

Protein Profile of the Strain *Trichophyton rubrum* in Response to Antifungal Agents

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Several substances are produced by microorganisms in stress conditions which, among others causes, can be result of the deficiency of nutrients in the medium or the presence of antifungal agents. In the presence of such agents, the fungus produces exo and endocellular proteins as an unspecific response. Dermatophyte fungi as *Trichophyton rubrum*, in stress conditions, produce and secrete some proteins. The aim of this work was to compare the exocellular protein production by *T. rubrum* (H6), isolated from patient presenting dermatophytosis with previous history of therapeutic failure. The strain was cultured in the absence and the presence of antifungal agents, in orbital shaker 30 rpm, at 28 °C during 7, 14 and 21 days. The protein profile was analyzed through polyacrylamide gel electrophoresis (SDS-PAGE) after silver staining. We observe alterations in bands of approximately 108 and 75.8 KDa. A band of 75.8 KDa detected in presence of griseofulvin and amphotericin B, could represent an acetylhexosaminidase, whose presence may be related to the formation of septum and hyphenation in fungi. The band of 108 KDa may be related to stress as demonstrated to be a heat shock protein in *Trichophyton mentagrophytes*. Analysis of protein expression against antifungal agents can help to elucidate mechanisms of evasion of the fungus, enabling development of new antifungal agents besides the analysis of stress processes. Such preliminary results demonstrate the necessity of subsequent studies to a better understanding of antifungal drug action mechanisms.

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