



the Chairman of the scientific jury,  
as defined by Order No. P-2599 / 14.11.2019  
of the Rector of the Medical University - Plovdiv

## R E V I E W

by

Prof. Maria Hristova Milanova, MD, PhD, DSci -

Head of the Cardiology Clinic at UMHATEM "N. I. Pirogov"-Sofia

about the competition

for "ASSOCIATE PROFESSOR" in "Cardiology" to the "Cardiology" section - First Department of Internal Diseases of the Medical University of Plovdiv, for teaching English in the discipline of Cardiology at the announced competition in SG, issue 72/13.09.2019.

The review has been prepared in accordance with the Law on Academic Staff Development (ZRAS), the Regulations for Application of the ZRAS (PRRAS) and the Rules for the Conditions and Procedures for Acquisition of Academic Degrees and Occupation of Academic Positions in the Medical University of Plovdiv.

The procedure for the competition was followed and all the necessary materials were provided by the only candidate Dr. Peter Fedev Nikolov.

### **1. Biographical data:**

Dr. Peter F. Nikolov graduated in medicine in 2007 at the Plovdiv Medical University with the Hippocratic Medal - a complete distinction from studying and state exams. He started working as an ordinator at the St. George University Hospital - Cardiology Clinic. In 2009 he won a competition for an assistant in the Cardiology Clinic of the Medical University of Plovdiv. Dr P.Nikolov acquired a specialty in cardiology in the year of 2012. In 2013 he defends PhD on the topic: "Prehypertension. Dissemination, Functional and Laboratory Changes. Therapeutic Approach." Since 2014 he has been Chief Assistant Professor at the Cardiology Clinic of the Medical University of Plovdiv. Since 2015 up to now he works in the invasive ward of the cardiology clinic at UMBAL "St George" – Plovdiv.

### **2. General description of the submitted materials for the competition:**

The following scientific works are presented in this competition:

- Publications,

- Abstracts from scientific forums,
- Monographs – one written by the author himself and others as participant in a team,
- Auto abstract of the dissertation work,
- Textbooks and manuals - two,
- Scientific projects - three.

### **3. Evaluation of scientific works on the overall academic development:**

The total production consists of 31 publications in foreign and Bulgarian magazines, 10 of which are in refereed journals. The attendance at congresses and conferences and is 21, 16 of which are abroad.

The citations are 28, of which 17 are from sources abroad and 11- from Bulgarian authors.

The dissertation on the topic "Hypertension. Dissemination, functional and laboratory changes. Therapeutic Approach "was presented in 2013. Nationally, data on the prevalence of hypertension and a clear formulation of the problem are lacking. The contributions are related to the fact that it is the first study to show the real incidence of prehypertension in Bulgaria. A complex laboratory and functional characterization of the condition of prehypertension is made, and it is concluded that this state is pathology rather than norm. The benefit of the drug treatment in a particular risk group is argued, which is also confirmed in the latest recommendations of the European Society of Hypertension by 2018.

Publication activity is related to the following areas: arterial hypertension, metabolic syndrome, atherosclerosis, ischemic heart disease, heart failure, endothelial dysfunction.

Hypertension is present in a large number of publications - its distribution, characteristics of patients with hypertension limit values, such as prehypertension and high normal blood pressure (HNAP) are investigated. It is established that borderline hypertension, including prehypertension and in particular HNAP, is not only a tendency for arterial pressure (AP) to increase, but also a metabolic disorder. There are deviations in the lipid profile and the biological markers for endothelial dysfunction. The values of asymmetric dimethyl arginine (ADMA) - a physiologic inhibitor of nitric oxide synthetase, are increased. The vascular and cell adhesion molecules that accompany vascular damage are increased. An early sign of endothelial dysfunction is the reduction in flow mediated vasodilation (FMD) - publications in refereed journals (RJ) №5,7 and publications in non-refereed journals (NRJ) -13, 21. Early endothelial dysfunction in borderline hypertension is also followed by initial vascular changes consisting of increased arterial rigidity and decreased FMD – RJ № 7,8,9 and NRJ-15, 16. The current tendency of patients with HNAP and high cardiovascular risk to be drug treated is discussed in article № 10.

A large number of publications are related to the metabolic syndrome - RJ № 1,2,4 and NRJ № 9,10,11. Examining the criteria for metabolic syndrome, one can see that prehypertension is one of. The incidence of metabolic syndrome in prehypertensives is many times higher than in normotonic individuals. In prehypertensives significantly higher are parameters like weight, waist circumference, LDL cholesterol and TG in hypertensive patients. This confirms the statement that prehypertension is

also associated with more significant metabolic disorders. The role of leptin and adiponectin in patients with metabolic syndrome has been investigated too.

Publications in NRJ № 1,2,3,4,5 reflect various aspects of the atherosclerotic process. Multiple prophylactic effects of the ACE inhibitor trandolapril on vascular and organ changes have been established on an atherogenic mouse model.

In the context of coronary artery disease are two publications in NRJ № 19 and 20, reflecting different problems of interventional treatment of acute myocardial infarction.

In the field of heart failure, there are two articles – RJ № 3 and NRJ № 17. The pathogenesis of heart failure is intertwined with many mechanisms, especially at its terminal, with chronic inflammation being one of them. A new inflammatory biomarker YKL-40 has been investigated, which is related to the degree of inflammation and the pathological tissue reconstruction. Another publication reports about the good effect of ivabradin as a relatively new therapeutic option, on the physical capacity in patients with III-IV functional class of heart failure (FCHF).

Some of the topics discussed in the publications were presented at 16 reputable international congresses, some of which are: International Conference of Prehypertension - 2011, Vienna, Austria; 23rd European meeting on hypertension and cardiovascular protection - Milano, Italy, 2013; British Undergraduate Cardiovascular Journal, 2015, vol 3, p68; European Journal of Medicine - 2011, 167-8; 17th European Students Conference (ESC) - Berlin, Charite, 8-12.10.2006.

