

STATEMENT

by

Assoc. Prof. Dr. Iliya Petrov Bivolarski, PhD,
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in his capacity as a member of the scientific jury, according
to Protocol No. 31 / 02.12.24 and Order No. P-109-437 / 05.12.2024 by the
Rector of Medical University - Varna,

in connection with the competition announced in the State Newspaper, issue 85 / 08.10.2024 for the academic position of "Associate Professor" in the field of "General and Clinical Pathology," professional area 7.1 Medicine, area of higher education 7. Health care and sports, at the Department of "General and Clinical Pathology, Forensic Medicine, and Deontology," Faculty of Medicine at Medical University - Varna, and the Clinic of "General and Clinical Pathology" – University Hospital "St. Marina" – EAD, Varna, with additional requirements for the competition: candidates must hold a specialty in the healthcare system "General and Clinical Pathology" and a PhD degree in the doctoral program "Pathological Anatomy and Cytopathology."

Materials on an electronic medium were submitted by Assistant Professor Dr. Martina Georgieva Stoeva, PhD, which include all necessary documents according to the Health Act and the Rules for the Development of the Academic Staff at Medical University - Varna, as well as documents meeting the additional requirements for the competition.

I. Career Development of Dr. Martina Stoeva, PhD.

Dr. Martina Stoeva was born in Blagoevgrad. In 2012, she graduated from the Medical University "Prof. Dr. Paraskev Stoyanov," Varna, with a degree in "Medicine." From 2015 to 2017, she was a part-time assistant at the Department of "General and Clinical Pathology, Forensic Medicine, and Deontology" at Medical University - Varna. From 2017 to 2022, she was an assistant, and since

2022, she has been a senior assistant at the same department. Between 2019 and 2022, she was a full-time doctoral student at the Department of "General and Clinical Pathology, Forensic Medicine, and Deontology," specializing in "Pathological Anatomy and Cytopathology." Her dissertation is titled "Immunohistochemical Expression of the Necroptosis Marker RIPK3 in Breast Cancer." She successfully defended her dissertation in 2022.

From 2013 to 2017, Dr. Stoeva specialized at the Clinic of "General and Clinical Pathology," University Hospital "St. Marina" EAD – Varna. She obtained her specialty in "General and Clinical Pathology" in 2017.

II. Description of the Scientometric Indicators of Dr. Martina Stoeva, PhD.

For her participation in this competition, Dr. Martina Stoeva has submitted a habilitation thesis – a monograph titled "Pathomorphology of Prostate Cancer," with a volume of 189 pages. In her academic record, there are 10 publications and presentations published in scientific journals, refereed and indexed in well-known global scientific databases. Dr. Stoeva also presents 6 other publications and presentations published in non-refereed journals, with scientific review or published in edited collective volumes. In three of them, Dr. Stoeva is the first author. Beyond the minimum scientometric requirements for the position of "Associate Professor," she has submitted one article published in an indexed and refereed publication. Five of her publications have an impact factor (IF), with her total IF being 5.5.

The total number of points from all indicators for Dr. Martina Stoeva is 224.31, with a required minimum of 200 points.

Dr. Stoeva has 5 participations with posters and reports in international and national scientific forums. Four of them were presented in the competition for the academic position of "associate professor".

Dr. Stoeva has presented 4 citations in publications, referenced and indexed in world-renowned databases of scientific information.

Dr. Stoeva has participated in 5 scientific projects: 1. "Experimental study of the effects of biologically active substances of plant origin in a metabolic syndrome model in rats for the future development of pharmaceutical products or food supplements," 2. "Study of the expression levels of immunohistochemical markers for necroptosis in breast cancer," 3. "Study of plasma levels and expression of leptin and adiponectin to assess their

applicability as molecular biomarkers in colorectal cancer," 4. "Predictive and prognostic role of immunohistochemical expression of apoptosis-inducing factor and RIPK3, a marker of necroptosis in renal cell carcinoma," 5. "Study of the expression levels of immunohistochemical markers for apoptosis and necroptosis in basal cell carcinoma and squamous cell carcinoma."

III. Evaluation of the Contributions of Dr. Martina Stoeva's Scientific Works.

Dr. Stoeva's contributions to scientific work are related to her dissertation, the submitted habilitation thesis – monograph, and full-text publications in scientific journals. The contributions are grouped into seven areas – prostate cancer, rarely diagnosed diseases, experimental morphology, pathology of adipose tissue, tumor and non-tumor diseases of the head and neck, molecular mechanisms of carcinogenesis, and infectious diseases.

