

To
The Chairman of the Scientific Jury,
determined by Order No R-109-260/15.0 5.2023
of the Rector of Medical University "Prof. Paraskev Stoyanov"
Varna

REVIEW

From: Prof. Anton Bozhidarov Tonchev, PhD, PhD – Head of the Department of Anatomy and Cell Biology, Medical University "Prof. Dr. Paraskev Stoyanov" – Varna, Bulgaria, on the the dissertation for awarding of the educational and scientific degree "**Doctor**" (PhD) in the field of higher education 7. Health and sport, professional field 7.1. Medicine, specialty "Judicial Medicine and Deontology".

Author: ***Dr. Deyana Georgieva Velkova***, Department of General and Clinical Pathology and Forensic Medicine and Deontology of the Medical University "Prof. Paraskev Stoyanov" Varna.

Subject: FORENSIC IDENTIFICATION BY THE AURICLE

Scientific Officer: Assoc. Prof. Dr. Viliam Dokov, MD, PhD

1. Administrative procedure

By Protocol No 410 of 27 April 2023 of the first meeting of the Scientific Jury, I was appointed to prepare a review of the scientific work submitted by the PhD candidate Dr. Deyana Georgieva Velkova from the Medical University of Varna. The certificate work of Dr. Velkova is on the subject of *“Forensic Identification by the Auricle”* for the award of the NSA “Doctor” in the scientific specialty “Forensic Medicine and Deontology”. Deyana Velkova is a regular doctoral student at the Department of General and Clinical Pathology, Forensic Medicine and Deontology of MU-Varna. She was enrolled in the same Department as a PhD student on regular training with Order of the Rector of MU-Varna R-109-449/28.10.2020.

By Protocol No 2/04.05.2023 of the FM of MU-Varna, Deyana Velkova was granted a right of defence after a positive assessment of her thesis. The procedures for the award and assignment of Deyana Georgieva Velkova were carried out in accordance with the requirements of the Law for the Development of the Academic Staff in the Republic of Bulgaria (LDASRB) and the Regulations for the conditions and procedure for acquiring academic degrees and holding academic positions at the Medical University “Prof. Paraskev Stoyanov” Varna. The materials presented by the applicant on a digital carrier for the preparation of a review, as well as a paper dissertation and autoreferate are in accordance with the requirements of LDASRB as well as the Rules the Medical University “Prof. Paraskev Stoyanov” - Varna.

2. Biographical data of the applicant

Deyana Velkova was born in 1991 in Kyustendil and graduated in Medicine at the Medical University “Prof. Dr. Paraskev Stoyanov” – Varna in 2016. In the period 2017-2021 he specialised in “Forensic Medicine and Deontology” at MU-Varna. He acquired a medical specialty in 2021. She held the following posts:

- 2016-2021 — doctor, SOS–center, “Dream Business Solutions” Ltd.
- 2017-2021 — doctor-specialist, Clinic of Forensic Medicine at University Hospital “St. Marina”, Varna
- 2021 and thus far – medical specialist in forensic medicine, Clinic of Forensic Medicine at University Hospital St Marina EAD, Varna
- 2017-2021 - Assistant professor at MU-Varna
- 2023 – Honorary lecturer at MU-Varna.

Her teaching experience includes the management of forensic and deontology classes of medical and dental students. He is a member of the Bulgarian Society of Forensic Anthropology Society of Europe, British association for Human Identification and others.

3. Knowledge of the problem on which the dissertation is

The introduction clearly motivates the need for research in the field of dissertation. A summary of the main scientific data at the moment on the topic and the availability of empty scientific fields, which deserve the original research and analysis of the author. The literature review, spread over 37 standard pages, shows the applicant’s good

knowledge of the available literary sources on the topic of the anthropological characteristics of the auricle and their potential for identification in the field of forensic medicine. A detailed anatomy of the object of the study is presented in a way it introduces into the presented research methodologies. The purpose and objectives of the study are clearly defined.

4. Methodology of the study

The criteria for the selection of the participants in the study of anthropometric characteristics of the auricle are clearly presented. Statistical methods are described in detail. Pre-sampling positive ethical assessment information is available.

Conclusion: The materials and methods are described in such a way as to allow the experiments to be repeated by other researchers.

5. Evaluation of results

The results extend over ~55 standard pages, which contain the main part of a total of 40 figures and 39 tables of the dissertation work, to which 2 annexes are attached. The figures are of very good quality and clearly visualise the thesis of the thesis.

The results on each of the tasks formulated in the ***Objective and Tasks*** section of the dissertation work are consistently presented. A large number of anthropometric parameters of the auricle in the Bulgarian population were measured and these data are correlated with other parameters such as age, sex, height, as well as with individuals from other populations.

Conclusion: the results presented support the thesis of the dissertation.

6. Contributions and importance of development for science and practice

The current thesis is relevant to a specific medical discipline – Forensic Medicine. The results are mostly of a confirmatory nature from a fundamental scientific point of view, but the presentation for the first time of morphometric data for the Bulgarian population in relation to the object of the study allows comparison with other populations, as a result of which differences between the populations are found.

Conclusion: The discovery of different populations between the Bulgarian and other populations provides a justification for the meaning of the work carried out on the dissertation, which is why I accept that the work possesses qualities for acquiring the PhD academic degree.

7. Evaluation of publications on dissertation

The dissertant presents a self-reviewed article:

Velkova D., Sex differences in anthropometric study of the auricle, Varna Medical Forum, 11 (2), 168-173.

Since Dr. Velkova is the sole author of this publication, this ensures that the minimum quantitative criterion is met according to the LDASRB.

In addition, the dissertant also presents a poster of participation in a scientific conference:

Velkova D. The external ear as a tool for human identification – a review. Spring Conference “Identification of the Living”, British Association for Human Identification (Bahid), 10th April 2021

8. Personal involvement of the author

Based on the provided dissertation papers and publications, I believe that the participation of the applicant to the conducted research is **pivotal**.

9. Autoreferate

My evaluation is that the autoreferate, presented together with the dissertation, accurately reflects the main results achieved in the dissertation.

10. Critical remarks and recommendations

The anthropometric characteristics of the auricle may be also studied in a cohort of deceased individuals, i.e. a post-mortem study, to compare with the characteristics of the volunteers.

CONCLUSION

The dissertation work on the award of the educational and scientific degree "Doctor" in the field of higher education 7. Health and sport, professional field 7.1. Medicine, Doctoral Program "Forensic Medicine and Deontology" by Dr. Deyana **Georgieva Velkova**, Department of General and Clinical Pathology and Forensic Medicine and Deontology of the Medical University "Prof. Paraskev Stoyanov" in Varna **complies with the LDASRB and the Regulations of the Medical University-Varna for the acquisition of degree "Doctor"/PhD. That is why I will vote positively** and allow myself to recommend the same to the other members of the respectable Scientific

Jury, as defined by Order No R-109-260/15.05.2023 of the Rector of the Medical University "Prof. Dr. Paraskev Stoyanov", Varna

Reviewer:



Prof. Dr. Anton B. Tonchev, MD

Department of Anatomy and Cell Biology

Medical University – Varna

Varna, 20.06.2023