

## OPINION

FROM ASSOC. PROF. DONKA IVANOVA STEFANOVA, MD, PhD  
REGARDING: PARTICIPATION IN A COMPETITION FOR THE ACADEMIC  
POSITION OF "PROFESSOR" IN THE FIELD OF HIGHER EDUCATION 7.  
"HEALTH AND SPORTS", PROFESSIONAL FIELD 7.1. "MEDICINE", SCIENTIFIC  
SPECIALTY "PNEUMOLOGY AND PHTHYSIATRY" AT THE FACULTY OF  
MEDICINE, FIRST DEPARTMENT OF INTERNAL DISEASES; DEPARTMENT OF  
PULMONARY DISEASES AND ALLERGOLOGY, "PULMONARY DISEASES"  
CLINIC IN "ST. MARINA" UMHAT-VARNA

CANDIDATE: ASSOCIATE PROFESSOR DR. DIANA PETKOVA GOSPODINOVA  
- VALKOVA, MD, PhD

### I. INFORMATION ON THE PROCEDURE FOR ANNOUNCEMENT OF A COMPETITION FOR THE ACADEMIC POSITION OF "PROFESSOR" IN THE SCIENTIFIC SPECIALTY OF "PNEUMOLOGY AND PHTHYSIATRY"

By order No. R-109-288/26.05.2023 of the Rector of Dr. Paraskev Stoyanov Medical University - Varna, I have been appointed as an external member of the Scientific Jury for the open competition. At the first non-attendance meeting of the Scientific Jury, a decision was made to prepare an opinion.

Assoc.prof. Diana Petkova Gospodinova - Valkova, MD, PhD is the only candidate who submitted documents for participation in the competition within the legally defined deadline. It complies with the requirements of the Law on the development of the academic staff in the Republic of Bulgaria, the Regulations for its application and the Regulations for the development of the academic staff of the University of Medicine - Varna. Based on meeting the necessary requirements, assoc. prof Dr. Diana Petkova was admitted to participate in the competition and be evaluated by the Scientific Jury.

### II. BIOGRAPHICAL DATA ON THE CANDIDATE

Assoc. prof. Dr. Diana Petkova was born in 1965. In 1984 graduated from secondary education - First Language High School with the study of English and German - city of Varna with a gold medal, and in 1990 graduated in medicine from Medical University - Varna, as the top of the graduating class. In 1994, she was selected as an assistant in the Department of Pulmonary Diseases at the Medical University of Varna. He has recognized specialties in Internal Medicine, Pulmonary Diseases, with qualifications in Sleep Medicine and Non-Invasive Ventilation.

Her professional development began in 1990-1994 as a resident in the Regional Hospital in the cities of Shumen and of Provadia. Since 1994 is successively assistant, senior assistant, principal assistant. In 2011, she was elected as an "Associate Professor" in the Lung Diseases Clinic of the Medical University of Varna. Since 2017 is the organizer (head of the sector) of Sleep Medicine and Non-Invasive Ventilation in "St. Marina" UMBAL, Varna, Head of the First Department with the activity "Sleep Medicine and NIV". From January 2019 is the head of the Department of Pulmonary Diseases and Allergology at the Medical University of Varna.

There are numerous specializations in well - known centers and participation in courses organized and certified by the BDBB Board (Spirometry, Vasculitis, IPF, Granulomatosis, ILD Reserve Educational Meeting; Malmo, ILD Expert, Aust ENT, Fundamentals of Academic Teaching, EFQM Auditor Training; Bern; CEO, EFQM, Social Medicine and Health Management, Annual Specializations at the Center for Sleep Medicine at St. Gallen- Switzerland, Education in the Element of the Party. Sleep and non-invasive ventilation", specialization in Inselspital Bern-Switzerland, training in



Salzburg-Austria, Salzburg-Cornell Seminar" TB in Eastern Europe"at Cantonal Hospital St. Gallen-Switzerland, Health "and others.

