

ACADEMIC OPINION

From Assoc. Prof. Iliya Petrov Bivolarski , MD

Department of General and Clinical Pathology , Medical University - Plovdiv
in his capacity as a member of the Scientific Jury,

Based on the order of the Rector of the University - "Prof. Dr. Asen Zlatarov" N ° RD 93 / 07.04.2021, regarding a competition for acquisition of the academic position "Associate Professor", on the grounds of Art. 57 (2) of RALDASRB , Art. 70 (2) of PULDASRB at the University "Prof. Dr. Asen Zlatarov " and report to the Dean of the Medical Faculty with registration № 902/06.04.2021. The competition for academic positions "Associate Professor" was published in the State Gazette 12 from 12.02.2021, in the field of higher education 7. Health and Sport, Professional field 7.1. Medicine, a scientific specialty "Pathoanatomy" in the Department of "Anatomy, histology and embryology, pathology" in Medical Faculty of the University „Professor. Dr. Asen Zlatarov" - Burgas.

Paper and electronic materials have been deposited for the competition from Dr. Maria Stoyanova Koleva-Ivanova, MD, who is the only candidate. The materials provided by Dr. Koleva-Ivanova include all necessary documents in accordance with the Law of the Development of Academic Staff in the Republic Bulgaria, the Rules for its application and the Rules of the terms and conditions for acquisition of scientific degrees and academic positions at the University "Prof. Dr. Asen Zlatarov" - Burgas.

I. Analysis of the candidate's career profile.

Dr. Maria Stoyanova Koleva-Ivanova was born on May 30, 1984 in the city of Burgas. She graduated English Language School „Geo Milev", Burgas, with a second language – German language in 2003. In the same year she was accepted as a medical student at Medical University of Plovdiv, where she graduated

successfully with a master's degree in 2009. In 2010 Dr. Koleva-Ivanova began working as an assistant in the Department of "General and Clinical Pathology" at the Medical Faculty of MU - Plovdiv, after successfully passing a competitive exam. Dr. Koleva-Ivanova was immediately appointed afterwards as a doctor in the Department of "General and Clinical Pathology" of the University Hospital "St. Georgi" - Plovdiv, where her specialization in the discipline started. In 2017 she acquired a specialty in "General and Clinical Pathology and Cytopathology". From 2019 Dr. Koleva-Ivanova is an administrative assistant in the Department „General and clinical pathology" - Plovdiv, which position she fulfills until this moment. In June 2019 she was enrolled as a doctoral student in an independent form of education.

In December 2020 Dr. Koleva – Ivanova successfully defend a thesis named: "Eosinophilic metaplasia in the prostate epithelium: general characteristics, morphology, morphogenesis" and acquired educational and scientific degree "Doctor".

During her work experience, Dr. Koleva-Ivanova has worked as: Pathologist in the Department of Clinical Pathology at the University Hospital "St. George" EAD – Plovdiv from 01.04.2010 to this present moment; she is the Head of Laboratory of General and Clinical pathology at DKC 1 – Plovdiv since 12/06/2017, and from June 2020 to the middle of November 2020 she worked as a pathologist in the department of clinical pathology at the University Hospital " Pulmed " - Plovdiv .

Dr. Koleva-Ivanova is fluent in English and has a very good level of German.

She is a member of the BDC, the National Society of Pathology, CIUB and the European Society of Pathology .

II . Description of the scientific publications and scientometric indicators of the candidate for the overall academic development.

Dr. Koleva- Ivanova is a co-author of 17 publications in scientific journals, referenced and indexed in world-famous databases with scientific information

and 5 publications in non-refereed journals with scientific review or published in edited collective volumes. One of these publications is the result of individual work with outstanding students.

The candidate has 11 participations in scientific forums, with posters and reports, 2 of which - international and 9 - national.

She presents 5 certificates for successfully completed postgraduate training projects, participation in training seminars, courses for training centers. And has 1 participation in an intra-university project.

Dr. Koleva- Ivanova is a co-author of 5 textbooks and 5 manuals (with Bulgarian and English versions) for students of medicine, dentistry, pharmacy and health specialties, with a team from the Department of General and Clinical Pathology at the Medical University- Plovdiv.

