

ACADEMIC REVIEW

from Assoc. Prof. Svitlana Yurievna Bachurska, MD, PhD
Associate Professor in the Department of general and clinical pathology,
deontology and forensic medicine, Medical Faculty,
Medical University „Prof. D-r Paraskev Stoyanov“, Varna

member of the scientific jury based on an order of the Rector of the University
„Prof. d-r Asen Zlatarov“ № RD 93 / 07.04.2021

According to the order of the Rector of University - „Prof. d-r Asen Zlatarov“ № RD 93 / 07.04.2021, regarding a competition for acquisition of academic position „Associate Professor“, based on an Art. 57 (2) from RILDASRB, Art. 70 (2) RTCASDAP in University „Prof. d-r Asen Zlatarov“ and report of the Dean of MF with reg. № 902/06.04.2021 y. The competition for acquisition of academic position „Associate Professor“ is announced in SG no.12 from 12.02.2021 y. in the field of higher education 7. Health and sport, professional field 7.1. Medicine, a scientific specialty „Pathoanatomy“, in Department of „Anatomy, histology and embriology, pathology“ in MF in University „Prof. d-r Asen Zlatarov“ - Burgas.

D-r Maria Stoyanova Koleva-Ivanova, MD is the only candidate and has submitted for the procedure paper and electronic materials. They include all necessary documents related with the Law for the development of the academic staff in the Republic of Bulgaria, its Regulation for application and the Regulation of the terms and conditions for acquisition of academic positions in the University „Prof.d-r Asen Zlatarov“-Burgas.

I. Biographical data and analysis of career development of d-r Maria Koleva-Ivanova, MD

The candidate Maria Stoyanova Koleva-Ivanova, MD was born on May 30, 1984 y. in the city of Burgas. In 2009 y. she graduated Medical University in Plovdiv, and in 2017 y. she acquired a specialty in „General and Clinical Pathology“. In 2020 y., d-r Maria Koleva-Ivanova, MD defended an educational and scientific degree of "Doctor" in the scientific specialty "Pathology and

Cytopathology" in the Department of General and Clinical Pathology at MU - Plovdiv with a dissertation named: "Eosinophilic metaplasia in the prostate epithelium: general characteristics , morphology, morphogenesis ", with supervisor Assoc. Prof. Dorian Dikov, MD.

The attached reference shows that d-r Maria Koleva-Ivanova, MD has passed the following qualification courses:

1. „Updates in sarcomas and lymphomas“, 2014, Craiova, Rumania.
2. „Updates in Gastrointestinal Pathology“, 2014, Craiova, Rumania.
3. „Diseases of the nervous, endocrine and neuroendocrine systems“, 2016, Sofia, Bulgaria.
4. „Updates in Thyroid gland pathology“, 2016, Varna, Bulgaria.
5. „Pedagogical problems in medical education“, 2018, MU-Plovdiv, Bulgaria.

Regarding the academic and professional career, the candidate has a total work experience as of March this year 11 years and 15 days, by simultaneously combining teaching and professional activities in her capacity as an assistant at the Department of General and Clinical Pathology, MU-Plovdiv and a doctor in the Department of Clinical Pathology UHMT „St. George’’EAD - Plovdiv. From 2017 y. until now, d-r Maria Koleva-Ivanova, MD is Head of the Laboratory of General and Clinical Pathology at DKC 1 - Plovdiv, and from June 2020 y. to middle of November 2020 y.- she works as a pathologist in the Department of Clinical Pathology in UHMT „Pulmed’’, Plovdiv. Since 2019 y., d-r Maria Koleva-Ivanova, MD is an administrative assistant in the Department of General and Clinical Pathology, MU-Plovdiv.

In summary, d-r Maria Koleva-Ivanova, MD has pass through all stages of the academic and professional growth. The availability of additional qualifications and administrative activity create a serious premise for future development and growth in both scientific-teaching and clinical areas.

