

To the Chairman of the Scientific Jury
according to Order No R-109-
358/21.09.22 of the Rector of MU-Varna

REVIEW

by Assoc. Prof. Tanya Ivanova Deneva, MD, PhD

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Associate Professor Yana Dimitrova Bocheva, Ph.D. is the only candidate for participation in the competition announced in State Gazette No. 59 of 26/07/2022 for the academic position of "professor" in the scientific specialty "Clinical Laboratory" at the "Clinical Laboratory" Department, Faculty of Medicine of the MU - Varna and Clinical Laboratory at the Clinical laboratory of UMBAL "St. Marina" EAD – Varna.

The procedure for announcing and holding the competition is in accordance with the requirements of the law on the development of the academic staff in the Republic of Bulgaria and the regulations for the implementation of the law on the development of the academic staff in the Republic of Bulgaria, as well as with the conditions for occupying the academic positions according to the regulations on the development of the academic staff of MU-Varna.

The presented set of materials on paper/electronic media is in accordance with Art. 137 of the regulations for the development of the academic staff of the MU - Varna.

I declare the absence of conflict of interest in the preparation of the review.

I have not detected any plagiarism in my submitted papers for review.

SCIENTIFIC AND PROFESSIONAL QUALIFICATION

Associate professor Yana Dimitrova Bocheva, Ph.D. was born in 1976 in the city of Yambol. In 1995 she graduated from Vasil Karagyozev Language High School - Yambol with a major in English. She graduated in medicine at the Medical University "Prof. Dr. Paraskev Stoyanov" - Varna in 2001.

In 2008, she acquired a specialty in Clinical Laboratory, and in 2010. Master's degree in Health Management.

Since 2009, she has been the head of the Central Clinical Laboratory at the "St. Marina" UMBAL - Varna.

In 2015, she defended his dissertation on the topic "Predictive value of some tumor markers in the follow-up of oncological patients - verification by FDG PET/CT" and obtained the educational and scientific degree "Doctor of Medicine".

In 2016, she was habilitated as an associate professor in the scientific specialty "Clinical Laboratory". In the same year, he published a monograph on "Serum markers in solid tumors".

Since 2005, she has successively held the competitive academic positions of "Assistant" and "Associate Professor" in the Department of "General Medicine and Clinical Laboratory at the Medical University of Varna, in the period 2018-2021 he is the head of the "Clinical Laboratory" Department at the same department.

Since 2021, she has been the Head of the newly established "Clinical Laboratory" department at MU-Varna and was elected as the Secretary of the Board of Directors of the Bulgarian Scientific Society for Clinical Laboratory and was elected as the President of the Society for the future period 2023-2025. She is a member of the Expert Council for the same specialty at the Ministry of Health.

Assoc. prof. Bocheva is a member of the Bulgarian Scientific Society of Clinical Laboratory, the Bulgarian Society of Endocrinology; International Society of Thrombosis and Hemostasis (ISTH), European Federation of Clinical Laboratory and Laboratory Medicine (EFLM), certified member of the European Register of Specialists in Laboratory Medicine (EuSpLM Register).

Prof. Dr. Yana Bocheva is the National representative of Bulgaria in the International Federation of Clinical Chemistry and Laboratory Medicine (IFCC).

RESEARCH ACTIVITY

Assoc. Prof. Yana Bocheva presents herself at the competition for academic position "Professor" with 1 dissertation for the award of PhD degree; 10 scientific publications in publications that are referenced and indexed in world databases with scientific information, 7 publications and reports published in scientific publications, referenced and indexed in world-renowned databases with scientific information, 21 publications and reports published in non-refereed journals with peer-reviewed or published in edited collective volumes and 3 full-text publications in scientific journals and collections indexed in a global database beyond the minimum scientometric requirements for holding academic position "professor", 2 university manuals for continuing education and a chapter from a published university textbook. In the current competition, the candidate participated with a total of 45 scientific papers, of which real publications – 41/ full-text articles in foreign journals, 25 in Bulgarian journals/ and 8 reports presented at prestigious international congresses with abstracts published in IF journals.

Acknowledgments for the quality of Assoc. Prof. Bocheva's published scientific works is the significant number of citations (83) incl. by foreign authors in authoritative international journals with an impact factor. Attached is evidence from the Web of Science, Scopus, Google Scholar database and an academic reference from the MU-Varna Library with the citations covering the minimum requirements for occupying the academic position of "professor"

A reference to the World Scientific Databases Google Scholar, ORCID, SCOPUS ID, Web of Science Researcher, Research Gate shows that for the last 5 years the candidate has 71 scientific publications, of which 33 have an impact factor or impact rank. The total IF of the publications is 169,938; h-index 5 (Scopus and Web Science).

