

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: 2023

Year of the defense: 2023

Student: **Miroslav Domanský**
Thesis Tutor: doc. PharmDr. Jan Zitko, Ph.D.
Consultant: Mgr. Marek Kerda
Opponent: prof. PharmDr. Petr Zimčík, Ph.D.
Thesis title: **Synthesis of novel inhibitors of human topoisomerase based on highly substituted phenyl scaffold**

Scope of work, number of: 76 pages, 26 figures, 0 tables, 48 citations

Evaluation of experimental work:

- | | |
|---|-----------|
| a) Evaluation of methodological procedures: | Excellent |
| 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): | Excellent |
| b) Interpretation and discussion of results: | Excellent |
| c) Literary research: | Excellent |
| 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, Miroslav Domanský joined our research group in his 3rd grade of master studies. He became involved in synthetic work in our laboratory, where, under the supervision of doctoral student Marek Kerda, he worked on the synthesis of substitute quinzoline-4(3H)-one derivatives as antimicrobial drugs. In this project, M. Domanský prepared 11 derivatives. These results would be both quantitatively and qualitatively sufficient to comprise a diploma thesis. Nevertheless and based on our recommendation, Mirek left for the Erasmus+ stay hosted at the Faculty of Pharmacy, University of Ljubljana (Slovenia), where he worked under the leadership of Prof. Janez Ilaš, M.Pharm., Ph.D. on the project of new inhibitors of human topoisomerase II. The write-up of the diploma thesis was independent, and my comments, as well as the comments of M. Kerda were carefully incorporated.

Quoting from the official Erasmus+ record:

“(He) learned how to use HPLC-MS – how to run the machine, how to prepare samples and how to analyse results. He also learned new methods and approaches used in synthesis of organic compounds. Overall, he gained valuable knowledge which will be very useful in the

future, for the work in laboratory. He showed very good level of expertise and independent working.”

Mirek also participated in two editions of Student Scientific Conference in past years.

The Theses similarity check gives a cumulative similarity of 25 %, with the highest similarity to the diploma thesis of B. Koutnikova (2023) elaborated on a similar topic and In the same Slovenian laboratory. The Turnitin system indicates a cumulative similarity of 34 % 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 assays performed at the host institution etc.).

Evaluation of the thesis: Excellent

**For the Recommend
defense:**

In Hradec Králové

11. září 2023

signature of the opponent