

To
the President of the Scientific jury
appointed by order of
the Executive director
of MHAT "NHH" №54/01.02.2023

S T A T E M E N T

From Prof. Dr. Plamen Gueorguiev Panayotov, MD, Ph.D. Head of the Department of Cardiac Surgery at UMBAL "St. Marina", Varna, and Head of the Cardiovascular Surgery and Angiology Department at Medical University "Prof. Dr. Paraskev Stoyanov," Varna. Member of the scientific jury for the competition for acquiring the academic position "Associate Professor" in the field of higher education 7. "Health and Sport," professional field 7.1. "Medicine" and scientific specialty "Cardiac Surgery" announced in SG issue 27/02.04.2021

For the contest as mentioned above, documents have been submitted by one candidate - Dr. Dimitar Ivanov Kyuchukov, MD, Ph.D., Head of the Department of Cardiac Surgery at the National Heart Hospital, Sofia. The documents submitted by the contestant follow the requirements for the acquisition of the academic position of Associate Professor in the Law for the Development of Academic Staff in the Republic of Bulgaria (LADASRB) and the Regulations for the Conditions and Procedure for the Acquisition of Scientific Degrees and Holding of Academic Positions of the Hospital "NHH" EAD. Therefore, I did not find any gaps in the submitted documentation.

Brief biographical data: Dr. Dimitar Ivanov Kyuchukov graduated from the Medical University of Sofia in 2000 and was immediately appointed as a resident in the Cardiac Surgery Clinic of the University Hospital "St. Ekaterina," now "Prof. Dr. Tschirkov, Sofia. In 2016 he was appointed via contest as a Head of the Department of Surgical Treatment of Acquired Heart Diseases at the same hospital. In 2023 he was again appointed via contest as Head of the Cardiac Surgery Department at the National Cardiology Hospital, Sofia. He has two specialties- Cardiac Surgery (since 2014) and Vascular Surgery (since 2019). After a competition in 2008, he was appointed Assistant Professor in the Department of Cardiovascular Surgery at the Medical University of Sofia. Again, after successfully passing the contest in 2019, he was appointed as

a Chief Assistant in the same Department. Dr. Kyuchukov has 22 years of medical experience, all of which he has worked in the Department of Cardiac Surgery.

1. Research

1.1 Publications

Dr. Kyuchukov has submitted for the competition a total of 33 scientific papers (all of them outside the ones submitted for the Ph.D.): 28 scientific publications and statements, one dissertation for the degree of Doctor of Medicine on the topic: Surgical Treatment of Atrial Arrhythmias, one personal monograph, and co-author in three chapters of a collective monograph: "Cardiac Surgery" Furthermore, after obtaining the academic position of Chief Assistant at MU Sofia, he published 14 of the presented scientific works: 13 publications and one monograph. Eleven submitted publications are in English, and nine are published in scientific journals with an impact factor. In addition, Dr. Kyuchukov is a co-author of three chapters of a collective monograph.

1.2 Authorship and Citation

Reference from the Central Medical Library (ex. №52/24.01.23): 12 Bulgarian citations. Index of citations in international scientific journals, 1 in the Web of Science and Scopus databases (without self-citations) after AD "Chief Assistant Professor ." Additionally, evidence of 7 more citations in Bulgarian journals from the national reference list is provided.

2. Research Activity Profile

Dr. Kyuchukov's research work is entirely in the field of Cardiac Surgery. According to the subject of the presented scientific works, the scientific research activity of the candidate can be grouped into the following topics:

1. Surgical treatment of supraventricular arrhythmias and atrial fibrillation - 6 publications. № from the list: 1; 2; 11;18;19;20;

2. Surgical myocardial revascularization - 7 Publ.№ from the list: 3;4;5;14;15;24;27;

3. Surgical treatment of ischemic heart disease complications - 7 Publ. № from the list: 7;10;17;28;31;32;33

4. Surgical treatment of aortic diseases- 7 publ.№ from the list: 9;12;13;21;22;29;30;

5. Surgical treatment of mitral valve diseases- 3 Publ.№ from the list: 6;16;23;
6. Surgical treatment of aortic valve diseases-2 Publ.№ from the list: 8;25;
7. Surgical treatment of pulmonary thromboembolism- 1 Publ.№ from the list: 26

3. Most significant scientific contributions

Significant scientific theoretical and practical importance contributions

Contributions from publications are presented and grouped by topic

3.1. Scientific contributions in the field of surgical treatment of supraventricular arrhythmias.

The scientific contributions in this field are related to studying the benefits of performing these additional procedures during other cardiac surgery, the role of risk factors, and the type of performed lesions that impacted the procedure's success. Such a study is done for the first time in our country and is the subject of this dissertation. Furthermore, an essential contribution to clinical practice is the creation of an algorithm for selecting patients suitable for the procedure. The author's monograph is a natural extension of the data accumulated during this study and the analysis of the reported results. Apart from being the first of its kind in Bulgaria, the monograph contains the shared experience and a detailed description of each modern surgical antiarrhythmic procedure- indications, performance technique, and sequence of actions. Three of the other four publications on the topic deal with variations of reduced-invasiveness antiarrhythmic procedures and the impact of this approach on postoperative outcomes; the conclusions of these articles are confirmatory, as is the contribution of the study of age as a risk factor in the candidate's last article on this topic (1; 2; 11;18;19;20).

