

Abstract:

Dermatophytes are a group of phylogenetically related microscopic fungi of the order Onygenales, the *Arthrodermateaceae* family, capable of using keratin as a source of nutrition. Some species are important pathogens of vertebrates including humans. The aim of my bachelor thesis was to summarize the current knowledge about virulence factors of dermatophytes, taking into account their possible role in the host specificity. In the main part, I describe the virulence factors, pathogenesis mediating molecules, in the context of the individual stages of infection, such as adherence, degradation of the keratin, or suppression of the immune response. The study of these factors in general, deserves increased attention because their knowledge can lead to the development of targeted treatment. Some aspects of pathogenesis, e.g. keratolysis and fighting the immune system, are relatively well studied. However, we know almost nothing about the other factors, especially about those mediating host sensing and adherence, but they could provide important information on identifying the host specificity of dermatophytes. The final chapter is dedicated to a discussion about the potential ability of these virulence factors to influence the selection of the host. My thesis brings a comprehensive overview of the pathogenesis of dermatophytes and implies possible directions of research leading to a better understanding of dermatophytosis mechanisms.

Key words: dermatophytic fungi, *Trichophyton*, *Microsporum*, skin pathogens, virulence factors, dermatophytoses, host specificity