I have known Associate Professor Petkova for more than thirty years, professionally and personally. She is systematic in her professional development and at the same time patient and respectful in communicating with her colleagues, in the training of students and young colleagues, to whom, as the chairperson of the BOBB, she provides the opportunity to take part twice a year in meetings with the most prominent professors, not only in pulmonary diseases, but also in internal diseases. He knows well and applies the established and accepted diagnostic and therapeutic methods in the specialty and definitely has an interest in the most modern national and international technologies and diagnostic methods, which he introduces into clinical practice. She actively participates in the events of the Bulgarian and international respiratory society with participation in scientific forums, with membership in professional organizations and participation in working groups at the Ministry of Health, as well as in various international scientific projects. For the construction and development of her as a leading pneumophthisiatist and teacher in the country and with international reknown, the specializations in reference training centers abroad are also important.

### **III. ANALYSIS AND EVALUATION OF SCIENTIFIC RESEARCH ACTIVITY AND SCIENTIFIC CONTRIBUTIONS.**

#### **1. Quantitative criteria for research activity**

Assoc. prof. Dr. Diana Petkova, PhD, presents in the documents for participation in the competition 73 scientific works, after occupying the academic position of "Assoc. prof", distributed as follows: Publications in scientific publications, referenced and indexed in global databases for scientific information - 26; Publications in refereed Bulgarian scientific periodicals – 20; Publications in non-refereed Bulgarian scientific periodicals – 23, Contributions to monographs -1 and textbooks -3; Participation in international European and World congresses and symposia – 18; Participation in national congresses and symposia – 48.

The total impact factor is 89.244. In the presented academic reference from the Medical Library of the Medical University of Varna (Exh.N 192/23.05.2023), 52 citations found in international databases are indicated. The total impact factor after occupancy of AP "Assoc. prof." is 89.244.

The evaluation of the scientific works of Diana Petkova is that they are sufficient in terms of number and quality, they are published in authoritative specialized scientific publications. Scientific works do not repeat those presented for the acquisition of the educational and scientific degree "Doctor" and the occupation of the academic position "Associate Professor". There is no proven plagiarism in the scientific works that meet and exceed the minimum national requirements for holding the academic position of "Professor".

#### **2. Scientific contributions**

After assuming the academic position of "Associate Professor", Dr. Petkova continues and expands the participation and publication of research in the field of pneumophthysiatry.

The subject matter of these scientific works covers the following main directions:

2.1. Breathing disorders during sleep: The presented works provide information about the frequency of snoring, excessive daytime sleepiness and arterial hypertension, in healthy adults, as the main risk factors for existing sleep apnea. Within the framework of a prospective cohort study, the type, frequency, degree of severity and risk factors



in patients with sleep apnea were determined, and for the first time in our country we published data characterizing a Bulgarian group of patients with various breathing disorders during sleep. A group of publications and communications define the most common comorbidity of patients with DNVS and increase knowledge and training in this area.

A methodological contribution to Bulgaria is the analysis of data on the quality of life using the organ-specific non-specific quality of life questionnaire SF 36. An algorithm for the diagnosis of DNVS is proposed, with the definition of the competence levels of various structural units of the health system in Bulgaria. For the first time, a study was carried out in our country on the disorders of sexuality in patients with DNVS.

A number of scientific projects are a continuation of the scientific pursuits related to the epidemiology, phenotypic characteristics and risk factors among the Bulgarian cohort of patients with DNVS, a structural-functional scheme was developed and on this basis the first interdisciplinary center for sleep medicine in our country, based in the University Clinic for Pulmonary Diseases, was created.

2.2. Non-invasive ventilation: Significant scientific contributions have been made in scientific works related to the study of clinical manifestations, therapeutic behavior and phenotypic characteristics of the Bulgarian patient population, as well as in determining the indications and methodology of non-invasive ventilation. Algorithms for a holistic approach, care and education for home oxygen therapy are particularly useful.

