1. International Eurasia MYCOLOGY CONGRESS



web: www.emcmanisa2017.com

EMC 2017

Characterization of metalloprotease genes in anthropophilic Trichophyton rubrum

Aylin DÖGEN¹, Engin KAPLAN^{2,4}, Serpil GONCA², Süleyha HİLMİOĞLU-POLAT³, Macit İLKİT⁴.

¹Department of Pharmaceutical Microbiology, Faculty of Pharmacy, University of Mersin, Mersin, Turkey

²Advanced Technology Education, Research, and Application Center, Mersin University, Mersin, Turkey

³Division of Mycology, Department of Microbiology, Faculty of Medicine, University of Ege, İzmir, Turkey

⁴Division of Mycology, Department of Microbiology, Faculty of Medicine, University of Çukurova, Adana, Turkey

serpil8585@gmail.com

Dermatophytes are considered as the most common cause of superficial fungal infections in both humans and animals. Several metalloproteases are described for dermatophytic fungi and exhibited keratinolytic, elastinolytic, and/or collagenolytic activities. We here investigated the isolated DNAs and the designed primers to amplify the metalloproteases genes (*MEP1-5*) of the anthropophilic *Trichophyton rubrum* using PCR. A total of 46 human isolates were included in the present study. Overall, *MEP-1* gene was found to be positive in 33 (71.7%) isolates, *MEP-2* gene in 34 (73.9%), *MEP-3* gene in 29 (63%), *MEP-4* gene in 28 (60.9%) and *MEP-5* gene in 32 (69.6%) of the isolates. The results of this study demonstrated the presence of *MEP1-5* genes in *T. rubrum* isolates from our region, hence we able to discuss the role of *MEP1-5* on the pathogenetic mechanisms of dermatophytic fungi. We suggested that none of the screened genes is indispensable for the infection progress.

Keywords: Anthropophiles, metalloprotease, pathogenesis, *Trichophyton rubrum*This study was supported by Academic Research Project Units of Mersin University

(Project no: 2015-AP3-1230)