ABSTRACT

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The study of antimycotic activity of newly synthetized substances
Rigorous thesis
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Study program: Pharmacy

Background: The aim of this rigorous thesis was to evaluace the antimycotic activity of 77 substances prepared at the Department of Inorganic and Organic Chemistry, Faculty of Pharmacy in Hradec Králové of Charles University in Prague.

Method: The substances were tested by the microdilution broth method and all substances were tested at eight strains of yeasts and filamentous fungi. The tested substances were divided into five groups according to their chemical structure to salicylanilide carbamates, sulfoneamide ureas – derivates of sulphamethoxazole, sulphonamide imidazolidinetriones – derivates of sulphamethoxazole, derivates of isoniazide and substances with disunited structure.

Results: The highest antimycotic activity was discovered in group of salicylanilide carbamates. There were tested 28 derivates of this group, from which 18 of them showed antimycotic activity. On the other hand, substances from group of derivates of isoniazide showed no antimycotic activity. The most susceptible strain was *Trichophyton mentagrophytes* and the most resistant was strain *Aspergillus fumigatus*.

Conclusions: To utilize these newly tested substances in a clinical practice, it is necessary to perform any other tests and clinical studies to prove sufficient antimycotic effect.

Key words: antifungal drugs, resistance, minimal inhibitory concentration, antimycotic activity