

**CHARLES UNIVERSITY
FACULTY OF PHARMACY IN HRADEC KRALOVE**

Department KFLT

Study program: Pharmacy

Opinion of the Opponent Diploma Thesis

Year of defense: 2023

Student: **Bc. Bahareh Bolboli**
Thesis Tutor: prof. PharmDr. František Štaud, Ph.D.
Consultant: Kasin Yadunandam Anandam, Ph.D.
Opponent: PharmDr. Alejandro Carazo, Ph.D.
Thesis title: **Precision-cut placental slices as a model to study inflammatory response**

Scope of work, number of: 43 pages, 12 figures, 0 tables, 54 citations

Evaluation of the work:

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|---|-----------|
| a) Topicality/ originality of the topic: | Excellent |
| b) Processing of the theoretical part: | Very good |
| c) Transparency and clarity of the text: | Very good |
| d) Concision and adequacy of conclusions: | Excellent |
| e) Meeting the objectives of the work: | Excellent |
| f) Quantity and up to date of references: | Excellent |
| g) Language level (stylistic and grammatical level): | Very good |
| h) Formal level of the work (text structure, graphic design): | Very good |

Comments on the evaluation:

The diploma thesis from student Bc. Bolboli focuses on precision cut placenta slices as a model for the study of inflammation and aims to determine if sex is a factor influencing the outcome to this physiological process. The aim of this work is interesting and the manuscript is well organized. However, there are several issues I noticed when reading the diploma thesis which require to be mentioned, in particular, the repetition of similar information, often literally (pages 5-9). Throughout the manuscript i have detected several imprecissions or formal mistakes: (page 27) the student mentions that further investigations are warranted, but this is, in my opinion, a grammatical nonsense - I guess she meant required/desirable; latin terms (ex vivo, ad libitum, ex vivo) should be written in italics. Quite shocking is the mistake in the chemical symbol of oxygen and carbon dioxide: superindex instead of subindex (!) (page 12). I have to mention that the thesis has, according to Turnitin software, a 53% similarity with other works. Particularly high is the similarity with a paper of the same research group (23%) on which this work is based, and of which the student is co-author. Although i understand the similarity, it is my opinion that this particular problem could be avoided by changing the workflow in the problematic passages, specially in such a short-extension diploma thesis.

Questions and comments to student:

1) The first sentence in the abstract starts with "maternal inflammation..", was does the student mean by with this term?; 2) Viability was determined using MTT method but no positive control is shown in the results (figure 8A-F), was some control used in the experiments to check the correct functioning of the method? 3) Based on what information

were the LPS and Poly I:C concentrations chosen? 4) TNF gene expression after Poly I:C 4h-treatment for female placenta (Fig. 9C) and 18h-treatment for male placenta (Fig. 9B) have a strange distribution with a narrow sample box and high s.d. whiskers. How does the student explain this distribution which is not observed in Fig. 9A or 9D (except for 10 µg/ml in Fig. 9D)? A similar effect is observed in Fig. 10B.

Evaluation of the thesis: Excellent

**For the Recommend
defense:**

In Hradec Králové

18. září 2023

signature of the opponent

