

## **SHORT REVIEW**

**by Prof. Dr. Luybomir Dimitrov Spasov MD, PhD**

Medical faculty, Sofia University "St. Kliment Ohridski", "Lozenetz" University Hospital –  
Sofia, Bulgaria

for a competition for an academic position "Associate professor"

Professional field 7.1. "Medicine", scientific specialty "Ophthalmology"

in Medical faculty, Sofia University "St. Kliment Ohridski"

published in State Gazette N 59/26.07.2019

The Review is prepared in accordance with the Law for the development of the academic staff and the Regulation for the conditions and the procedure for acquisition of scientific/academic degrees and appointment of academic positions at Sofia University "St. Kliment Ohridski"

In the competition the only participant is **Dr. Elena Atanasova Mermeklieva–Haralanova MD**

**Biographical data and professional realization:** Dr. Elena Mermeklieva is born in the town of Kazanlak. She graduates with a gold medal from the English Language High School. In 1997, she graduates from the Medical University Sofia with honors. She acquired the "Ophthalmology" specialty in 2002. She has completed a full course in "Health Management" at the Medical University - Sofia in 2004. In 2018, she acquires an educational and scientific degree "Doctor" after a successful thesis defense. In 2018, she publishes the monograph "Electrophysiology of vision basic principles and clinical application" and the practical guide „Electrophysiological methods in ophthalmological and ophthalmo-neurological practice”.

Dr. Elena Mermeklieva has 20 years of experience as an ophthalmologist. In the beginning of her carrier she has worked in DKC "XX" and DKC "St. Sofia" in Sofia and since 2007 until now she has been an ophthalmologist in "Alexandrovska" University Hospital, Clinic of Ophthalmology, Unit of vitreoretinal surgery and eye trauma. Since May, 2019 she is an ophthalmologist in the Ophthalmology Department of "Lozenetz" University Hospital.

Dr. Elena Mermeklieva has a number of specializations abroad – in "Moorfields Eye Hospital" – London where she specialized oculoplastics, surgery of the anterior segment of the eye, vitreoretinal surgery. In New York - USA - oculoplastic and orbital surgery; Slovenia - OCT, FA, laser therapy, electrophysiology, neuro-ophthalmology; Austria, India - cataract surgery; Czech Republic - retinal diseases and Germany - electrophysiology. She has won numerous training grants from international organizations - SOE Educational grant - 2007, IFOS/ICO International Fellowship – 2008, EBO grant for teachers – 2008, AAF/OMI grant – 2012, LIONS Club International Grant – 2013. She has been part in 39 specialized courses in ophthalmology and esthetic surgery.

Since 2017, Dr. Elena Mermeklieva has been a lecturer of the basic course for ophthalmology residents at the Ophthalmology Department at the Medical University - Sofia, and



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Since 2017, Dr. Elena Mermeklieva has been a lecturer of the basic course for ophthalmology residents at the Ophthalmology Department at the Medical University - Sofia, and



since 2018, for nurse and midwife students at the Medical University – Varna, Veliko Turnovo branch.

She is a member of the Bulgarian Ophthalmology Society, the Bulgarian Glaucoma Association, the Union of the Eye Doctors in Bulgaria, the Bulgarian Association of clinical electromyography and evoked potentials and also a member of the Federation of the Healthcare Unions of the Confederation of the Independent Trade Unions in Bulgaria.

In 2016, Dr. Elena Mermeklieva was an abstract reviewer at the World Congress of Ophthalmology in Mexico. She was a reviewer of 7 articles in referent journals in the world data base Scopus, Web of science with ISI Impact factor. She is also a member of the editorial board of three specialized international medical journals and one Bulgarian specialized medical journal.

In 1997, Dr. Elena Mermeklieva was awarded the Diploma of Scientific Report at the Student Scientific Session – Medical University-Sofia and in 2017 she received the First Prize for Best Poster at the 12<sup>th</sup> National Congress of the Bulgarian Ophthalmology Society with international participation. She is fluent in English, Greek, Russian. Married, with three children.

**Scientific activity:** The total number of scientific works of Dr. Elena Mermeklieva is 71, 5 of which are related to the dissertation, one of which is published in ISI Impact Factor journal. In addition to her dissertation, Dr. Elena Mermeklieva also presents monograph work and practical guide. The actual publications except the dissertation are 39, 6 of which are in internationally referent journals in the world database Scopus, Web of science with ISI Impact Factor – as a single and lead author. The total ISI impact factor of Dr. Elena Mermeklieva's publications is 5,943; her personal impact factor is 5.94. In international referent journals in Scopus world databases, Web of science with SJR Impact Factor, Dr. Mermeklieva has 2 publications, she is the lead author in both. Dr. Mermeklieva has 1 publication in an international journal with a scientific review, where she is the third author and 26 articles in national medical journals with a scientific review where she is the first author in 13 of them. Dr. Mermeklieva has 3 participations in scientific forums abroad, in 2 of them being the lead author and 23 - in national scientific forums (21 out of those for the acquisition of PhD) - in 6 of them she is the lead author.

According to the reference for meeting the minimum national requirements for the respective scientific field, the real points of Dr. Elena Mermeklieva are 1502.38.

According to the information provided by National Center for Information and Documentation, 6 citations have been found in Scopus, Web of science and other databases. The IF of the journals where the citations were found is 0.453, SJR is 0.267. According to the information provided by the Central Medical Library, Medical University - Sofia, 4 Bulgarian citations were found. Four citations were found in the Scopus database and 4 citations were found in the Web of Knowledge database. According to the information provided by the Central Medical Library, Medical University - Sofia and National Center for Information and Documentation, the total impact factor of the publications of Dr. Elena Mermeklieva, MD, except those, related to the dissertation is: 5, 943, the personal impact factor is 5.94, with publications in international medical journals with a high impact factor such as the European Journal of Ophthalmology, Biotechnology & Biotechnological Equipment, Neurophysiologie Clinique.



