To the Chairman of the Scientific Jury,
determined by Order No. R-2392/17.07.2024.
Deputy Rector-NID Prof. Dr. Maria Tokmakova, PhD
MU-Plovdiv

Attached I present:

STATEMENT

by competition for the academic position "Associate Professor" in Medical Rentgenology and Radiology (incl. use of radioactive isotopes) for the needs of cat. "Clinical oncology" in the discipline "Medical Rentgenology and radiology (incl. use of radioactive isotopes)

Opinion by: Prof. Dr. Antonia Dencheva Tsonevska, dm
Scientific specialties – Medical radiology, Oncology
The opinion has been drawn up in accordance with the requirements of ZRASRB and PPZRASRB - Section III - Conditions and procedure for occupying the academic position of "docent"

In the legally established term for participation in the competition for the academic position of Associate Professor of Medical Rentgenology and Radiology (incl. use of radioactive isotopes) for the needs of cat. "Clinical oncology" in the discipline "Medical Rentgenology and radiology (incl. use of radioactive isotopes), MU-Plovdiv
announced in the State Newspaper No. 35 of 19.04.2024, only one candidate has submitted documents - Dr. Albena Dimitrova Botushanova, MD. All submitted documents and materials of the candidate have been prepared according to the requirements of PPZRASRB of MU-Plovdiv

**1. Professional and academic development**

Dr. Albena Dimitrova Botushanova was born on June 5, 1966. She graduated from the Faculty of Medicine of the Medical University of Plovdiv in 1992. with excellent success. From 07.02.1995 works as a resident doctor in the CLT in the Laboratory of Radiobiology at the UMBAL "St. Georgi" EAD - Plovdiv. Acquired the specialty "Radiobiology" on 06.05.1998. Since 1999, she has been working at CLT and in 2003 acquires a specialty in Nuclear Medicine. Since 2004, she has been a graduate student on the scientific topic "Nuclear-medicine methods for the diagnosis of abnormal parathyroid glands in primary and secondary hyperparathyroidism" and obtained a doctorate from the National Academy of Sciences "Doctor" in a scientific specialty,Medical Rentgenology and radiology (including the use of radioactive isotopes)" at the Medical University "Prof. Dr. Paraskev Stoyanov", Varna. Since September 2019, she has been selected as an assistant at the "Clinical Oncology" department of the MU - Plovdiv. She participates in the teaching of radiology to medical and dental students. She is also a teacher at the Medical College - Plovdiv of X-ray laboratory assistants in the study disciplines of nuclear medicine and radiobiology.

Dr. A. Botushanova graduated as a Master in Health Management at the Higher School of Agribusiness and Regional Development, Plovdiv, Faculty of Economics and Management from 23.05.2019.

From 2020 she is the head of the Department of Nuclear Medicine at the "St. Georgi" EAD - the city of Plovdiv, which has two bases with hybrid SPECT/CT and PET/CT gamma camera equipment. From 2021 after a competition, Dr. A. Botushanova, PhD, holds the post of "principal assistant" at the Department of Clinical Oncology.

During her work, Dr. Botushanova established herself as a respected colleague, with high professionalism, a sense of responsibility, communication and business-like nature.

**2. Evaluation of the research activity:**

In the current competition, Dr. Botushanova participates with publication activity, presented in 1 peer-reviewed monograph, 12 publications and reports published in scientific publications, referenced and indexed in MBD Scopus and Web of science and 5 publications and reports in non-refereed journals with scientific review or in edited collective volumes. Of the publications submitted for review, she is first author or second author in one monograph and 10 publications. Various modern nuclear-diagnostic methods and modern nuclear-medical equipment were used in the scientific developments.

Scientometrics indicate a total IF=15,963 of articles and reports.

Dr. Botushanova has a successfully defended dissertation with an abstract for the award of the educational and scientific degree "Doctor" in the scientific specialty "Medical Rentgenology and radiology (incl. use of radioactive isotopes"): "Nuclear-medical methods for the diagnosis of abnormal parathyroid glands in primary and secondary hyperparathyroidism', which defines the scientific area in which the candidate's interest is focused.

Dr. Botushanova is an independent author of a peer-reviewed monograph on "Nuclear Medicine and Parathyroid Glands - Past, Present and Future". The monographic work is the first on the subject for our country. In this work, Dr. A. Botushanova has traced the development in the search for the right radiopharmaceutical for the diagnosis of abnormal parathyroid glands and the development of new methodologies in connection with technological progress in nuclear medicine equipment.

