

To the Chairman of the Scientific Jury,  
designated by Order of  
Rector of Medical University- Varna  
№ P-109-214/22.04.2025

### **Statement**

by Associate Professor Maria Stoyanova Dimova, MD, Ph.D  
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Member of the scientific jury for the contest (State Gazette # 15/21.02.2025) for the acquisition of the academic position " Associate Professor" in the specialty "Nephrology", professional field 7.1 Medicine, field of higher education 7. Health care and sports - for the needs of the Second Department of Internal Medicine, Faculty of "Medicine" and full-time position for the Clinic of Nephrology at the University hospital "St. Marina" - Varna.

### **Contest details:**

The competition was announced in the State Gazette No. 15/21.02.2025.

By order of the Rector of MU Varna № R-109-214/22.04.2025 I have been elected as a member of the scientific jury. By Protocol 1 of the scientific jury meeting I was appointed to prepare a statement on the procedure for the acquisition of the academic position "Associate Professor" for the needs of the Faculty of Medicine, Second Department of Internal Medicine, Faculty of Medicine and full-time position for the Clinic of Nephrology at the University Hospital "St. Marina EAD - Varna.

The procedure for announcing the competition complied with the legal requirements, no procedural irregularities were found. For the competition have been submitted documents by one candidate - Asst. Professor Dr. Alexander Alexandrov Petrov, MD, Ph.D

### **Brief details of the applicant**

Dr. Alexander Alexandrov Petrov, M.D., born on 08.07.1990 was born in Varna. He graduated from the First Language High School in Varna and continued his studies at the Medical University - Varna, graduated in 2015.

Dr. Petrov has been an assistant professor at the "Second Department of Internal Medicine" since 2016, since 2022 he has been a senior assistant professor at the same department after successfully defending his PhD work entitled: "Level of awareness of patients with chronic kidney disease regarding kidney transplantation and the importance of awareness in the choice of renal replacement therapy" and obtaining the PhD degree.

**Acquired specialties.** Dr. Al.Petrov has acquired a specialty in Nephrology in 2020.

### **Scientific research:**

Dr. Al. Petrov has submitted the following scientific production for participation in the competition:

1. Habilitation thesis - monograph - 1 issue, 131 pages,
2. Scientific publications in journals with SJR and/or IF (indexed in Scopus and/or Web of Science) -11
3. Articles published in non-refereed peer-reviewed journals or conference proceedings without IF and SJR (not indexed)- 3 issues
4. 12 papers with a total length of 60 pp.
5. 19 participations in scientific forums.

Dr. Al. Petrov is the second or third author in 9 of the publications, which shows independence and good knowledge of the scientific issues and active participation in the presentation of the obtained scientific results and their publication. Dr. Al. Petrov is the first author in two of the publications.

Dr. Al. Petrov has 8 participations in national congresses and conferences in the field of nephrology and several more participations in other European and regional forums.

From the presented publications and citations Dr. Al. Petrov meets the minimum state requirements under the RAADB Act and the 2018 PRAS of MU-Varna.

**Citations:**

As of 11.03.2025 the scientific works of Dr. Al. Petrov have been cited 5 times in scientific journals - refereed and indexed in world-known databases (Web of Science, Scopus).

**Scientific achievements and contributions:**

The main scientific areas in which Dr. Alexander Alexandrov Petrov works are modern diagnostic approaches for early detection of chronic kidney disease. This includes contrast-enhanced ultrasonography, which is taking an increasingly important role in the assessment of renal function and pathology. New technologies, such as urine proteomics, which help detect renal involvement at the preclinical stage, are discussed in detail and depth in the monograph. As an important part of clinical nephrology, the difficulties and challenges posed by autoimmune diseases are also within the scientific scope of this book. Attention is drawn to the need for individualized and innovative treatment approaches when acute kidney injury occurs in these patients. All of these themes underscore Dr. Alexander Petrov's commitment to the rapid integration and application of modern methods and technologies into clinical practice in order to improve and accelerate diagnosis, treatment, and quality of life for patients.

Another important issue, on which Dr. Al. Petrov, together with his co-authors, is the issue of genetic diseases. In the light of scientific progress and modern advances in genetics, the diseases pseudoxanthoma elasticum, primary ciliary dyskinesia, tuberous sclerosis and familial Mediterranean fever are discussed in details.

Sharing experiences in these cases is essential to build on and enrich the experience of all who might encounter similar cases.

A quite avant-garde field, on which Dr. al. Petrov has devoted himself to is "The role of 3D technologies and bioartificial organs in healthcare". These are new and exciting "scientific fields" in various fields, especially in medicine and biotechnology. One revolutionary approach is the concept of "organ-on-a-chip"-a method that combines 3D printing and biological materials to create functional organ models. This makes it possible to mimic real biological structures and provide invaluable data for research and testing. This reduces the need for experimental animal models.

One more topic, of exceptional clinical relevance is in the scientific field of Dr. Al. Petrov. This is the problem of the onset of acute kidney injury after a retained abortion. This relatively rare condition is life-threatening, manifested by hemodynamic disturbances, inflammation, which can progress to acute renal failure. Publications in this area and topic are of great importance because, in addition to requiring knowledge and experience in the onset of such a severe and acute condition, they provide clinical guidance and can be a reference for timely and correct orientation in such a clinical situation.

### **Memberships in scientific organizations.**

Dr. Al. Petrov is a member of the following professional organizations:

- Bulgarian Medical Association
- Bulgarian Society of Nephrology

### **Participation in projects:**

Dr. Al. Petrov was a participant in a project funded by "Science Fund" named "Identification of the causes of the high epidemiological activity of chronic kidney disease in the municipality of Dalgopol, reg. Varna".

### **Educational and teaching activities.**

Dr. Al. Petrov has been an assistant professor at the Second Department of Internal Medicine of Medical University - Varna since 2016, a senior assistant professor at the same department since 2022. A report on the academic workload shows the study load with lectures and practical training of English-language medical students as follows:

2019/2020r. – 198 academic hours

2020/2021 r. – 210 academic hours

2021/2022r – 206 academic hours

2022/2023r. – 212 academic hours

2023/2024r. – 252 academic hours

**In conclusion:** Dr. Alexander Alexandrov Petrov is a well-trained specialist, with a specialty in Nephrology, distinguished by his rich scientific research activities. Dr. Al. Petrov has a broad knowledge in teaching and clinical activity of Internal Medicine and in particular in Nephrology and broad spectrum of scientific interests. The scientific

production of Dr. Al. Al. Petrov fully meets the requirements of the Academic Staff Development Act in the Republic of Bulgaria and the Rules for the Academic Staff Development at the Medical University of Varna. This gives me reason to confidently propose to the esteemed scientific jury to vote positively for awarding the academic position of "Associate Professor" to Dr. Alexander Alexandrov Petrov, Ph.D. in the scientific specialty "Nephrology" for the needs of the Second Department of Internal Medicine at MU "Prof. Dr. Paraskev Stoyanov - Varna.

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(Assoc. prof. Maria Dimova, MD, PhD)