II. Assessment of scientometric indicators of d-r Maria Koleva-Ivanova, MD

The assessment was made on the basis of the candidate's scientific publications in Bulgarian and foreign journals and full-text reports in scientific journals, as well as the presented monographs and lists of citations, together with the evidence.

D-r Maria Koleva-Ivanova, MD presents publications, reports and communications that do not repeat those submitted for the acquisition of educational and scientific degree of "Doctor", as follows:

- 1 collective monograph named: „Current pathomorphology in urinary bladder diseases”,
- 14 publications in scientific journals, referenced and indexed in world-famous databases with scientific information,
- 5 publications in non-peer-reviewed journals with scientific review or published in edited collective volumes,
- 12 citations in scientific journals, peer-reviewed and non-peer-reviewed journals with scientific review,
- 10 co-authorships in textbooks and teaching manuals,
- 11 scientific papers from national and foreign forums and abstracts published in international journals,
- 7,17 - Impact Factor of Thomson Reuters.

After analysis, it is evident that d-r Maria Koleva-Ivanova, MD is the first author in a total of six (6) publications listed in the reference, two of which (2) are in extremely prestigious international journals with an impact factor. Twelve (12) citations were followed, eleven of which (11) were in publications in peer-reviewed and indexed journals in international databases. This, as well as the significant Impact Factor according to Thomson Reuters (7,17), are evidence of the high international recognition of the candidate's scientific works.

In addition, d-r Maria Koleva-Ivanova, MD presents a report on participation in an intra-university project at MU-Plovdiv with number NO-14/2014 on the topic: "Development of a modern immunohistochemical algorithm for the diagnosis of socially significant pelvic tumors in men “. Last but not least, the candidate

attached a reference that shows her participation in writing a number of textbooks focused on the teaching activities of the Department of General and Clinical Pathology, Forensic Medicine and Deontology of MU - Plovdiv to students of medicine, dental medicine and pharmacy in Bulgarian and English.

In summary, the presented publications, participation in forums, projects, textbooks, teaching manuals and citations are completely comprehensive and provide information related with the necessary indicators in this section.

III. Assessment of the scientific activity and contributions of d-r Maria Koleva-Ivanova, MD

Regarding the scientific profile of the candidate it is obvious that it is focused in pathology of the urogenital system and in particular - the pathology of the prostate and urinary bladder. Regardless of the focus of d-r Maria Koleva-Ivanova, MD in this field, her research interests also include gastrointestinal system, respiratory system, neuropathology, forensic medicine and innovation and modernization in the field of medical education.

1. Contributions in urological pathology

- Systematized imaging and analysis of the correct diagnosis, including current morphological criteria of not only tumor pathology of the bladder, but also non-tumor - epithelial abnormalities and metaplasia, cystitis, modern histological grading and staging of urothelial tumors is done. The results of this area are used to develop the dissertation and create the monograph "Current pathology of urinary bladder diseases."
- The dynamics of urological morbidity in nosology for an eight-year period was studied. D-r Koleva-Ivanova and colleagues found a partial distribution of diseases of the prostate and urinary bladder among the general surgical pathology. The same study found a diagnostic value for NKX3.1 and Cadherin-17 in prostate and colorectal cancer. The obtained results confirm the role of the studied antibodies as reliable immunohistochemical markers in the context of differential diagnosis.

