

Charles University

Faculty of Pharmacy in Hradec Králové

Department of Pharmaceutical Chemistry and Pharmaceutical Analysis

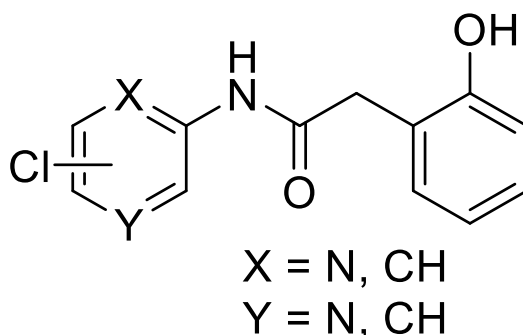
Candidate: Fahim Joe Rahi

Supervisor: Assoc. Prof. PharmDr. Jan Zitko, Ph.D.

Title of diploma thesis: Design, synthesis, and evaluation of heterocyclic compounds with potential antimicrobial activity III

The overuse of antibiotics has led to an alarming increase in resistance. The acute need for antibiotics with novel mechanism of action has driven our research to find promising new compounds through a HIT-SAR study.

The scaffold was inspired by a recent publication. Our compounds have an additional methylene bridge between the heterocycle and the benzene ring. This methylene bridge increases the flexibility of the structure, which might improve the interaction potential of the compounds.



In general, the methylene bridge did not improve the antimicrobial properties of the intended compounds. In some cases, the antimicrobial activity was significantly reduced in comparison to published compounds. MIC was insufficient to perform additional microbiological testing.