



## REVIEW

by Prof. Dr. Veselin Todorov Belovezhdov, MD, PhD

Head of the Department of "General and Clinical Pathology"

MU – Plovdiv,

in his capacity as a member of a scientific jury based on

order of the Vice Rector of Science and Research of MU – Plovdiv, № P-2303 /  
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regarding the procedure for occupying the academic position "Professor" in "Pathology and Clinical pathology", field of higher education 7. Health care and sports, professional direction 7.1. Medicine announced in state newspaper no. 35 / 19.04. 2024, approved by the approved by the Faculty Council of the Faculty of Medicine (No. 6 of 26.06. 2024) for the needs of the Department of General and Clinical Pathology at the MU - Plovdiv for teaching in Bulgarian and English.

For the contest, materials on paper and electronic media were submitted by the only candidate, Associate Professor Dr. Elena Poryazova-Markova, MD, which include all the necessary documents according to the Regulations for the Implementation of the Law on the Development of the Academic Staff in the Republic of Bulgaria and the Regulations for the Conditions and Procedures for Acquisition of scientific degrees and occupying academic positions at Medical University - Plovdiv.

### **I. Career development of Associate Professor Dr. Elena Poryazova-Markova, MD**

Associate Professor Dr. Elena Galabova Poryazova-Markova was born in Plovdiv. She completed her higher medical education in 1992 at the Medical University of Plovdiv, in the following year 1993, after successfully passing a competition, she became an assistant in the Department of General and Clinical Pathology, and subsequently rose to senior and chief assistant. In 2000 she acquired a specialty in pathology and cytopathology, in 2007 she was enrolled as a doctoral student of independent training, and in 2010, after a successfully defended dissertation, she obtained the PhD degree. Until 2011, Dr. Poryazova was a doctor in the Department of Clinical Pathology at UMBAL "St.George" - Plovdiv. In the same year, she became the Head of the Department of Clinical Pathology at UMBAL "Palmed" EAD, Plovdiv. In 2005, Associate Professor Dr. Poryazova acquired a professional qualification in "Health Management" at the European College of Economics and Management, Plovdiv. In 2014, Dr. Poryazova habilitated as Associate Professor at the Department of General and Clinical Pathology of MU - Plovdiv, where she still works today. In 2024, she

was elected Deputy Dean of Project Activity and International Cooperation of the Faculty of Medicine of MU - Plovdiv.

## **II. Description of the scientometric indicators of Associate Professor Dr. Elena Poryazova-Markova, MD**

Associate Professor Dr. Poryazova submits the following scientific works for participation in the competition:

- monograph on the topic: "E-cadherin - metastasis, tumor progression, clinical-morphological aspects (2024)

and a total of 45 real scientific publications, which were published after the acquisition of the academic position "Associate Professor":

- 20 publications are referenced and indexed in the world-famous databases Scopus and Web of Science;

- 25 peer-reviewed publications in non-refereed and non-indexed journals and collections in world-famous databases, 9 – in foreign journals.

Assoc. Professor Dr. Poryazova is the first author in 3 of the presented publications, second - in 16 of the presented publications and third or next - in 26 publications.

Assoc. Professor Dr. Poryazova has a total of 36 scientific reports in national and international scientific forums, which were presented after she acquired the academic position of "Associate Professor", and 1 of them was presented as a summary in "Virchows Archiv". Associate Prof. Dr. Poryazova is a co-author in a collective monograph - "Malignant tumors of the vulva" (2015).

The reference for citations presented by Assoc. Dr. Poryazova shows that the total number of citations of her scientific publications is 72, of which 39 are in scientific publications, referenced and indexed in world-famous databases, some of which have an impact factor. Based on the citation reference and automated information from the world-famous databases Web of Science and Scopus, Prof. Poryazova has h-index=5.

## **III. Evaluation of the contributions of the scientific works of Associate Professor Dr. Elena Poryazova-Markova, MD**

The main areas in which Assoc. Professor Dr. Poryazova worked were related to gastroenterological, gynecological, surgical and maxillofacial pathology. They have scientific-theoretical and applied contributions related to the diagnosis and subsequent treatment of patients with tumor and non-tumor diseases of different localization. The dissertation of Assoc. Prof. Dr. Poryazova is on the topic

"Differential-diagnostic significance of the immunohistochemical expression of the markers CK 7, CK 20, CDX2 and beta catenin in primary colorectal and ovarian carcinomas, and peritoneal metastases from adenocarcinomas of unclear origin". A predominant part of Assoc. Professor Dr. Poryazova's research activity, including her recently published monograph, is dedicated to the in-depth study of the epithelial-mesenchymal transition (EMT) and its role in tumor progression in tumors of different localization - breast, stomach, ovarian, endometrial carcinomas and carcinosarcomas, and others.

The results of the performed immunohistochemical studies with E-cadherin and other EMT-related markers are also published in some of the presented publications. They contribute to elucidating the role of EMT in the complex biological mechanisms of tumor progression and metastasis of the studied tumors.

Another direction of publications is related to colorectal carcinoma, and the results obtained here have a direct scientific and practical application. In them, the importance of individual clinico-morphological characteristics (tumor size, histological appearance and degree of differentiation, tumor stage) is evaluated, as well as the degree of immunohistochemical expression of the proliferative marker Ki 67, of p 53 and of HER-2 and of their significance for prognosis in patients diagnosed with this tumor.

