

To Scientific jury,  
defined by Order № P-109-260/ 15.05.2023r.  
of the Rector of the Medical University  
"Prof. P. Stoyanov" – Varna  
Prof. Valentin Ignatov, MD, PhD

On your protocol N 1/25.05.2023

I present attached:

### Short academic review

on dissertation for the award of educational and scientific degree "Doctor"

by Assoc. Prof. Deyan Lyudmilov Dzhankov, MD, PhD, Associate Professor at the Department of General and Clinical Pathology, Forensic Medicine and Deontology at MU "Prof. Dr. Paraskev Stoyanov" – Varna  
Appointed a member of the Scientific Jury / order № P-109-260/ 15.05.2023 of the Rector of MU "Prof. P. Stoyanov" – Prof. Dr. Valentin Ignatov, MD

Field of higher education 7. Health and sports. Professional direction 7.1 Medicine.

Scientific speciality 03.01.59 "Forensic medicine". Topic: "Forensic identification by earlobe"

Author: Deyana Georgieva Velkova

Form of doctoral studies: full-time form

Department: General and Clinical Pathology, Forensic Medicine and Deontology

Scientific adviser: Assoc. prof. Viliam Dokov, MD, PhD

#### **I. Brief biographical data on the candidate's career development**

Dr. Deyana Georgieva Velkova graduated from the PMG "prof. Emanuil Ivanov", city of Kyustendil with profile "Biology and health education" and graduated with a master's degree in medicine at the Medical University "Prof. Dr. Paraskev Stoyanov" - Varna in 2016. In 2017, he began his professional career as a specialist at the "Forensic Medicine" Clinic, Sveta Marina Hospital, Varna and as an assistant in the "Forensic Medicine" Department at the Department of "General and Clinical Pathology, Forensic Medicine and Deontology" at the MU. Prof. Dr. Paraskev Stoyanov" - Varna. From 2021, he also acquires a specialty in "Forensic medicine and deontology".

Dr. Velkova was enrolled by order No. R-109-449/ 28.10.2020 for full-time doctoral studies on the topic of "Forensic Identification of the Auricle". In connection with his dissertation work, he has one full-text publication as the sole author in a Bulgarian journal and participation with a poster in a scientific conference.

Dr. Velkova is a member of the International Academy of Legal Medicine, Forensic Anthropology Society of Europe, British association for Human Identification, Bulgarian Society of Forensic Medicine, Bulgarian Medical Association.

## **II. General performance of the candidate**

The presented materials in electronic and paper form meet the requirements of the 2018 Regulations for the Development of the Academic Staff at the Varna University of Medical Sciences under the Procedure for the Acquisition of Doctoral Degree at the University of Varna Medical University. The doctoral student has passed the doctoral minimum exam in the specialty "Forensic Medicine and Deontology" with an excellent grade. Required scientometrics are covered. The doctoral student was dismissed with the right to defense by Order No. R-109-260 of 05/15/2023.

## **III. Dissertation evaluation**

The dissertation work on the topic "Forensic Identification by Auricle" is well structured with distinct main elements: literature review, aim and objectives, research materials and methods, results, discussion, conclusions, contributions and bibliography. It is written in 114 standard pages and illustrated with 39 tables and 40 figures, and the literary sources include 123 titles, of which 22 are in Cyrillic and 101 are in Latin. The subject of the dissertation is an attempt to investigate the identification of the person through the detailed study of the anatomical and anthropological characteristics of the auricle.

The literature review is comprehensive, up-to-date, aimed at a thorough examination of auricle anatomy, embryology and phylogeny, malformations, post-mortem changes, anthropo-genetic heritability data and a historical review of pinna identification and methods used.

The doctoral student has defined 5 scientific hypotheses that are related to the following tasks:

Task 1. Establishing a total of 9 anthropometric measurements of the auricle bilaterally in individuals from the Bulgarian population with a subsequent comparison of the results between the left and right auricle, as well as a comparison of the data with other studies in individuals from the Bulgarian population. Drawing up a protocol for conducting an anthropometric study of the auricle.

Task 2. Establishing a relationship between the dimensions of the auricle and gender.

Task 3. Establishing a relationship between the size of the auricle and age.

Task 4: Establishing a relationship between the dimensions of the auricle and height.

Task 5: Comparison of the established dimensions of the auricle in the individuals from the Bulgarian population in the present study with those in other populations.

In connection with the dissertation work, the scientific research has been previously approved by the Research Ethics Committee at the Medical University "Prof. Dr. Paraskev Stoyanov" - Varna, involving a total of 222 individuals from the Bulgarian population (123 men and 99 women) aged between 18 and 94 years.

The objective is defined clearly and concretely. Formulated tasks are logically connected and doable. The methods used are modern, tailored to the purpose and tasks.

The results are systematically described, the obtained results are original. In the discussion, a thorough comparison of the obtained results with the data published in the literature is made. The conclusions are clearly formulated, and the contributions of the dissertation work have a practical-applied nature, with the conclusion being that the anthropometric dimensions of the auricle can be used as an additional tool for forensic identification of the person due to the differences according to gender, age and population affiliation.

#### **IV. Evaluation of publications and personal contribution of the PhD student**

Dr. Velkova is the author of 1 full-text publication in Bulgarian journals, being the only author, and has also participated in a scientific conference.

#### **V. Abstract**

The abstract of the dissertation work is prepared accordance to the requirements of the Regulations of the academic staff of the University of Varna, reflecting adequately and in sufficiently the state of the studied problem, the set goals and objectives, the methods used for their practical implementation, the results obtained, their analytical description and interpretation of the own data, as well as the author's conclusions and contributions.

#### **VI. General assessment of compliance with the mandatory conditions, quantitative criteria and scientific-metric indicators, according to the Law on the Development of Academic Staff in the Republic of Bulgaria and the Regulations for its application.**

The quantitative scientometric criteria for the PhD degree have been met, in accordance with the LADRB, the Regulations for its application and the Regulations of MU-Varna - a total of 30 points is required: indicator D (publications) - 30 = 30 points.

#### **Conclusion**

As a member of the scientific jury, I give a positive evaluation for the acquisition of the scientific degree "PhD" by Dr. Deyana Georgieva Velkova. The submitted dissertation, abstract and published scientific works meet the requirements of the Law on the Development of Academic Staff of the Republic of Bulgaria (LADRB) and the Regulations of MU-Varna. The dissertation addresses a scientifically and clinically relevant problem, and the conclusions drawn have potential for future research in the field.

19.06.2023

  
Assoc. Prof. Deyan Dzhenkov, MD, PhD