2.3. Home oxygen therapy: Since the 18th century, oxygen has been a panacea for all ailments associated with impaired respiratory function. In our country, there is no problem with oxygen treatment in inpatient conditions, but in outpatient conditions, oxygen treatment is longer and is left uncontrolled. In the monographic work "Domestic oxygen therapy: *conditio sine qua non*", Assoc. prof. Petkova summarizes the knowledge and 13 years of experience gained so far in Bulgaria and offers a comprehensive overview of the science-based strategy for introducing, implementing and monitoring the effects of long-term home oxygen therapy, devices, modalities, indications, contraindications and application models.

2.4. Pulmonary hypertension: In the scientific works submitted for participation in the competition, the topic of the rare disease pulmonary arterial hypertension occupies a significant place. In addition to the data documenting the application for the first time in our country of targeted treatment for patients with pulmonary arterial hypertension, the scientific developments of the team include the study of survival, quality of life and clinical effectiveness of the applied targeted treatment in this group of patients.

2.5. Pulmonary thromboembolism (PTE), epidemiological data, modern methods of diagnosis and treatment, postthromboembolic pulmonary hypertension (STERN): The group of publications outlines the clinical characteristics and problems related to the diagnosis and treatment of patients with pulmonary vascular pathology. They are related to a large-scale retrospective study on PTE and post-thromboembolic pulmonary hypertension in our country - the Varna cohort of patients and are part of the scientific developments of the team, summarized in the dissertation work of Dr. Valentina Dimitrova, PhD student of the candidate in the competition.

2.6. Pulmonary tuberculosis, epidemiology, risk factors, resistance: Our own studies on the epidemiology and clinical course of tuberculosis in our country determine the behavior of clinical cases of tuberculosis in patients with systemic diseases on targeted treatment.

2.7. Idiopathic pulmonary fibrosis - clinical presentation, diagnosis and differential diagnosis, treatment and follow-up: Several articles and scientific reports summarize the current knowledge of interstitial lung diseases and IPF in particular, regarding the



clinical presentation, methods of investigation and diagnosis, and experience in the follow-up and monitoring of patients with this pathology.

2.8. Bronchoobstructive diseases COPD and bronchial asthma – epidemiology, clinical features and treatment: Publications are based on several national research projects and include screening for COPD incidence in high-risk groups, a cross-sectional study on specialist and general practitioner care in COPD, analysis of COPD severity according to modern assessment criteria, characterization of asthma exacerbations in outpatients, evaluation of beclomethasone/formoterol Extrafine for the treatment of chronic obstructive pulmonary disease of disease, non-interventional study among the Bulgarian population, characteristics of patients with severe asthma considered suitable for biological therapy - the Bulgarian RECOGNIZE study, use of mucolytics in COPD.

2.9. Infectious lung diseases - pneumonias, epidemiological data and clinical characteristics: Publications include participation in international projects related to the epidemiology, course and characteristics of bacterial infections of community-acquired pneumonias, nosocomial pneumonias, which complement and enrich the picture for Europe and the world. The articles have been published in refereed and indexed journals with a high impact factor and a high citation index.

2.10. COVID-19 - clinical characteristics and peculiarities of course, treatment of pulmonary manifestations: The subject of the publications are epidemiological data, burden of survival and treatment of pneumonias associated with the virus, the use of antiviral drugs and antibacterial treatment coagulation disorders. They summarize data from patients who underwent treatment through the Intensive Respiratory Unit and the COVID-19 Clinic for Thoracic Surgery of the "St. Marina" UMBAL Varna. Severe clinical cases of patients with pulmonary cavitations and transplant patients with COVID-19 pneumonia are presented, data from autopsy reports are also reported. By summarizing the scientific knowledge at the moment, a methodological guideline for behavior in the diagnosis and treatment is determined. The works devoted to Covid lung diseases and the post-covid syndrome can be evaluated as fundamental in controlling such epidemics, which is why they are extremely relevant now and in the future.

