



To  
**The Chairman of the Scientific Jury,**  
**appointed by Order No. P-407/ 28/02/2020**  
**of the Rector of Medical University - Plovdiv**  
**15A, "V. Aprilov" Blvd.**  
**4002 Plovdiv**

**In response to your Protocol No. 1/ 05/03/2020**

***Please find enclosed: Statement***

on the competition for attaining the academic position of **Associate Professor**  
in the scientific specialty of **Nephrology**  
announced for the needs of MU - Plovdiv, Second Department of Internal Diseases,  
Section of Nephrology,  
promulgated in State Gazette, issue 99 of 17/12/2019

**Prepared by:** Prof. Dr. Maria Panchovska-Mocheva, MD, PhD

Scientific specialties: Internal Diseases, Rheumatology

Institution: MU - Plovdiv, Faculty of Medicine, Department of Propedeutics of Internal Diseases

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*The statement was prepared in accordance with the requirements of the Act for the Development of the Academic Staff in the Republic of Bulgaria (ADASRB) and Section III / Section IV of the ADASRB on the Terms and Procedure for Attaining the Academic Position of Associate Professor / Professor.*

In the announced competition for attaining the academic position of Associate Professor in the higher education field 7. Healthcare and Sports, 7.1. Medicine, and the scientific specialty of Nephrology, announced for the needs of the Second Department of Internal Diseases, Section of Nephrology at MU - Plovdiv, Faculty of Medicine, promulgated in State Gazette, issue 99 of 17/12/2019, Dr. Dimitar Georgiev Nikolov., is the sole candidate.

Dr. Dimitar Georgiev Nikolov has submitted all the required documents in accordance with the Act on the Development of the Academic Staff in the Republic of Bulgaria and the RULES FOR THE IMPLEMENTATION OF THE ACT ON THE DEVELOPMENT OF THE ACADEMIC STAFF IN THE REPUBLIC OF BULGARIA for attaining the academic position of Associate Professor, as well as in accordance with the requirements of the Rules of MU - Plovdiv.

#### **I. Professional and academic career**

Dr. Dimitar Georgiev Nikolov was born on 09/12/1966 in Plovdiv. He graduated from "Lilyana Dimitrova" High School in 1984. In 1990, he graduated from the Higher Medical Institute in Plovdiv. In November 1990, he started working as a clinical intern at the Clinic of Nephrology, "Iv. P. Pavlov" Higher Medical Institute - Plovdiv, and in February 1992, after successfully passing the competitive examination, he was appointed Assistant at the Clinic of Nephrology, Higher Medical Institute - Plovdiv. During his academic development, he was certified as Chief Assistant in 2001, and from 2004 to 2014, he was appointed as Chief Administrative Assistant at the Clinic of Nephrology, Medical University - Plovdiv. Since 2014 and currently, he is Administrative Assistant at the Clinic of Nephrology, Section of Nephrology, to the Second Department of Internal Diseases. Since October 2011 and currently, Dr. Dimitar Nikolov is Head of the Clinic of Nephrology at "St. Georgi" University Hospital - Plovdiv.

Dr. Dimitar Nikolov acquired a specialty in Internal Diseases in 1997 and Nephrology in 2000. Dr. Dimitar Nikolov has obtained certificates for the following highly specialized activities: "Conventional Abdominal Echography and Echography of Superficial Structures"

– first level, 2012, “Abdominal Doppler Echography” -- second level, 2012, “Biopsy Kidney Methods” – 2016, and has completed a qualification course in Health Management – 2006.

## **II. General characteristics and evaluation of the applicant's activities**

### **A. Educational-pedagogical and methodical activity**

Since 1992, Dr. Dimitar Nikolov has been involved in academic work, going through the hierarchy from Assistant to Chief Assistant. His teaching work is related to the training of medical students at the Faculty of Medicine, Medical University - Plovdiv. Since 2004, Dr. D. Nikolov is Chief Administrative Assistant at the Clinic of Nephrology, Medical University - Plovdiv, and since 2014 - at the Second Department of Internal Diseases, Section of Nephrology. Throughout his academic career, Dr. Dimitar Nikolov has been developing and establishing himself as a competent, responsible and valuable lecturer. He participates in teaching medical students, conducting semester and state exams, and training postgraduates, both theoretically and practically. The applicant's curricular and extracurricular workload for the last year is 575 hours (compared to the standard for a non-habilitated lecturer in clinical disciplines). Dr. D. Nikolov is the technical editor of 3 textbooks, one manual on Nephrology, a collection of selected lectures on Nephrology, participates in the composing of 2 textbooks and is a co-author in the preparation of teaching tests in Nephrology for the needs of Medical University - Plovdiv.

