

## **Abstract**

In my bachelor thesis I have dealt with the role and application of the molecular methods in the taxonomy and epidemiology of the dermatophytes and the question of the species concepts in dermatophytes. In the first part, I focused on the evaluation of the advantages and disadvantages of the recent species concepts and their problematic application in dermatophytes. The second part is focused on the molecular methods that used genetic markers for phylogenetic analysis and species delineation within dermatophytes, e.g. the PCR-RFLP method, PCR-fingerprinting and DNA sequencing. I have evaluated the discrimination power of the particular DNA sequence loci to distinguish closely related species. In the last part, I have summarized the molecular methods that have been used in the typization at the intraspecific level, e.g. microsatellite analysis, PCR-fingerprinting, multilocus sequence typing.