

**To the Chairman of the Scientific
Jury, appointed by order of the
Executive Director of Acibadem City
Clinic UMHAT Tokuda EAD
No 15-05-259#1/15.12.2025**

REVIEW

From prof. Borislav Georgiev Georgiev, MD, PhD,
Head of the Cardiology Clinic at National Heart Hospital
Member of the scientific jury for the competition for the academic position of "Associate Professor"
in the field of higher education 7. "Health and Sports", professional field 7.1."Medicine" and
scientific specialty "Cardiology" for the needs of the Cardiology Clinic of "Acibadem City Clinic
UMHAT Tokuda" EAD, announced in State Gazette No. 85/14.10.2025.

For the above-mentioned competition, documents have been submitted by one candidate – Dr. Ivayla Zhivkova Zheleva-Kyuchukova, MD PhD, invasive cardiologist at the Cardiology Clinic of Acibadem City Clinic UMHAT Tokuda. The documents submitted by the applicant are in accordance with the requirements of the regulations for the academic position of "Associate Professor" and the regulations of "Acibadem City Clinic UMHAT Tokuda" EAD. I do not find any gaps in the submitted documentation and declare that I have no common scientific papers with the candidate.

Brief curriculum vitae

Dr. Ivayla Zhivkova Zheleva-Kyuchukova graduated from secondary education in 1993 at the Romain Rolland School. She graduated in 1999 from the Medical University of Sofia. In 2009 she acquired a specialty in Internal Medicine, and in 2013 – Cardiology. In 2010 she received a certificate in Invasive Cardiology. She worked consecutively at the St. Ekaterina Hospital, the University Hospital "Acibadem City Clinic UMHAT Tokuda". She attended a number of international courses in interventional cardiology. In 2016 he graduated with a Master's degree in Health Management from the Faculty of Health Sciences of MU-Sofia. She successfully defended his thesis on "*Interventional treatment in patients with left main stenosis and concomitant complex coronary pathology*" for the award of the educational and scientific degree of "Doctor" in 2021. Since 2019, he has been a part-time lecturer in internal medicine and cardiology at the Faculty of Medicine of Sofia University.

1. Research

1.1. Publications.

Dr. Ivayla Zheleva-Kyuchukova has presented a total of 94 scientific papers - 1 thesis for the acquisition of an educational and scientific degree "Doctor" (PhD) and 40 scientific publications and 53 participations in scientific forums realized after the doctoral work. 16 scientific publications in peer-reviewed scientific journals have been presented (in Scopus/Web of Science), of which with IF – 6; 23 - in the National Reference List and 1 - international non-indexed journal with scientific peer review.

1.2 Scientific forums

Dr. Ivayla Zheleva-Kyuchukova has presented evidence of 53 congress participations. She has been a lecturer at 5 program lectures at international congresses and author and co-author of 15 scientific reports and publications with published abstracts (5 at international scientific forums and 10 at national scientific forums).

1.3 Authorship and citations

Total impact factor, citation indices:

Dr. Ivayla Zheleva-Kyuchukova is the author and co-author of scientific publications in refereed and indexed international databases (Scopus and Web of Science), as well as in national peer-reviewed journals. She has active participation in international and national scientific congresses, including published abstracts in prestigious journals. Some of the publications have an impact factor, with the total impact factor of 60.483 and the individual impact factor – 22.7372

A total of 31 citations have been documented in the databases from the citation reference from the medical library of MU-Sofia, of which in foreign sources Scopus/Web of Science – 7. Citations have been found in sources from the library fund of the central medical library – 18. *h* index: Scopus – 2 and Web of Science – 1. The citations in Scopus, Web of Science and Bulgarian sources, as well as the presence of *h*-index, confirm the scientific visibility and recognition of the published results.

In more than 2/3 of the publications, the candidate is an independent, first or second author, which confirms the leading participation in the research activity

1.4 Peer review activity

Peer-reviewed activity is an important indicator of scientific expertise and recognition in the relevant scientific field. Dr. Zheleva's participation as a reviewer of scientific manuscripts for established peer-reviewed journals reflects the confidence of the editorial boards in her professional competence and scientific judgment.

In the period 2023-2024, the candidate participated as a peer reviewer of three scientific manuscripts in peer-reviewed scientific journals, including Bulgarian Cardiology and Pharmacia. The peer-reviewed works address both clinical and experimental aspects of cardiology and require in-depth knowledge in the fields of interventional cardiology, clinical pharmacology, and physiology. Participation in the evaluation of such manuscripts implies a high level of critical thinking, the ability to analyze the methodology, statistical processing and clinical significance of the results presented. Dr. Zheleva's peer review activities complement the published scientific production and participation in scientific forums, emphasizing the role of the candidate not only as an author, but also as an expert evaluator of scientific results.

2. Profile of research, practical and applied activities

The thesis: "*Interventional treatment in patients with left main stenosis and concomitant complex coronary pathology*" is based on a prospective registry of patients with unprotected stenosis of the trunk of the left coronary artery treated with percutaneous coronary intervention.

