

# The Enzymatic Activity and Molecular Characterization of a Secreted Subtilisin-Like Protease in *Microsporum gypseum* and *Trichophyton vanbreuseghemii*

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R�sum� en anglais	<p>Background: Subtilisin -like proteases are the group of proteases including keratinases found in dermatophytes which degraded keratin. Determination of the proteases activity of <i>Trichophyton vanbreuseghemii</i> isolates which were obtained from soil and clinical and soil isolates of <i>Microsporum gypseum</i> in Iran and characterization of their genome were aim of present study. Methods: Ezymatic activity was determined by use of chromogenic substrates. The genes, which coded subtilisin-like proteases in above-mentioned dermatophytes, was identified and amplified by using specific primers in PCR. Results: The highest yield of enzyme production was observed in only one isolate of <i>T. vanbreuseghemii</i> Ir-84 whereas low enzyme activity was observed in <i>M. gypseum</i> isolates. Homology study of obtained nucleotide as well as amino acid sequences indicated different rates of homology with other subtilisin-like proteases genes in other pathogenic dermatophytes. Conclusion: Intra-strain differences were observed in production of serine proteinases and molecular characterization of genes encoding such enzymes could be of great interest for studies on pathogenicity and other purposes.</p>
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