

To: The Chairman of the Scientific Jury  
at Varna Medical University

## **S T A N D P O I N T**

**of Prof. Elitsa Petkova Encheva-Mitsova, MD, PhD,  
Department of Diagnostic Imaging, Interventional Radiology and Radiotherapy**

**Regarding:** Announced competition for the acquisition of the academic position of **“Associate professor”** in the higher educational field of 7. “Healthcare and sport”, professional direction 7.1. “Medicine”, and scientific specialty “Diagnostic Imaging” for the needs of “Radiological Technologist” Study Sector of Varna Medical College and the Clinic of Diagnostic Imaging at UMHAT “Sveta Marina” Varna.

### **Information on the procedure:**

Following a decision of the academic council of Varna Medical University and by order of the Rector of Varna Medical University the contest for the acquisition of the academic title **“Associate professor”** in “Diagnostic Imaging” is announced in the **State Newspaper issue 8/28.01.2020r.**

By decree of the Chairman of the Scientific Jury and the Rector of Varna Medical University (Order № P-109-176/03.06.2020) I am appointed to the duty of jury member with preparation of a standpoint.

Only one candidate has submitted an application to the contest:

**Georgi Nikolaev Valchev, MD, PhD.**

I have received all materials necessary for the preparation of the current standpoint from the "Career development" department at Varna Medical University.

The standpoint is in accordance with the Law for Development of Academic Staff in the Republic of Bulgaria, the Rulebook for its application, and the Regulations for Development of the Academic Staff of Varna Medical University “Prof. Dr. P. Stoyanov”

### **1. General and professional data on the candidate**

Georgi Nikolaev Valchev, MD, PhD is born on 24.07.1987 in Varna. He receives his degree in Medicine in 2012 from Varna Medical University. From 2013 to 2017 he specializes Diagnostic Imaging at the Clinic of Diagnostic Imaging, part of UMHAT “Sveta Marina” Varna, and in 2018 attains the title of specialist in this field. In 2018 he

acquires the scientific title "PhD" by defending his dissertation on the topic "Classification and Selection of Image Defined Risk Factors in Neuroblastoma".

From 2012 to the present G. Valchev, MD, PhD works at UMHAT "Sveta Marina" Varna. His academic path starts after winning a contest for the position of teaching assistant at the Study Sector "Radiological Technologist" of Varna Medical College, part of Varna Medical University.

For the purposes of continuous medical education G. Valchev, MD, PhD, participates in several educational and scientific events in Bulgaria, Austria, Australia (Radiopaedia courses). He is a regular participant in the national congresses of Radiology.

G. Valchev, MD, PhD is a member of the Bulgarian Association of Radiology, the European Society of Radiology, and the Bulgarian Medical Association.

Dr. Valchev is proficient, verbally and in writing, in English and German.

## **2. Assessment of the quantitative and qualitative indicators of the candidate**

### Overall scientometric indicators

Publications	Total
• <b>Dissertation</b>	<b>1</b>
• <b>Monography</b>	<b>1</b>
• <b>Co-authorship of collective monography</b>	<b>1</b>
• <b>Full-text publications</b>	<b>37</b>
○ Articles in referred journals and compendiums	9
○ Articles in non-referred journals	28
• <b>Participation in textbooks</b>	<b>1</b>
• <b>Participation in scientific forums with published abstracts</b>	<b>8</b>
○ National scientific forums	7
○ International scientific forums	1
<b>Total scientific activity</b>	<b>49</b>

G. Valchev, MD, PhD has submitted 49 scientific works for participation in the present contest. In the aforementioned he is the sole or primary author in 14 instances (29%). The scientific works are separated thematically in 16 sections – dissertation, monography, chapter of collective monography with focus on transcranial Doppler ultrasonography, articles focused on neuroblastoma, articles with student participation, articles regarding avant-garde diagnostic techniques, articles with an interventional focus, with urological focus, with paediatric focus outside of the topic of neuroblastoma, articles focused on cardio-pulmonary diagnostic imaging, focused on congenital anomalies, with a neuroradiological focus, an original study regarding the

effect of an online reference platform, articles with applied statistical focus, chapter of a translated textbook, and others.