Dr. D. Nikolov is the Head of Practice Activities to the Inter-University Project Center for Competence “Personalized Innovative Medicine (PERIMED)”, funded by the Operational Program “Science and Education for Smart Growth 2014-2020”. The applicant also participates in three European Projects on *Student Practices*, Operational Program “Human Resources Development”, co-financed by the European Social Fund of the European Union (2013-2014; 2014-2015; 2015-2016).

## **B. Scientific and applied research activities**

The applicant participates in the competition with 41 scientific papers - 37 articles, 1 monograph, 29 published summaries, 6 of which from international forums;

**Defended dissertation** on "CLINICAL AND GENETIC INVESTIGATIONS FOR EARLY DIAGNOSIS OF DIABETIC NEPHROPATHY IN PATIENTS WITH TYPE 2 DIABETES MELLITUS"

1. The dissertation for acquiring the educational and scientific degree of D.M.Sc. on "CLINICAL AND GENETIC INVESTIGATIONS FOR EARLY DIAGNOSIS OF DIABETIC NEPHROPATHY IN PATIENTS WITH TYPE 2 DIABETES MELLITUS" is a modern study, with significant scientific and applied contributions. Genetic polymorphisms of four genes (MTHFR, PAI-1, MnSOD, ACE-I/D) were analyzed for the first time in Bulgaria and their role in the pathogenesis and clinical presentation of diabetic nephropathy was determined. Correlations between the polymorphisms of the studied genes and the changes in laboratory parameters, as well as in the RI of renal arteries and the IMT of carotid arteries were found.

This scientific study improves the potential for early diagnosis of diabetic nephropathy in patients with type 2 diabetes mellitus by determining the risk polymorphisms of the genes for MTHFR C677T, PAI-1, MnSOD Val16Ala and ACE I/D and their correlations with serum creatinine and creatinine clearance, microalbuminuria, albumin/creatinine ratio and cystatin C.

### **2. Monograph on GENETIC ASPECTS IN DIABETIC NEPHROPATHY**

The monograph is dedicated to type 2 diabetes mellitus and diabetic nephropathy. The established so far data on the epidemiology, pathogenesis and manifestations of the disease are summarized. The monograph presents a number of data on the latest biomarkers and molecular genetic analyzes. The role of micro-RNAs as biomarkers in diabetic nephropathy has been examined in detail and analytically, as well as the possibilities of applying micro-RNA-based therapy for diabetic nephropathy. The monograph is a valuable guide for the specialists in Nephrology, Endocrinology, Internal Diseases, general practitioners, specializing doctors and medical students.

### 1. Scientific field “Glomerulonephritis and glomerular damage in systemic diseases”

Some of Dr. D. Nikolov's publications are devoted to **glomerular damage (idiopathic glomerulonephritis and glomerular damage in systemic diseases (2, 61)**. Several articles are devoted to various pathogenetic regimens for the treatment of chronic glomerulonephritis, the effects of high-dose immunovenin treatment (8, 6, 29). The articles have been cited many times in international journals, including Impact factor journals. Some publications are related to an extensive clinical and genealogical study of a genealogy with focal-segmental glomerular sclerosis and hyalinosis in the town of Sarnitsa (49, 62), as well as glomerular damage due to toxic (parathion) effects (B-58, 3).

### 2. Scientific field “Autosomal dominant polycystic kidney disease (ADPKD)”

Dr. D. Nikolov's articles devoted to the study of ADPKD have reported and analyzed the possibilities of different imaging methods, the performed DNA analyzes and the examined erythropoietin levels in patients with ADPKD, as well as the therapeutic aspects of anemic syndrome and changes in plasma renin activity in ADPKD. The effect of the treatment of active pyelonephritis in patients with ADPKD has been described (18, 19, 20, 22).

### 3. Scientific field “Renal anemia”

Dr. D. Nikolov co-authored the first publications in Bulgaria on the results of the treatment of patients with renal anemia with the recombinant erythropoietin beta Neo-Recormon, as well as several scientific reports (5, 41, 50).