3.2. Scientific contributions in surgical myocardial revascularization and operative treatment of complications of ischemic heart disease.

Dr. Kyuchukov has presented a total of 14 publications in this area. Three of them are chapters from a collective monograph, while in the remaining ones, the candidate is included as part of a collective effort, with him being the first author in five of them. Contributions in this area have a scientific-applied and scientific-theoretical character. Two articles analyze the results of myocardial revascularization performed under beating heart conditions without using extracorporeal circulation, and the data from these studies confirm their findings. One article is a report on the benefits of using a device for automatic proximal anastomoses, and it has an original contribution to the scientific literature in Bulgaria. (5;14;15) Also original is the

contribution to the subject matter of the next three articles, in which Dr. Kyuchukov is the first author. (4;5;24) Two analyze the benefits and risks of two types of graft preparation for myocardial revascularization. At the same time, in the third, the authors examine the impact on postoperative results of two types of antithrombotic therapy in patients undergoing coronary artery endarterectomy.

Regarding the surgical treatment of complications of ischemic disease, Dr. Kyuchukov presents 7 publications with confirmatory contributions for the competition. Three of them are on the topic of surgical treatment of post-infarction left ventricular aneurysm, and the subject of the third is surgical options for treating end-stage ischemic dilated cardiomyopathy. This study comprises the most extensive group of patients with similar pathology in Bulgaria. Furthermore, in the three chapters of the collective monograph, Dr. Kyuchukov, in collaboration with one other colleague, describes in detail the methods for surgical treatment of post-infarction rupture of the free wall of the left ventricle, interventricular septum, and left ventricular aneurysms.

3.3. Surgical treatment of heart valve diseases.

On this topic, Dr. Kyuchukov has presented five publications for the contest. The scientific-theoretical contributions are noteworthy, and it is worth mentioning the large group of treated patients over an exceptional 18-year period, during which all operated patients with mitral valve repair are followed, confirming the benefits of this type of surgery. In another article on this topic, a team of which the candidate is a part identified all reoperations for ten years after mitral surgery and the reasons for their performance, confirming the excellent results achieved with valve-sparing surgeries and the drawbacks of valve replacement. (6;16) The scientific-practical contributions arise from two publications, in which Dr. Kyuchukov is the first author. One is a report on the first-ever performed aortic valve-sparing surgery in Bulgaria using a newly proposed technique. The other reflects in detail the experience of a team led by the candidate in the implantation of sutureless aortic valve prostheses through an upper mini sternotomy, which is also the first study of this strategy in Bulgaria. (8;25) Dr. Kyuchukov is the principal investigator in a project funded by the "Grant" program of the Medical University of Sofia, aiming to evaluate the applicability of simulation training in mastering minimally invasive ring annuloplasty of the mitral valve. The project was evaluated with a Very Good grade and is the first on this topic in Bulgaria. (23)

3.4. Diseases of the large vessels of the heart (aorta and pulmonary artery).

In this field, Dr. Kyuchukov presents a total of eight articles. The main scientific contributions are once again of a scientific-practical nature, and the most attention is deservedly given to the studies on the results of treating complex aortic diseases achieved by interdisciplinary teams and reflected in a series of three articles (9;12;13), which are the first such reports from Bulgarian authors.

4. Teaching Activity

Dr. Kyuchukov has been a lecturer at the Department of Cardiovascular Surgery and Invasive Cardiology of the Medical University of Sofia since 2008. In addition, he has been a Chief Assistant Professor since 2019. As such, his teaching load in the last three years is 780 hours and comes from classroom exercises with students and the supervision of two postgraduate fellows in Cardiac Surgery.

5. Membership in scientific organizations

Dr. Kyuchukov is a member of the following scientific organizations: the Bulgarian Society of Cardiac Surgery (BSCS), the Bulgarian Association of Cardiac, Vascular and Thoracic Surgery (BACVTS), and European Association of Cardio-Thoracic Surgery (EACTS).

Dr. Dimitar Ivanov Kyuchukov, MD, meets the national requirements following the Law of Development of the Academic Staff in the Republic of Bulgaria and the Regulations for the Conditions and Procedure for the Acquisition of Scientific Degrees and Holding of Academic Positions of the National Hospital of Cardiology, with a minimum of 400 points, he has 558.

6. Conclusion

Based on the analysis of Dr. Dimitar Ivanov Kyuchukov's scientific, teaching, and clinical activity and contributions, it is clear that he is an exceptionally well-prepared and thorough scientist, teacher, and physician with extensive experience in the field of cardiac surgery.

Dr. Dimitar Ivanov Kyuchukov meets all the requirements of the Regulations on the Conditions and Procedures for Acquiring Academic Degrees and Occupying Academic Positions at the National Hospital of Cardiology. Therefore, I recommend that he be awarded

the academic position of "Associate Professor" in higher education 7.1 Medicine and the scientific specialty of "Cardiac Surgery.

10.03.2023

Sofia

Statement issued by:

A handwritten signature in blue ink, consisting of several overlapping loops and strokes, positioned above the printed name of the signatory.

Prof. Dr. Plamen Panayotov, MD, Ph.D.