- A comprehensive morphological study of some lesser known areas of non-tumor pathology of the human prostate was performed using a wide range of classical and modern methods.
- Quantitative analysis of basic indicators (frequency, age and main clinical symptoms) of prostate eosinophilic metaplasia (EM) of TURP-material, as well as the level of serum PSA was performed.
- A systematic morphological study of cytoplasmic granules in prostate EM was performed. D-r Koleva-Ivanova proved the variability of their morphological expression. This allowed the author to expand and enrich the modern definition of prostate EM.
- A systematic topographic study of the localization of EM in the transitory zone of the prostate gland, as well as a systematic and schematic classification of prostate EM in relation to its localization.
- A panel expression study of markers (MUC1, MUC2, MUC5, MUC6) demonstrates an immunohistochemical profile of cytoplasmic granules in EM. The results logically demonstrate a specific EM phenotype other than mucinous metaplasia.
- Using both exocrine (PSA and MUC1) and lysosomal (antichymotrypsin-AHT and lysosom-associated membrane proteins-Lamps) markers, the author demonstrates that eosinophilic cytoplasmic granules in prostate EM have a mixed exocrine and lysosomal character.
- Investigation of the combination of different types of prostate epithelial metaplasia and their relationship with chronic prostate inflammation and basal cell hyperplasia.
- The first histo-epidemiological data on the frequency and clinical and anatomical characteristics of eosinophilic cystitis, giant cell cystitis and nephrogenic adenoma have been reported.
- A clinical and anatomical case of urethral prostate ectopic tissue with the presence of eosinophilic epithelial metaplasia (EM) has been described. The first case described in the world literature illustrates the development of a type of organ-specific metaplasia (EM) in ectopically located tissue from the same organ.
- It was described for the first time on the basis of a clinical case, the connection between bladder xanthoma and urothelial neoplasm with low

malignant potential. The described rare case and the literature review are commented in terms of the morphogenesis of the lesion in view of its development after previous bladder surgery.

Scientific-applied and methodological contributions

- Two scales for semi-quantitative histological evaluation have been developed: the histological spreading of EM (focal and diffuse EM) and the histological distribution of EM (EM in single or small groups of cells and EM in large groups of cells).
- Schematic systematization of the localization of prostate EM has been performed: according to the localization in the secretory prostate epithelium; according to the localization in the secretory prostate unit (acinus or duct); according to the topographic tissue localization in the prostate, according to the microanatomical architectural localization in the prostate.
- Algorithmic morphological and IHC criteria for tissue diagnosis and differential diagnosis of prostate EM have been developed.

2. Contributions in gastrointestinal pathology

- A number of reports of rare cases of tumor and non-tumor pathology have been made, demonstrating associative connections between different diseases, which allows for new hypotheses about the etiology and mechanisms of their occurrence.

3. Contributions in lung pathology

- The diagnostic value of the urgent intraoperative examination in lung diseases, in particular in malignant pleural mesothelioma (MPM), non-tumor lesions of the pleura and metastatic pleural tumors has been studied.

4. Contributions in neuropathology

- Based on several rare clinical cases, analysis of diagnosis, differential diagnostic possibilities and prognostic factors of rare forms of neuroma, astrocytoma and angiomatous meningioma have been performed.

5. Contributions in forensic medicine and deontology

A review study and analysis of the relationship between the suicidal idea and the transition to its implementation, complex suicides, complex and complicated forms of suicide, the role of forensic autopsy.

6. Contributions in teaching activity

- New multi-component teaching manuals have been introduced in the Department of General and Clinical Pathology at MU - Plovdiv - Books, combining elements of manuals and exercise books, accompanied by a study CD.
- A comparison was made between the deductive and inductive model of pathology education.
- The use of clinical and morphological observations in the education of students has been expanded since 2011 as an element of an inductive model of education.

IV. Assessment of teaching activity of d-r Maria Koleva-Ivanova, MD

D-r Maria Koleva-Ivanova, MD has significant teaching experience as an assistant engaged in practical lessons in general and clinical pathology of students from three faculties in the following specialties: medicine, dental medicine and pharmacy, both in Bulgarian and English.

Regarding the study workload of the candidate, the provided information shows that with a standard for non-habilitated teachers of 270 hours, the presented by d-r Maria Koleva-Ivanova, DM is an average of 400, which significantly exceeds the standard.

