

OPINION

Subject: Competition for the occupation of the academic position "professor" in professional direction 7.1. Medicine (Image diagnostics), announced in the State Gazette, no. 35 of April 18, 2023 for the needs of the Faculty of Medicine of the SU "St. Kliment Ohridski", Department of "Physics, Biophysics and Radiology".

Candidate: Associate Professor Georgi Vassilev Hadjidekov, MD

Author of the statement: Associate Professor Dobrina Christova Mlachkova, MD, Head of the Clinic of Imaging Diagnostics, Medical Institute - Ministry of Internal Affairs, Sofia

According to the announced competition for professor, the only candidate is Assoc. Prof. Georgi Vassilev Hadjidekov. The candidate's documents are regular and the procedure for the selection of the academic position "professor" has been started, as by order of the Rector of SU "St. Kliment Ohridski" a scientific jury has been appointed to conduct the competition

1. Analysis of the candidate's career profile

Assoc. Prof. Georgi Vassilev Hadjidekov graduated in medicine in 2000 at the Medical University - Sofia. From January 2002 until now, he has been working at Lozenets University Hospital, Sofia, Department of Imaging Diagnostics. Since 2007, he has successively held the academic positions of "assistant", "senior assistant" and "principal assistant" at SU "St. Kliment Ohridski", Faculty of Medicine, Department of "Physics, Biophysics and Radiology". Since 2013, he has been elected as an "associate professor" at SU "St. Kliment Ohridski" by professional direction 7.1. Medicine (Imaging diagnostics, medical radiology and roentgenology, including use of radioactive isotopes), Certificate No. SU2013-127/29.11.2013

Assoc. Prof. Hadjidekov has a recognized specialty "Imaging diagnostics" in 2007. In 2012, he successfully defended his thesis for the acquisition of the educational and scientific degree "doctor". In 2014, he graduated with a master's degree in health management.

2. Teaching and learning activity

Assoc. Prof. Hadjidekov is a teacher with 16 years of academic experience. He is leading lectures and practical exercises on imaging diagnostics to Bulgarian and foreign medical students, to nursing students and kinesitherapists, and to imaging diagnostics specialists. From

the attached study load report for the last 5 years, it can be seen that he has an average study load of 630 hours per year.

Assoc. Prof. Hadjidekov has been invited as a lecturer in training workshops with international participation. He is a participant in the MES project "Student practices", as well as in the project "Building interdisciplinary teams of young researchers in the field of fundamental and applied scientific research relevant to medical practice" under the Operational Program "Development of Human Resources".

The candidate participated in scientific juries for the acquisition of scientific degrees and academic positions. He was a head of the practical training in imaging diagnostics of 7 specialists who have successfully passed the exam for the specialty. He was a research supervisor of a successfully defended doctoral student.

The candidate participated in the writing of a university guide.

3. Scientific and research activity

The presented scientific production of the candidate corresponds to the scientific field, the scientific direction and the specialty of the competition for the academic position "professor".

The dissertation work of Assoc. Prof. Hadjidekov for the acquisition of the educational and scientific degree "doctor" is on the topic "Magnetic resonance urography in childhood".

The total number of the candidate's scientific works is 234 titles, of which 108 have been published in full. Of these, 39 have been published in scientific periodicals abroad (23 with IF) and 62 have been published in scientific periodicals in Bulgaria. He participated in the writing of 6 monographs abroad.

After his election as associate professor, the total number of works was 104, of which 59 were fully published. Of these, 38 - in publications referenced and indexed in world-renowned databases with scientific information, of which 9 in IF publications and 18 - in non-refereed journals with scientific review. The candidate has 2 participations in monographs abroad.

Assoc. Prof. Hadjidekov's publications have been cited a total of 216 times. After his election as associate professor, the number of citations was 157, of which 110 in publications referenced and indexed in world-renowned databases. H-index: 7 (by Scopus with auto-citations excluded).

From the report presented by Assoc. Prof. Hadjidekov, on the implementation of the minimum national requirements under Art. 2b of Law on the development of the academic staff in the Republic of Bulgaria for scientific field 7. Health care and sports, professional direction

7.1. Medicine, scientific specialty "Imaging Diagnostics", it is evident that the candidate fully meets and even exceeds the minimum national requirements for occupying AP "Professor" in some groups of indicators.

4. Scientific activity

Assoc. Prof. Hadjidekov participated in 103 reports and scientific announcements at congresses and other scientific forums, of which 45 were after his election as associate professor. The distribution of the latter is as follows: scientific communications abroad with abstracts published in international journals – 18; scientific announcements in Bulgaria with published abstracts – 24; reports and scientific announcements at congresses and other scientific forums without published abstracts - 3.

The candidate participated in contract No. 80-10-205/24.04.2017, together with students and young scientists on the topic "Application of 3D printing technologies in the field of general and clinical anatomy".

Assoc. Prof. Hadjidekov has written 20 reviews of various books and monographs published in the magazine "Rentgenology and Radiology", 9 of which - after his election as an associate professor.

