OPINION

**from**

**Prof. Dr. Dimitar Petrov Nikolov, MD, PhD**

**Head of Cardiac Surgery Clinic,**

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**Regarding: Participation in a competition for the occupation of an academic position "** **Associate Professor " in the field of higher education 7. "Health and sport", Professional direction 7.1. "Medicine", scientific specialty "Cardiovascular Surgery" for the needs of Cardiosurgery Clinic " Acibadem City Clinic UMHAT Tokuda" JSC.**

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# *Candidate: Dr. Ivilin Plamenov Todorov, PhD, surgeon at Cardiac Surgery Clinic", Acibadem City Clinic UMHAT Tokuda" JSC*

1. **INFORMATION ON THE PROCEDURE FOR THE ANNOUNCEMENT OF THE COMPETITION FOR THE ACADEMIC POSITION OF "ASSOCIANT PROFESSOR" IN THE SCIENTIFIC SPECIALTY OF "CARDIOVASCULAR SURGERY", FOR THE NEEDS OF THE CARDIOVASCULAR SURGERY CLINIC "ACIBADEM CITY CLINIC UMHAT TOKUDA" EAD**

The competition for the academic position "Associate Professor" in the field of Higher Education 7. "Health and Sports", Professional direction 7.1 "Medicine", in the scientific specialty "Cardiovascular Surgery", for the needs of the Cardiac Surgery Clinic " Acibadem City Clinic UMHAT " Tokuda" EAD, was announced in the State Gazette No. 37/25.04.2023 by order No. 15-03-123# 2/15.06.2023 of the Executive Director and procurator of " Acibadem City Clinic UMHAT Tokuda" EAD, I am appointed as the chairman of the Scientific Jury . At the first absent meeting of the Scientific Jury, it was decided to prepare opinion.

Dr. Ivilin Plamenov Todorov, PhD , cardiac surgeon at the Cardiac Surgery Clinic " Acibadem City Clinic UMHAT Tokuda" EAD is the only candidate who submitted documents for participation in the competition within the legally defined period. He complies with the requirements of the ŽRASRB, the Regulations for its application and the Regulations for the terms and conditions for acquiring scientific degrees and holding academic positions at "Acibadem City Clinic UMHAT Tokuda" EAD – was a part-time teacher for more than 2 years, submitted a certificate of fulfillment of the minimum requirements (542.5 points out of the required 400), also submitted the necessary set of documents and copies of scientific works and other documents. Based on meeting the necessary requirements Dr. Ivilin Todorov was admitted by an admission committee appointed by order of the director and procurator of UMHAT Tokuda for participation in the competition and evaluation by a Scientific Jury.

**II . BIOGRAPHICAL DATA**

Dr. Ivilin Plamenov Todorov was born on July 30, 1982 in the city of Sofia. He graduated in medicine in 2007 at Medical University - Sofia. In the same year he was appointed as a resident physician to the newly opened department of cardiac surgery at Tokuda Hospital-Sofia, where he still works. In 2009, he was enrolled for specialization in cardiac surgery at the Sofia University. Acquired a specialty in cardiac surgery in 2014.

In 2019, he graduated with a master's degree in public health and health management at the Faculty of Public Health of Medical University-Sofia. Since 2019, until now he has been a part-time teacher at the Faculty of Medicine of Sofia University " St. Kliment Ohridski".

In 2021, he successfully defended a dissertation on the topic " Surgical treatment in patients with a prosthetic valve endocarditis " for the acquisition of the educational and scientific degree "PhD-Doctor" in the the scientific specialty "Cardiovascular Surgery".

I have known Dr. Todorov since the beginning of his career in 2007. He is consistent in his professional development and at the same time patient and respectful in communicating with his colleagues. Over the years, he developed himself as a trained cardiac surgeon. He knows well and applies the established diagnostic and therapeutic methods in the specialty and definitely has an interest in the latest technologies, striving to introduce them into clinical practice .

Actively participates in Bulgarian and international cardiac surgery events society with participation in scientific forums, with membership in professional organizations. He has many specializations abroad.

**III . ANALYSIS AND EVALUATION OF SCIENTIFIC RESEARCH ACTIVITY AND SCIENTIFIC CONTRIBUTIONS.**

* 1. **Quantitative criteria for research activity:**

Dr. Ivilin Plamenov Todorov, PhD, submits 25 published scientific papers for participation in the competition. Scientific activity is represented by participation in international European and World congresses and symposia - 3; Participation in national congresses and symposia - 9. After excluding the dissertation work from the total number of publications presented, 24 scientific papers remain for review, including 2 monographs, 6 of the publications are publications in journals with an impact factor, the total impact factor is 10.473. In the presented citation reference from the Medical Library of the MU - Sofia (Exh.N 245/12.05.2023) 11 open citations are indicated - Bulgarian 9, and in the Scopus database - 2 citations, in Web of Science - 1 citation.

