STATEMENT

by **Prof. Dr. Atanas Georgiev Baltadjev, PhD, MD**

Head of the Department of Anatomy, Histology and Embryology, MU-Plovdiv

on the PHD thesis for the award of the educational and scientific degree 'doctor'

professional field "Anatomy, Histology, Embryology", doctoral program "Anatomy, Histology and Cytology"

Author: Dr. Zlatizara Hristova Todorova

Form of doctoral studies: independent doctoral student

Department: "Anatomy, Histology and Embryology"

Topic: "Anthropological characteristics of the facial skull and apertura piriformis in the Bulgarian population of Southern Bulgaria - measurement on 3D reconstructions of computed tomography"

Scientific supervisor: Assoc. Prof. Dr. Ferihan Mustafa Ahmed-Popova, MD, Department of Anatomy, Histology and Embryology, MU-Plovdiv

Scientific consultant: Dr. Irina Angelova-Dechevska, MD, Department of Imaging Diagnostics, Dental Allergology and Physiotherapy, Faculty of Medicine, MU-Plovdiv

1. General presentation of the procedure and the PhD student

The presented set of materials on paper / electronic media is in accordance with Art. 70 (1) of Section I. Acquisition of the educational and scientific degree "DOCTOR" and the scientific degree "DOCTOR OF SCIENCES" at MU-Plovdiv; Regulations of MU-Plovdiv dated 28.01.2021 and includes the following documents:

– Application to the Rector of MU-Plovdiv for the opening of the procedure for the defense of a dissertation

– CV in European format with the signature of the doctoral student

– copy of a higher education diploma (verified by notary)

– orders for enrollment in doctoral studies, interruption of studies (due to maternity) and for continuation of studies; for dismissal with the right to defend

– order for conducting an exam from the individual plan and a corresponding protocol for a passed exam or doctoral minimum in the specialty

– protocol of the department council for a preliminary discussion of the doctoral thesis and the decisions made to open a procedure and to compose a scientific jury

– PhD thesis

– abstract

– list of scientific publications on the topic of the dissertation

– copies of scientific publications

– list of participation in scientific forums

– declaration of originality and authenticity of the attached documents

– other documents related to the course of the procedure

The PhD student submitted 4 publications.

The submitted documents meet the requirements of the "Law on the Development of the Academic Staff in the Republic of Bulgaria" and the "Regulations on Academic Development" of MU-Plovdiv.

CV

Dr. Zlatizara Todorova graduated from MU-Plovdiv in 2009 with a degree in "Dental Medicine". In 2021, she joined the Department of "Anatomy, Histology and Embryology" at MU-Plovdiv as an assistant, where she works to this day. She is fluent in English and French.

2. Relevance of the topic

The present dissertation aims to confirm the reliability of craniometric measurements performed on 3D reconstructions of computed tomography; to study the presence of sex-related differences between individuals from the modern Bulgarian population and their comparison with other populations.

The relevance of the topic lies in the use of innovative methods that correct inaccuracies in manual measurement, but not least in the applicability of the obtained anthropological data both for scientific disciplines such as anthropology and archaeology, and for clinical medical and dental specialties.

3. Knowledge of the problem

Dr. Todorova has formulated the purpose of the study, working hypothesis and tasks of the study. The bibliography includes 269 sources. These facts speak of a detailed knowledge of the problem of the dissertation work.

4. Material and Methods

The present study includes 120 conventional computed tomography scans of individuals of Bulgarian ethnic origin aged 20 to 60 years. The study was conducted with a third-generation Siemens SOMATOM Sensation Cardiac 64 Multi-Slice Computed Tomography (MSCT) Scanner

– a multidetector, spiral 64-slice computed tomograph. The imaging studies are obtained in DICOM format and a three-dimensional reconstructed model of the skull and lower jaw is visualized using the 3D VR (Volume Rendering) tool of the Radiant DICOM Viewer software. The number of subjects studied is sufficient to guarantee statistical reliability of the results. An exceptionally modern and innovative methodology was used.

5. Characteristics and evaluation of the dissertation work and contributions

The dissertation work is presented on 146 pages and is illustrated with 27 tables and 57 figures. It contains the following chapters: "Introduction", "Literature review", "Aim and objectives of the study", Material and methods", "Results of own research", "Summary and discussion", "Conclusions", "Contributions", "Literature", "Participation in scientific forums" and "Publications on the topic of the dissertation". After a detailed study of the dissertation, I found that it is correctly structured according to modern scientific requirements. The information in all chapters is presented extremely competently and thoroughly, and the above-mentioned tables and figures also contribute to this. The chapters "Results of own research", "Summary and discussion" deserve special attention, where the results of the study are published. In the chapter "Conclusions" a sufficient number of conclusions are presented in an appropriate and clear manner, which are an undoubted result of the research carried out. The doctoral student presents original, theoretical-methodological and scientifically applied contributions. They confirm the undoubted scientific significance of the dissertation work.

6. Assessment of the publications and personal contribution of the doctoral student

Dr. Todorova presents 4 participations in scientific forums on the topic of the dissertation work. She also presents 4 publications, two of which are in journals referred by Web of Science, and one of which has IF. All publications are on the topic of the dissertation. According to these data, Dr. Todorova undoubtedly fulfills the requirements of the "Act on the Development of the Academic Staff in the Republic of Bulgaria" and the "Regulations for Academic Development" of MU-Plovdiv.

I have no critical remarks and recommendations on the dissertation work.

7. Abstract

The abstract is structured according to the dissertation work, presenting in a shortened version the main information from all chapters in the dissertation.

CONCLUSION

The dissertation contains scientific, scientifically applied and applied results that represent an original contribution to science and meet all the requirements of the Act on the Development of the Academic Staff in the Republic of Bulgaria (ADSRB), the Regulations for the Implementation of the ADSRB and the Regulations of MU - Plovdiv. The presented materials and dissertation results

fully comply with the specific requirements adopted in connection with the Regulations of MU - Plovdiv for the Implementation of the ADSRB.

The dissertation shows that the doctoral student Dr. Zlatizara Hristova Todorova possesses in-depth theoretical knowledge and professional skills in the scientific specialty "Anatomy, Histology and Cytology", demonstrating qualities and skills for independent conduct of scientific research.

Due to the above, I confidently give my positive assessment of the conducted research, presented by the above-reviewed dissertation, abstract, achieved results and contributions, and I propose to the esteemed scientific jury to award the educational and scientific degree of 'Doctor' to Dr. Zlatizara Hristova Todorova in the doctoral program in "Anatomy, Histology and Cytology".

01.03.2026

Written by

Prof. Atanas Baltadjiev, PhD, MD