

In Vitro* Comparison of MIC Crude extracts of Active Actinomycetes Isolates with Terbinafine, Griseofulvin Ketoconazole and Fluconazole against *Microsporium canis*, *Microsporium gypseum* and *Trichophyton mentagrophytes

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Abstract

Background and Objective: Dermatophytes are the fungi that have the ability to attack the keratinized tissues such as the skin, hair and nails. Infections caused by these organisms are named dermatophytosis. We aimed to compare Minimum inhibitory concentration (MIC) of Crude extracts of Active Actinomycete Isolates with Terbinafine, Griseofulvin, Ketoconazole and Fluconazole Drugs against *Microsporium Canis*, *Microsporium gypseum* and *Trichophyton mentagrophytes*.

Material and Methods: In this experimental study, in order to find MIC by actinomycete, 100 isolates were studied and then crude extracts of the active actinomycete isolates were prepared in sterile conditions. Finally, the crude extracts obtained at different concentrations were used to obtain the MIC of *Microsporium Canis*, *Microsporium gypseum* and *Trichophyton mentagrophytes*. Moreover, various concentrations of the drugs such as terbinafine, griseofulvin, ketoconazole and fluconazole in solvent Dimethyl sulfoxide (DMSO) were prepared and their growth inhibitory effect was evaluated and then compared with the results obtained from the crude extract of active actinomycete isolates.

Results: the crude extracts obtained from active Actioiomycetes isolates and the drugs such as terbinafine, griseofulvin, ketoconazole and fluconazole, in a dose-dependent manner, could inhibit the growth of *Microsporium Canis*, *Microsporium gypseum* and *Trichophyton Mentagrophytes*.

Conclusion: compared to MIC of Crude extract of active actinomycete isolates, Terbinafine has a significant effect on the growth inhibition in all of the fungal Dermatophytes and then griseofulvin, ketoconazole and fluconazole are in the next rank, respectively.

Keywords: Actinomycetes Crude Extract, *Microsporium Canis*, *Microsporium Gypseum*, Terbinafine