The scientific results presented by Dr. Botushanova, reflected in real publications and abstracts from scientific forums, are in the direction of the most modern nuclear medicine diagnostic methods. I accept the contributions declared by the candidate:
1.Nuclear medicine methods for diagnosis of abnormal parathyroid glands in primary and secondary hyperparathyroidism: For the first time, the results of nuclear medicine examinations conducted in a large group of patients with PCHT and PCHT are summarized. The advantages and disadvantages of a single-isotope two-phase method and a two-isotope subtraction method with 99mTc-sestamibi and 99mTc-tetrofosmin performed in patients with PCPT and PCPT are presented.
The role of the SPECT technique for increasing the diagnostic sensitivity of single-isotope two-phase and two-isotope subtraction methods is emphasized. An in-depth study was made of the relationship between scintigraphic findings and indicators of calcium-phosphorus exchange, as well as with the volume of the echographic findings in patients with PCPT and PCPT. The risks of false-negative and false-positive results were analyzed. Protocols have been prepared for the combined use of SPECT technique with single-isotope two-phase and subtraction methods. An algorithm for the study of parathyroid glands has been prepared.
2. PET/CT hybrid equipment: For the first time in the "St. Georgi" EAD - Plovdiv have introduced 18F-FDG PET/CT examinations for carcinomas of: lung, stomach, mammary gland, kidney, colon, lymphoma diseases for the purpose of diagnosis, staging and monitoring the effect of therapy. Standard of Nuclear Medicine, image processing and interpretation protocols were applied.
3. SPECT/CT hybrid equipment: For the first time in the "St. Georgi" EAD - Plovdiv have introduced SPECT/CT studies with protocols according to the Standard of Nuclear Medicine, processing and interpretation of hybrid images for: bone scintigraphy, radioiodine scintigraphy, lung and parathyroid scintigraphy. In 2023, sentinel scintigraphy was introduced.

Dr. Albena Botushanova is the Head of the scientific project NO - 07/2023. on: Diagnosis of bone metastases by hybrid SPECT/CT and markers of bone metabolism in patients with prostate carcinoma.
The attached reference for citations of Dr. Albena Botushanova shows 20 citations. All citations are in MBD journals in SCOPUS. Official citation evidence is provided.
The academic report for the fulfillment of the minimum national requirements and the requirements of the Regulations for occupying academic positions of the MU-Plovdiv shows results covering the minimum scientometric requirements.

**3. Evaluation of the scientific activity of the candidate and evaluation of the educational and teaching activity.**

The official report from the Academic Department of MU-Plovdiv on the personal and academic workload in the last three academic years of units with medical-clinical activity is reflected that Dr. Albena Botushanova has classroom and non-auditory employment exceeding the required minimum according to the norms of MU-Plovdiv.
It includes teaching "radiology" modules for the third year of medical students at MF, MU-Plovdiv, as well as teaching "nuclear medicine" and "radiobiology" modules for 1st and 2nd year X-ray laboratory students at MK - Plovdiv. For the last two years, a total study load of 1588 hours has been carried out. Dr. Albena Botushanova participated in the preparation of lectures and exercises for distance learning during the COVID-19 pandemic. Assists in updating the curricula of the specified disciplines.Participates in the preparation of the exam tests for the radiology semester exams.
Dr. Albena Botushanova was the Head of the specialization of two medical interns.
He is a co-author in a collective of teaching aids.

**4. General assessment of the candidate's compliance with the mandatory conditions and the mandatory quantitative criteria and scientometric indicators for occupying the academic position, according to ZRASRB and PPZRASRB.**
After a detailed study of the scientometric indicators and quantitative criteria in Dr. Albena Botushanova's documents, I believe that they meet the national requirements for holding the academic position "Acc.Professor".
As a recommendation for future development, I would give advice on the base that the clinic has the most modern equipment in the field of nuclear medicine, there are all the conditions to strengthen scientific research activity.

**CONCLUSION:**
Bearing in mind the criteria of ŽRASRB and PPZRASRB, as well as the documentation presented by Dr. Albena Botushanova, I can state that Dr. Botushanova is a qualified specialist in nuclear medicine.
The analysis of Dr. Botushanova's scientific-research and teaching-teaching qualities, as well as her scientific potential, give me the reason to propose to the honorable scientific jury to vote positively for her election to the academic position of "associate professor" for the needs of cat. "Clinical oncology" in the discipline "Medical Rentgenology and Radiology (incl. use of radioactive isotopes), MU-Plovdiv.

23.08.2024г.

Prof.dr A.Tzonevska,PhD