She is also a co-author in a collective monograph named: "Current pathomorphology of urinary bladder diseases" which was published in 2020. The same year she received an award for high publishing activity.

The scientific works of the candidate has a high publication image in the national and foreign literature. She has 12 positive citations that have been presented, 11 of which are in journals referenced and indexed in world databases of scientific information and 1 - in monographs and collective volumes of scientific peer review.

The publications of Dr. Koleva-Ivanova have scored 7.17 in Thomson Reuters and Global Impact Factor - 0.388.

III. Evaluation of the contributions of the scientific works of Dr. Maria Stoyanova Koleva-Ivanova.

The scientific contributions of the work of Dr. Koleva can be thematically divided in the following areas:

1. Pathology of the prostate

Contributions of original character.

A quantitative study of basic parameters (frequency of distribution, age and resulting clinical symptoms) of the prostate eosinophilic metaplasia (EM) of TURP-material and the level of serum PSA was performed. The size of eosinophilic cytoplasmic granules in patients with prostate EM was determined and the definition of this morphological finding was updated. A systematic study of the localization of EM was made with a systematic classification and schematic topographic representation of the process. The results of histochemical and immunohistochemical examination of EM prove the mixed exocrine and lysosomal nature of eosinophilic granules. A summary of the possible outcomes of prostate EM was performed. It has shown that EM is an obligate pathological finding, absent in the normal prostate tissue. It has been concluded scientifically that chronic histological prostatitis (CHP) is related to the development of EM and basal cell hyperplasia (BCH). It has been found that the two processes are too often synchronous, which demonstrates their pathogenetic relationship.

Scientifically - applied and methodical contributions

There are scales for semi-quantitative morphological assessment of histological distribution of EM (focal and diffuse) and histological spread of EM. The localization of the prostate EM is schematically systematized as follows: according to the localization in the secretory prostate epithelium; according to the localization in the secretory prostate unit (acin or duct); according to the topographic tissue localization in the prostate tissue and according to the microanatomical architectural localization in the organ. The advantage of standard histological stains containing phloxin instead eosin (HES and HPS) is shown for easier identification of the tissue cytoplasmic granules in the prostate EM. A tissue artifact mimicking histologically the EM associated with the nature of the TURP material was observed. A differential diagnostic algorithm has been developed to distinguish true EM from tissue cytoplasmic pseudo - eosinophilia . An observation of EM in material of laser resection th prostate (HOLEP), with preservation of eosinophilic granule in the cytoplasm of the secretory cells with

EM was described. An algorithm has been developed for the morphological and immunohistochemical criteria for diagnosis and differential diagnosis of prostate EM. Despite the microscopic phenomena in benign prostate epithelium has been reported diagnostic and differential - diagnostic value of EM in relation to chronic prostate inflammation.

For the first time in literature, the combination of nonspecific granulomatous prostatitis (NSGP) with EM and prostate adenocarcinoma has been described . A differential diagnosis IHC-algorithm for distinguishing NSGP, EM and prostate adenocarcinoma with endocrine differentiation, resembling morphologically Paneth cells has been developed. A histological, histochemical, and IHC description of NSGP was made and the relationship between NSGP and chronic histological prostatitis was discussed.

The transition from the prostate to the general pathology was tracked, considering the matter of prostate epithelial EM, the combination of various prostate epithelial metaplasias and their relation to chronic inflammation of the prostate and basal cell hyperplasia. A clinical- anatomical case of urethral prostate ectopic tissue with eosinophilic epithelial metaplasia (EM) has also been described. The case is the first in the world literature and illustrates the development of organ- specific metaplasia (EM) in ectopically located tissue from the same organ.

2. Pathology of the urinary bladder

The presented collective monograph is the first deeper scientific examination for the country, devoted to the pathology of the urinary bladder. Issue is structured to serve as a practical guide for uropathology . Its content includes conditions for the correct diagnosis of diseases of the bladder, the criteria for histological grading and staging of urothelial tumors, which is *Conditio sine qua non* for the personalized post-operative therapy. The original contribution of this study is expressed in the first accurate descriptions of clinical-morfological characteristic and the frequency distribution of diseases such as eosinophilic

cystitis, Giant cell cystitis and nephrogenic adenoma. The morphogenesis of xanthoma of the urinary bladder, related with its development after prior surgical bladder interventions, as well as the connection of this rare lesion with urothelial neoplasm of low malignant potential was described for the first time in literature.