The monographic work using 554 sources is entitled Endothelial Dysfunction and Coronary Disease. It is an in-depth analysis of the complex interactions between endothelium and coronary disease. The monograph devotes much to the functions of the normal endothelium. From there, the complex concept and manifestations of endothelial dysfunction are formulated. A special section is devoted to the ways endothelial dysfunction is examined. By itself, it can affect the large arteries as well as the microcirculation. Studies on endothelial dysfunction of the large arteries have the advantage of establishing functional and structural changes in them. Changes in microcirculation are difficult to visualize and their functional abnormalities are mainly determined. In clinical terms, it is of particular importance to determine what ischemia is due - to large epicardial vessels or microcirculation. It is simplified to identify ischemia with coronary stenosis or spasm. In some cases, changes in the microcirculation can be leading - microvascular angina, Takotsubo CMP, "X" syndrome, non-obstructive coronary accidents. The interaction between macro- and micro-vascular coronary endothelial dysfunction is common and complex. This interaction is almost obligatory in acute coronary syndromes, processes of destabilization and occlusion of the coronary vessel, as well as in the subsequent recanalization and invasive procedures. The role of endothelial dysfunction (ED) in stenting is especially focused – early changes after stenting, stent thrombosis, neointimal proliferation and restenosis, hypersensitivity to the stent are specifically considered. The possibility endothelial dysfunction to be influenced has been extensively considered. Non-drug means and drug agents for its treatment are followed and described in details.

Dr. Nikolov is the author of the chapter "Pleiotropic effects of statins" from a collective monograph - "A Guide to Lipid Regulators in Clinical Practice-Past, Present and Future."

The candidate's scientific publications are cited 28 times, in Scopus and Web of science - 9 times, 8 times other foreign sources - dissertations, a book, periodical, 11 times in Bulgarian magazines.

Dr. Nikolov participates in three scientific projects, two of which have been successfully completed.

#### 4. Teaching:

Dr. Nikolov's workload is considerable over 420 hours per year. He teaches both English and Bulgarian students. The teaching activities include lectures, exercises, participation in semester and state exams. He participates in thematic courses for cardiology specialists and trainee doctors.

The applicant is a co-author of two textbooks, one in English.

#### 5. Professional assesment:

Dr. Nikolov has 12 years of experience in the Cardiology Clinic. He has been a specialist in Cardiology for 7 years. In her professional development he has developed as a complex cardiologist with skills in non-invasive diagnostics, as well as a graduate invasive specialist. Expert certificates for echo cardiography as well as invasive cardiologist certificates are presented. He is a member of the National Societies of Cardiology and Invasive Cardiology, as well as of the European Society of Cardiology.

#### 6. Overall assessment of the applicant's compliance with the national minimum scientometric requirements according to the 2018 ASDL, as well as compliance with the mandatory conditions and scientometric criteria of the Rules of the Medical University of Plovdiv.

Dr. Nikolov meets all the mandatory requirements of the rules of the Medical University of Plovdiv for taking the academic position "associate professor", namely - acquired educational and scientific degree "doctor", recognized speciality in the announced competition and internship in it. D-r P.Nikolov has been chief assistant professor for more than 2 years and has published monographicwork.

#### Mandatory scientometric criteria according to the rules of the Plovdiv's Medical University

Academic position – Associate professor	Medical clinical disciplines	D-r Petar F.Nikolov, MD, PhD
Total number of publications - 25	25	31
- in refereed journals	5	10
- in journals with impact factor	1	5
Positive citations	15	28

The presented table shows that d-r Petar Nikolov also meets the mandatory scientometric criteria according to the rules of Plovdiv's Medical University.

According to the 2018 updated national minimal scientometric requirements, D-r Nikolov meets also the requirements for the academic position "associate professor". At minimal scientometric requirements of 400 points, d-r P.Nikolov has 934 points. Index "D" -

Publications is exceeded 2 times and Index "E" – Quotations, - 5 times.

**Minimal required points in the groups of indices for the academic positions "associate professor" and "professor" according to the 2018 ASDL**

Group of indices	Content	Associate professor (points)	Professor (points)	d-r Petar F.Nikolov, DM,PhD (points)
A	Index 1	50	50	50
B	Index 2	-	-	
C	Indices 3 or 4	100	100	100
D	Sum of indices from 5 to 9	200 (160 for PD 7.6)	200 (180 for PD 7.6)	392
E	Sum of indices from 10 to 12	50	100	270
F	Sum of indices from 13 till the end	-	100 (80 for PD 7.6)	115
Overall points		400		934

PD – professional direction

Minimum required points by group of indicators for academic positions

"Associate Professor" and "Professor" according to the 2018 ASIA.


Group of indicators	Contain	Associate professor (points)	Professor (points)	d-r Petar F. Nikolov, MD,PhD (points)
A	Index 1	50	50	50
B	Index 2	-	-	
C	Indices 3 or 4	100	100	100
D	Group of indices from 5 to 9	200 (160 for PD 7.6)	200 (180 for PD 7.6)	392
E	Group of indices from to 10 do 12	50	100	270

F	Group of indices from 13 till the end	-	100 (80 for PD 7.6)	115
Overall points		400		934

## 7. Conclusion:

Considering, in aggregate, the qualities of D-r Peter Fedev Nikolov, as well as the requirements of LDAP and the Rules for the application of ASDL of Plovdiv's Medical University, I consider that he completely meets the requirements for the academic position of Associate Professor.

09.12.2019

Signature:   
 ( Prof. Maria Hr. Milanova, MD, PhD, DSci)