

## **REVIEW**

by Prof. Zornitsa Zlatarova, MD, PhD, DSc

Head of the Department of Ophthalmology and Visual Sciences,

Medical University – Varna,

Appointed by Rector's Order No. R-109-254/06.06.2025

**Subject:** Announced competition for the academic position of "Associate Professor" in the field of higher education 7. "Health and Sports", professional field 7.1. "Medicine", scientific specialty "Ophthalmology", for the needs of the Department of Optometry and Occupational Diseases, Faculty of Public Health, according to an announcement in the SG issue 30/08.04.2025.

Dr. Elitsa Gercheva Hristova, PhD, is the sole candidate in the announced competition. The documents presented meet the requirements of the Regulations on the Conditions and Procedure for Acquiring Academic Degrees and Holding Academic Positions at the Medical University – Varna.

### **Brief Biographical Data**

Dr. Elitsa Gercheva Hristova graduated in Medicine from MU–Varna in 2012. In 2013, she began for Eye Diseases–Varna and MU–Varna, acquiring the specialty "Ophthalmology" in 2017. Between 2013 and 2016, she was a full-time PhD student at the Department of Ophthalmology and Visual Sciences, MU–Varna. In 2016, after defending her dissertation titled "Microstructural Characteristics of Macular Changes in Retinal Diseases of Social Significance", she was awarded a PhD degree in Medicine.

In 2016, Dr. Hristova was appointed as an Assistant Professor at the Department of Optometry and Occupational Diseases, MU–Varna, and in 2020 she became a Chief Assistant Professor. She has

participated in numerous courses, including: Modern Methods for Examining Retinal Structural Changes (FFA and OCT), Lasers in Ophthalmology – Therapeutic Applications, Intravitreal Drug Administration, Ultrasonography in Ophthalmology, Anterior Ocular Surface, Digital Creativity Training, Innovative Educational Technologies, and others. In 2024, she obtained a Master's degree in "Health Management and Medico-Social Care" from the Medical University – Varna.

Dr. Hristova is proficient in English. She has participated in numerous national and international scientific conferences and has been awarded:

- First Prize – Poster Competition, Congress on Advances in Ophthalmology (2014)
- First Prize – "Surgical" Session, Science and Youth Competition (2014)
- Second Prize – Poster Competition, XVII Annual Meeting of the Bulgarian Society of Ophthalmologists (2014)
- Second Prize – Jubilee Scientific Student Session (2011)
- Two research grants – from the European Academy of Allergology and Clinical Immunology and the American-Austrian Foundation
- Scholarship from the Bulgarian Medical Association

She has participated in five research projects funded by the Science Fund of MU–Varna, acting as principal investigator in one.

She is a member of the Bulgarian Society of Ophthalmology, the Bulgarian Glaucoma Association, the Bulgarian Medical Association, and the Union of Scientists in Bulgaria.

## **I. Evaluation of Scientific Achievements**

### **1. Total number of scientific publications**

Dr. Elitsa Hristova's total publication record comprises 33 scientific works. For the purposes of this competition, she has submitted the following:

- PhD Dissertation: "Microstructural Characteristics of Macular Changes in Retinal Diseases of Social Significance" (2016)

- Monograph: Refraction – Clinical Principles and Algorithms, MU–Varna Press, 2024, ISBN 978-619-221-500-2
- Other scientific works: 17 full-text publications not related to the PhD, of which 5 are published in international peer-reviewed journals indexed in global scientific databases (WoS/Scopus), and 12 in non-indexed peer-reviewed journals.
- 4 full-text publications related to the PhD work in non-indexed peer-reviewed journals
- 1 publication exceeding the minimum scientometric requirements for associate professor

Scientometric points:

- **Indicator A: 50 points (minimum required: 50)**
- **Indicator B: 100 points (minimum required: 100)**
- **Indicators G5–G9: 202.25 points (minimum required: 200), including 71 points for G7 (minimum required: 60)**

She has presented 29 national and 8 international conference papers (oral or poster presentations).

#### **Citations:**

According to the report provided by the MU–Varna Library, there are 4 citations of Dr. Hristova's works in international peer-reviewed journals indexed in WoS/Scopus.

