A Journey through Onygenalean Families. Arthrodermataceae and Ajellomycetaceae
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Summary

The thesis “A journey through onygenalean families Arthrodermataceae and Ajellomycetaceae” focuses on the taxonomy of dermatophytes and emerging dimorphic fungi, searches for the best (secondary) locus for identification and phylogeny of these important onygenalean families, and tests LC-MS/MS as an alternative method for identification. For both Arthrodermataceae and Ajellomycetaceae, a thorough phylogenetic study based on four and five loci, respectively, was performed, which resulted in demarcation of some species boundaries, re-classification of others, and introduced new genera and species. Locus assessment has revealed that ITS is among the best markers for identification and phylogenetic study for Arthrodermataceae, and rPB2 for Ajellomycetaceae while TUB2 is the second best for both families. For species complexes and pairs or groups of fungi with high levels of genetic similarity, LC-MS/MS was used to supplement or exchange molecular characterization. For full characterization of the (novel) taxa, all identification methods should be combined. First results of antifungal susceptibility testing of the newly described dimorphic fungi are important to guide and establish clinical treatment protocols for dimorphic fungi, especially in cases where reference methods for these important systemic pathogens are lacking.