Modern interventional cardiology has seen significant development over the past two decades, with the expansion of indications for percutaneous coronary intervention (PCI) leading to the inclusion of increasingly complex and high-risk coronary lesions. A special place among them is occupied by the significant stenosis of the trunk of the left coronary artery, which is traditionally associated with an unfavorable prognosis and for a long time was considered the domain of surgical revascularization. The accumulation of clinical data, the introduction of second-generation drug-eluting stents and the improvement of interventional techniques have led to a reassessment of therapeutic strategies in this high-risk group of patients.

A leading place in the scientific activity of the candidate is occupied by publications dedicated to percutaneous coronary intervention in patients with significant stenosis of the left coronary artery trunk. This issue is also the basis of the dissertation, which is a prospective registry study of patients treated with percutaneous coronary intervention and implantation of second-generation drug-eluting stents. The clinical profile of the patients, the angiographic characteristics of the lesions, as well as the interventional techniques used, were analysed.

Particular attention is paid to distal bifurcation stem lesions, which pose a serious technical challenge. The publications discuss various dual-stent and single-stent strategies, including culotte, T-stenting, and DK-crush techniques, as well as the role of optimal lesion preparation in severe calcinosis. The analysis shows that an individualised approach and adaptation of the intervention strategy to the specific anatomy are key to achieving high procedural success.

A significant contribution is made by the analysis of patients with high anatomical complexity (Syntax Score ≥ 32). The papers have shown that in the presence of an experienced interventional team and careful selection, PCI can be applicable to this group of patients, with acceptable early and medium-term clinical outcomes. Clinical, anatomical and procedural predictors of adverse cardiovascular events have been identified, which supports decision-making within the multidisciplinary "heart team".

A significant part of the scientific activity is focused on drug behavior in patients after percutaneous coronary interventions, with a focus on antithrombotic therapy and the management of bleeding risk. The publications consider various therapeutic regimens in patients at high ischemic and hemorrhagic risk, including concomitant atrial fibrillation and old age. These developments have a clear practical orientation and support clinical decision-making.

Part of the scientific developments is devoted to the complications of interventional procedures - contrast-induced nephropathy, and rare neurological complications. The analysis is based on real clinical cases and registry data and is important to increase clinical vigilance and safety. Interdisciplinary publications dedicated to radiation protection and dosimetry complement the scientific profile and demonstrate commitment to the quality of medical activity, both for patients and for medical personnel in invasive cardiology.

Participation in national and international scientific forums occupies an essential place in Dr Zheleva's scientific activity and represents an important component of the dissemination and validation of the scientific results presented in her publications. The analysis of these participations shows a consistent and long-term commitment to leading scientific events in the field of interventional cardiology, as well as a growing expert role over the years. The participation of Dr. Ivayla Zhivkova Zheleva-Kyuchukova in scientific forums complements and builds on the published

scientific production, providing broad professional visibility, international recognition and a direct link between scientific research and clinical practice.

A significant part of the presentations and scientific reports is directly related to the topic of the dissertation and presents the results of the interventional treatment of patients with left main stenosis and complex coronary pathology. The presentation of data from real clinical practice at forums such as EuroPCR, TCTAP, the National Congresses of Interventional Cardiology and the congresses of the Bulgarian Society of Cardiology contributes to the validation of these results in the professional community and to their comparison with international experience.

Especially indicative of the candidate's scientific development is her participation in prestigious international forums with published abstracts in journals such as the *Journal of the American College of Cardiology*, *Endoscopy* and *Physica Medica*. These participations testify to the international visibility of scientific activity and to the acceptance of the presented results from high-ranking scientific platforms. The reports dedicated to the results of stem interventions, rare clinical cases and dosimetric studies complement and expand the thematic scope of scientific production.

In recent years, there has been a pronounced evolution in the role of Dr. Zheleva at scientific forums – from an active participant and presenter to a lecturer, moderator and panelist in specialized sessions, courses and symposia. Lectures at national and international forums, including courses on bifurcation and complex coronary interventions, EuroPCR-related events and thematic symposia, are an indicator of expert recognition and trust from the professional community.

The topics of the lectures and moderated sessions reflect the leading directions in modern interventional cardiology – treatment of calcified coronary lesions, complex PCI, functional assessment of coronary microcirculation, ANOCA/INOCA, chronic total occlusions and optimization of interventional results through imaging methods. This shows not only a depth of expertise, but also an ability to integrate new scientific concepts into clinical practice.

Participation in training modules, live sessions with clinical cases and roles as commentator and demonstrator further highlight the candidate's contribution to medical education and the continuing training of cardiology and interventional cardiology specialists. In this sense, scientific forums become not only a platform for presenting results, but also a means for actively forming and disseminating good clinical practices.

3. Most significant scientific contributions

A. Contributions of scientific-theoretical and scientifically confirmatory nature

1. The applicability and effectiveness of percutaneous coronary intervention in patients with unprotected stem stenosis, including with high anatomical complexity, in the conditions of real clinical practice have been confirmed.
2. Clinical, anatomical and procedural predictors of major adverse cardiovascular events after left coronary artery trunk interventions were analyzed.
3. Data on optimal antithrombotic behavior in patients at high risk of bleeding after PCI have been enriched.

