

ABSTRACT

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Title of Thesis: Derivatives of Rhodanine as Potential Antifungal Drugs

Rhodanine (2-thioxo-1,3-thiazolidin-4-one) forms the basic skeleton of many biologically active substances and potential drugs. Antifungal properties of rhodanine derivatives have been studied since the early 1950s.

Theoretical part of the thesis deals with mycoses and drugs that are currently used to treat them. The aim of the experimental work was to find suitable reaction conditions for Mannich reaction of (5*Z*)-5-(subst.)benzylidenes-2-thioxo-1,3-thiazolidin-4-ones with various amines. The attempts to prepare Mannich bases using diethylamine as the basic component were unsuccessful. (5*Z*)-5-benzylidene-3-(morpholin-4-yl-methyl)-2-thioxo-1,3-thiazolidin-4-one was successfully obtained by treating (5*Z*)-5-benzylidene-2-thioxo-1,3-thiazolidin-4-one with formaldehyde and morpholine in dimethylformamide. This compound was reported previously and exhibited antibacterial activity and acceptable toxicity. Hence, Mannich bases derived from (5*Z*)-5-arylalkylidene-2-thioxo-1,3-thiazolidin-4-ones deserve further attention as potential antimicrobial agents.