# 2. Scientific contributions

The main part of the candidate's publications is devoted to the analysis of valve prosthetics in patients with valvular endocarditis and the conditions for increasing the effectiveness of operative treatment. They are reflected in the scientific works of the candidate related to surgical behavior and treatment in patients with early and late prosthetic valve endocarditis. The duration of hospitalization and survival in patients with a proven microbiological causative agent treated with antibiotics according to an antibiogram and those without an isolated causative agent treated empirically were studied. The degree of sensitivity and specificity of the most available diagnostic imaging studies (TEE and TTE) in the diagnosis of prosthetic valve endocarditis and its complications has been established. An in-depth study and comparative analysis of outcomes in deceased and discharged patients was conducted and a state-of-the-art prognostic model was established for factors predicting an increased risk of death in patients with prosthetic valve endocarditis.

For the first time in Bulgaria, in the surgical treatment of PVE and previous coronary surgery with a working LIMA-LAD graft, a method for angiographic balloon LIMA occlusion has been proposed, with the aim of optimal myocardial protection, as well as improving the operative results and patient survival.

A high rating should also be given to innovative approaches introduced by the author to reduce complications and improve postoperative results in reoperations in heart surgery.

In the presented monograph: "PROSTHETIC VALVE ENDOCARDITIS - CLINIC, DIAGNOSIS AND TREATMENT", dedicated to the main aspects of the clinic, diagnosis and operative treatment in patients with prosthetic valve endocarditis, significant scientific contributions are presented, and the presented algorithm and the main steps should be especially noted when performing various types of surgical interventions. The conclusions and recommendations made for the daily practical activity of cardiac surgeons, pointing to correct concrete solutions for diagnosis and treatment, have significant scientific and applied value.

The monograph also presents the multidisciplinary model for the diagnosis, medical and surgical management of prosthetic valve endocarditis, discussing in depth the challenges and solutions in patients with PVE when the infection involves a prosthetic valve, as the risks of repeat cardiac surgery can be significant. The history of PVE is traced and the current literature on the management of specific valvular involvement (ie, aortic and/or mitral) is reviewed, and the challenges, issues, and outcomes that drive clinical decision-making in light of the most new and effective therapeutic approaches and the latest strategic and practical algorithms in the treatment of the disease.

The publications devoted to the surgical treatment of native valve endocarditis, as a significant disease with a poor prognosis without adequate treatment, are devoted to important issues such as the type of valve prosthesis used for the development of early PVE, the degree of correlation between ultrasound and operatively established data in the diagnosis of infective valvular endocarditis and its complications. The presented model for evaluation and selection of the optimal moment for surgical intervention in patients with native valve endocarditis can be highly appreciated and applied in the daily practical activity of cardiac surgeons.

 The scientific and applied contributions in the scientific works dedicated to the surgical difficulties and the experience of the team in a patient with Marfan syndrome and severe pectus excavatum, the proposed cardiac surgical approach for extracorporeal perfusion through the use of two parallel connected oxygenators, as an effective, easy and safe method, also deserve attention in patients with "extreme" perfusion needs, providing the surgical team with sufficient oxygenator "reserve" for the implementation of an optimal and safe surgical intervention.

Dr. Todorov's scientific activity was realized by participating in scientific forums, where he presented the experience of the clinic for a fifteen-year period in the field of reoperations, and the surgical treatment of numerous rare complications related to invasive methods of treatment and rare cardiac anomalies.

The evaluation of Dr. Ivilin Todorov's scientific works is that they are sufficient in number and quality, they were published in authoritative specialized scientific publications. The scientific works do not repeat those presented for the acquisition of the educational and scientific degree "Doctor". There is no proven plagiarism in the scientific works, which meet and exceed the minimum national requirements for occupying the academic position "Associate Professor".

**IV . EDUCATIONAL AND TEACHING ACTIVITY**

An official reference for the educational and teaching activity of Dr. Todorov as a part-time assistant at the Faculty of Medicine of SU "Kliment Ohridski" is presented:

During the academic year 2019/2020: exercises on "Surgical diseases" for students 3-6 course of medicine - 24 study hours;

During the academic year 2020/2021: exercises on "Surgical diseases" for students 3-6 course of medicine - 6 study hours;

In the academic year 2021/2022: exercises on "Surgical diseases" for students 3-6 course of medicine - 39 study hours.

**VI . CONCLUSION**

Dr. Todorov is one of the leading young cardiac surgeons in the country. He mastered the most modern methods of diagnosis and treatment in the field of cardiac surgery. Over time, he established himself as a successful member of the team of young and motivated specialists at the Clinic of Cardiac Surgery. The professional and personal qualities of Dr. Ivilin Todorov, his research and teaching and teaching activities, meet the requirements of ZRASB, as well as the requirements, listed as criteria in the Rules for Development of the Academic Staff of „ Acibadem City Clinic UMHAT Tokuda” JSC, for holding an academic position “ Associate Professor ”.

I convincingly give my positive assessment and recommend to the other distinguished members of the Scientific Jury to vote positively for the well-deserved award of Dr. Ivilin Plamenov Todorov, PhD. of the academic position “ Associate Professor” in the scientific specialty “Cardiovascular surgery ” for the needs of the Clinic of Cardiac Surgery in „ Acibadem City Clinic UMHAT Tokuda ” JSC.

23.08.2023

SOFIA (PROF. DR. DIMITАR NIKOLOV MD, PhD)