B. Contributions of a scientific and practical nature

1. A register approach for monitoring patients with coronary stem cell disease treated interventional in a Bulgarian centre has been introduced and analysed.
2. Practical algorithms for interventional behavior in complex coronary lesions, including Syntax Score ≥ 32 , are proposed.
3. The scientific results are directly applicable in the daily clinical practice of interventional cardiology and contribute to improving the selection and treatment of high-risk patients.

4. Educational, teaching and scientific-organizational activities

The Cardiology Clinic conducts training in the specialty "Cardiology" for postgraduate doctors, students of medicine III, IV, V and VI years and nurses in thematic areas.

Dr Zheleva's workload is well represented. In a Certificate issued by ASK UMHAT Tokuda EAD for the period 01.01.2021 - 31.11.2025 has realized a total of 1289 eq. hours from the training of postgraduate students, and from the Certificate of the Medical faculty of Sofia University, from 2022 to 2025 she has realized 600 equivalent hours of work with students

Dr. Zheleva-Kyuchukova has a long-term active role in the scientific and organizational life of the professional community. For five consecutive mandates (10 years in total), she has been a member of the Board of the Society of Interventional Cardiology, acting as an organizational and scientific secretary. In this role, he actively participates in the planning and implementation of national and international scientific forums, training courses and professional initiatives, as well as in the coordination of scientific programs and interaction with lecturers, institutions and partner organizations.

The combination of peer review activity and long-term participation in the management and scientific-organizational structures of a specialized professional society complements the overall scientific profile of the candidate and demonstrates its commitment not only as an author and researcher, but also as an expert, evaluator and organizer of the scientific process. This activity is an additional argument for the academic maturity and active role of Dr. Zheleva in the development of interventional cardiology.

In the context of a competition for the academic position of Associate Professor, the presented peer reviewed activity is an indicator of academic recognition, integration into the scientific process and readiness to participate in editorial and expert activities related to the development of medical science.

In the period after 2019, Dr. Ivayla Zheleva-Kyuchukova was appointed as a part-time lecturer in internal medicine and cardiology for medical students, according to a reference from Sofia University "St. Kliment Ohridski".

The workload of Dr. Ivayla Zheleva-Kyuchukova corresponds to the requirements for the workload for occupying the academic position of Associate Professor.

5. Diagnostic work

Professional skills - Dr. Ivayla Zheleva-Kyuchukova has 26 years of work experience as a doctor, of which 15 years she has worked as an invasive cardiologist. In her clinical practice she uses a wide range of diagnostic and therapeutic approaches, which is why she is an appreciated specialist at national level. She served as organizational and scientific secretary of the Society of Interventional Cardiology for the period of 5 consecutive mandates.

Knowledge of English is also of great importance for the versatile and scientific and professional realization.

6. Membership in scientific organizations

Dr. Ivayla Zheleva-Kyuchukova is a member of the following national and international scientific organizations:

- Bulgarian Society of Cardiology.
- Bulgarian Society of Invasive Cardiology.
- European Society of Cardiology (ESC).

- European Society of Interventional Cardiology (EAPCI).

According to the requirements of NACID for occupying the academic position of "Associate Professor", Dr. Ivayla Zheleva-Kyuchukova meets more than the minimum requirements.

Indicator group	Table of Contents	Minimum required NACID points for "Associate Professor"	Presented points by Dr. I. Zheleva
A	Indicator 1	50	50
B	Indicator 2	-	-----
In the	Indicators 3 or 4	100	139,52
D	Sum of indicators from 5 to 9	200	395,75
D	Sum of indicators from 10 to 12	50	220
Total number of points.		400	805,27

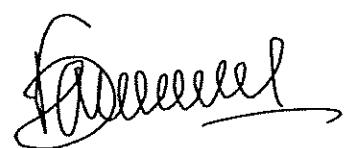
Based on the above data about Dr. Ivayla Zheleva-Kyuchukova, she can be characterized as:

- established clinical and interventional cardiologist who has recognized contributions on a national scale,
- researcher capable of independent creative scientific work in the field of diagnosis and therapy,
- an erudite doctor with a wide medical perimeter.

In conclusion, I believe that Dr. Ivayla Zheleva-Kyuchukova meets the requirements of the Law on the Acquisition of Scientific Degrees and the Regulations on the Terms and Conditions for Acquiring Scientific Degrees and Occupying the Academic Position of Associate Professor and the Regulations of Acibadem City Clinic UMHAT Tokuda EAD. I give a positive assessment and propose to the esteemed scientific jury that she be awarded the academic position of Associate Professor in the field of higher education 7. "Health and Sports", professional field 7.1. "Medicine" and a scientific specialty "Cardiology".

Prepared by:

12.01.2026



(Prof. Borislav Georgiev, MD PhD)