

## Opinion

regarding the competition to fill the academic position " Professor " in the field of higher education 7. Health and Sport, occupational direction 7.1 Medicine and scientific specialty "internal diseases", announced in the State Journal of the Republic of Bulgaria 13/14.02.2020 (day, month, year), for the needs of University "Prof. Dr. Asen Zlatarov" – Burgas, Faculty of Public Health and healthcare, with candidate Assoc. Prof. Iliya Dimitrov Popov.

**Reviewer:** Prof. Dr. Boris Iliev Bogov, M.D.

Scientific Subjects: **Internal Diseases and Nephrology**

**Institution:** MU-Sofia, Faculty of Medicine, Department of Internal Medicine, clinic of Nephrology, University Hospital "Alexandrovska" EAD-Sofia

*The review was made in accordance with the requirements of the ZRCB*

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### **I. Analysis of the applicant's career profile.**

Assoc. Prof. Iliya Dimitrov Popov was born in the town of Sandanski. In 1977, he graduated PG "Yane Sandanski" in the town of Sandanski, and in 1979, was a student at the Medical Faculty of Medical Academy – Sofia. With recognized specialties in "Internal diseases" and "Nephrology", respectively in 1991 and 1995.

He starts his professional career as a doctor at the Department of Hemodialysis at Multi-Profile Hospital "Prof. Dr. St. Kirkovich" Stara Zagora. Between 2003 – 2011, he managed Medical Center "Nephro" LTD., as well as being the owner. At that time, he was also the Executive Director of the first private laboratory for the production of hemodialysis solutions, in the town of Sliven; Product Manager and consultant at Aventis Pharmaceutical Company; Regional Manager of "Dom Zdrave" in Sofia. Between 2013-2016, he worked at Multi-Profile University Hospital "Prof. Dr. St. Kirkovich" – St. Zagora at First Internal Clinic, as a nephrologist and associate professor of internal diseases at the Medical College of the Thracian University in St. Zagora. He is currently the head of First Internal Clinic at Multi-Profile University Hospital "Prof. Dr. St. Kirkovich" – St. Zagora.

Since 2016, he is also a lecturer at the Faculty of Public Health of the Medical College of University "Prof. Dr. Asen Zlatarov" – Burgas.

In 2006, he defended successfully dissertation work on the topic: **"Participation of the infection Helicobacter pylori in gastric pathology in patients with the CRF of hemodialysis"**, for acquiring a teaching and scientific degree "Doctor". Since 2016, he has been



habilitated as "Associate Professor" with the scientific specialty of "Internal Diseases" at University "Prof. Dr. Asen Zlatarov – Burgas, Faculty of "Public Health and Healthcare".

Assoc. Prof. Popov has undergone several specialized courses in "Healthcare Management", such as the Goethe International Institute in Sofia – "Healthcare management in the conditions of health insurance" in 1999; in 2009, International Institute of Health and Health insurance "; in 2011, Health Management at the Health Insurance Fund at the Medical University of Sofia.

Level of foreign language proficiency: English language, level B1.

Assoc. Prof. Popov has indicated 75 publications in foreign and Bulgarian scientific journals, participated in the writing of 2 teaching tools and in 2 monographs, one of which is co-authored. From the presented literary report and a list of the publication activity of the author, I accept 16 as true scientific publications, of which in the referenced and indexed in world famous database of scientific information (Scopus; Web of Science)-6, and in unreferenced journals with scientific review or published in edited collective volumes – 10. From the actual 16 scientific publications, in foreign scientific journals – 6, with only two being referenced and indexed in world-famous databases and 4 in unreferenced journals.

Assoc. Prof. Iliya Popov is a member of the GNI, member of ERA-EDTA and BMA.

## **II. General description of the submitted materials for the competition**

In the competition for the occupation of academic position "Professor" participates one candidate – Assoc. Prof. Iliya Popov, M.D. He is currently the head of First Internal Clinic at Multi-Profile University Hospital "Prof. Dr. St. Kirkovich" – St. Zagora. Since 2016, he is also a lecturer at the Faculty of Public Health of the Medical College of University "Prof. Dr. Asen Zlatarov" – Burgas.

The required documents on the part of the applicant are regular and presented in full volume.