Participation in scientific projects

In connection with the current competition, Assoc. Prof. Yana Bocheva presents evidence of participation in 5 national projects at the Science Fund of the University of Varna, 1 national scientific project under a contract financed by the Scientific Research Fund at the Ministry of Education, Science and Technology of Ukraine DN 13/3 of 14.12.2017, 1 participation in an international project in Horizon 2020 (GA #643708 H2020-HCO-2014) funded by the European Union research and innovation program and 1 participation (academic mentor) in an educational project under the OP "Science and Education for Intelligent Growth" program BG05M2OP001-2.013-0001" Student practices-phase 2 (2020-2023)

Scientific contributions

On the basis of the presented scientific works, including the author's abstract of a dissertation, monograph, full-text publications and summaries of participation in scientific forums, it is evident that the author works and builds his professional development by initially developing his specific scientific interest in the field of medical oncology and consistently expands the scope of its scientific research in the fields of endocrinology, haematology, pulmonology, infectious diseases and nephrology. In the publications of the last 7 years, the author works with clinical teams in national and international projects and shows a desire to adapt and validate methodologies for new and up-to-date markers in laboratory diagnostics. Assoc. prof. Bocheva's full-text publications chronologically follow his development as a broad laboratory diagnostician with interests in almost all therapeutic medical specialties - cardiology, endocrinology, oncology, pulmonology, paediatrics, nephrology, infectious diseases, gastroenterology, and in adjacent surgical specialties - abdominal surgery with a focus on oncosurgery, oncogynecology, breast oncosurgery, maxillofacial surgery. With joint reports with clinicians, Assoc. prof. Bocheva also participates in international forums of the European Thyroid Association, the European and World Society of Nuclear Medicine, ESPE, ISPAD, BCLF as well as in national congresses and conferences in endocrinology, oncology and pulmonology, paediatrics.

The main contributions in the research work of Assoc. prof. Bocheva are related to:

- defining clinical indications when using validated laboratory markers,
- validation of innovative laboratory markers
- developing guidelines for the application of laboratory markers based on evidence-based medicine
- introduction of innovative or validated laboratory markers into prognostic and rapid risk assessment and diagnostic algorithms
- derivation of reference limits when validating innovative markers

I present in a summarized form contributions related to the main directions of the scientific works of Assoc. prof. Bocheva:

Contributions in the Clinical Laboratory direction

- Introduction of a standardized determination of pathological inhibitors against factor VIII/IX according to a model in accordance with the Bonn protocol for the needs of the Expert Center for Rare Diseases at UMBAL "St. Marina" - Varna
- Derivation of reference values for the Bulgarian population for NGAL and cut off values of the same marker for specific clinical indications.
- Development of guidelines for the application of validated tumor markers in specific clinical entities, based on evidence-based medicine.
- Development of work procedures and adaptations for work of specific parameters in different biological specimens/saliva, wash-out/.
- Study of the diagnostic and prognostic value of DNI in various clinical indications/localized inflammation, systemic multiorgan failure, sepsis/
- Output of reference values for the Bulgarian population for DNI.

Contributions in the Medical Oncology direction

- Investigating the diagnostic value of the tumor markers CEA, CA-19-9, CA-125, SCC, CA-15-3 and deriving a positive predictive value for each of the markers.
- Development of practical guidelines for evaluating the evidentiary value of predictive laboratory markers in solid tumors and in hematological neoplasias.
- Development of a practical guide for behavior in breast carcinoma, thoracic and gastroenteropancreatic neuroendocrine tumors, ovarian carcinoma, melanoma, and neuroblastoma in children in the part of laboratory tests for follow-up in the composition of the National Expert Board.

Contributions in the Pulmonology direction

- Study and application of DNI/delta-neutrophil index/ as part of a risk assessment system in patients with sepsis, shock and multiorgan failure.

Contributions in the Endocrinology direction

- Adaptation of a working procedure for the determination of calcitonin, free T4, thyroglobulin in a specific biological material: lavage from a lymph node or thyroid node.

- Study of the incidence of gestational diabetes mellitus according to three groups of criteria in Northeastern Bulgaria.

- Participation in a multidisciplinary team within the framework of an international scientific project on the risk of type 1 diabetes mellitus in risk groups with included intervention in the groups.