Since 2019 y. d-r Maria Koleva-Ivanova, DM starts working as an administrative assistant in the Department of General and Clinical Pathology of MU-Plovdiv. The candidate expands her research and teaching interests and activities, and in collaboration with other colleagues from the department organizes thematic seminars in the field of gastrointestinal pathology for graduates in the academic year 2020/2021.

In summary, d-r Maria Koleva-Ivanova, MD has extensive experience in teaching and organizing training in the discipline. It demonstrates consistency, initiative and innovation in the teaching process, which is a prerequisite and a necessary condition for the future and development in this direction.

V. Assessment of the applicant's compliance with mandatory quantitative criteria and scientometric indicators.

According to the Regulation for acquisition of academic positions in University „Prof. d-r Asen Zlatarov“-Burgas and Resolution № 122 from 29.06.2018 y. for amendment and supplement of the Regulations for application of the Low for the development of the academic staff in Republic of Bulgaria, adopted by Decree № 202 of the Council of Ministers 2010 y. (promulgated, SG, NO. 75 from 2010 y.; ed. and add., no. 19 from 2011 y., no. 9 from 2012 y., no. 62 from 2013 y., no. 60 from 2014 y. and no. 57 from 2015 r.) for minimum required points by groups of indicators for academic position „Associate Professor“ candidate d-r Maria Stoyanova Koleva-Ivanova, MD has achieved and provided the following results:

Group of indicators	Content	Associate Professor (points number)	Maria Koleva-Ivanova (points number)
A	Indicator 1	50	50
B	Indicator 2	-	-
C	Indicator 3 or 4	100	100
D	Sum of indicators from 5 to 9	220 (160 за ПИИ 7.6)	273,5
E	Sum of indicators from 10 to 12	60	175
F	Sum of indicators from 13 to the end	20	107,16
Total		450	705,66

The candidate d-r Maria Koleva-Ivanova, MD meets the criteria for acquisition of the academic position of "Associate Professor", as:

- She has completed higher medical education;
- She has acquired a specialty in „General and Clinical pathology“; -
- She has defended a scientific and educational degree „Doctor“ in scientific specialty „Pathologoanatomy and Cytopathology“; -
- Covers the required quantitative scientometric indicators.

VI. Personal impressions

I know the candidate personally. We were longtime colleagues in the Department of General and Clinical Pathology at MU-Plovdiv. For this period I could define her as an extremely responsive, correct and ethical in her relations with her colleagues. D-r Maria Koleva-Ivanova, MD is hardworking, persistent, consistent and extremely precise and responsible for her professional duties. She has serious scientific interests, communicative abilities and perspective thinking. She is a very good organizer who stands out with original ideas, methodical solutions and excellent opportunities for teamwork.

VII. Critical remarks and recommendations of the reviewer

D-r Maria Koleva-Ivanova, MD in her work as a scientist has deep scientific theoretical interest and meticulous methodological implementation. In my humble opinion, these qualities are fundamental to the scientific guidance of both young scientists and research projects. I would like to recommend to the candidate to continue her development, focusing on building a stable scientific infrastructure in the form of managing research projects and doctoral students, which would be especially useful for a new research structure such as the Faculty of Medicine at the University " Prof. d-r Asen Zlatarov ".

VIII. Conclusion

Based on the above, I can summarize that the candidate d-r Maria Stoyanova Koleva-Ivanova, MD is a well-established scientist, erudite teacher and pathologist

who manages to combine both precise diagnostic work and teaching, administrative and scientific work.

It is evident that the scientific, publishing and teaching activities of the candidate meet the requirements for acquisition of the academic position "Associate Professor. That is why I give **my positive review and I will confidently vote "YES"** for acquisition of the academic position of "Associate Professor" to d-r Maria Stoyanova Koleva-Ivanova at the Department of „Anatomy, Histology and Embryology, Pathology”, University - "Prof. d-r. Asen Zlatarov ", Burgas.

May 2021 y.

Assoc. Prof. Svitlana Yurievna Bachurska, MD, PhD