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STATEMENT

by **Assoc. Prof. Dr. Darina Kirilova Georgieva-Hristova, PhD**

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Pursuant to Order No. P-109-200/16.04.2025 of the Rector of the Medical University "Prof. Dr. Paraskev Stoyanov" – Varna, in connection with the competition announced in the State Gazette, issue No. 15/21.02.2025, for occupying the academic position of *Associate Professor*, and based on Report Ref. No. 102-829/27.03.2025 from the Head of the Department of Diagnostic and Interventional Radiology, as well as the decision recorded in Protocol No. 37/31.03.2025 of the Faculty Council of the Faculty of Medicine, and in accordance with Art. 4, para. 1 and 2 of the **Academic Staff Development Act in the Republic of Bulgaria**, Art. 57, para. 1 and 2 of the Regulations for the Implementation of the Academic Staff Development Act in the Republic of Bulgaria, and Art. 6, para. 1, Art. 127, para. 1 and 2 of the Rules for the Development of Academic Staff at the **Medical University – Varna**

Regarding: Competition for occupying the academic position "Associate Professor" in the specialty Imaging Diagnostics, professional field **7.1. Medicine**, area of higher education **7. Healthcare and Sports** – Teaching sector Magnetic Resonance Imaging, Department of Imaging Diagnostics and Interventional Radiology, Faculty of Medicine, Medical University – Varna, Imaging Diagnostics Clinic at University Hospital "St. Marina" EAD – Varna.

Only one set of documents has been submitted for participation in the competition by Dr. Emilian Bozhidarov Kalchev, PhD. The candidate has submitted all necessary documents for participation in the competition, in accordance with the requirements of the Act on the Development of the Academic Staff in the Republic of Bulgaria, the regulations for its implementation and the regulations for the development of the academic staff at the Medical University - Varna.

According to protocol №1 of the scientific jury meeting, I have been appointed to prepare a statement on the procedure for occupying the academic position Associate Professor.

Biographical Data and Professional Development of the Candidate

Dr. Emilian Bozhidarov Kalchev earned his Master's degree in Medicine from the Medical University – Varna in 2011.

His academic career began in 2012 as a part-time assistant, later becoming a full-time assistant until 2021, and currently he serves as Chief Assistant at the Department of Imaging Diagnostics and at the Imaging Diagnostics Clinic of University Hospital “St. Marina” – Varna. In 2018, he obtained a specialty in Imaging Diagnostics.

From 2015 to 2019, Dr. Kalchev was a doctoral student at the same department, and in 2019 he earned a PhD with a dissertation titled: "Arterial Spin Labeling for Evaluation of Brain Perfusion in Patients with Microangiopathy".

Dr. Kalchev has participated in numerous national and international scientific forums and conferences. He participated in the annual Congress of the Bulgarian Association of Radiology and the European Congress of Radiology; Balkan Congress of Radiology 2015, Sarajevo; European School of Radiology, Visiting Professorship Programme – Abdominal Imaging, 2015, Plovdiv; European School of Radiology, Visiting Professorship Programme – Abdominal Imaging, 2022, Plovdiv; „ERIC and mechanical thrombectomy”, 2016, Sofia; Alzheimer's Association International Conference, Satellite Symposium, 2017, Varna; ILD Preceptorship Basel, Switzerland, 2024. He is a member of the voluntary organization Alumni Club and Friends and is fluent in both English and German, which he uses professionally.

Evaluation of Scientometric Indicators

The submitted publications and references prove Dr. Kalchev's solid scientific knowledge and international recognition. An academic report confirms he meets both the national and institutional minimum requirements. An academic reference for fulfilling minimum national requirements and the requirements of the regulations of MU-Varna has been provided, prepared in the MU-Varna Library, based on information provided by the candidate and automated information from international scientific databases. His scientific output exceeds the minimum indicators required for the “Associate Professor” position and in some indicators exceeds the minimum scientometric requirements.

A total of 15 papers were submitted for participation in the competition, reflecting scientific research activities in the period 2023–2024.

- Publications in journals and collections – total 15. Distribution of scientific works by language of publication:
- 9 as sole author
- 6 co-authored (including 1 as first author, 2 as second, 3 as fourth)

The scientific works submitted for the competition are as follows:

- **Dissertation for the acquisition** of the ONS "Doctor" on the topic: "Arterial spin labeling for assessment of cerebral perfusion in patients with microangiopathy" 2019 (A1)
- **Habilitation work** - presented in the form of 10 scientific publications, indexed in WoS/Scopus (B4)
- **Three publications** in scientific journals, referenced and indexed in world-renowned databases of scientific information (G7)
- **One full-text article** in non-refereed journals (G8)

Total points for indicators G5-G9: 210 (minimum required: 200)

One full-text publication is presented, beyond the minimum scientometric requirements for holding the title of Associate Professor.

