

ABSTRACT

Department of Biological and Medical Sciences

Faculty of Pharmacy in Hradec Králové

Charles University in Prague

Author: Ivana Ťapuchová

Title of diploma thesis: Evaluation of activity of potential antifungal substances through the use of microdilution broth method

Supervisor: Mgr. Marcela Vejsová, Ph.D.

Background: The aim of this diploma thesis was to evaluate potential antifungal activity of 52 test substances which were developed at the Department of anorganic and organic chemistry Faculty of Pharmacy in Hradec Králové Charles University in Prague.

Methods: For testing we used microdilution broth method on eight strains of yeasts and filamentous fungi in the laboratory of Department of Biological and Medical Sciences.

Results: Overall 26 test substances with various substituents had antifungal activity. These substances were derivatives of 4-aminobenzoic acid, 4-aminosalicylic acid, 5-aminosalicylic acid and large group derivatives of sulfonamids. The most sensitive strain was dermatophyte *Trichophyton mentagrophytes*, the least sensitive strain was filamentous fungi *Absidia corymbifera*.

Conclusions: Despite there was observed antifungal activity in low concentrations of derivatives, it is necessary to perform next tests and clinical studies to prove efficiency and safety for use.

Key words: yeasts, filamentous fungi, antimycotics, minimal inhibitory concentration, microdilution broth method