To

The Chairperson of the Scientific Jury

Appointed by Order No. R-109-200/16.04.2025

of the Rector of the Medical University – Varna

STATEMENT

by Prof. Dora Konstantinova Zlatareva, MD, PhD

Department of Diagnostic Imaging, Medical University – Sofia

External member of the Scientific Jury appointed by Order No. R-109-200/16.04.2025 of the Rector of MU-Varna

concerning the competition for the academic position "Associate Professor" in Field of Higher Education 7. Healthcare and Sport, Professional Field 7.1 Medicine, Specialty Diagnostic Imaging – 0.5 full-time equivalent for the Teaching Sector "Magnetic Resonance Imaging", Department of Diagnostic Imaging and Interventional Radiology, Faculty of Medicine, and 1 full-time position for the Clinic of Diagnostic Imaging at UMHAT "St Marina" – EAD, Varna, announced in State Gazette, issue 15 of 21.02.2025.

A single candidate has applied: ***Assist. Prof. Emilian Bozhidarov Kalchev, MD, PhD***

Prof. Dora K. Zlatareva, MD, PhD
Scientific Specialty: Diagnostic Imaging
Institution: Faculty of Medicine, Medical University – Sofia
Address: Department of Diagnostic Imaging, MU-Sofia, 1 G. Sofiyski Blvd., 1431 Sofia, Bulgaria
E-mail: dorazlat@yahoo.com   Tel.: +359 2 923 0895

The electronic dossier submitted by the candidate complies with the Law on the Development of Academic Staff in the Republic of Bulgaria (LDASRB) and with the Regulations for the Development of the Academic Staff of MU-Varna.

I.   Biographical Data and Career Development

The candidate Dr Emilian Bozhidarov Kalchev was born on 6 June 1986 in Targovishte. In 2005 he completed his secondary education at the Mathematics High School "Dr Petar Beron", Varna, graduating with the highest honours. He obtained his higher education at the Medical University "Prof. Dr Paraskev Stoyanov", Varna, finishing in 2011. Since 2012 he has worked as a physician in the Clinic of Diagnostic Imaging and Interventional Radiology at UMHAT "St Marina" – Varna and, the following year, began his residency in the same clinic. After successfully passing the state examination, he acquired the specialty "Diagnostic Imaging" in December 2017. Dr Kalchev became an adjunct assistant at the Department of Diagnostic Imaging of the Medical University "Prof. Dr Paraskev Stoyanov" – Varna in 2012, later serving as a full-time assistant until 2021. In 2019 he was awarded the educational and scientific degree "Doctor of Medicine" after defending the dissertation **"Arterial spin labeling for the assessment of cerebral perfusion in patients with small vessel disease."** Since 2021 Dr Kalchev has been a Senior Assistant Professor in Diagnostic Imaging and Interventional Radiology at MU-Varna. He is a member of the Bulgarian Association of Radiology, the European Society of Radiology (ESR), and Mensa Bulgaria, and is an active participant in congresses and conferences in Bulgaria and abroad.

For the present competition Dr Kalchev submits 15 publications, 13 of which are full-text articles in journals indexed in the international databases WoS/Scopus.

He is fluent in English and German.

II.   Evaluation of the Quantitative and Qualitative Indicators of Research and Applied-Science Activity

The publications submitted for review fully meet the requirements of MU-Varna for the position of Associate Professor in terms of number and type.

1. Dissertation thesis "Arterial Spin Labelling for the Assessment of Cerebral Perfusion in Patients with Small Vessel Disease" – Scientometric indicator group A - 50 points.

2. Habilitation work in the form of ten scientific publications in journals indexed in Scopus/WoS (10) - Scientometric indicator group B.4– 319 points.

3. Additional publications and conference papers indexed in Scopus/WoS that are not part of the habilitation set (3) - Scientometric indicator group G.7 - 180 points.

4. Publications in peer-reviewed non-indexed journals or edited volumes (1) - Scientometric indicator group G.8 - 30 points.

5. Extra full-text publications beyond the minimum requirements (1) - 30 points.

6. Publications related to the dissertation (4).

Dr Kalchev fully meets the national minimum requirements for the academic position "Associate Professor" in indicator groups A, B, G, D, which cover scientific publication output and the citations of his works both in peer-reviewed journals indexed in major international databases and in non-indexed journals. The attached report also shows that he completely satisfies the national minimum requirements for "Associate Professor" with respect to the overall number of published scientific works across all indicator groups.