All publications are correctly described and attached in full in electronic format to the materials for the competition.

The presented reference includes six citations of Dr. Kalchev's scientific works in foreign scientific publications, referenced and indexed in world-renowned databases of scientific information, which is indicative of the relevance of the topics discussed.

The indicated citations under indicators D10-12, representing 60 points, with a minimum requirement of 50 points.

Scientific research and contributions of scientific works

Dr. Kalchev's works are distributed in the following scientific areas:

1. Arterial Spin Labeling (ASL) in Neuroradiology – 6 publications
2. Oncologic Imaging – 3 publications
3. Pediatric Imaging – 2 publications
4. Cardiovascular Imaging – 1 publication
5. Medical Education & Interdisciplinary Aspects – 3 publications

The main directions of scientific research are aimed at developing and improving diagnostic methods and techniques, in particular the use of Arterial spin labeling (ASL) MRI, as well as the application of innovative approaches in the diagnosis of oncological, cardiovascular and pediatric diseases, as well as the development of medical education.

The main contributions of Dr. Kalchev's scientific works are:

In the field of *Arterial Spin Labeling* (ASL) MRI in neuroradiology, significant methodological, clinical, and interpretational successes have been achieved, which support standardization, improve diagnostic accuracy, and expand the applicability of the technique in modern neuroradiology. A five-point visual scale has been developed, the main contribution of which is an easier and uniform interpretation of ASL images, with a view to improving the early detection of a global hypoperfusion process. One of the included articles proposes a new conceptual perspective, according to which the interpretation of ASL images should take into account not only local perfusion deficits, but also the overall cerebral perfusion background. Such an approach is particularly valuable in neurodegenerative diseases.

The publications in the field of *Oncologic Imaging* are dedicated to refining the radiological approach in some of the most common yet challenging scenarios in oncologic diagnostics, such as prostate cancer and breast cancer. Special attention is given to optimizing decision-making algorithms in borderline clinical situations where traditional imaging indicators do not provide a clear answer. In this way, the contributions in oncologic imaging encompass both widespread and rare oncologic conditions, demonstrating how modern imaging can be integrated into individualized and clinically applicable decision-making algorithms.

The Pediatric Imaging section includes two original publications focusing on rare but clinically significant conditions in childhood. These publications highlight the importance of an interdisciplinary approach and the careful selection of imaging modalities in complex pediatric scenarios, while also contributing to the expanding knowledge in pediatric oncology and neurology.

In the publication related to *Cardiovascular Imaging*, a clinical case of pronounced mitral calcification is presented, where left ventricular outflow tract (LVOT) stenosis is observed. The role of ECG-synchronized computed tomography is emphasized for identifying anatomical factors that may complicate the intervention and affect the final outcome.

In the area of *Medical Education and Interdisciplinary Aspects*, the main focus is on the development of medical education in the field of imaging, particularly in the context of personalized medicine and the digital transformation of teaching.

In summary, the presented report outlines the research activities of Dr. Emilian Kalchev. The thematic focus aligns with current trends in imaging diagnostics and medical education, with contributions including the development of new diagnostic approaches, refinement of existing algorithms, and the implementation of innovative methodologies in teaching.

Teaching Experience

As of April 11, 2025, Dr. Emilian Kalchev has accumulated 12 years, 1 month, and 16 days of teaching experience, and 13 years, 2 months, and 24 days of overall professional experience. Dr. Kalchev's teaching activities are closely aligned with his professional qualifications and research interests. He is actively involved in delivering practical sessions, lectures, and pre-graduate clinical internships in Diagnostic Imaging for students in Medicine, Dental Medicine, and the Medical College, in both Bulgarian and English-language programs.

Conclusion

The scientific works and supporting documentation submitted by Dr. Emilian Bozhidarov Kalchev for the academic competition for the position of **Associate Professor** are fully sufficient in volume and exceed the regulatory requirements set forth in the Rules for the Development of the Academic Staff at the Medical University "Prof. Dr. Paraskev Stoyanov" – Varna.

Based on the fulfillment of the minimum national requirements as defined in the Regulations for the Implementation of the Academic Staff Development Act in the Republic of Bulgaria, the internal rules of the Medical University – Varna, the candidate's documented scientific contributions, as well as his teaching and clinical experience, I confidently express my **positive vote**. I recommend that the esteemed members of the scientific jury also vote in favor and propose to the Rector of the Medical University – Varna that **Dr. Emilian Bozhidarov Kalchev** be appointed to the academic position of **Associate Professor** in the scientific specialty *Diagnostic Imaging*, in the professional field 7.1. Medicine, higher education area 7. Healthcare and Sports, within the **Educational Sector "Magnetic Resonance Imaging"**, Department of *Diagnostic Imaging and Interventional Radiology*, Faculty of Medicine, Medical University – Varna.

16.06.2025, Varna

Prepared by:

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