

## OPINION

by

Prof. Dr. Veselin Todorov Belovezhdov, MD, PhD,  
Head of the Department of General and Clinical Pathology,  
Medical University – Plovdiv,  
in his capacity as a member of the academic jury

appointed by order of the Rector of MU – Plovdiv,  
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regarding the procedure for appointment to the academic position of “Associate Professor,” announced in State Gazette No. 110 of 31.12.2024 in the higher education field 7. Healthcare and Sports, professional field 7.1. Medicine, scientific specialty “Pathological Anatomy and Cytopathology,” at the Department of General and Clinical Pathology, for teaching in Bulgarian and English, following a proposal by the Faculty Council of the Faculty of Medicine at MU – Plovdiv (Protocol No. 3 of 12.03.2025).

Application materials were submitted in electronic form by the sole candidate, Chief Assistant dr. Maria St. Koleva-Ivanova, PhD, including all required documents in accordance with the Law on the Development of Academic Staff in the Republic of Bulgaria and the internal regulations of MU – Plovdiv.

### **I. Career Development of Dr. Maria Koleva, PhD**

Dr. Maria St. Koleva was born in 1984 in Burgas. She graduated from the English Language High School "Geo Milev" in Burgas in 2003. She earned her Master's degree in Medicine in 2009 from the Medical University – Plovdiv. Since 2010, she has worked as an assistant at the Department of General and Clinical Pathology at MU – Plovdiv and as a pathologist at University Hospital “St. George.” In 2017, she obtained a specialization in pathology; since 2019, she has held the position of administrative assistant at the Department. In 2020, Dr. Koleva successfully defended her PhD dissertation. In 2021, she was appointed Chief Assistant at MU – Plovdiv and Associate Professor at "Prof. Dr. Asen Zlatarov" University – Burgas. Since 2022, she has been Head of the Pathology Department at University Hospital “St. George” – EAD.

### **II. Scientometric Indicators of Dr. Maria Koleva, PhD**

Dr. Koleva presents 18 scientific papers, 14 of which are published in journals indexed in Scopus and/or Web of Science, including 7 with Impact Factor, and 4 in non-indexed journals. She is also a co-author of a monograph in which she authored 100 pages, qualifying as an individual contribution.

One of the publications is a result of her individual work with students. She has 11 participations in scientific forums - 2 international and 9 national presentations.

Her citations include 10 in indexed journals, 1 in a non-indexed publication, and 1 in a monograph.

Dr. Koleva participated in 5 successfully completed internal university projects. She also presents 9 certificates for completed postgraduate trainings and qualification courses.

### **III. Evaluation of the Scientific Contributions of Dr. Maria Koleva, PhD**

Her contributions can be grouped as follows:

**1. Contributions related to prostatic pathology**, where her dissertation plays a significant role. It explores some lesser-known aspects of non-tumorous processes with original characteristics, such as eosinophilic metaplasia. The study investigates the eosinophilic cytoplasmic granules, their topography, possible outcomes, and the expression of MUC1, which may serve as a reliable immunohistochemical marker for these phenotypic changes. It was established that this metaplasia lacks expression of other mucin proteins (MUC2, MUC5, and MUC6). It is demonstrated that the eosinophilic cytoplasmic granules in prostatic eosinophilic metaplasia express both exocrine (PSA and MUC1) and lysosomal (antichymotrypsin and lysosome-associated membrane proteins—LAMPs) markers, which confirms their mixed exocrine and lysosomal nature. Furthermore, it is emphasized that this is a distinctly pathological finding not observed in the normal human prostate.

Another aspect of her contributions to prostatic pathology is the study of lymphoepithelial lesions in inflammatory processes of the prostate and their expression of PDL-1. PDL-1 positive lymphoepithelial lesions are not organ-specific, although they are a consistent histological finding in high-grade chronic inflammation. They are an integral part of prostate-associated lymphoid tissue. Notably, this work includes the first attempt to study PDL-1 expression in granulomatous prostatitis, showing that granulomatous inflammation can be more easily identified using the PDL-1 marker.

**2. Another major contribution in Dr. Koleva's work concerns bladder pathology**—both tumorous and non-tumorous (epithelial anomalies, metaplasias, cystitis). Her work provides an original contribution to Bulgarian medical literature, as it presents the first histoepidemiological data on the frequency and clinicopathological characteristics of eosinophilic cystitis, giant cell cystitis, and nephrogenic adenoma. These results are included in the monograph "*Current Pathology of Bladder Diseases*", which can serve as a valuable reference for daily practice in pathology.

**3. Valuable contributions in Dr. Koleva's research activity are also evident in gastrointestinal pathology**, including a notable case of esophageal leiomyosarcoma combined with squamous cell carcinoma, confirmed via immunohistochemistry. In pulmonary pathology, she evaluated the diagnostic significance of frozen section examination in lung diseases, particularly malignant pleural mesothelioma. Her contributions in forensic medicine and deontology include a study describing bone changes that may mimic trauma and complicate forensic assessment. In neuropathology, she investigated the relationship between astrocytoma and angiomatous meningioma. In gynecological pathology, she conducted a histological analysis of 15 biomarkers across samples from normal endometrial tissue, atypical hyperplasia, and endometrial carcinoma, enabling comparative evaluation of these three lesion types and the relevance of specific biomarkers.

**4. She has also contributed to rare case studies**, such as the description of a retrobulbar ectopic lacrimal gland combined with a choristoma with a risk of neoplastic transformation in a 56-year-old woman with left eye exophthalmos; a case of massive pulmonary embolism containing bone marrow elements following bone cement implantation for a closed femoral neck fracture in a patient scheduled for a subsequent bilateral hip replacement; an investigation of Janus kinase inhibitors used in treating immune-mediated diseases, assessing the thromboembolic risks associated with their use; and the emphasis on the necessity of a multidisciplinary team—including surgeons, pediatricians, primary care physicians, and dermatologists—for treating large lymphangiomas in children.

**5. As a transition to the next section**, it is worth adding that Dr. Koleva is also involved in analyzing effective educational strategies, such as the implementation of new teaching aids in the Department of General and Clinical Pathology at MU – Plovdiv. Her work includes a comparative analysis of deductive versus inductive teaching models as applied to medical education.

#### **IV. Evaluation of Teaching Activities of Dr. Maria Koleva, PhD**

D-r. Koleva is actively involved in teaching pathology to students in Medicine, Dental Medicine, and Pharmacy programs in both Bulgarian and English. She participates in developing and using modern teaching aids and conducting examinations. Her annual teaching load exceeded 1000 hours in the 2023/24 academic year.

She co-authored 5 textbooks and 5 academic manuals (available in both Bulgarian and English), in collaboration with the Department of General and Clinical Pathology.

She contributed to a 2011 survey showing strong student interest in using digital tools for pathology learning—an approach that proved essential during the COVID-19 pandemic for distance learning.

She is also actively involved in the training of residents at University Hospital “St. George” and participates in online seminars with Assoc. Prof. Dr. D. Dikov.

***Conclusion :***

The academic and scientific development of Chief Assistant dr. Maria Koleva, PhD - including her career path, scientometric indicators, doctoral degree, research contributions, and teaching activity - fully meet the required criteria for the academic position of Associate Professor as defined by the national and institutional regulations of MU – Plovdiv.

*Therefore, I will vote in favor of awarding Dr. M. Koleva the academic title of Associate Professor and recommend the same to my respected colleagues on the Scientific Jury.*

Заличено на основание  
Чл.5 §1, б. "В" Регламент (ЕС)2016/679

09.05.2025

Prof. Dr. V. Belovezhkov, MD, PhD

