

***In Vivo* Study on the Hindrance Activity of Cinnamon Extract Against *Aspergillus niger* in Mice**

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Abstract : Aim: The antimycotic effect and immune stimulating capacity of natural extract of *Cinnamomum zeylanicum* plant was evaluated against *Aspergillus niger* strain.

Methods and results: the herbal extract was prepared from cinnamon bark to be examined against *Aspergillus niger* (ATCC16404) species fungal cell suspension. Mice were injected with both fungal cell suspensions and *Cinnamomum zeylanicum* extract in a certain regime. Histopathological examination was applied on lung, liver and brain tissues extracted from the experimental animals and histopathological findings revealed the strong fungicidal effect of the herbal extract in the mice's tissues. Phagocytic activity, interleukins 2 & 6 (IL 2 & IL6) and tumor necrosis factor (TNF) were measured in mice's blood samples as immunity stimulating efficacy parameters and also results revealed the potent immune stimulating efficacy of the extract and its safety *in vivo*.

Conclusion: According to the results of the study, *Cinnamomum zeylanicum* extract has a strong fungicidal activity against *A. niger* (ATCC16404) in addition to potent immune stimulating action confirmed experimentally. Results are supporting the efficacy of *C. zeylanicum* extract as prophylactic agent as well as fungicide.

Significance and impact of the study: our study spotted a light on the advantages of the examined herbal extract as antimycotic substance, the promising results revealed encourages the use of *C. zeylanicum* extract as pharmaceutical preparation for treating and prevention of mycosis in immunocompromised patients instead of using some chemical antimycotic preparations available for commercial use to avoid the disadvantages of these chemically prepared medications.

Keywords: *Cinnamomum zeylanicum*– Interleukin 2 – Interleukin 6 – Antimycotic extract – Immunostimulant.