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Effect of honey bee venom on Candida albicans in comparison with Ketoconazole Amphotericin B

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Statement of the Problem: The Candida species are the most important factors of fungal infections in humans and animals. Due to side effect and resistance to anti-fungal drugs, honey bee venom is considered as an antimicrobial material.

Methodology & Theoretical Orientation: At first, the venom was gathered by electric shocks and its antimicrobial properties were examined using disk diffusion method. Then MIC, MFC and IZ between the venom and the drugs were calculated using Analysis of Variance (ANOVA) method and mean comparison was done using Tukey method.

Findings: Results showed that different venom concentrations possess inhibitory effect on C. albicans and MIC and MFC were calculated 24 and 28 µg/mL, respectively. Comparison between the venom and two antifungal drugs also showed that the venom has low effect in given concentrations. A meaningful difference was observed between Ketoconazole and Amphotericin B.

Conclusion & Significance: Results showed that honey bee venom poses antimicrobial properties on *Candida albicans*. So more accurate toxicology examinations and derivation its compositions can help us to formulate new natural antibiotics.

Biography

Shahin Gavanji was selected as the Best Science and Technology Young by Ministry of Science, Research and Technology of Iran in 2013. He also could win the best young symbol from Iran president hands prize in 2010 for the second time. He was chosen as the best inventor of Iran in 2009.

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