### 4. Scientific field “Acute renal impairment”

Several aspects of acute renal impairment - etiology, pathogenesis, therapeutic approach and treatment outcomes - have been addressed in several publications and scientific reports (10, 33, P-42, 46, 56, 59, 65).

### 5. Scientific field “Diabetic nephropathy”

Establishing early markers for diabetic nephropathy in type 2 diabetes mellitus plays an important role in Dr. Nikolov's research. The role of genetic polymorphisms of the genes

for methylenetetrahydrofolate reductase C677T, plasminogen activator 1 inhibitor, ACE, and manganese superoxide dismutase as markers for early development of diabetic nephropathy in patients with type 2 diabetes mellitus was presented in several publications and scientific reports (1, 14, 16, 17, 30, 32, 38, 39, 40, 50, 51, 52, 53, 57). The protective significance of the Leiden factor V mutation on the development of diabetic nephropathy was analyzed (36). Another number of publications and scientific reports have found a correlation between polymorphisms in the genes for MTHFR, PAI-1, ACE, MnSOD, FVL and microalbuminuria, Doppler ultrasound changes of a. *renalis* and IMT of carotid arteries in diabetic nephropathy (14, 15, 16, 32, 37, 54).

#### 6. Other

Publications on immunotherapy in pollen allergy (in an international journal with IF = 2.278 and 6 citations in international journals with a total IF = 3.721) (11), the role of low protein diet and ketosteril in patients with pre-dialysis stage of renal insufficiency (2 citations in international journals) (4), familial hypercholesterolemia among a contingent of patients in Plovdiv and the region (31).

**Dr. Nikolov's scientific papers have been cited 25 times: 24 citations in international scientific journals with a total IF of 19.723 and one citation in the Bulgarian scientific periodicals.**

### III. Original research contributions

1. Improvement of the possibilities for early diagnosis of diabetic nephropathy in patients with type 2 diabetes mellitus by determining the polymorphism of the genes for MTHFR C677T, PAI-1 4G/5G, MnSOD Val16Ala and ACE I/D.

2. Determination of RI of renal arteries relative to IMT of carotid artery, comparison with the genetic polymorphisms C677T for MTHFR, 4G/5G for PAI-1, Val16Ala for MnSOD2 and I/D for ACE, and their use as early markers for the diagnosis of diabetic nephropathy in patients with type 2 diabetes mellitus.

3. By correlating the genetic polymorphisms for MTHFR C677T, PAI-1 4G/5G, MnSOD Val16Ala and ACE I/D with serum creatinine level, creatinine clearance, microalbuminuria, albumin/creatinine ratio and cystatin C, to be used as early diagnostic markers of diabetic nephropathy in patients with type 2 diabetes mellitus.

4. By demonstrating the role of micro-RNAs as biomarkers in diabetic nephropathy, to exploit the potential for administration of micro-RNA-based therapy in diabetic nephropathy.

5. Improving the diagnostic approach for early diagnosis of diabetic nephropathy in patients with type 2 diabetes mellitus.

#### **IV. Expertise**

Dr. Dimitar Nikolov is a member of the Bulgarian Society of Nephrology and since 2019, he has been a member of the Management Board of the society. The applicant is a member of the Union of Scientists in Bulgaria, a member of the European Society of Nephrology.

Dr. D.Nikolov is a consultant in Nephrology at the Regional Health Insurance Fund and the National Insurance Institute - RUSO, Plovdiv.

The above mentioned expert positions are recognition of Dr. Dimitar Nikolov's high professional competence.

#### **V. Conclusion**

The documents and materials, submitted by Dr. Dimitar Georgiev Nikolov, meet the requirements of the Act for the Development of the Academic Staff in the Republic of Bulgaria (ADASRB), the Rules for the implementation of the ADASRB and the Rules of Medical University - Plovdiv.

The comparison of the applicant's scientometric indicators with the mandatory national indicators has confirmed that Dr. Dimitar Nikolov, meets the required criteria.

After getting acquainted with the materials and scientific papers submitted for the competition and their scientific and applied research contributions, I confidently give my positive assessment and recommend to the members of the honorable scientific jury to vote positively for awarding the academic position of Associate Professor in Nephrology at the Medical University - Plovdiv to Dr. Dimitar Georgiev Nikolov .

Reviewer:

Prof. Dr. Maria Panchovska, D.M.Sc.

