

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

Study program: Pharmaceutical Sciences

Opinion of the Thesis Tutor/Consultant about the Diploma Thesis

Year of assignment: 2021

Year of the defense: 2023

Student: **Nechirwan Taimur Abdalrahman, B.Sc.**
Thesis Tutor: doc. PharmDr. Jan Zitko, Ph.D.
Consultant: -
Opponent: doc. PharmDr. Veronika Nováková, Ph.D.
Thesis title: **Design, synthesis and evaluation of heterocyclic compounds
with potential antimicrobial activity VI**

Scope of work, number of: 64 pages, 13 figures, 3 tables, 41 citations

Evaluation of experimental work:

- | | |
|---|-----------|
| a) Evaluation of methodological procedures: | Excellent |
| b) Skill in the laboratory or in obtaining experimental data: | Excellent |
| 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): | Excellent |
| b) Interpretation and discussion of results: | Very good |
| c) Literary research: | Very good |
| d) Text processing (stylistic level): | Very good |
| 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:

As a diploma student, Nechirwan joined our research group in his 1st year of master's studies. He became involved in synthetic work in our laboratory, where he joined several running projects on small heterocyclic compounds as antimicrobial drugs. Nechirwan learned the basics of simple organic synthesis, operating the microwave reactor and handling the automated flash chromatographs. Eagerly, Nechirwan progressed to mostly independent work and began working on his project of 3-phenylureido-pyrazine-2-carboxamides as new inhibitors of mycobacterial prolyl-tRNA synthetase. He also learned the basics of structure-based drug design methods based on molecular docking and applied this in his project/diploma thesis. The write-up of the diploma thesis was independent at first, but significant corrections concerning the syllabus of the thesis were needed from my side. My comments on the draft were carefully incorporated, and overall, I am satisfied with the outcomes of the project. Partial results of the diploma thesis were presented at the Student Scientific Conference 2022. The obtained results will later form a significant part of an impacted publication.

The Theses similarity check gives a cumulative similarity of 35 %, with the highest similarity to the diploma thesis of A. Fekri (2023) elaborated as well in our group on a similar topic. The indicated similarities are located mainly in the description of the common laboratory equipment, where they are understandable. The Turnitin system indicates a cumulative similarity of 39 % including the matches in the list of cited literature. After a detailed examination of both protocols, I note that the matches found are insignificant and are located in parts where they are expected and understandable (e.g. instrumentation, description of biological assays, etc.). Therefore, I deem this thesis as an original work.

Evaluation of the thesis: Excellent

**For the Recommend
defense:**

In Hradec Králové

11. září 2023

signature of the opponent