To the Chairman of the Scientific Jury appointed by Order No. R-109-279/24.06.2025 of the Rector of the Medical University of Varna "Prof. Dr. Paraskev Stoyanov"

STATEMENT

by Assoc. Prof. Dr. Nevyana Valentinova Veleva – Krasteva, MD, PhD

Department of Ophthalmology, Faculty of Medicine, Medical University - Sofia, appointed as a member of the Scientific Jury, according to Order No. R-109-279/24.06.2025 of the Rector of MU-Varna "Prof. Dr. Paraskev Stoyanov" and designated, based on Protocol No. 1/30.06.2025, as an external member of the scientific jury, preparing the present opinion.

Regarding: PhD work for the acquisition of the educational and scientific degree "PhD" by Dr. Slavyana Dimitrova Malcheva-Marinova, full-time PhD student at the Department of Eye Diseases and Vision Sciences, Faculty of Medicine, Medical University – Varna, on the topic **"Ophthalmological Perspectives on Children's Eye Health"** in the field of Higher education 7. Healthcare and Sports, Professional field 7.1. Medicine, Scientific specialty Ophthalmology, code 03.01.36, supervised by Assoc. Prof. Dr. Yana Manolova Manolova, PhD, Department of Eye Diseases and Vision Sciences, MU – Varna.

Assessment of the Topic

Vision accounts for over 90% of the information a person perceives from the environment. The normal anatomical and functional development of the visual analyzer is critical for the overall development of children, while severe visual impairments lead to significant disturbances in normal neuro-psychological, emotional, physical, and professional maturation. The creation and operation of screening programs aimed at "children's vision" require in-depth knowledge of pediatric eye pathology on global, national, and regional scales. In recent years, with the advent of modern technologies, and especially during and after the COVID-19 pandemic, there has been a profound change in the daily lives of children and adolescents—less outdoor activity and more near-work tasks, especially excessive use of video display devices. This has led to a growing epidemic of myopia and

severe asthenopic complaints, observed even in preschool age. It is imperative to develop a national strategy, tailored to regional characteristics, focusing on prevention, early diagnosis, and treatment of pediatric eye pathology.

General Biographical Data

Dr. Slavyana Malcheva-Marinova graduated from the Foreign Language High School "Nikola Yonkov Vaptsarov," Shumen. In 2011, she obtained her Master's degree in Medicine at MU–Varna. She began her specialization in Ophthalmology in 2012 at "SOBAL Dr. Taskov," Targovishte, later continuing at UH "St. Marina" EAD, Varna. In 2016, she acquired her specialty in Eye Diseases at MU–Varna. She has been enrolled as a PhD student at the Department of Eye Diseases and Vision Sciences, MU–Varna since 2020. She participates regularly in congresses and conferences in Bulgaria and abroad. She has completed postgraduate courses in ultrasound diagnostics in ophthalmology; intravitreal drug application; modern methods of retinal structure analysis; and lasers in ophthalmology.

General Data on the Dissertation

The PhD work and Author's abstract have been prepared in accordance with the requirements of the Bulgarian Law on the Development of the Academic Staff, its regulations, and the regulations of MU–Varna. The dissertation was provided to jury members on electronic media, while the abstract was submitted both in print and electronically. The dissertation comprises 148 typed pages, divided into: Summary (in Bulgarian and English), Introduction (2 pp.), Literature Review (57 pp.), Aim and Tasks (1 p.), Materials and Methods (2 pp.), Results and Discussion (45 pp.), Conclusions (1 p.), Contributions (1 p.), Bibliography (9 pp.), illustrated with 23 tables and 38 figures.

Literature Review

The literature review occupies slightly more than one-third of the dissertation. The bibliography includes 255 references, over 50% from the last 10 years, and a significant portion from the last 5 years, indicating topicality and familiarity with modern aspects of pediatric ophthalmology. A shortcoming is that only 14 references are in Cyrillic, showing a need for more in-depth study of Bulgarian research. The review is divided into two subchapters: (1) Pediatric Eye Pathology and (2) Global Data on Pediatric Eye Pathology Distribution. The first details congenital, hereditary, and acquired conditions, emphasizing the effects of COVID-19 and electronic devices on children's (eye) health. The second presents epidemiology across regions and countries. The review logically concludes with examples of child vision screening programs worldwide.

Aim and Tasks

The aim is clearly defined, with five tasks: collecting medical data from ophthalmological examinations of children (0–17 years) from three medical facilities in Shumen; statistical analysis of pediatric eye pathology distribution per year and overall during the

study period; monitoring changes before, during, and after COVID-19; comparing results with foreign and local studies; formulating recommendations for optimizing pediatric ophthalmic screening.

Materials and Methods
The retrospective study used medical data from 6 ophthalmologists in Shumen over 4 years. Inclusion/exclusion criteria were defined. Diagnoses were grouped for easier statistical analysis. Data from different centers were unified in an Excel database and analyzed statistically with specified methods.

Results and Discussion
The results are presented in detail in clear medical language, based on 2,579 primary ophthalmological examinations of children aged 0–17. Each diagnostic group was analyzed annually and for the whole period. Key findings include: reduced number of examinations during COVID-19, especially preventive ones; adolescents (12–17) had the most visits, preschool children the least.; refractive errors were the most common reason for visits, followed by accommodation disorders, asthenopia, and headaches. Amblyopia prevalence in Shumen was 0.62%, lower than national and global data. Myopia and asthenopic complaints increased during and after COVID-19, while inflammatory anterior segment diseases decreased. Very few asymptomatic preventive check-ups were recorded. The discussion analyzes each nosological group in detail.

Conclusions
Six conclusions are formulated, highlighting the need for an annual, comprehensive, accessible, and regionally tailored pediatric vision health program in Bulgaria.

Contributions
The dissertation has theoretical, scientific-practical and confirmatory characteristics. A key contribution is the detailed review of COVID-19's impact on children's eye health.

Scientific metrics
In connection with the dissertation, Dr. Malcheva-Marinova has 2 publications as first author in peer-reviewed (but non-indexed) journals. According to the information from the "Doctoral School" of MU–Varna, the PhD student meets the scientometric criteria in force until 25.07.2025.

The **abstract** provides a concise but comprehensive overview of the dissertation and complies with formal requirements.

Final Evaluation
The PhD work of Dr. Slavyana Malcheva-Marinova addresses a highly relevant and important issue in modern ophthalmology—pediatric eye pathology. My evaluation of the

presented work is positive, and I recommend the members of the scientific jury to vote positively and award Dr. Slavyana Malcheva-Marinova the educational and scientific degree of PhD.

10.09.2025

Sofia

Assoc. Prof. Dr. Nevyana Veleva-Krasteva, PhD/