Dr. Valchev's scientific production encompasses various fields of diagnostic imaging, including oncological diseases and anomalies in children, as well as interventional radiology. Points of import in his scientific work are the successfully defended dissertation "Classification and Selection of Image Defined Risk Factors in Neuroblastoma" for the acquisition of the title of PhD in 2018, as well as the monography "Neuroblastoma – Nature and Diagnosis" in 2020. These works are an indicator for the scientific researcher qualities of the candidate and should take priority in the overall assessment of the candidate's suitability for associate professorship. All scientific works of the candidate exhibit great thoroughness, are scientifically and practically relevant, and yield scientific and applicable contributions.

#### Citations

According to the academic reference prepared by the Library of Varna Medical University based on the de viso overviewed sources, submitted by the candidate G.Valchev, MD, PhD, as well as the automated information from the foreign databases Web of Knowledge, Scopus и Google Scholar, a total of 7 citations are present, of which 5 in referred journals, and 2 in non-referred.

### **3. Educational and teaching activity of the candidate**

The submitted reference of G. Valchev, MD, PhD's teaching activity demonstrates a varied and intensive curriculum. His teaching load from 2013 to the present includes workshops in diagnostic imaging for students of medicine and dental medicine in both Bulgarian and English. He has been a substitute lecturer to medical students in English. He leads workshops and lectures for radiology technologist students in the following disciplines: imaging anatomy, clinical diagnostic imaging, and basics of diagnostic imaging. He also leads workshops in diagnostic imaging for students of midwifery. For the purposes of his teaching activities at the Varna Medical College he has developed a "Daily activity register for the national internship of radiology technologist students".

G. Valchev, MD, PhD is a lector in the regular Basic Courses for postgraduate qualification in Diagnostic Imaging at Varna Medical University. He participates in the development of curricula, tests, and materials pertaining to lecture and teaching activities.

### **4. Primary directions of scientific research work – scientific and applied scientific contributions**

The thematic analysis of the scientific production of G. Valchev, MD, PhD for the period 2014-2020 reveals his activity in researching varied imaging methods in the context of diverse nosological units, including paediatric diseases – neuroblastoma

and anomalies, as well as avant-garde diagnostic techniques, with development of example protocols and a diagnostic algorithm.

Dr. Valchev has a substantial contribution in researching the imaging methods in neuroblastoma. His dissertation and its associated works analyze the effect of the number of imaging defined risk factors on survivability (contribution of original and applied scientific type), with development of example protocols for imaging in neuroblastoma with CT and MRT (contribution of practico-applicable type), as well as an example checklist in aid to diagnostic imaging (contribution of practico-applicable type).

Neuroblastoma is also the topic of Dr. Valchev's monography – a work with a clear accent on the diagnostic imaging aspects of the disease, as well as with a thorough presentation of all potential imaging findings in the different imaging modalities, including comprehensive instructions for optimal interpretation and establishment of the image defined risk factors of importance to resectability and potentially to long-term prognosis (contribution of cognitive and applied scientific type). Personal experience with neuroblastoma is presented and illustrated with images from the author's practice, along with summarizing original graphics and schematics.

**In a chapter of a collective monography the role of** transcranial Doppler ultrasound as a vasodiagnostic method is assessed (contribution of cognitive and methodological type), methodological instructions for performing the examination via several points of access are provided (contribution of cognitive, applied practical, and methodological type), as well as guidelines for the interpretation of findings (contribution of cognitive, applied practical, and methodological type).

As an educator, Georgi Valchev, MD, PhD presents publications co-authored by students of several consecutive classes of radiology technologists, edited by and with the participation of the candidate. The publications are scientific reviews, focusing on diagnostic imaging methods used in gastrointestinal studies (contribution of cognitive, theoretical scientific, and methodological type) and mammary studies (contribution of cognitive and theoretico-methodological type).

