

SHORT REVIEW

For a competition for an academic position "**Associate professor**", **professional field 7.1. "Medicine", ("Ophthalmology"-one)** for the needs of Medical faculty, Sofia University "St. Kliment Ohridski". The competition was published in State Gazette N 59/26.07.2019.

By: Prof. Dr. Ivan Petrov, MD, PhD, DSc
Head of the Neurological Department at the Medical Institute - Ministry of Interior, Bulgaria

With the Order of the Rector of Sofia University "St. Kliment Ohridski", Sofia – RD 38-634/31.10.2019, I am hired to as a member of a scientific jury that will conduct the procedure for the competition for "**Associate professor**". The only candidate at this competition is **Dr. Elena Atanasova Mermeklieva-Haralanova, MD**, ophthalmologist at "Lozenetz" University Hospital – Sofia, Bulgaria and in "Alexandrovska" University Hospital, Clinic of Ophthalmology

Biographical data and creative developmental path

Dr. Elena Mermeklieva was born on August 9, 1973 in Kazanlak. In 1991 she graduates an English high school with a gold medal. She graduates with honors from the Medical University – Sofia in 1997. Diploma – "Master" degree in Medicine (C-MYC, № 002988, № 1967). In the period 1998-2002 she is a resident in ophthalmology in the Medical University – Sofia, Ophthalmology Department at the Military Medical Academy - Sofia; **Clinic of ophthalmology** at "Queen Joanna". University hospital. Since 2002 she has been recognized as a specialist in ophthalmology, diploma C-AC № 008651, № 008455. From 2003 to 2006, Dr. Mermeklieva worked as an ophthalmologist at St. Sofia Medical Center, from 2006 to 2012 as an ophthalmologist at Diagnostic consultative Center - XX, Sofia. Since 2007 she has been working in Clinic of ophthalmology "Alexandrovska" University hospital, Sofia and since May, 2019 in "Lozenetz" University Hospital –Sofia also.

In the period 2001 – 2019, Dr. Mermeklieva has an impressive number (37) of participations in specialized ophthalmology courses in Bulgaria and abroad, the most important are: 6th International Update Ophthalmology course, Ultrasound diagnostics in ophthalmology, Eye movement disorders, Basics of Health management, Corneal transplantation, Computer automated perimetry, Cataract surgery, 5th Balkan Wetlab Phaco & Glaukoma Advanced Course, Retinal and Vitreous surgery, AMD. In her professional career, she has the following specializations abroad: Moorfields Eye Hospital - London (2007), New York Eye & Ear Infirmary, USA - plastic and reconstructive eyelid surgery, orbit surgery and lacrimal system (2008), University Eye clinic - Ljubljana, Slovenia - laser therapy, electrophysiology, neuro-ophthalmology (2008), Salzburg Weill Cornell Seminar in ophthalmology – Austria, Phaco Fellowship, Training in cataract Surgery by Phacoemulsification – Mahatma Eye Bank&Eye Hospital – Nagpur, India, 4-th LOEG Age related macular degeneration course – Charles University, Prague (2013), Roland Consult Hands-On-Course in Electrophysiology and Imaging- Berlin, Germany (2017), Vitreous

surgery, AMD (2018), Good clinical practices NIDA Clinical Trials Network Certificate (2018), Corneal transplantation (2019).

Dr. Mermeklieva is a member of: The Bulgarian Medical Association, The Union of Ophthalmologists in Bulgaria, The Bulgarian Society of Ophthalmology, The National Association of Ophthalmologists for Outpatient Care, The European Medical Students' Association, the Bulgarian Association for Clinical EMG and EPs (2018) and more.

She has the following awards: Diploma for a Scientific Report of the Student Scientific Session – Medical University, Sofia, 1997; First Prize for the Best Poster of the 12th National Congress of the Bulgarian Society of Ophthalmology with International Participation – 2017. She has won the following Grants: SOE Educational grant (2007); IFOS / ICO International Fellowship (2008); EBO grant for teachers (2008); AAF / OMI grant – 2012. Dr. Mermeklieva has a fluent command (written and spoken) in English, Greek and Russian and has quite good computer skills.

Research activity

The analysis of the quantitative data on the scientific production of Dr. Mermeklieva shows that she has participated in the current competition with a total of **69 scientific works**, of which: **44 real publications** and **25 participations** in national and international scientific forums with printed abstracts. The real publications include: 1 dissertation, 1 monograph, and 42 scientific articles, of which: 3 are related to dissertation (1 with IF), 12 are published in referent journals in the world database Scopus, Web of science, as 6 are with IF, 1 in international peer-reviewed journal, 26 in national peer-reviewed medical journals. In the real publications, Dr. Mermeklieva is the lead or sole author - in 28 (67%), second author - in 2 (5%), third and subsequent author - in 12 (28%), published abstracts - lead author in 8, 2nd - in 3rd and 3rd and subsequent author - in 15. The total IF of the publications not included in the dissertation is 5,943 (personal - 5,94).

