

**To the Chairman of a Scientific
Jury appointed by order of
the Executive Director of
"Acibadem City Clinic UMHAT
Tokuda" EAD
EAD No 245/01.06.2021.**

REVIEW

From Prof .Borislav Georgiev Georgiev, MD PhD,
Head of the Cardiology Clinics, MHAT "National Heart Hospital" Sofia,
Member of the scientific jury for the competition for the acquisition of the academic position
"Associate Professor" in the field of higher education 7. "Health and Sport", professional field
7.1. "Medicine" and scientific specialty "Cardiology" for the needs of the Clinic of Cardiology,
Department of Invasive Electrophysiology of "Acibadem City Clinic University Hospital
Tokuda" announced in SG issue 27/02.04.2021

For the above competition, documents were submitted by one candidate – Dr. Valery Gelev, PhD, Department of Cardiology at The Clinic of Cardiology of "Acibadem City Clinic UMHAT Tokuda". The documents submitted by the applicant are in accordance with the requirements of the regulation for the academic position "Associate Professor" and the rules of "Acibadem City Clinic UMHAT Tokuda" EAD. I do not find any gaps in the submitted documentation and declare that I do not have scientific works with the candidate.

Short biographical data

Dr. Valeri Liubenov Gelev graduated from high school in 1982 at the English Language School, Sofia. He completed his higher medical education in 1990 at the Medical University - Sofia. In 1995 he acquired the specialty of Internal Medicine, and in 2000 - Cardiology. In 2003 he received a certificate in invasive cardiology. He has been working successively in the Department of Invasive Cardiology at the National Heart Hospital, Head of the Department of Invasive Cardiology at the Institute "Pirogov", and since 2013 he has been Deputy Head of Cardiology Clinic at Acibadem City Clinic Tokuda Hospital. In 2016 he completed a master's degree in health management at the Faculty of Health Sciences MU-Sofia. He attends a number of international courses in interventional cardiology. Successfully defended the dissertation on the topic "*Retrograde access in recanalization of chronic coronary artery occlusions*" for the award of educational and scientific degree "PhD".

1. Research

1.1. Publications.

Dr. Valery Gelev has presented a total of 90 scientific papers: one dissertation on the acquisition of the educational and scientific "PhD" degree, 72 scientific publications and 17 scientific reports. Of the scientific publications 68 are in scientific periodicals, of which 32 are in Bulgarian journals. 36 are publications in international journals, of which 31 are in journals with impact factor. Co-author in 2 monographs and 1 textbook.

1.2 Scientific forums.

Dr. Valery Gelev has presented 49 published abstracts of scientific reports since 2015, of which 17 in Bulgarian and 32 in international forums.

1.3 Authorship and citations

Total impact factor, citation indices:

Total impact factor of periodicals – 536.35

Citation indices, reference from the Central Medical Library (ex. No RT 120/02.04.2021):

Ø 4 Bulgarian citations.

Citation Index in International Scientific Publications

Ø 2721 citations in Web of Knowledge databases and 1024 in Scopus (no self-citations).

1.4 Participation in working and expert groups

He is a member of the Expert Council of Cardiology at the Ministry of Health.

Member of the Executive Board of the Bulgarian Society of Cardiology from 2020

Chairman of the Society of Invasive Cardiology for two terms 2015-2017; 2019-2019

Member of the Executive Board of the Society of Invasive Cardiology 2009-2015

One of the Directors of the Bulgarian Bifurcation Course 2013-2021

2. Profile of research, practical and applied activities

In accordance with the profile of scientific work in the cardiology clinic at "Acibadem City Clinic UMHAT Tokuda", to which the place of associate professor was announced, and the Department of Invasive Cardiology, Dr. Valery Gelev works mainly in the field of invasive cardiology. He has 20 years of practical experience in diagnostic and therapy in the field of invasive cardiology.

3. Most significant scientific contributions

Main scientific and scientific and applied contributions

Research and practical application activity is directed in several directions, which can be grouped into several fields: recanalization of chronic coronary occlusions, Left main PCI, ~~percutaneous interventions of left main stenosis~~, transradial approach in invasive coronary procedures, complex coronary interventions.

3.1 Recanalization of chronic coronary occlusus

Contributions of a scientifically theoretic and confirmatory nature

The applicant has conducted one of the few studies of patients with coronary chronic total occlusions (CTO) in Bulgaria and around the world, analyzing the results of the application of the retrograde method of recanalization of CTO among a large number of patients, following the evolution of the techniques over time. For the first time in Bulgaria is presented in a theoretical and scientifically applied plan the methodology of retrograde access for the treatment of chronic coronary occlusions.

Epidemiological, clinical and anatomical characteristics are presented, which appear as predictors for failure in recanalization of coronary chronic total occlusions. The predictive value of the J-CTO score has been confirmed as a very strong predictor for success.

The importance of other anatomical characteristics, predictors for failure has been confirmed: localization of occlusion in the LAD and LCx arteries; the presence of significant calcification in the body of the occlusion; the length of the occlusion; the unfavorable form of the proximal part of the cap of occlusion; localisation of occlusion in the vascular bed of

LAD and LCx. Proven as predictors of failure are some clinical and anatomical characteristics that have not been considered as such until now: the presence of arterial hypertension, non-insulin-dependent diabetes mellitus, CCO in patients who present themselves with the clinic of acute coronary syndrome, a significant atherosclerotic involvement of the vessel distal from occlusion.

It has been proven that the retrograde approach for the treatment of CTO is highly effective and contributes for achieving very high procedural success, even in occlusions with very high complexity, where the success rate with classical antegrade access is unacceptably low.

Contributions of an applied nature

The applicant proves that the recanalization of the CTO, including the use of retrograde access, have a very low incidence of major complications. He found that retrograde access did not appear as a predictor for a greater incidence of complications.

