

CHARLES UNIVERSITY
FACULTY OF PHARMACY IN HRADEC KRALOVE
Department of Pharmaceutical Chemistry and Pharmaceutical Analysis

Study program: Pharmacy

Opinion of the Thesis Tutor/Consultant about the Diploma Thesis

Year of assignment: 2021

Year of the defense: 2024

Student: **Fahim - Joe Rahi**
Thesis Tutor: doc. PharmDr. Jan Zitko, Ph.D.
Consultant: Mgr. Marek Kerda
Opponent: PharmDr. Marta Kučerová, Ph.D.
Thesis title: **Design, synthesis and evaluation of heterocyclic compounds with potential antimicrobial activity III**

Scope of work, number of: 62 pages, 15 figures, 3 tables, 59 citations

Evaluation of experimental work:

- | | |
|---|-----------|
| a) Evaluation of methodological procedures: | Very good |
| b) Skill in the laboratory or in obtaining experimental data: | Very good |
| c) Independence: | Excellent |
| d) Initiative: | Excellent |
| e) Diligence and conscientiousness: | Excellent |

Evaluating the processing of results and writing up the thesis:

- | | |
|---|-----------|
| a) Processing of results (diligence and independence): | Good |
| b) Interpretation and discussion of results: | Very good |
| c) Literary research: | Excellent |
| d) Text processing (stylistic level): | Excellent |
| e) Formal level of the work (text structure, graphic design): | Very good |

I recommend the thesis for recognition as a rigorous thesis

Verbal evaluation, distinctive features of the author, and the thesis:

Joe joined our research group with a sincere interest in computational modeling and antimicrobial research. Under the supervision of Mgr. Marek Kerda, Ph.D., he began experimental work on synthesizing N-substituted amides of phenylacetic acid. The compounds were intended as antimicrobial, specifically antimycobacterial compounds, and represent an important extension (higher homologues) of compounds previously published within our group. Joe performed simple acetylations and prepared amides via several routes (SOCl₂, oxalyl chloride, CDI coupling). From non-routine methods, he learned how to use TLC-MS and flash chromatography. He also learned the basics of structure-based drug design in MOE (Molecular Operating Environment).

Joe learned to work independently in the lab, and his motivation stayed high throughout his years within our group. Considering the weak points of the candidate, his rather poor self-organization and note-taking prevented Joe from using his potential and achieving better results. The consultant partially guided the write-up of the diploma thesis. My comments and suggestions on the draft were incorporated, although sometimes not correctly, and some errors persisted in the final version of the thesis. Partial results were presented at the

Student Scientific Conference, and the obtained results will be incorporated into a future publication. Joe stays motivated and would like to pursue a Ph.D. within our group.

The thesis similarity check shows a cumulative similarity of 26%. The Turnitin system indicated a cumulative similarity of 37% (including matches in the list of cited literature), but the similarity to any single document does not exceed 2%. After careful examination of the protocols, I consider the thesis an original work.

Evaluation of the thesis: Very good

For the defense: Recommend

In Hradec Králové

1. června 2024

signature of the opponent