He is a member of the Bulgarian Association of Radiology (BAR), European Society of Radiology (ESR) European Society of Urogenital Radiology (ESUR) European Society of Pediatric Radiology (ESPR) European Society of GastroAbdominal Radiology (ESGAR) American Roentgen R Society (ARRS)

5. Scientific contributions of the candidate in the competition

The main scientific interests and publications of the candidate and related scientific and applied-practical contributions are in the following areas:

A. Imaging diagnostics of the female reproductive system .

The possibilities of magnetic resonance imaging diagnostics for visualization of congenital anomalies of the uterus according to the latest classification of the European Society of Human Reproduction and Embryology (ESHRE) and the European Society of Gynecological Endoscopy (ESGE) are presented. The principal classes of fetal defects are illustrated by the author's own observations, evidence of extensive clinical experience. The contribution of 3 Tesla MR diagnostics in uterine fibroids, including indications for hysteroscopic removal, is reviewed.

In an original study, the issue of 3T MR diagnosis of space-occupying processes in adnexa, their classification and preoperative assessment was considered.

B. Magnetic resonance fetal and perinatal imaging diagnostics.

An original comparative study of two-dimensional measurements from ultrasound and MR images on the one hand and volumetric segmentation on different degrees of fetal ventriculomegaly was performed. The methods used are techniques of artificial intelligence. The obtained data for different gestational ages can be a basis for future establishment of quantitative norms of fetal cranial structures, allowing early detection of abnormal development of the fetal brain and ventriculomegaly. The candidate's observations are discussed and demonstrated in a number of publications by other authors in the field of fetal pathology.

C. Imaging diagnostics of tumors and their complications.

The contribution of 3T MR diagnostics to the characterization of adnexal tumors is described. Cases of tumors with unusual clinical and imaging findings have been published - tumor intussusception in the ileocolic region, a tumor in a bladder diverticulum, a spindle cell tumor of the mammary gland, a tumor of the peripheral nerve sheaths with a rare presacral localization, meningioma of the optic nerve sheath.

D. Varieties in anatomy.

A number of interesting variations in the anatomy of the human body are described: direct passage of the right posterior communicating artery into the right posterior cerebral artery, Cisterna chili visualized by CT and MR examination, variations in the anatomy of the hepatic arteries and the portal vein of candidates for liver transplantation are determined.

E. Imaging diagnostics in surgical diseases of the abdomen.

Rare complications accompanying surgically treated conditions such as a case of choledocholithiasis after liver transplantation, ischemic colitis due to inferior mesenteric AVM and agenesis of vena mesenterica inferior, etc., were reviewed.

F. Imaging diagnostics of the excretory system.

Rare cases of spontaneous kidney rupture, a case of urethrolithiasis have been reported. The application of low-dose 64-slice computed tomography in nephro- and ureterolithiasis, kidney tumors and other conditions has also been developed.

G. Methods of interventional diagnostics.

The interventional methods for the treatment of pain syndrome are considered.

H. Pediatric imaging diagnostics.

The application of low-dose CT as the method of choice for evaluation and monitoring of chronic pulmonary complications in children with cystic fibrosis is presented. The possibility of MR examination in the imaging of renal anomalies is presented.

I. Musculoskeletal imaging.

MR images of focal periepiphyseal areas of edema (also known as FOPE areas) and their differentiation from Salter-Harris fractures, stress fractures, contusion foci with bone marrow edema, chronic recurrent multifocal osteomyelitis are described.

J. Technique of magnetic resonance examination.

In co-authorship with a team of Bulgarian and Japanese scientists, an algorithm was developed based on MR measurements carried out on an experimental 7.0 T magnetic resonance imaging machine for working with small animals, to assess functional impairments based on changes in the redox status of the kidney tissue and the dynamics of the contrast in the kidneys.

Similar is the study by the same group to visualize superoxide production in the dopaminergic region of the brain in MPTP-treated mice. The described methodology could be applied for non-invasive analysis of oxidative stress in the brain and redox imbalance in Parkinson's disease and in other neurodegenerative diseases such as Alzheimer's disease, schizophrenia.

K. Imaging diagnostics in genetic syndromes and rare diseases.

The leading role of imaging methods in the diagnosis, monitoring and treatment of some rare genetic syndromes and diseases has been proven.

6. Personal impressions

I have known Georgi Hadjidekov for many years. He is distinguished by scientific competence, responsibility in his work and responsiveness to his colleagues. Possesses qualities for working in a team, showing high tolerance and respect for the ideas and opinions of others.

7. Conclusion

The scientific works and materials submitted for the competition are in full compliance with and exceed the required scientometric indicators according to the Law on the development of the academic staff in the Republic of Bulgaria, the Regulations for its implementation and the Regulations for the terms and conditions for acquiring scientific degrees and for holding academic positions at Sofia University "St. Kliment Ohridski".

The above-mentioned analysis and my personal impressions of the candidate as a highly qualified teacher and scientist are grounds for my conviction to give my positive assessment and I recommend to the Scientific Jury to vote positively for awarding the academic position of "Professor" to Assoc. Prof. Dr. Georgi Vasilev Hadjidekov.

25.07.2023 г.

Member of the scientific jury

Sofia

/ Assoc. Prof. Dr. Dobrina Mlatchkova, MD/