**Indicators D10–D12: 60 points (minimum required: 60)**

#### **Main Research Areas**

1. Refraction – Clinical Principles and Algorithms (monograph)
2. Microstructural alterations and prevention of anterior ocular surface damage (G7.1, G8.1)
3. Diabetic retinopathy and other retinal diseases of social significance – epidemiology, microstructure, diagnostics (G7.3, G7.5, G8.4, PhD thesis)
4. Modern diagnostic technologies and digitalization in ophthalmology (G8.2)
5. Rare ocular diseases and interdisciplinary approach (G8.3)

The monograph **Refraction – Clinical Principles and Algorithms** is a structured and practice-oriented scientific work dedicated to one of the core areas in ophthalmology – clinical refraction.



It is composed of nine chapters, guiding the reader from the physics of refraction through emmetropia and refractive anomalies, to the clinical principles of prescribing spectacles. A key strength of this work is its systematic approach to explaining the clinical foundations of refraction. It includes classifications of ametropias and associated clinical manifestations. Contemporary methods for myopia control are reviewed (e.g. pharmacological, orthokeratology, bifocal soft contact lenses), alongside influencing factors like outdoor time and nutrition. The clinical workflow in refraction is logically presented, emphasizing both diagnostic precision and patient communication to ensure optimal correction. Special attention is given to multifocal lens prescription in presbyopia. A detailed review of optical instruments for refraction assessment is provided. A significant original contribution is the comparative analysis of two automated methods for interpupillary distance (PD) measurement – autorefractometry and pupillometry – revealing no clinically significant differences. The monograph is richly illustrated with diagrams, photographs, and tables. Clinical cases and decision-making algorithms enhance understanding and offer practical alternatives, making the text valuable for opticians, optometrists, ophthalmology residents, and ophthalmologists.

#### **Main Contributions of Dr. Hristova's Research:**

- Developed and presented clinical algorithms for refraction assessment and spectacle correction, including with multifocal lenses, adapted for practical use.
- Conducted a detailed comparative analysis of two automated methods for PD measurement, showing equivalent results and increasing clinical flexibility.
- Demonstrated microstructural changes in corneal basal epithelium and conjunctival cystic alterations after UV exposure, undetectable with standard methods.
- Contributed to an epidemiological assessment of diabetic retinopathy in Northeastern Bulgaria, considering diabetes type, treatment, and demographics.
- Performed a first-of-its-kind comparative OCT analysis of macular changes in socially significant retinal diseases (e.g., AMD, CRVO, CSCR).
- Identified OCT biomarkers supporting early and differential diagnosis of retinal diseases.
- Introduced the FORUM diagnostic platform (Zeiss, US) for early detection and monitoring of glaucoma and retinal pathology.

- Reviewed the clinical and genetic features of Usher syndrome as a rare multisensory disorder.

## **II. Teaching Activity:**

As of 15.04.2025, Dr. Hristova has 8 years, 7 months, and 8 days of academic teaching experience. She teaches in the Department of Optometry and Occupational Diseases at MU–Varna, participating in the education of students in Optometry, Medicine (Bulgarian and English tracks), Dental Medicine, residents in Ophthalmology, and various thematic courses.

Teaching hours:

- 2022/2023 – 169 hours
- 2021/2022 – 488 hours
- 2020/2021 – 425 hours
- 2019/2020 – 72 hours

She was on maternity leave during 2017/2018, 2018/2019, 2022/2023, and 2023/2024.

## **III. Clinical and Diagnostic Activity:**

Dr. Hristova is actively involved in diagnostic and consultative work at the Specialized Hospital for Active Treatment in Ophthalmology – Varna. She participates in screening programs for early detection of refractive anomalies in children, glaucoma, and diabetic retinopathy. Her clinical interests include modern diagnostics and treatment of retinal diseases, and oculoplastic surgery – eyelid reconstruction after tumor excision or trauma.

Personal Impressions:

I have known Dr. Elitsa Hristova since the beginning of her specialization in Ophthalmology. She is a meticulous and dedicated young physician with a strong interest in research. She actively participates in student and resident education and demonstrates collegiality, teamwork, and professionalism.

**Conclusion:**

The scientometric indicators, professional qualifications, and teaching activities presented by Dr. Elitsa Hristova meet the minimum legal requirements for the position of Associate Professor under the Law on the Development of Academic Staff and the internal regulations of the Medical University – Varna. Therefore, I give a positive evaluation and recommend that the esteemed academic committee appoint Dr. Elitsa Gercheva Hristova, PhD, to the academic position of Associate Professor in Ophthalmology, at the Department of Optometry and Occupational Diseases, Medical University – Varna.

02 August 2025

Varna

Respectfully,

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