III. Evaluation of the candidate's scientific works, monograph, or equivalent publications for his overall academic development

The publications submitted for review, in both number and type, meet the requirements of the Regulations of MU-Varna for holding the academic position "Associate Professor".

The ten articles provided for review are devoted to current trends in diagnostic imaging. The first major research direction continues the topic of the dissertation—Arterial Spin Labeling (ASL) in neuroradiology. Dr Kalchev presents a five-grade visual scale intended to facilitate and standardise ASL image interpretation, which could improve the early detection of global hypoperfusion, for example in dementia or in patients with generally reduced cerebral blood flow. Another article evaluates the influence of a fetal-type posterior cerebral artery (fPCA). The author proposes a

global–regional approach to cerebral perfusion in neurodegeneration. The conclusions regarding the visibility of meningiomas on ASL are also of interest.

The results of prostate MRI studies form another part of Dr Kalchev's publications. The clinical significance of PI-RADS 3 lesions and the challenges of invasive verification are analysed, as is the added value of PSAD; biparametric (bpMRI) is compared with multiparametric (mpMRI) MRI.

The scientific contributions of some publications enrich knowledge in paediatric diagnostic imaging, breast imaging, and cardiology.

IV. Main Scientific and Applied Contributions

The main scientific interests of Dr Kalchev are grouped in the following directions:

1. Arterial Spin Labelling (ASL) in neuroradiology – 6 publications

2. Oncologic Diagnostic Imaging – 3 publications

3. Paediatric Diagnostic Imaging – 2 publications

4. Cardiovascular Diagnostic Imaging – 1 publication

5. Medical Education and Interdisciplinary Aspects – 3 publications

The contributions can be summarised in the following areas:

1. **ARTERIAL SPIN LABELING (ASL) MRI in neuroradiology.** Dr Kalchev applies advanced diagnostic techniques—ASL—and presents publications related to diverse interdisciplinary scenarios. Of scientific and practical importance are the creation of standardised protocols and the clarification of perfusion characteristics in various brain pathologies, which enhance diagnostic accuracy and broaden the technique's applicability in contemporary neuroradiology.

2. **Oncologic diagnostic imaging.** The submitted publications set out the candidate's concepts regarding the role and optimisation of the radiological and interdisciplinary approach in some of the most common and challenging oncological scenarios—patients with prostate cancer or breast cancer.

3. **Paediatric diagnostic imaging.** Two original publications are presented, devoted to rare but clinically significant conditions in childhood.

4. **Cardiovascular diagnostic imaging.** A publication describing an imaging finding of key importance for pre-operative planning in patients scheduled for TAVI.

5. **Medical education and interdisciplinary aspects.** These publications reflect the development of medical education in diagnostic imaging, in line with personalised medicine and the digital transformation of teaching, telemedicine, digital technologies, and online learning. Dr Kalchev substantiates the need for integrated and continuous training through mentorship and an interdisciplinary approach. The contributions are of practical character.

The author demonstrates the ability to work within a multidisciplinary team. Overall, Dr Emilian Kalchev's works possess both theoretical and practical scientific value and address current topics in diagnostic imaging. They are characterised by breadth—ranging across diagnostic radiology, cutting-edge technologies, and education.

V. Visibility (Citations) of the Candidate's Publications in National and International Literature

Dr Emilian Kalchev's scientific works have been cited 6 times in journals indexed in internationally recognised databases.

Dr Kalchev has active profiles in Google Scholar, ResearchGate, ORCID, and Researcher ID.

VI. Evaluation of the Teaching and Methodological Activity

The teaching activity of Dr Kalchev began in 2012. From 2012 to 2021 he was an assistant at the Department of Diagnostic Imaging and Interventional Radiology; since 2021 he has been a senior assistant. His annual teaching workload meets the standard set by MU-Varna.

VII. Critical remarks – none

CONCLUSION

The scientific output presented by Dr Emilian Bozhidarov Kalchev covers topical subjects and state-of-the-art imaging methods, as demonstrated by the citations his work has received in peer-reviewed journals. His teaching activities with students meet the standards set for academic staff at MU-Varna.

Based on the indicators outlined above—indicators that fully satisfy the requirements and evaluation criteria of the Medical University – Varna—I recommend that the esteemed members of the Scientific Jury vote in favour of electing Dr Emilian Bozhidarov Kalchev, MD, PhD to the academic position of Associate Professor.

24.06.2025

Заличено на основание чл. 5, §1, б. „В" от Регламент (ЕС) 2016/679

Sofia

Prof. Dora Zlatareva, MD, PhD