Dr. Elena Mermeklieva's main publications and scientific interests are in the field of electrophysiology, neuro-ophthalmology, retinal diseases, inflammatory and tumor diseases of the eyes, traumas.

Dr. Elena Mermeklieva's dissertation - "Changes in the values of the electrophysiological studies of visual analyzer in patients with diabetes mellitus" examines the damage of the visual analyzer as a complication of diabetes mellitus and emphasizes the role and importance of electrophysiological methods for early detection of the impaired function of the visual analyzer, which is essential for the prophylaxis and prevention of the complications of diabetes mellitus.

Dr. Mermeklieva's monographic study, "Electrophysiology of Vision – basic principles and clinical application" is dedicated to the thorough and comprehensive examination of all electrophysiological methods - Electroretinography (ERG), Electrooculography (EOG) and Visual-evoked Potentials (VER), with an emphasis on the role and importance of these methods in the study of the visual analyzer in a number of diseases in the ophthalmological and neurological practice, for objective measuring of the visual acuity and visual field in non-cooperative patients, young children and during simulation. Another important application of the electrophysiological studies is to determine medicinal and production toxicity. Dr. Elena Mermeklieva's monograph is the only publication on this topic issued in Bulgarian. The author's own experience is presented, illustrated with appropriate examples and discussions of interesting clinical cases. It is quite valuable for a wide range of specialists - Ophthalmologists, Neurologists, Electrophysiologists. It is structured in three separate chapters and each one is accompanied with its own bibliography. The Practical Guide for Ophthalmologists, Neurologists and Physiologists, "Electrophysiological Methods in Ophthalmological and Neuro-ophthalmological Practice", examines in detail the mechanism of the performance of the different electrophysiological methods by providing recommendations in connection to which test would be most informative for which disease.

For the most part (33 issues), Dr. Elena Mermeklieva's scientific production is related to the Electrophysiology of vision in various diseases. Dr. Mermeklieva starts her scientific work in this field as a student and her report is honored with an honorary diploma. She is the author of numerous articles related to the research of various electrophysiological studies in a number of neuro-ophthalmological, neurological and systemic diseases. She is also included in studies using Auditory-evoked Potentials and Intraoperative monitoring of brain function (4 issues). Dr. Mermeklieva has also worked in the field of Neuro-Ophthalmology: Multiple Sclerosis, Opticomyelitis, Antiphospholipid Syndrome with ocular involvement and rare diseases with ophthalmological complications (7 issues). Dr. Mermeklieva is also included in an international team for scientific research, presenting a rare case of Orbital Schwannomas. She has also worked on scientific research in the field of retinal detachment, inflammatory diseases and eye injuries, presented at scientific forums in her home country and abroad (6 issues).

Dr. Elena Mermeklieva's main contributions are related to the introduction in Bulgaria of Pattern electroretinography (PERG), full-field electroretinography, as well as the establishment of an original method for simultaneous registration of Pattern electroretinography (PERG) and Visual-evoked Potentials in ophthalmological, neuro-ophthalmological and some systemic



diseases. She has developed a reference range for the Bulgarian population. She also has written publications with multifocal ERG in retinal dystrophy diseases.

**Academic teaching activities:** Dr. Elena Mermeklieva is a lecturer of a basic course for resident ophthalmologists at the Ophthalmology Department at the Medical University - Sofia and a lecturer of nurses and midwife students at the Medical University - Varna, Veliko Turnovo branch. She has issued a practical guide for ophthalmologists, neuro-ophthalmologists and electrophysiologists "Electrophysiological methods in ophthalmological and ophthalmoneurological practice". As an ophthalmologist in the Clinic of ophthalmology "Alexandrovska" University hospital, Sofia, Dr. Mermeklieva makes practical trainings to resident ophthalmologists both in medical and diagnostic and in operative activity.

**Research activity:** Dr. Elena Mermeklieva has participated in two research projects - "InterCriteria Analysis - A New Approach to Decision Making" - funded by the National Research Fund 2016-2017, DFNI-I-02-5 and "Analysis Model of brainstem auditory evoked potentials in patients with acute disorders of the cerebral circulation" - Medical University-Sofia, 1996-1997.

Dr. Elena Mermeklieva is a researcher in 7 Phase III clinical trials and has Certificates of Good Clinical Practice in Clinical Trials.

**In conclusion,** Dr. Elena Mermeklieva is an eminent physician and scientist in the sphere of ophthalmology, electrophysiology and neuro-ophthalmology with a significant contribution to the scientific, therapeutic and surgical activities. The candidate fully meets the quantitative and qualitative criteria of Sofia University "St. Kliment Ohridski"-Sofia for the academic position of "Associate Professor".

Based on the Regulations for the Terms and Conditions for Acquisition of Academic Degrees and Occupation of Academic Positions at Sofia University "St. Kliment Ohridski"-Sofia, I propose that the members of the distinguished scientific jury vote positively for Dr. Elena Mermeklieva, MD, to be elected "Associate Professor" in ophthalmology for the needs of the Medical Faculty at Sofia University "St. Kliment Ohridski"-Sofia.

01.12.2019  
Sofia, Bulgaria

Prof. Dr. Luybomir Dimitrov Spasov, MD, PhD

