Abstract

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Title of thesis: Synthesis of benzothiazole derivatives as potential DNA Gyrase-B inhibitors

Aim of this diploma thesis was the synthesis of benzothiazole derivatives as potential inhibitors of Gyrase-B. First suggested structures were designed as analogues of alkaloid oroidin gained from marine sponge *Angelas oroides*. Successful series with high inhibitory activity were derivatives of 4,5,6,7-tetrahydrobenzo[1,2-d]thiazole. To increase inhibitory activity, series of benzothiazole derivatives were designed. 6-nitrobenzo[d]thiazole-2-amine was used as starting compound and substituted in position 2 and 6 for different substitution.

In second part, this diploma thesis is focused on preparation of 3,4-dichloro-5-methyl-1H-pyrrole-2-carboxylate in large quantity as a key substituent for further reactions.