The attached reference for the fulfillment of the minimum national requirements for the respective scientific field for "**associate professor**", **400** points are required and Dr. Mermeklieva has **1502.38 points**.

The reference cited by the Central Medical Library-Sofia and National Center for Information and Documentation in Scopus, Web of science and other databases, shows 14 citations. The IF of the journals with the citations is **0,453**, **SJR – 0,267**. Dr. Mermeklieva also has 4 citations in Bulgarian sources.

In the presented self-assessment, Dr. Mermeklieva identifies the following main areas of research: electrophysiology, inflammatory eye diseases, retinal diseases, tumors, eye traumas and neuro-ophthalmology.

The analysis of the presented scientific works allows me to determine the following important original and scientifically relevant contributions of the author:

1. For the first time in Bulgaria, a number of electrophysiological methods of examination are introduced - pattern electroretinography, full-field retinography, as well as the establishment of an original methodology for simultaneous registration of pattern ERG and VEPs in ophthalmological, neuro-ophthalmological and some systemic diseases.
2. For the first time in Bulgaria, reference values for the Bulgarian population were established for simultaneous examination of pattern ERG and VEPs, as well as assessing the diagnostic capabilities of their individual components in patients with diabetes mellitus.

3. In the field of neuro-ophthalmology, the author has contributed to the study of neuromyelitis opticus, antiphospholipid syndrome with ocular involvement, multiple sclerosis, and rare diseases with ophthalmoneurological involvement. She also has interest in the presentation of a rare case of orbital schwannoma.

4. With the application of full-field electroretinography, the author presents interesting clinical cases in which the study is of great importance for the diagnosis and prognosis of the diseases (retinitis pigmentosa, inherited photoreceptor dystrophies, Leber's atrophy, toxic retinopathies, etc.).

5. Using focal and multifocal ERG, the author evaluated post-operative macular function before macular surgery at a macular hole or an epiretinal membrane. The application of these techniques in different clinical cases is of exceptional importance for the diagnosis and prognosis of the diseases.

6. Multifocal ERG is a relatively new method that objectively reflects the cortical responses from the central vision. According to Dr. Mermeklieva, the method provides topographic information from the central vision as well as the ability to evaluate localized responses.

7. The use of electrooculography records the permanent potential that exists in the eyeball and mainly reflects the function of the retinal pigment epithelium. The technique and informative nature of the test for the Best disease are presented.

Dr. Mermeklieva has participated in two research projects (1998 and 2016-2017) as well as in 7 international clinical trials.

Academic teaching activities

Dr. Mermeklieva has an active teaching activity with residents, students, nurses and midwives at: Medical University, Sofia; Medical University - Varna (Veliko Turnovo Branch), having a total teaching activity for: 2016/2017: 1.5 hours; 2017/2018 1.5 hours; 2018/2019: 3 hours of lectures and 20 hours of training; 2019/2020: 20 hours of training. She has issued a guide „Electrophysiological methods in ophthalmological and ophthalmoneurological practice” for specialists ophthalmologists, neurologists and electrophysiologists.

Medical and diagnostic activities

Dr. Mermeklieva works as an ophthalmologist at “Alexandrovska” University hospital and at “Lozenets” University hospital. As such, she has over 18 years of active diagnostic, therapeutic and surgical activity in the field of various eye diseases. I would like to specifically point out her surgical activity. As a result of her numerous specializations abroad, she has mastered all modern surgical methods that she applies quite successfully in her daily practice.

Conclusion:


Dr. Elena Mermeklieva, MD, PhD is a highly qualified specialist in the field of eye diseases. She is fluent in a number of diagnostic, therapeutic and surgical methods of treatment. Her scientific production and her contributions have an original and scientifically applied character and are universally recognized.

Her scientometric criteria and quantitative indicators for research, teaching and diagnostics and therapeutic treatment meet the criteria for awarding academic degrees and academic positions at the Medical Faculty at Sofia University "St. Kliment Ohridski", Sofia.

All this convinces me to give a positive opinion and to offer the honorable members of the Scientific Jury to vote positively for the occupation of the academic position of **“Associate Professor”** in “ophthalmology” at the Medical Faculty at Sofia University "St. Kliment Ohridski" to **Dr. Elena Atanasova Mermeklieva-Haralanova, MD, PhD.**

25.11.2019

Review prepared by:



Prof. Dr. Ivan Petrov, MD, PhD, DSc