

CHARLES UNIVERSITY IN PRAGUE  
FACULTY OF PHARMACY IN HRADEC KRÁLOVÉ

Department of Inorganic and Organic Chemistry

Study program: Pharmacy

Author: **Maria Kourtidou**

Supervisor: Prof. RNDr. Jarmila Vinšová, CSc.

Year of defence: 2013

Title of theses: **Synthesis of 5-nitrosalicylanilide derivatives with potential antibacterial activity**

(Syntéza 5-nitrosalicylanilidových derivátů s potenciální antibakteriální aktivitou)

**Evaluation:**

Diploma thesis named „**Synthesis of 5-nitrosalicylanilide derivatives with potential antibacterial activity I**“, deals with the synthesis of novel compounds from salicylanilide group with potential antimycobacterial activity. It is a part of our on-going research that is focused on the multidrug resistance tuberculosis strains and their inhibition. We would like to know how the nitro group influences this activity.

Maria Kourtidou has worked in my laboratory together with her schoolmate Styliani Karagianni on the very same topic. They prepared compounds differing only in the position of nitro group on the salicylic part of molecules. Although the difference of molecules was small, reactions gave different yields.

First of all she passed through on-line Reaxys data to know if the suggested molecules are original. Some structures were found but without details for biological activity. She managed synthesis using a microwave reactor, learned crystallization, chromatography on TLC and partly also flash chromatography. Procedure of the synthesis was simple, but in the end after several recrystallizations she obtained very low yields. The main problem to finish work with good results was the time. She left the faculty before Christmas without knowing NMR results and returned just before handing the written thesis. Thus it was not possible to do other experiments, release salicylanilides from their salt forms. Existence of the salt was unfortunately found on  $^1\text{H}$  NMR at the last minute.

She wrote the thesis on the distance and returned only a week before handing it. This fact is reflected in the quality which could be better.

In spite of this fact the paper has all elements for the diploma thesis on the Faculty of Pharmacy, Charles University so I recommend it for the final defence with evaluation “**good**”.

Hradec Králové, Mai, 25th, 2013

signature