2.11. History of Medicine: Little-known facts about Bulgarian doctors and for great personalities in medicine have been researched and presented.

2.12. Rare diseases: Scientific publications report rare diseases such as Langerhans histiocytosis, cysticercosis, pulmonary artery dissection and PAH, differential diagnosis of cavitory lesions in the course of COVID-19 infection. The interest in rare diseases and in particular in idiopathic pulmonary fibrosis is expressed in the proposed methods of selection and diagnosis, referral to adequate treatment provided by the NHIF, achieved with many years of effort, selflessness and ethical persistence.

2.13. Others: Initiator and founder of the Varna Lung League within the framework of an international project with the St.Gallen Lung League, Switzerland. As a member of the Board of Directors of BSPD for the period 2011-2023 and in her capacity as the chairman of the Board of Directors of the BSPD 2014-2018 and from 2022 - until now actively participates in the organization and holding of national scientific events with international participation, chairman of Scientific and organizational committees of Congresses of the BSPD. During these mandates, the BSPD Board launched the BSPD Summer Schools initiative with the participation of many well-known speakers from Europe and the USA. Assoc. prof. Petkova also has a high scientific activity, realized by participating in a number of scientific forums, where she presented



interesting reports discussing current issues of modern pneumology, which always provoked interesting discussions

#### **IV. EDUCATIONAL AND TEACHING ACTIVITY**

Assoc. prof. Dr. Diana Petkova is the supervisor of the specialists in pneumology and phthysiatry, conducts postgraduate specialization courses, is a member of scientific commissions, scientific juries and scientific councils. Assoc. prof. Petkova is the scientific supervisor of 1 successfully defended doctoral student and the scientific supervisor of 5 doctoral students in the process of developing their dissertation works. According to the report presented, assoc. prof. Petkova has realized a significant study load for the last 5 years, with the average annual load being over 200 lecture study hours, and for the last academic year they were 223, with the norm for an annual study load of 99 hours. This teaching and learning activity is completely sufficient as a basis for occupying the academic position of "Professor".

#### **V. ANALYSIS AND EVALUATION OF THE DIAGNOSTIC-TREATMENTAL AND CONSULTING ACTIVITY**

Assoc. prof. Dr. Diana Petkova is one of the leading pneumologists in the country, an exceptionally well-prepared specialist and university teacher. She knows the most modern methods of diagnosis and treatment in the field of pneumology. Over time, she established himself as a successful manager, and with a lot of patience and persistence, she managed to create a team of young and motivated specialists working in this field.

#### **CONCLUSION**

The professional and personal qualities of the eminent and authoritative clinician assoc.prof. Dr.Diana Petkova, her in-depth scientific research activity, fascinating teaching and teaching activity, dedicated and selfless public activity, fully cover the requirements of the Law on the development of the academic staff in the Republic of Bulgaria , as well as the requirements specified as criteria in the Regulations for the Development of the Academic Staff of the MU-Varna, for occupying the academic position "Professor". With the required minimum points by groups of indicators totaling 550, Associate Professor Petkova achieved more than 3 times more points - 1631.3 points, which definitely shows her high scientific achievements, scientific theoretical and practical-applied contributions.

I CONVINCEDLY GIVE MY POSITIVE ASSESSMENT AND RECOMMEND TO THE OTHER RESPECTED MEMBERS OF THE SCIENTIFIC JURY TO VOTE POSITIVELY FOR THE FULLY DESERVED AWARD TO ASSOCIATE PROFESSOR DR. DIANA PETKOVA GOSPODINOVA - VALKOVA, PhD, IN THE ACADEMIC POSITION "PROFESSOR" IN THE FIELD OF HIGHER EDUCATION 7. "HEALTH AND SPORTS", PROFESSIONAL FIELD 7.1. "MEDICINE", SCIENTIFIC SPECIALTY "PNEUMOLOGY AND PHTHYSIATRY".

PREPARED THE OPINION:  
(ASSOC. PROF. DR. DONKA STEFANOVA, PhD)

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