

Abstract

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Title of diploma thesis: **Synthesis of substituted arylguanidines as potential drugs IX.**

The increasing incidence of diseases caused by fungal and mycotic pathogens, many of which acquire resistance to available antifungal substances, causes the need for a search for new molecules inhibiting their growth. The worldwide research is focused on substances derived from guanidine which were found to be potentially active against many strains of fungi and bacteria. Faculty of Pharmacy in Hradec Králové has been researching these substances for many years. The aim is to get the most active compounds from the group of substituted arylguanidines and find a structure-activity relationships effect of these substances.

In this study the seven previously undescribed molecules were synthesized: 1-(4-methyl-2-octylsulfanyl)phenylguanidinium nitrate, 1-(4-methyl-2-dodecylsulfanyl)phenylguanidinium nitrate, 1-(4-methyl-2-dodecylsulfanyl)phenyl-3,3-dimethylguanidine, octyl-(4-methyl-2-nitrophenyl)sulfide, 5-methyl-2-(octylsulfanyl)aniline, dodecyl-(4-methyl-2-nitrophenyl)sulfide and 5-methyl-2-(dodecylsulfanyl)aniline. Three of them were further tested on fungal and bacterial strains .