

P-HO-619/12.05.2025

To the Chairperson of the Scientific Jury,
appointed by Order No. P-1251/13.03.2025
of the Rector of Medical University – Plovdiv

OPINION

from Associate Professor Dr. Kalin Petrov Kalchev, PhD,

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Department of "General and Clinical Pathology, Forensic Medicine, and Deontology,"
Medical University "Prof. Dr. Paraskev Stoyanov" – Varna

This opinion pertains to the candidacy of

Assistant Professor Dr. Maria Stoyanova Koleva-Ivanova, PhD

for the competition for the academic position of "**Associate Professor**" in the scientific specialty "**Pathological Anatomy and Cytopathology**" at the **Department of "General and Clinical Pathology" of Medical University – Plovdiv**, announced in the "State Gazette," issue 110/31.12.2024, with an additional condition for candidates to be employed under an employment contract with an accredited practical training base.

I have been provided with the complete set of administrative documents required by the Law for the Development of Academic Staff in the Republic of Bulgaria and the Regulation for the Appointment to the Academic Position of "Associate Professor" from the Statute of Medical University - Plovdiv, as described in the application attachment submitted by the candidate to the Rector of Medical University – Plovdiv.

I. Career Development of the Candidate

After graduating in 2009 with a Master's degree in Medicine from MU-Plovdiv, Dr. Maria Koleva started working as an assistant in the Department of General and Clinical Pathology at the same university in 2010. In 2017, she obtained a specialization in "General and Clinical Pathology" at MU-Plovdiv. In 2019, she became an administrative assistant, and from 2021 until the present,

she has been a senior administrative assistant at the Department.

In parallel with her work in the Department, in 2010, she started working as a resident physician in the Department of Clinical Pathology at University Hospital "St. George" EAD – Plovdiv, and since 2022, she has been the head of the department. Between 2017 and 2020, she led the laboratory of general and clinical pathology at DKC I in Plovdiv, and for several months in 2020, she worked as a pathologist at UMHAT "Pulmed" - Plovdiv. Her total professional experience in the specialty is 14 years, 10 months, and 19 days as of the date of the report – 21.01.2025.

II. Scientometric Indicators of Dr. Maria Koleva

The minimum scientometric requirements are met by:

- Dissertation for obtaining the educational and scientific degree of "Doctor" on the topic "Eosinophilic Metaplasia in Prostatic Epithelium: General Characteristics, Morphology, Morphogenesis" from 2020, which earned the required 50 points in group indicators A,
- Monographic habilitation thesis on "Current Pathomorphology of Diseases of the Urinary Bladder," which earned the required 100 points in group indicators B,
- In group indicators C, 14 scientific publications in peer-reviewed and indexed international databases like Web of Science and Scopus, reflecting research activity from 2016-2024, which accumulated 181.6 points. Four additional publications in non-refereed journals earned another 40 points, bringing the total to 221.6 points, thus meeting the required 200 points.
- From citations in both foreign and domestic peer-reviewed and non-refereed publications, Dr. Maria Koleva gathered 165 points, exceeding the required points in group indicators D.
- In group indicators E, Dr. Koleva's specialization diploma earned 40 points. Her participation in five scientific projects brought 15 points each, totaling 75 points. Publications of textbooks earned 16.31 points, and educational aids earned 5.85 points, adding up to 22.16 points.
- In group indicators G, she accumulated 440.3 points for her teaching workload and 300 points for the academic position held, totaling 740.3 points.

III. Contributions of Dr. Maria Koleva's Scientific Works

The main topics of Dr. Koleva's scientific publications are in the following areas:

- I. Urological Pathology
- II. Gastrointestinal Pathology
- III. Pulmonary Pathology
- IV. Forensic Medicine and Deontology
- V. Neuropathology
- VI. Scientific Research Related to Teaching Activities
- VII. Gynecological Pathology
- VIII. Miscellaneous

Section I covers primary scientific research in prostate and urinary bladder pathology. These studies lead to new diagnostic and therapeutic approaches in uropathology, significantly contributing to the expansion of knowledge in the field and improving clinical practice.