## **III. Evaluation of the candidate's scientific works for the overall academic development**

*Common characteristics of scientific production and publication activity. Analysis of the overall research activity.*

The scientific activity of Assoc. Prof. Popov contains overall 75 publications. From the presented literary report and a list of the publication activity of the author, I accept 16 as true scientific publications, of which in the referenced and indexed in world famous database of scientific information (Scopus; Web of Science)-6, and in unreferenced journals with scientific review or published in edited collective volumes – 10. In 9 of the submitted publications are registered repeating publications by their nature, and for some there is duplication in Bulgarian and another language. From the actual 16 scientific publications, in foreign scientific journals – 6, with only two being referenced and indexed in world-famous databases and 4 in unreferenced journals. Assoc. Prof. Popov has issued one independent monograph, participated as a major habilitation work "Chronic Kidney Disease and Microbiota" and has co-authored another monograph "Osteoporosis – Prevalence and Prevention". Assoc. Prof. Popov is the only or first author in 6 publications, he is second author in 1, and in 9 – third or next author. Total participation in scientific publications, scientific forums in Bulgaria and abroad – 33. He has



defended a dissertation work on the topic "**The involvement of the *Helicobacter pylori* infection in gastric pathology in patients with CRF on hemodialysis**".

Assoc. Prof. Popov is quoted 26 times, of which 25 in Bulgarian editions and 1 quote in a foreign edition. He has developed 9 education syllabuses for training in Internal Diseases, Nursing in Somatic Diseases, Geriatrics for the specialties of the Faculty of Public Health and Healthcare at the University "Prof. Dr. A. Zlatarov" - Burgas and 2 study programs for training in "Internal Diseases" and "Paramedic Care" at the Medical College of the Thracian University of Stara Zagora. He is a mentor to two fellows in the scientific specialty of nephrology. There are no current enrolled or defended doctoral candidates. The candidate has not presented participation in implementation and management of projects, rationalizations and patents.

**The scientific research and scientific and applied activity** of Assoc. Prof. Popov is focused in several directions, namely problems related to chronic renal failure, early diagnosis of mineral bone disorders, which occur in patients with chronic kidney disease or the so-called renal osteodystrophy, in patients in pre-dialysis and dialysis stages, chronic kidney disease and helicobacter-pyloric infection. Related to this is also the dissertation work of Assoc. Prof. Popov.

*1. Scientific studies related to renal osteodystrophy in patients with chronic renal insufficiency.*

It has been proven that in the early stages of CKD, vitamin D deficiency causes reversible increase in secretion and blood levels of PTH, and a decrease in Ca and MG. They can be corrected with adequate supplementation of vitamin D3, Ca and Mg and to prevent disturbances in bone and general metabolism. In the complex therapy, it is especially important that the parallel intake of vitamin K2 is an important regulator for directing minerals to target tissues and organs.

The risk of osteoporosis with the RHEMS methodology for central zones-lumbar spine and femoral neck of the patient has been investigated. The methods of self-assessment of the risk of osteoporosis are applied among the population of women from the Bulgarian population who are most threatened by osteoporosis fractures. The risk of fall has been studied-an important factor in the occurrence of fractures in patients suffering from osteoporosis with osteoporosis. Comorbidity and its importance in cases of concomitant osteoporosis have been investigated and evaluated in the work of the student Biomechanics workshop, led by the author.

Osteoporosis has been diagnosed in patients in senile age. Bone density of central areas-vertebral column and hip joints in patients treated with corticosteroids has been studied. The bone density of the central zones-vertebral column and hip joints in patients treated with corticosteroids and the presence of rheumatoid arthritis disease has been studied. The fractal risk has been investigated in patients with rheumatoid arthritis. The bone mineral density of the two femoral necks for the evaluation of osteoporosis was compared. In 4 of the publications are presented interesting clinical cases of combination of osteoporosis with rare diseases-essential tremor, ankylosing spondylitis and chronic osteomyelitis.

2. On the same subject is the published monograph, which is not presented as a major habilitation work, Assoc. Prof. Popov is a co-author and presents a synthesis of national and international data on epidemiology, causes and prophylaxis of osteoporosis until 2019. The purpose of the authors is to present the essence of the disease, its prevalence in the country and the world, as well as the assessment of the main risk factors. This objective is presented in an accessible and exhaustive manner. The content of the book includes well-applicable methods of



clinical practice serving doctors in general medicine and specialized bases. The knowledge is also available for the training of students of Bachelor's degree from the specialties in the Medical schools.

A central place in the book take the prevention and non-pharmacological methods of influencing osteoporosis. Of significant interest is the part with own research of the main tools for assessment of fractal risk and data for Bulgaria. For the first time, an overview of the role of environmental factors for osteoporosis is being made. The important function of NGOs is discussed in a special part of the book.

