To

The chairman of the scientific committee, determined by Order № P-109-180/03.06.2020 of the President of the Medical University Varna

#### **REVIEW**

For the academic position of Associate professor in Healthcare and sports in professional field 7.1. Medicine and scientific specialty "Medical radiology and radiology (incl. Use of radioactive isotopes)" for the needs of the Department of Imaging Diagnostics and Radiation Therapy of MU - Varna, announced in SG No. 8 / 28.01.2020 at a board appointed by order of the Chairman of MU - Varna No P-109-180 / 03.06.2020

Candidate Dr. Marin Boykov Penkov, MD PhD, Head of Radiology Clinic, University Hospital "St. Ivan Rilski - Sofia " EAD - Sofia city

Member of the jury Prof. Dr. Galina Ivanova Kirova-Nedyalkova, PhD with a scientific specialty "Imaging Diagnostics", Head of the Radiology Clinic, Acibadem City Clinic Tokuda Hospital, Sofia,

### Brief biographical data

Dr. Marin Penkov was born on December 3, 1977 in Sofia. He graduated in 2003 from the Medical University of Sofia. In 2009 he was awarded the specialty "Diagnostic Radiology" (Imaging). After successfully defending his PhD in 2018, he was awarded the educational and scientific degree "Doctor" (PhD). Dr. M. Penkov started working in 2004 at UMHAT Lozenets, as a trainee-radiologist. From 2009 until now Dr. Penkov works at the University Hospital "St. Ivan Rilski", Sofia.

Since 2012 he has been working as an assistant radiologist at the Department of Imaging Diagnostics at the Medical University of Sofia. Over the years until now he has been a consultant to various hospitals in Sofia and the country

Dr. Penkov is a prominent specialist in the field of neuroradiology, in particular pediatric neuroradiology and gastroenterology. Holding two European diplomas in the subspecialties "Neuroradiology" (EDINR054-2015) and "Pediatric Neuroradiology" (EDIPNR016-2019) from the European Society of Neuroradiology (ESNR)

In 2014 Dr. Penkov won a European project for "Creation of an innovative methodology for research in the field of neurocognitive science and theoretical and practical foundations of Neuroeconomics and Neuromarketing"

Dr. Penkov is a recognized specialist of national importance in neuroradiology with over 50,000 examinations over 16 years. He is a member of the European Association of Radiology - ESR, a member of the European Association of Neuroradiology ESNR, a member of the European Association of Gastroradiology ESGAR, a member of the Bulgarian Association of Radiology. He speaks German, English and Russian.

## General characteristics of the research and scientific-applied activity of the candidate.

Dr. M. Penkov participates in this competition with 37 scientific papers, divided thematically into 3 sections:

- PhD thesis on the topic "Conceptual framework and model for organization and quality management in the medical institution UMHAT St. Ivan Rilski-Sofia according to ISO9001: 2008"
- 2. Scientific publications in publications, referenced and indexed in an international database -11
- 3. Scientific reports published in scientific journals, referenced and indexed in an international database 15
- 4. Publications and reports published in non-peer-reviewed and peer-reviewed journals or published in edited collective volumes -11

Dr. Penkov participates as a co-author of 2 monographs, 1 textbook and 1 guide. The publications and the congress participations express the teaching talents and skills of the candidate and should have a priority weight in the overall assessment of his scientific activity. What unites all these works is their depth, didacticity and scientific and practical relevance. The latter is also expressed in the number of publications abroad, the large number of citations and the high impact factor for Bulgaria (9).

# Evaluation of the pedagogical preparation and activity of the candidate

Dr. Marin Penkov presents reports on very intensive and diverse teaching activities. He has an extremely high workload from 2012 until now - only for the academic year 2019-2020 his workload is 200 hours, which is significantly above the norm approved by MU-Varna.

His teaching activity includes full lecture courses in Imaging Diagnostics in both Bulgarian and English for English-speaking medical students.

Dr. Penkov participates in the development of materials related to classroom and extracurricular teaching. In addition to working directly with students at MU Sofia, Dr. Penkov conducts postgraduate courses in imaging diagnostics at MU Sofia; reads selected lectures in the basic course for postgraduate qualification in imaging diagnostics of the Department of Lung Diseases and Ophthalmology at MU Sofia, conducts courses and individual trainings in the subspecialties Neuroradiology and Pediatric Neuroradiology. By order of the Minister of Health Ne RD-01-113 / 01.04.2019 he was appointed a member of the expert council on Imaging Diagnostics at the Ministry of Health and as such participates as the author of the updated medical standard for Imaging Diagnostics, options 2018 and 2020. He is a member of a commission elected by BAR to prepare Rules for good medical practice and Rules for referring patients in the field of Imaging "Recommendations for the type of imaging based on risk and benefit assessment for the specific clinical situation - Neuroradiology".