TEACHING AND LEARNING ACTIVITY

Assoc. Prof. Bocheva's teaching experience is 17 years, of which 6 years as an associate professor. The educational and teaching activities of Assoc. Prof. Yana Bocheva are evenly distributed over the years and significant in volume.

During this period, she gave lectures and exercises to students of medicine and pharmacy in Bulgarian and English, to students of the specialties of medical laboratory technician and nurse. From the report presented for the last 4 academic years, Assoc. Prof. Bocheva's study load is over 120% of the norm for study load. Contributed as an author to 2 university continuing education manuals and a chapter of a published university textbook.

As supervisor of physicians specializing in clinical laboratory for the period 2017-2022, two interns successfully completed their studies under her supervision, and she is currently the supervisor of 3 clinical laboratory specializing physicians

Assoc. Prof. Bocheva participates in examination committees for semester and state examination committees for the acquisition of a specialty in clinical laboratory.

Associate Professor Bocheva is a lecturer - an annual participant in the established format during the period 2020-2022. virtual training seminars for hematologists, laboratory specialists, pathologists and paediatricians certified by EBAH /European Board of Accreditation in Haematology/.

Associate Professor Bocheva is the supervisor of two PhD students who have successfully defended their PhD degree and two doctors who are currently studying in doctoral programs. The four doctoral theses are in the scientific specialties of "clinical laboratory", "infectious diseases" and "surgery", which is in line with the wide-spectrum scope of Bocheva's scientific research and her views on the development of specialists in diagnostic specialties.

As Head of the Department, Assoc. Prof. Bocheva is responsible for the overall organization and implementation of the educational, teaching, and scientific activities in the department.

DIAGNOSTIC AND THERAPEUTIC ACTIVITY

Assoc. Prof. Yana Bocheva as Head of the Clinical Laboratory of UMBAL "St. Marina" EAD is also responsible for the entire diagnostic and therapeutic activity of the unit, ensuring high analytical quality and reliability of clinical-laboratory research through implemented modern technologies and principles of analysis. Along with the contributions reflected in the publications, as the head of the clinical laboratory at the Medical Center "St. Marina"-Varna, Associate Professor Bocheva introduced some specific diagnostic tests. After training at the Center for Haemophilia - University Hospital Bonn, Germany, Assoc. prof. Bocheva adapted and introduced determination of inhibitors against factor 8 and 9 in accordance with the Bonn protocol for the needs of the Center for Rare Diseases at UMBAL "St. Marina" EAD-Varna. The center is unique and unique in the country. Until Bocheva and the clinical laboratory team at the "St. Marina" UMBAL - Varna adapted for work and introduced into routine work in 2012 the first robotic system in laboratory diagnostics in Bulgaria with modules for clinical chemistry and immunochemistry.

Since the start of kidney transplants, autologous stem cell transplants in CCL have been introduced to routinely determine levels of immunosuppressants from all used groups: Everolimus, Sirolimus, Tacrolimus and Cyclosporin A.

What characterizes the candidate's diagnostic and therapeutic activity is the accumulated experience and practical knowledge in all aspects of modern clinical and laboratory diagnostics.

MANDATORY QUANTITATIVE CRITERIA AND SCIENTIFIC INDICATORS

Assoc. Prof. Yana Bocheva has submitted an academic reference for compliance and fulfilment of the mandatory quantitative criteria and scientometric indicators according to the Regulation for occupying the academic position "Professor" at the MU - Varna, Chapter III, Section IV, Annex 1.

Indicators	Points required	Number of points based on the evidence presented by the candidate
A	50	50
B	100	108,62
Г	200	236,55
Д	100	105
E	100	260.1

Based on the indicated activity of the candidate, the requirements of the law on the development of academic staff in the Republic of Bulgaria and its regulations for application in the MU-Varna for the appointment of academic position "Professor" are met.

CONCLUSION

In the competition, Assoc. Prof. Yana Bocheva presents herself as an exceptional and well-established specialist with sufficient medical, research and teaching experience.

I believe that with her many years of research, teaching and clinical diagnostic activity, Assoc. Prof. Dr. Yana Bocheva, MD, PhD. meets (and exceeds) the mandatory and specific conditions and scientometric criteria for occupying the academic position of "professor". This gives me reason to vote positively and to suggest to the members of the esteemed jury to support the election of Assoc. Prof. Yana Bocheva, PhD. for "Professor" of Clinical Laboratory".



12.12.2022 г.
Plovdiv

Assoc. prof. Tanya Deneva, MD, PhD