The Literary Review covers a new range of publications on the topic concerning physiology, prevention and management of the disease osteoporosis-the epidemic of the 21st century.

## *2. Scientific research related to patients with chronic renal insufficiency and helicobacter-pyloric infection, CKD and microbiota.*

### **Dissertation Work**

In the presented dissertation work and abstract on the topic "The Participation of the Infection with *Helicobacter pylori* in Gastric Pathology in Patients with CRF on hemodialysis", Assoc. Prof. Popov proves that a major role in the damage to the gastric mucosa is played by chronic endogenous intoxication, and the infection with *Helicobacter pylori*. The treatment of the infection with *Helicobacter pylori* is carried out with medical therapy in dosages and duration as in patients without kidney disease.

### **Habilitation work – Monograph**

In the monograph "Chronic Kidney Disease and Microbiota", is presented the long-years of personal experience of Assoc. Prof. Popov in the diagnosis and treatment of kidney diseases. This experience has been reflected in a number of publications in national and international forums. As a summary of the international achievements in the field of microbiota in practical medicine, the knowledge is synthesized and focused on clinical activity. The aim is to make the assessment an important part of the thinking in the routine practice of the Bulgarian nephrologist. The basic knowledge of the microbiota is covered, the central location is the changes of the microbiota in the digestive tract in patients with chronic kidney disease. Own studies have been made of the main pathogenic microorganism *Helicobacter pylori*. Data on trends in the modern microbiota studies are marked with new possibilities for their application in nephrology and dialysis.

In a purely **scientific aspect**, there are several publications concerning the summary model, which describes the process of diagnosing diseases with the help of intelligent techniques. Analyzing retrospective physiological, medical, individual-behavioral parameters of the patient, Assoc. Prof. Popov argues that we can find a connection with a particular disease, its progression and the probability of responding to the treatment. The model can be used to monitor and analyze the evaluation process.

Other publications are in the field of Interactive Training and the possibility for each student to enter into an individual contact with the database containing the information to be



learned. The basic principle applied to interactive Training in MF and MK is the active dialogue between the instructor and the learner, which is based on the "feedback" between them. In the education process, feedback is particularly important as it provides the teacher information about the students' preliminary knowledge, new information received and learned, its understanding and perception.

#### **IV. Analysis of the quotations of the candidate's publications in national and foreign literature.**

The quotation report shows that the candidate is quoted 26 times, 25 of which are in scientific journals of Bulgarian authors and 1 quote in foreign literature.

#### **VI. Complex, qualitative assessment of the educational and methodological and teaching activities, incl. scientific guidance for students, doctoral candidates, postgraduates.**

Assoc. Prof. Popov has developed 9 education syllabuses for training in Internal Diseases, Nursing in Somatic Diseases, Geriatrics for the specialties of the Faculty of Public Health and Health Care at the University "Prof. Dr. A.Zlatarov"- Burgas and 2 study programs for training in "Internal diseases" and "Paramedic Care" at the Medical College of the Thracian University of Stara Zagora for second and third year students with the specialty of rehabilitation, medical laboratory assistant, geriatric care, paramedic. He is a mentor to two fellows in the scientific specialty of nephrology.

From the two reports presented regarding the school-teaching activity at University "Prof. Dr. Asen Zlatarov" – Burgas and TU, MK – St. Zagora is evident that Assoc. Prof. Popov has sufficient instructor workload for the period 2016-2019 for both universities.

#### **VII. Overall assessment of the applicant's compliance with the mandatory conditions and the mandatory quantitative criteria and the knowledge-based indicators according to the "Regulation for the occupation of academic positions" at University "Prof. Dr. Asen Zlatarov"– Burgas and "*Criteria for evaluation* " (part of the rules of the organization and activity of University "Prof. Dr. Asen Zlatarov" – Burgas).**

The presented scientific production of Assoc. Prof. Popov in terms of quantitative and qualitative characteristics, as well as in terms of innovation, practical orientation and breadth of the problems in the field of internal diseases, meet the minimum requirements of the NSND for the award of the academic position "Professor". The number of quotations – 1 in foreign literature and the missing of the doctoral candidates under the direction of the candidate are not enshrined in the RAS Regulations of University "Prof. Dr. Asen Zlatarov" – Burgas as an obstacle to participation in the competition.

#### **VIII. Assoc. Prof. Popov **meets** the minimum requirements, specific conditions and unique scientometric criteria for the award of the academic position "PROFESSOR."**