Dr. Penkov is a regular speaker in the training panels of the National Congresses of BAR, as well as national congresses of the Bulgarian Society of Pediatrics and the Bulgarian Society of Gastroenterology, the Bulgarian Society of Neurology, the Bulgarian Society of Rheumatology; participates with a training panel dedicated to various aspects of imaging at the forums of the International Organization of Surgeons, Gastroenterologists and Oncologists (IASGO). In 2016 he was a guest lecturer at a training session of the European Association of Neurosurgery EANS, with a lecture "Modern Imaging of CNS tumors".

Under his guidance, 10 postgraduates and over 150 students in imaging diagnostics, as well as over 100 doctors from other specialties have passed postgraduate training on various topics in the Department of Imaging Diagnostics, of which he has been the head since 2011.

Dr. Penkov has repeatedly been a guest on television and radio programs dedicated to current issues of imaging and healthcare. He is the winner of the award "Best Doctors" for 2011 and 2015 on Darik Radio and the award "Doctor Who Bulgarians Trust" 2019.

## Main scientific and scientific-applied contributions and their significance

The publications and participations in textbooks and monographs presented by Dr. Marin Penkov outline several main directions. A significant share is devoted to diseases of the nervous system and the problems of diagnostic imaging in patients with diseases requiring surgical treatment. The series of papers dedicated to oncology within the traditional conferences "MOPE", where Dr. Penkov is a member of the National Expert Board, have made a significant contribution. The documents developed at these interdisciplinary consensus conferences are of a national nature and importance due to the developed evidence-based behavioral recommendations for a specific cancer and the emphasis on good practice.

Dr. Penkov is the author and co-author of articles on diagnostics, including interventional, of CNS diseases, colon diseases, lung diseases, liver and pancreas diseases. The unique descriptions of extremely rare neurological diseases in childhood - PRESS, congenital creatinine deficiency syndrome in children, as well as the participation in the detection of a de-novo mutation of CREBBP in patients with Rubinstein-Taybi syndrome are also contributing.

Dr. Penkov has made a significant contribution to the research and application of both diagnostic and therapeutic endovascular neurointerventional procedures. For the first time in Bulgaria he introduces in clinical practice the functional magnetic resonance diagnostics as part of the preoperative preparation of patients with forthcoming neurosurgical operations. The application of perfusion and diffusion techniques for magnetic resonance imaging in the diagnosis of glial brain tumors, as well as MR spectroscopy in distinguishing low- from highly differentiated brain tumors is an indisputable contribution to Bulgarian medicine. Although less important, the reporting of isolated rare cases in the field of neuroradiology also contributes.

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Hospital and management in radiology is another aspect of his scientific and practical activity, to which his dissertation is dedicated. To this end, he conducts a wide-ranging and in-

depth study of the literature relating to the management of basic social norms, values in health care and methods of regulation and interaction between providers of medical care. Based on this study, through the eyes of doctors and health care professionals, he systematizes the advantages and disadvantages of various quality management systems in medicine.

Dr. Penkov is active in working with patient organizations. He is a member of the European Association of Radiology (ESR), the European Association of Neuroradiology (ESNR), the European Association of Gastroradiology (ESGAR), the Bulgarian Association of Radiology (BAR).

Dr. Marin Penkov holds two European diplomas in the subspecialties "Neuroradiology" (EDiNR054-2015) and "Pediatric Neuroradiology" (EDiPNR016-2019) from the European Society of Neuroradiology (ESNR)

He speaks German, English and Russian.

## Personal characteristics and teamwork

Last but not least, some personal characteristics of the candidate should be emphasized - his exceptional ability to work, passion for innovation and non-standard solutions, his optimism, sense of humor and self-irony make him a sought-after partner in both practice-oriented and research projects. Giving a lot, but also demanding a lot, he is the leader of a well-coordinated team of young professionals. His sense of empathy and care for the patient is well combined with professionalism and specific medical knowledge, which determines his basic attitude towards patients and their loved ones.

### CONCLUSION

Based on the above, I believe that Dr. Marin Boykov Penkov, Phd meets the science metric criteria and indicators for holding the academic position "Associate Professor", defined by the Regulations for the development of the academic staff of MU Varna. Dr. Marin Boykov Penkov, MD he has the necessary qualities and scientific output, he is also a distinguished teacher, researcher and specialist - image diagnostician from practice. This gives me reason to convincingly give my positive vote and to propose to the honored members of the scientific jury, determined by order of the President of MU Varna to approve of the academic position "Associate Professor" in the field of "Health and Sports" in professional field 7.1. "Medicine" and scientific specialty "Medical Radiology and Radiology" (including the use of radioactive isotopes) for the needs of the Department of Imaging and Radiation Therapy of the MU-Varna Dr. Marin Boykov Penkov, MD.Phd

Prof. Dr. Galina Ivanova Kirova-Nedyalkova, Phd., Head of the Radiology Clinic, Acibadem City Clinic Tokuda Hospital, Sofia