3. Gastrointestinal pathology.

Several publications describe the connection between esophageal xanthoma, developed in Barrett's esophagus and taking AINS, and the association of rare presented Russel body gastritis with malignant GIST. A clinical case of capillary hemangioma with atypical and rare localization in the stomach has been also described.

4. Pulmonary pathology.

The role of urgent intraoperative examination is presented and also its predictive value for lung diseases and more specifically in malignant pleural mesothelioma (MPM).

5. Neuropathology, forensic medicine and deontology

Cases of neuroma with rare intraoral localization, differential diagnostic aspects in astrocytoma and angiomatous meningioma, as well as cases of suicides from forensic medicine practice were described.

6. Innovative pedagogical methods in teaching of pathology.

In connection with the introduction of electronic textbooks, a survey of student's opinion was done in the year 2011. The results demonstrate increased interest and positive attitude of the students towards the use of computer technology in teaching pathology. The expanded opportunities for teaching are established. Today, in pandemic conditions, such innovative practices demonstrate their practical value and reveal the relevance of the issue, which was seen by researchers a decade ago.

IV. Complex, qualitative assessment of the teaching activities of Dr. Maria Stoyanova Koleva-Ivanova, incl. student's and graduate's study guide.

Dr. Koleva-Ivanova has solid teaching experience and qualification as an assistant in the Department of General and Clinical Pathology. She is engaged in teaching in the regular course in pathology for training students in the specialties "Medicine", "Dental Medicine" and " Pharmacy", both in Bulgarian and English. She is actively participating in the creation and use of new educational manuals for teaching, training and examinations. After acquiring specialty in the discipline, Dr. Koleva- Ivanova was included in the training of trainees through consulting in the daily biopsy diagnostic work and autopsy activities of the Department of General and Clinical Pathology of the University Hospital "St. Georgi "- Plovdiv. After obtaining the scientific-educational degree "Doctor" Dr. Koleva-Ivanova, actively participates in the organization and conducting of online training presentations, collaborating with her supervisor Assoc. Prof. Dr. Dorian Dikov. The main goal of these presentations is to improve the theoretical and practical training of pathology trainees.

According to my personal observations, Dr. Koleva is a highly valued by students teacher and a deeply respected specialist from the entire academic staff of the Department of General and Clinical Pathology at MU-Plovdiv.

V. CONCLUSION

The career development of Dr. Koleva-Ivanova, her scientometric indicators, acquired scientific and educational degree "Doctor", co-authorship in writing of textbooks, manuals and monographs, fully comply with the set of mandatory conditions, scientometric criteria and indicators for acquisition the academic position of " Associate Professor " according to the LDASRB, the Rules for its application and the Rules for acquisition of the academic position "ASSOCIATE PROFESSOR", adopted in the Regulations for the structure and activity of the University "Prof. Dr. Asen Zlatarov " - Burgas.

My personal impression of the qualities of the candidate, based on our co-work for many years in the Department of General and Clinical Pathology at MU-Plovdiv, is excellent. Despite the laborious teaching commitments, including English teaching, Dr. Koleva-Ivanova has successfully handled all other professional obligations - solid in volume and complex multidisciplinary diagnostic activity, solving regular or incidental administrative tasks. At the same time, Dr. Koleva-Ivanova manages to combine and develop in-depth scientific research through participation in congresses, conferences and realization of scientific publications in prestigious international journals, the most part of which - with IF. Dealing with all these commitments inevitably requires precise time planning and enviable work discipline.

I will confidently vote FOR the acquisition of the academic position of "AssociateProfessor" to Dr. Maria Stoyanova Koleva-Ivanova to the Department of „Anatomy, Histology and Embryology, Pathology” , University - "Prof. Dr. Asen Zlatarov ”, Burgas.

May, 2021

Assoc.Prof.Dr.Iliya Bivolarski, MD.