**The studies regarding avant-garde diagnostic techniques also amount to contributions.** Among the cardiac imaging techniques magnetic resonance pulse sequences are explored as part of a multidisciplinary scientific project, pertaining to the relation between epicardial fat and cardiovascular risk in diabetes type 1 patients (contribution of cognitive and applicable scientific type). An additional explored subject are innovative, but established methods for breast diagnostics, among which roentgenological tomosynthesis, automated breast ultrasonography, whole breast ultrasonography, and others (contribution of cognitive and applicable scientific type). Another imaging method reviewed by the candidate is capsule endoscopy as an avant-garde potential replacement of conventional gastrointestinal fibroendoscopy (contribution of cognitive, theoretico-methodological, and applicable scientific type).

The scientific research experience of the candidate also encompasses interventional radiology – minimally invasive, intravascular, and percutaneous interventions in malignant liver lesions (contribution of original, cognitive, and practico-applicable type), in mechanical jaundice (contribution of original, cognitive, and

practico-applicable type), embolization of bronchial arteries in life-threatening bleeding (contribution of original, cognitive, and methodological type).

In the field of paediatric urology Dr. Valchev has studied magnetic resonance tomography in prenatal diagnostics of congenital urinary anomalies, as well as postnatal ultrasonographic diagnostics of the same entities (contribution of cognitive, practico-applicable and applied scientific type).

His interest in paediatric pathology leads to a review of the diagnostic imaging characteristics of potential postoperative complications in liver transplantation in children, accompanied by an example imaging algorithm for postoperative follow-up (contribution of original, cognitive, theoretico-methodological, and practico-applicable type).

Among Dr. Valchev's scientific works of note is a study in the field of **cardio-pulmonary diagnostic imaging**, regarding pulmonary-renal syndromes and more accurately their diagnostic imaging findings from high resolution computed tomography; the article is awarded with a Certificate of Merit at the European Congress of Radiology 2016 (contribution of cognitive, theoretico-scientific, and methodological type).

**Another direction with notable contribution is congenital anomalies, among which *congenital absence of inferior vena cava***, with computed tomography and magnetic resonance images from personal practice (contribution of original, cognitive, and applied scientific type), *the rare renal anomaly oligomeganephronia* and its relatively unknown computed tomographic image, illustrated with a case from personal practice, *congenital urinary anomalies in children*.

In the field of **neuroradiology the role of magnetic resonance tomography has been examined in the broad differential diagnosis of viral encephalitides** (contribution of cognitive and applied scientific type), **in Alzheimer's disease, cortical laminar necrosis after subarachnoid hemorrhage** (contribution of cognitive type).

**G. Valchev, MD, PhD has an original contribution in his study of the effect of an online reference radiological platform.** The article is cited twice in referred journals (contribution of original, cognitive, and practico-applicable type).

## CONCLUSION

Georgi Valchev, MD, PhD is an established young specialist in diagnostic imaging with scientific production substantial in both volume and quality, which brings theoretical and practical contributions to Bulgarian diagnostic imaging. He is a developed academic teacher and active researcher.

Considering the fulfilled necessary criteria of Varna Medical University in accordance with the Regulations for Development of the Academic Staff of Varna Medical University, along with the professional and personal qualities of the candidate, I deem that Georgi Valchev, MD, PhD is worthy of acquiring the title of "Associate

professor" and I confidently recommend that the honorable members of the Scientific Jury award him the academic position of "Associate professor" in the scientific specialty "Diagnostic Imaging" for the needs of the "Radiological Technologist" Study Sector of Varna Medical College and the Clinic of diagnostic imaging at UMHAT "Sveta Marina" Varna.

**Varna, 03.08.2020r.**

**Reviewer:**

**Prof. Elitsa Petkova Encheva-Mitsova, MD, PhD**