There are complications that are characteristic or mainly associated with retrograde access associated with donor vessel complications and collateral connections, which need to be known and prevented.

Based on the data and his experience, the applicant develops an algorithm for the indications and how to apply the retrograde approach in recanalisation of the CTO.

3.2 Percutaneous interventions in left main stenosis

Contributions of a scientifically theoretic and confirmatory nature

For the first time in Bulgaria, the candidate analyzed the results of his own prospective study, with large number of patients after revascularization of the left main coronary artery with long-term follow up (68.76). He analyses the procedural success and procedural characteristics of this type of intervention. Results for major complications within hospital stays and medium-term follow-up (25.46.64.80) were presented. The importance and impact of clinical risk factors expressed through the EUROSCORE assessment for procedural success and major adverse events in short and long-term follow-up (60.73) are shown.

The importance of the complexity of coronary anatomy, expressed by Syntax score, has been analysed on procedural results and mortality, as well as other major adverse events in short and long-term follow-up (67).

The frequency of instant restenoses and their specific manifestation after interventions on the left main coronary artery and the significance for the clinical course of patients were analyzed (81).

Contributions of a scientifically complex nature

The candidate analyzes the predictors for major complications in interventions on the left main coronary artery. The importance of scoring systems – EUROSCORE and Syntax score – is highlighted as factors for assessing immediate procedural outcomes, short-term and long-term adverse events. An algorithm for percutaneous interventions of the left main coronary artery was created.

3.3 Transradial approach in invasive coronary procedures

As a member of the team who introduced transradial access in Bulgaria, the candidate participates in publications analyzing the experience and results of the first procedures carried out in Bulgaria with this access.

He is the co-author of a chapter of a manual on invasive cardiology that examines the advantages and peculiarities of transradial access, its use in specific cases, and the behaviour in anatomical peculiarities and complications.

He also took part in a prospective, multicentre, international study on the advantages of different types of diagnostic catheters used with transradial access (10,52).

The subject of publications and scientific communications is the experience gained by the applicant in performing complex coronary procedures, such as bifurcation lesions, chronic coronary occlusions, etc., with transradial approach (8,11, 54).

3.4 Complex coronary interventions

Publications consider the importance and behavior in the presence of massive coronary calcinosis and global trends in the treatment of this type of lesions (70). The site of rotational atherectomy in the treatment of calcium lesions was also examined, as well as an analysis of own results in the treatment of patients with rotablation (65,119).

The applicant presents publications and numerous reports on the interventional treatment of complex coronary interventions, which are of a significant scientific and applied nature. (12,26,56,112,118).

3.5 Miscellaneous

The applicant presents publications in which the experience of endovascular treatment of lesions of upper and lower extremities (33,47,69) has been shared for the endovascular treatment of visceral organs in life-threatening conditions in gastroenterology (34) and urology (40).

An overview of the expression of arrhythmias in patients with COVID-19 was carried out, in pointing out the mechanisms of arrhythmogenesis and looking at the different types of arrhythmias in terms of therapeutic approach in pandemic conditions. The role of antiviral drugs as proarrhythmic factors has been examined in detail, with practical guidelines for the prevention of proarrhythmias (86).

Overviews were made on modern treatment in acute coronary syndrome (58), heart failure (83,84), and treatment of arterial hypertension (79).

The applicant submitted publications concerning current drug therapy in various heart diseases (14,15,24,39,35,36,41,49,59).

4. Educational and scientific and organizational activities

During the period 1992 to 2001, after a competition, Dr. Valeri Gelev was appointed a research associate at the Pirogov University Hospital. In 2019 he was selected as a full-time assist. prof. at Sofia University "Kliment Ohridski", with 60 hours per year.

According to a report from "Acibadem City Clinic UMHAT Tokuda" EAD, Dr. Gelev has for the last 5 years 2751 equivalent hours of training of graduates and continuing training courses.

The teaching workload of Dr. Valery Gelev corresponds to the requirements for the teaching workload for the academic position "Associate Professor".

5. Diagnostic work

Professional skills - Dr. Valery Gelev has 30 years of service as a doctor, of which 20 years he has worked as an invasive cardiologist since 2009 as Head of Department of

Invasive Cardiology UMBALSM "Pirogov". In his clinical practice he used a wide range of diagnostic and therapist approaches, which is why he was a specialist at the national level.

For its diverse scientific and professional realization, the proficiency of English and Russian is also of great importance.

6. Membership of scientific organizations

Dr. Valery Gelev is a member of the following national and international scientific organizations:

- Bulgarian Society of Cardiology.
- Bulgarian Society of Invasive Cardiology.
- European Cardiology Society.
- European Club of Chronic Occlusions since 2010

According to the requirements of THE National Centre for Information and Documentation for the academic position "Associate Professor" Dr. Valery Gelev meets more than the minimum requirements.

Based on the above data about Dr. Valery Gelev, it can be characterized as:

- ✓ a clinical and interventional cardiologist who has recognised contributions nationally,
- ✓ a researcher capable of independent creative scientific work in the field of diagnostics and therapy,
- ✓ erudite doctor with a wide medical perimeter.

In conclusion, I believe that Dr. Valery Gelev meets the requirements of the Law for the Development of the Academic Staff in the Republic of Bulgaria for acquiring the Academic positions and the Rules for the Development of the Academic Staff in "AcibademCity Clinic UMHAT Tokuda" EAD for acquiring scientific degrees and holding the academic position "Associate Professor". I propose that the esteemed scientific jury to award him with the academic position "Associate Professor" in the field of higher education 7."Health and Sport", professional department 7.1."Medicine" and scientific specialty "Cardiology".

27.07.2021



(Prof. BorislavGeorgiev, MD PhD)