

OPINION

by Assoc. Prof. Blagoy Angelov Uzunov, Ph.D.

Department of Botany, Faculty of Biology, Sofia University "St. Kliment Ohridski", member of the Scientific Jury, appointed by Order № P-109-333 / 06.08.2021 of the Rector of the Medical University - Varna „Prof. Dr. Paraskev Stoyanov”

on the dissertation of Petya Boycheva Atanasova, PhD student in full-time education at the Department of Biology, Faculty of Pharmacy at the Medical University - Varna "Prof. Dr. Paraskev Stoyanov" for awarding the educational and scientific degree "Doctor" in the field of higher education 4. Natural sciences, mathematics and informatics, Professional field: 4.3. Biological Sciences (Botany), on the topic: "Ethnobotanical study of medicinal plants in the region of the Northern Black Sea coast", with scientific supervisor - Prof. Dimcho Zahariev, Ph.D. and scientific consultant - Prof. Dobri Ivanov, Ph.D.

Compliance with the procedure and the doctoral student with the national legislation

The presented materials and documents on electronic media by Petya Boycheva Atanasova for awarding the educational and scientific degree (ESD) "Doctor" are in accordance with the current Law for development of the academic staff in the Republic of Bulgaria, Regulations for application of the Law for development of the academic staff in the Republic of Bulgaria and Regulations for the development of the academic staff at the Medical University "Prof. Dr. P. Stoyanov "- Varna (MU-Varna). From the attached reference for compliance with the national minimum requirements for (ESD) "Doctor" for the respective scientific field it is evident that the candidate fully meets them. I have no substantive criticism of the documents submitted.

Characteristics of the dissertation

The dissertation is designed according to the requirements of MU-Varna. It consists of 177 pages of text with 68 figures, 13 tables and 12 separate pages with appendices containing 1 table and 8 figures (photos) - a total of 189 pages.

The work is an in-depth ethnobotanical study on the use of medicinal plants for prevention, treatment and in the lives of local residents of the Northern Black Sea coast of Bulgaria, including the use of medicinal plants: in human and veterinary medicine, cosmetics, culinary, pet food animals and

bee pastures, for decorative purposes, for household purposes, for sale, for weather forecasting, in folk traditions and customs. The topic is extremely relevant not only because of the trend of globalization, leading to a reduction and irreversible loss of traditional knowledge about medicinal plants, but also because of their conservation importance at national and European level. Of the identified species, 55 have a conservation status. The purpose of the dissertation is clearly stated. Quite a few, quite ambitious and comprehensive tasks have been set. Appropriate, modern methods are used, which is a guarantee for the reliability of the obtained results. The reference is composed of 354 sources, of which 172 are in Cyrillic and 182 in Latin, in addition, 12 more sources of national and international law, as well as 16 websites. This shows that the doctoral student is fully aware of the research problem and testifies to her skills for critical evaluation and use of existing information in the interpretation of her own data.

Significance and persuasiveness of the obtained results and conclusions and character of the scientific contributions

The topic of the dissertation requires multifaceted and in-depth knowledge and practical skills, which Petya Atanasova has definitely acquired during the development of her dissertation, to which her scientific supervisor and scientific consultant undoubtedly have an important contribution. The doctoral student demonstrates good research skills for planning the study and selection of appropriate classical and modern methods and tools, as well as for the correct interpretation and analysis of the results. They are convincing and presented in an appropriate way.

As a result of the study, 333 species of medicinal plants have been reported, used in human and veterinary medicine, as well as in a large number of different applications in the life of the locals from the Northern Black Sea coast of Bulgaria. In addition, 98 species of medicinal plants with application in human medicine have been registered, which are new for the region of the North Black Sea coast in ethnobotanical terms. New localities of some conservation important species have been identified, and new scientific information has been collected for others. Recommendations have been made for the creation of a national database with results from ethnobotanical studies, as well as to initiate activities for their promotion. In my opinion, the results in the dissertation of Petya Atanasova are presented in a convincing way, her analyzes and conclusions are correct and logical, and the development is an original contribution to the fundamental knowledge of ethnobotany in Bulgaria and Europe.

Evaluation of the quality of the scientific works, reflecting the research on the dissertation

In the attached reference are presented 5 scientific publications, and in 3 of them Petya Atanasova is the first author. Two of the publications are in an impact factor journal (IF = 0.468 for 2020) and an impact rank (SJR = 0.190 for 2020), one is in a journal with an impact rank (SJR = 0.127 for 2018) and two are in a journal that is referenced but not indexed. One of the publications has been reflected in the scientific literature as it is cited in a referenced and indexed journal. In this way, the doctoral student meets and even exceeds the requirements for publishing activity related to the dissertation. The attached reference also lists 3 participations of Petya Atanasova in scientific forums, all of which he is the first author of. Thanks to this, the doctoral student was able to acquaint the scientific community with the results of her research on the topic of her dissertation.

Reasoned conclusion

The dissertation is a research on a topical issue related to an in-depth ethnobotanical study in the Northern Black Sea coast regarding the application of medicinal plants. It is a personal work of the doctoral student, who shows enough theoretical knowledge and skills to conduct independent research. The dissertation meets the requirements of the Law for the development of the academic staff in the Republic of Bulgaria and the Regulations for the development of the academic staff in MU-Varna. What has been said so far gives me reason to convincingly evaluate the dissertation of Petya Boycheva Atanasova and to vote FOR the award of ESD "Doctor". I would like to recommend to the esteemed members of the Scientific Jury to support the award of ESD "Doctor" in professional field 4. 3. "Biological Sciences", Scientific specialty "Botany" by Petya Boycheva Atanasova.

17.09.2021 r.

Sofia

Prepared the opinion:

/Assoc. Prof. Blagoy Uzunov, PhD/

