STANDPOINT

**on behalf of Prof. Dr. Nikolay Margaritov Runev, PhD,
Cardiology Department at the Clinic of Propaedeutics of Internal Medicine
"Prof. St. Kirkovich " - University Alexandrovska Hospital,
Medical University - Sofia**

Subject: Competition for the academic position of "Associate Professor" in the professional field 7.1. "Medicine" and scientific specialty "Cardiology", announced in the State Newspaper, issue 45/28.05.2021 for the needs of the Cardiology ward, Clinic of Cardiology in MHAT "NKB" - Sofia

Order No. 308 of July 22, 2021 of the Executive director of MHAT "NKB" for appointment of a scientific jury

One candidate has been admitted to the announced competition for "Associate Professor" in Cardiology: Dr. Iliyana Hristova Petrova-Stoyanova, PhD, Assistant-professor in Clinic of Cardiology, MHAT "NKB" - Sofia.

The applicant has submitted all the documentation necessary for the preparation of the standpoint, in accordance with the requirements.

I. Research activity

Dr. Iliyana Petrova has presented **an author's report** for acccordance and implementation of the minimum national requirements (MNR) for "Associate Professor", including publications, citations and research activities:

✓ Dissertation work for awarding the Educational and Scientific Degree (ESD) "Doctor" in 2020 - "Study of renal function in patients undergoing invasive angiographic examination with a new biomarker - Neutrophil Gelatinase Associated Lipocalin (NGAL)": **group A = 50 points (MNR - 50 p.)**

✓ Habilitation work - **Monograph:** I. Petrova. "Modern aspects of contrast-induced nephropathy in cardiology". Arbilis Publishing - Sofia, 2021. p. 295, ISBN: 978-619-7063-47-9. In print: **group B = 100 points (MNR - 100 p.)**

✓ Publications and reports in scientific journals, referenced and indexed in worldwide databases with scientific information: **gr. D7 = 135.85 points**

✓ Publications and reports in non-peer-reviewed journals with scientific review or in edited collective volumes: **gr. D8 = 143.5 points**

✓ Published chapters of a collective monographs: **gr. D9 = 110 points**

Total number of points in group D = 389.35 points (MNR - 200 p.)

✓ Citations or reviews either in scientific journals, referenced and indexed in worldwide databases with scientific information or in monographs and collective volumes: **gr. E10 = 30 points**

✓ Citations or reviews in in non-peer-reviewed journals with scientific review: **gr. E12 = 45 points**

Total number of points in group E = 75 points (MNR - 50 p.)

Total number of points in groups A, C, D and E = 614.35 points (MNR - 400 p.)

A report from CML to MU-Sofia is presented for a **total number of citations 11**, of which in Bulgarian scientific journals - 10 and in foreign scientific editions– (Web of Science) - 1.

The main contributions of Dr. Petrova`s scientific work are in the following areas:

1. Contrast-induced nephropathy

✓ For the first time in our country a new biomarker for assessment of renal function has been introduced in clinical practice - Neutrophil Gelatinase Associated Lipocalin. After calibration, clarification of the coefficients of variation and standardization of the method, the first pilot study was performed in patients after planned contrast angiography.

✓ The role of NGAL as a biomarker of renal impairment has been analyzed in the field of invasive cardiology, cardiac surgery and critically ill patients. The hopes that the "kidney troponin" has been discovered make NGAL the most up-to-date and studied biomarker in recent years.

✓ An innovative approach for risk stratification of patients has been introduced by integrating plasma NGAL into a risk scale for assessment of the severe renal dysfunction.

✓ The role of NGAL as an early biomarker for diagnostics of contrast-induced nephropathy has been proved both in patients with preserved renal function and in those with chronic kidney disease.

✓ For the first time in Bulgarian patients population the relationship between plasma levels of NGAL and persistent renal dysfunction after coronary angiography has been demonstrated (monograph).

2. Innovative interventional methods

✓ A new generation drug-eluting stent (BIOSS) has been introduced and

established in clinical practice. It has been developed for the treatment of bifurcation lesions and provides maximum adaptation to the differences in the diameter of the main vessel before and after the separation of the side branch.