In connection with breast cancer, the topic of her dissertation, a comprehensive analysis was performed of the immunohistochemical expression of the necroptosis marker RIPK3 to clarify its role in prognosis and survival in patients with this disease.

The monograph presents contemporary aspects of the pathomorphological diagnosis of prostate cancer. It thoroughly discusses the characteristics of tumor staging, using the latest classifications for tumors of the urinary and male reproductive systems (WHO, 2022) and for staging prostate cancer (8th revision of AJCC). Practical problems in determining tumor grading by Gleason score are also discussed. Special attention is given to discussing possible practical cases that create potential diagnostic challenges, which adds practical value to the monograph, making it useful for urologists, pathologists, and oncologists.

In the field of rarely diagnosed diseases, publications are included describing a rare case of classical congenital mesoblastic nephroma of the left kidney in an 11-month-old baby; a case of metastasis in a wreath from colon carcinoma, with a little-known phenotypic transformation from adenocarcinoma to neuroendocrine carcinoma; and a case of cervical mucocoele (cervical ranula), clinically mimicking a median cyst, which requires a multidisciplinary approach for diagnosis and treatment.

In experimental pathology, the effects of vitamin K on experimental animals (rats) with metabolic syndrome were studied, focusing on morphological changes in internal organs. The study has both scientific and practical significance and contributes to understanding the role of vitamin K in

metabolic syndrome. Changes in organ morphology were also studied in artificially induced vitamin K deficiency to establish the safe dose of warfarin and vitamin K1 that causes a vitamin K deficiency state without leading to fatal bleeding. The experimental model could serve as a basis for studying the role of osteocalcin in other physiological processes.

Regarding the pathology of adipose tissue, morphological changes in white and brown adipose tissue under chronic cold exposure were examined. A case study of adipose tissue in arrhythmogenic right ventricular dysplasia was also presented. These contributions have both scientific and applied value, helping to understand current issues in contemporary biology of adipose tissue.

In publications related to tumor and non-tumor diseases of the head and neck, an automatic method for counting Ki-67 positive nuclei on digital slides is used, eliminating the subjective approach. The method has scientific and applied significance in the global study of the importance of this proliferation index in malignant diseases with various localizations, including primary and metastatic intracranial tumors. A statistical analysis was also performed on the relationship between Ki-67 positive cell values and differentiation degree and survival. Ethnic dependence in intracranial neoplasms was also revealed in a solid number of cases over a period of 22 years.

In the field of molecular mechanisms of carcinogenesis, the little-known transmembrane protein – tetraspanin CD151 was studied. This group of proteins has not been previously explored in Bulgaria. The structure of tetraspanin CD151, its interaction with other proteins, and the mechanisms by which it participates in carcinogenesis processes are presented in detail.

The infectious pathology section covers the study of histological changes in the lungs during COVID-19 viral infection. A comparison is made between the morphological changes and the onset of clinical symptoms. The results contribute to a better understanding of the long-term consequences of the disease.

IV. Evaluation of Dr. Martina Stoeva's Contribution to Scientific and Teaching Activities.

As a part-time assistant (2015-2017), Dr. Stoeva had an annual workload of 80 to 280 hours, while as an assistant and senior assistant (over 7 years), her annual teaching load ranged from 266 to 434 hours, which is above the minimum according to the university's regulations (220 hours). Dr. Stoeva leads

practical classes in pathology in both Bulgarian and English for students from the specialties of "Medicine," "Dental Medicine," "Pharmacy," and "Medical Laboratory Technician." In 2022, Dr. Stoeva was certified as a class tutor. She is a member of the Bulgarian Medical Association and the Bulgarian Society of Pathology.

Conclusion: Dr. Martina Stoeva's career development, teaching, and research activities, as well as her scientometric indicators, fully comply with the requirements of the Law for the Development of Academic Staff in the Republic of Bulgaria and the regulations of Medical University - Varna for the academic position of "Associate Professor." Dr. Stoeva also meets the additional competition requirements – a specialty in "General and Clinical Pathology" and a PhD in the doctoral program "Pathological Anatomy and Cytopathology."

This gives me grounds to confidently vote POSITIVE for Dr. Martina Stoeva, PhD, to be awarded the academic title of "Associate Professor."

22.02.2025

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(Assoc. Prof. Dr. I. Bivolarski, PhD)