

REVIEW

**on PhD-thesis: "Pharmacognostic, technological study of wormwood
Artemisia gmelinii and creation of phytosubstances on its basis" presented for
defense on specialty 6D110400 - «Pharmacy» on scientific degree competition
of Doctor of Philosophy (Ph.D) by
Mamatova Aliya Serikzhanovna**

It is my pleasure and honor to evaluate the Ph.D Dissertation of Ms. Aliya Mamatova entitled "Pharmacognostic, technological study of wormwood *Artemisia gmelinii* and creation of phytosubstances on its basis".

Ms. Aliya Mamatova has been graduated a full-time doctoral program in "Pharmacy" department of Asfendiyarov Kazakh National Medical University on specialty 6D110400 - «Pharmacy» in 2017.

Ms. Aliya Mamatova proved itself as a capable, industrious and promising researcher in the field of pharmacy during the period of doctoral program. Successful work on the dissertation thesis of Aliya Mamatova is largely determined by the presence of the good theoretical training and practical skills in the preparation of dosage forms from medicinal plant of wormwood *Artemisia gmelinii*.

Ms. Aliya Mamatova worked in laboratories of Department of Pharmaceutical Microbiology with Laboratory for Microbiological Diagnostocs and Department of Pharmacognosy with Medicinal Plant Unit, Faculty of Pharmacy with Medical Analytics Division as PhD student from 25th January to 25th February 2016.

She was engaged in a project dealing with the secondary metabolites of endemic plant *Artemisia gmelinii*. The aim of her project was to measure the antioxidant potential, as well as antimicrobial properties of the selected extracts, and perform a detailed identification of the extracts' components with application of modern techniques.

During her scholarship, the PhD candidate was realizing her individual plan of scientific work, but also took part in different classes and lectures for pharmacy students of Medical University of Lublin. In her research work she was trained about the safety conditions in the laboratory.

Moreover, she was introduced to the general stages of the development of scientific results in the field of pharmacognosy and has learnt to different analytical techniques applied in the research work with plant material. She was trained to work alone, but also in a group to be able to organize the laboratory work and also to follow the guidelines.

Ms. Aliya Mamatova showed herself as skillful, thoughtful, conscientious researcher, able to analyze and make valid conclusions, that evidenced about 20 publications in renowned scientific journals, including foreign ones. It should be emphasized, her strongly pronounced skills as investigator and ability to plan or conduct independent research, qualitative statistical data processing and mathematical calculations.

The study performed on the topic of the thesis is an original scientific work, which achieved all of the goals and objectives.

In summary, the research work done by Ms. Aliya Mamatova is original and more than enough to award her the PhD degree.

Sincerely yours,

KIEROWNIK
Katedry i Zakładu Mikrobiologii Farmaceutycznej
z Pracownią Diagnostyki Mikrobiologicznej

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