Section II presents an extremely rare clinical case of a combined esophageal tumor, including leiomyosarcoma and microinvasive squamous cell carcinoma— a combination documented in fewer than ten cases worldwide. Histologically, the tumor contains highly pleomorphic spindle cells with atypical mitoses and necrosis, and immunohistochemical analysis confirms the diagnosis, ruling out alternative possibilities. The case was successfully treated with robotic-assisted surgery and highlights the importance of precise diagnostics, including immunohistochemistry, for the accurate identification of rare malignant esophageal formations.

Section III focuses on pulmonary pathology and the evaluation of the diagnostic significance of intraoperative frozen section examination in pulmonary diseases, with special attention to malignant pleural mesothelioma. The main contribution of the research in this section is to highlight the advantages and limitations of frozen section examination in the context of pulmonary diseases, emphasizing its effectiveness in diagnosing non-tumor and metastatic lesions, but also its difficulties in detecting malignant pleural mesothelioma.

Section IV focuses on scientific research in forensic medicine and deontology, addressing various diagnostic challenges and improvements in expert diagnostics: paleopathology and diagnostic difficulties, complications in skull fractures, precision in forensic medical expertise, and frozen section examination in malignant pleural mesothelioma. The main contribution of these

studies is to emphasize the importance of precise diagnostics and careful interpretation of medical data in forensic practice, as well as the need to use more reliable diagnostic methods in difficult cases.

Section V focuses on neuropathology and addresses diagnostic challenges in distinguishing between astrocytoma and angiomatous meningioma, which can have similar morphological characteristics. These studies highlight the need for a multidisciplinary approach, including histological and immunohistochemical analysis, for accurate diagnosis of neurological tumors. Section VI includes two main areas of innovation in teaching activities at the Department of General and Clinical Pathology at MU-Plovdiv: the introduction of new educational aids and the comparison between the deductive and inductive models of teaching pathology. These scientific contributions significantly improve teaching methods in medical education by stimulating student engagement and integrating modern teaching technologies.

Section VII covers important research in gynecological pathology, with a special focus on endometrial carcinoma, cervical cancer, and gynecological vasculitis. The section is divided into several groups: endometrial carcinoma, cervical carcinoma, and gynecological vasculitis. These studies highlight advances in the diagnosis and treatment of gynecological diseases, as well as the implementation of new methodologies to improve prevention and therapy.

Section VIII summarizes several significant scientific contributions related to advances in the diagnosis and treatment of rare diseases and innovations in medicine: retrobulbar ectopic lacrimal gland, infectious endocarditis, cement implantation syndrome, JAK inhibitors and their safety, massive lymphangiomas, and tracheal reconstruction. The overall contribution of these studies is to provide new diagnostic and therapeutic strategies that could improve the treatment of complex and rare diseases.

IV. Evaluation of Dr. Maria Koleva's Participation in Teaching Activities

According to the certificate of teaching experience dated January 27, 2025, Dr. Koleva has 11 years, 4 months, and 29 days as an assistant and 3 years, 5 months, and 27 days as a senior assistant. Throughout this time, her teaching workload has consistently exceeded the required workload according to the university's regulations.

Conclusion

Regarding her career development, scientometric indicators, acquired academic and scientific degree of "Doctor" based on the successfully defended dissertation, her research activity, and teaching work, Dr. Maria Koleva fully meets the requirements of the Law for the Development of Academic Staff in the Republic of Bulgaria and the Regulation for the Appointment to the Academic Position of "Associate Professor" from the Statute of Medical University – Plovdiv.

I declare that I will vote positively for the awarding of the academic position of "Associate Professor" to Dr. Maria Koleva and recommend the esteemed members of the scientific jury to support this choice as well.

09.05.2025

Associate Professor Dr. Kalin Kalchev, PhD

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

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