✓ An alternative approach for detection of periprocedural myocardial ischemia has been developed in the treatment of bifurcation lesions by application of intracoronary electrocardiogram and electrocartography of all vessels within the scope of coronary intervention.

✓ A method of catheter thrombfragmentation, thrombaspiration and local fibrinolysis has been introduced in clinical practice for the treatment of high-risk patients with pulmonary embolism (PE).

✓ An original algorithm for interventional treatment in acute forms of PE has been developed and has become a part of the clinical practice in NKB.

3. Acute coronary syndrome – risk factors, prognosis, interventional treatment

✓ It has been found that in patients over 80 years of age with STEMI the interventional approach is not being applied optimally, which is leading to increased mortality in the cohort left to conservative treatment.

✓ It is proved that the anemic syndrome in the course of the acute ST-elevation coronary syndrome is an important additional risk factor which significantly worsens the short-term prognosis in these patients.

✓ It is found that high blood sugar levels at hospitalization of patients with acute coronary syndrome is associated with both: the occurrence of in-hospital complications (heart failure, arrhythmias, conduction disorders, mechanical complications) and the reduced survival.

4. Arterial hypertension

✓ Individual data of patients with suboptimally controlled arterial hypertension have been analyzed with assessment of the risk for development of cognitive impairment.

✓ The practical aspects and the role of home blood pressure measurement are studied to achieve an optimal drug control in arterial hypertension.

5. Heart failure

✓ The peculiarities of the therapeutic approach in CHF with emphasis on the main classes of cardio-protective drugs, their indications and contraindications have been analyzed.

✓ Dr. Petrova has participated in an original research project related to

proteome analysis in CHF patients. The discovery of specific signal-transduction pathways offers hope to reveal the role of gene expression in determining the course of the disease.

6. Atrial fibrillation

✓ Data from the NKB were analyzed in order to optimize the approach for conduction of planned electrocardioversion (ECV) in patients with persistent atrial fibrillation.

✓ An original algorithm with a therapeutic protocol for planned ECV in atrial fibrillation has been introduced in everyday clinical practice.

7. Rare clinical cases

✓ Chronic aortic dissection type B with the formation of a giant thoracic aortic aneurysm.

✓ Complicated acute myocardial infarction with simultaneous manifestation of popliteal artery thrombosis.

The quality of the presented publications fully meets the academic requirements.

Dr. Petrova is a member of: Bulgarian Society of Cardiology, Bulgarian Society of Interventional Cardiology and European Society of Cardiology.

In the period 2019-2020 she was an active reviewer of the journal "Renal Failure". She has been a speaker at numerous national and international congresses and symposia.

II. Teaching and learning activities

A report was presented on behalf of the Deputy Director for Research and Teaching activities of MHAT "NKB" in the assurance of that in her capacity as a teacher of trainees/interns and students Dr. Petrova had a teaching load of 250 hours per year.

The figure is averaged over the last 5 years.

III. Diagnostic and therapeutic activities

Dr. Petrova is a very well-trained specialist in clinical and interventional cardiology with significant experience accumulated in Clinic of Cardiology and Invasive Cardiology ward of MHAT "NKB" - Sofia.

She has an excellent command and applies in practice the main invasive and non-invasive diagnostic and therapeutic methods in cardiology.

She acquired specialty in "Cardiology" in February 2013 from MU-Sofia and certificate for professional qualification in "Invasive cardiology" dated June 2013 from MU-Sofia.

IV. Conclusion

I believe that with her qualification, research, teaching, diagnostic and therapeutic activities **Dr. Petrova fulfills the minimum national requirements** in the professional field "Medicine - Medical and Clinical Field" for the competitive position.

This gives me grounds **to vote in favour** and **to suggest to the esteemed members of the Scientific jury to support the election** of Dr. Iliyana Hristova Petrova-Stoyanova, PhD, for "Associate Professor" in Cardiology for the needs of **the Cardiology ward, Clinic of Cardiology in MHAT "NKB" – Sofia.**

Sofia, 05.09.2021

Prof. Dr. Nikolay Runev, PhD