Oral pathology is another field in which Associate Prof. Dr. Poryazova worked. Related publications report current data on the surgical treatment and morphological diagnosis of odontogenic cysts and some tumors of the jaws, including a rare case of peripheral osteoma of the mandible.

In the studies of Assoc. Prof. Dr. Poryazova, cases with rare tumor and non-tumor diseases in various areas and organ localizations - CNS, orthopedics, pediatrics, etc. have not been overlooked. In the field of CNS tumor pathology, a rare case of myxopapillary ependymoma of the filum terminal and a pediatric case of a solitary neurofibroma of the cauda equina have been described; a rare case of intramedullary meningioma in the lower thoracic region. In orthopedics, the morphological changes in the tenosynovial tissue in patients with idiopathic carpal tunnel syndrome are described, as well as the most important anatomical variations of the median nerve and their importance for the surgical treatment of the disease.

Other publications are devoted to rarely seen cases from practice such as a case of pleomorphic adenoma in the sinonasal area, initially diagnosed as malignant melanoma; a case of undifferentiated pleomorphic sarcoma of the mammary gland; a case of Ewing's sarcoma of the spine.

Publications related to the use of some useful pedagogical methods and practices in the pathology training of medical students are also valuable.

#### **IV. Evaluation of the participation in the scientific-teaching activity of Associate Professor Dr. Elena Poryazova-Markova, MD**

Assoc. Professor Dr. Elena Poryazova has over 25 years of total work and teaching experience. She has led exercises and subsequently lectures in Bulgarian and English to medical students, dentistry and pharmacy, as well as to students at the Medical College. The data from the attached reports on academic employment (practical exercises, lectures, semester exams) during the last three academic years (a total of 1328 academic hours for the 2020-2021, 2021-2022 and 2022-2023 academic years) show a significant workload exceeding the required minimum for qualified teachers at MU-Plovdiv. She also participates in the training of students under the Erasmus program at MU-Plovdiv.

Assoc. Prof. Dr. Poryazova is the author and co-author of 5 university textbooks on General and Clinical Pathology in Bulgarian and English:

1. Lecture Course in General Pathology for medical students, first edition, E. Poryazova, MD, PhD et al. Publishing by "Lax books", Plovdiv, 2017, 144 pp., ISBN: 978-619-189-058-3
2. Lecture Course in Clinical Pathology for medical students, first edition, E. Poryazova, MD, PhD et al Изд. Лакс бук, ПЛОВДИВ, 2017, 230стр., ISBN 978-619-189-071-2
3. Lecture Course in General and Clinical Pathology for dental students, first edition, E. Poryazova, MD, PhD et al. Publishing by "Lax books", Plovdiv, 2017, 2017, 253 pp., ISBN: 978-619-189-066-8
4. Handbook of Histopathology and immunohistochemistry, E. Poryazova, Publishing by "Lax books", Plovdiv, 2017, 2016, 158 pp. ISBN: 978-619-189-046-0
5. General and clinical pathology textbook for pharmacy students, B. Anavi, V. Belovezhdov, D. Staribratova, E. Poryazova, S. Genova, Il. Bivolarski, V. Danev, Zh. Peshev, G. Ivanov, TAFPRINT OOD, 2021, 193 pages, ISBN: 978-619-7091-15-1

Assoc. Prof. Poryazova also has participated in the development of ten university teaching aids.

Assoc. Prof. Dr. Poryazova was the scientific supervisor of 3 intra-university PhD projects (2018, 2020, 2022), which were successfully completed,

and since 2024 she is the supervisor and principal researcher of two other scientific research projects under the program for strategic research and innovation for the development of MU-Plovdiv, related to digital pathology and the application of artificial intelligence in the field of pathology. Assoc. Prof. Dr. Poryazova is also a participant in the team of a European international Erasmus+ project (2023).

Assoc. Prof. Dr. Poryazova was the supervisor of two successfully defended PhD students - Dr. Desislava Bozhkova and Dr. Denitsa Serteva, who are now chief assistants. Currently, she is the scientific supervisor of Dr. Veselin Chonov, a self-taught PhD student.

*Assoc. Prof. Poryazova was and is still a member of the commission conducting state exams for the acquisition of a specialty in pathology, she was a member of scientific juries evaluating candidates for academic positions, as well as a reviewer of scientific projects.*

#### **Conclusion:**

The career development of Assoc. Prof. Dr. E. Poryazova, PhD, the scientometric indicators, the contributions from scientific research and activity correspond to the mandatory conditions and indicators for occupying the academic position "Professor", according to The Law on the Development of the Academic Staff in the Republic of Bulgaria, the Regulations for its implementation and the Regulations for occupying this academic position at the Medical University - Plovdiv.

**This gives me the reason to state that I will vote FOR awarding the academic position of "Professor" to Associate Professor Dr. Elena Poryazova-Markova, MD. I also take the liberty to urge the other members of the esteemed scientific jury to support this choice as well.**

30.08. 2024 г.

Prof. Dr. V. Belovezhdrov, MD

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