

P002 Bioactive proteins from *Escherichia coli* having antimycotic properties

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The need for safe and effective antifungal agents increases in parallel with the expanding number of immunocompromised patients at risk for invasive fungal infections. *Escherichia coli* is an important component of gut flora. It also found to be associated with anti-allergic properties. We had investigated the anti-*Aspergillus* properties in lysate of *E. coli* BL 21. In the present study, the antifungal protein components of *E. coli* BL 21 were purified using pathogenic isolates of *Aspergillus* and *Candida*. The antifungal protein was purified with a procedure involving ion exchange chromatography on DEAE Cellulose, gel filtration chromatography on Sephadex G 100 and HPLC on C18 reverse phase chromatography. The molecular weight of the purified protein was estimated as 39.306 kDa by a software namely, Kodak 1D software. The purified protein inhibited the growth of *A. fumigatus* completely at a concentration of 1.95 µg/ml by microbroth dilution assay. It also inhibited the 100 % growth of *Candida albicans* at 15.62 µg/ml concentration by percent growth inhibition assay. *In vitro* toxicity tests demonstrated that purified protein showed no toxicity against human erythrocytes. This protein was found to be active upto 40° C. These results indicated that *E. coli* BL21 might be important leads for developing new therapies for treating fungal infections.