

REVIEW

by Prof. Dr. Krasimira Kisiova, DMS

Regarding the competition promulgated in SG No. 28/28.03.2023 for the occupation of the academic position "Professor" in the field of higher education 7. "Health and sport", professional direction 7.1 "Medicine" and specialty "Pneumology and phthiology" at Faculty of Medicine, First Department of Internal Medicine; Department of Pulmonary Diseases and Allergology, "Pulmonary Diseases" Clinic at "Sveta Marina" UMBAL EAD-Varna

The review has been prepared in accordance with the requirements of the ZRASRB, the Regulations for the conditions and procedures for acquiring scientific degrees and occupying academic positions at the Medical University - Varna.

By decision of the scientific jury, Assoc.Prof. Dr. Diana Petkova Gospodinova-Valkova, MD, was admitted to the competition.

Assoc. Prof.Dr. Diana Petkova was born in Novi Pazar in 1965. She graduated First Language High School in Varna with English and German languages winning gold medal, then MU Varna - as the top of the class. She started as a doctor in Shumen and Provadia. Since 1994 she has been elected as an assistant in the "Pulmonology and Phthiisiatry at the Department of Internal Medicine" clinic, successively senior and chief assistant. Since 2004 she has been head. assistant - Head of the "Sleep Medicine" sector. She has a specialty in Internal Medicine and Pulmonology.

Scientific and educational degree.

Under her supervision there are 6 PhD students, one of whom has successfully defended his thesis..

Leader of scientific projects – 5 projects with participation of colleagues from other internal medicine specialities. She is involved in international projects. They are so numerous that a parallel review should be written. She has a number of specializations in Switzerland, the most important of which are:

-VSD certificate, social medicine and health management course

-EfQM quality management auditor, which she introduced in "St. Marina" Medical Center and Varna University of Medical Sciences

-VSD diploma.

She speaks German, English and Russian. Computer literacy: Word, Excel, Power Point.

In the current competition, Prof. Petkova participated with 48 full-text publications, of which 6 were independent;

10 in first place and 9 in second place and the rest in third or subsequent place. I am sure that these are not all publications, but the author has decided that with these she has covered the minimum criteria for obtaining the academic position "Professor" (more than 50% of the publications are independent or in first and second place).

Participation in international forums -. 18. IF 86.24 of the publications presented.

Study load 2-3 times more than the required 99 hours.

The areas in which scientific papers and publications can be grouped cover almost the entire spectrum of pulmonary pathology::

Breathing disorders during sleep.

For the first time in Bulgaria the delegated sleepiness scale - Epworth Sleepiness Scale was used. High scoring criteria have been developed: the relationship between DNVS in the study of different and variable factors characterizing vascular resistance, Echo CG and patients at risk for cardiovascular resistance. Quality of life (SF 36) was assessed. For the first time in our country, a study of sexuality disorder in patients with DNVD was performed. A project was initiated to investigate some cardiovascular resistance indicators and biomarkers in sleep-disordered breathing. Total and free testosterone in serum and saliva were determined in patients with OSA. A prospective study of patients with sleep-disordered breathing was performed to determine cardiovascular risk. A National Consensus Statement on Diagnosis and Treatment was published by a multidisciplinary team; a pilot study was conducted to investigate coronary calcium scoring as a marker of coronary atherosclerosis; a study of circadian rhythm, corticosteroid rhythm in remission was performed in patients with schizophrenia. Variability against a background of ongoing CPAP treatment at home was studied, which actually evaluated the long-term effectiveness of noninvasive ventilation. In addition, studies and detailing of sleep disorders and their treatment (first significant contribution) of a scientifically applied nature have been carried out.

Another important achievement of Assoc. Petkova is focused on home oxygen therapy in a monograph, which can serve as a study guide for all pulmonologists. "Home Oxygen Therapy (conditio sine qua non)", in which the indications, contraindications, international guidelines, models and systems for home oxygen therapy, as well as all devices and interfaces, advice for patients placed on home oxygen therapy are found. The Bulgarian experience in the face of the introduced model for home oxygen therapy is also present

This is the second significant scientific and applied contribution of Dr. Petkova.

Assoc. Petkova, who is distinguished by her search for rare diseases (the so-called "niches"), studies:

Primary Pulmonary Hypertension (PAH) and conducts for the first time in our country targeted treatment of patients with idiopathic PAH .

Pulmonary thromboembolism -PTE- with epidemiological data, modern methods of diagnosis and treatment.

Post-thromboembolic pulmonary thromboembolism (PTE). Studies have been done that can outline the clinical features and problems associated with the diagnosis and treatment of patients with pulmonary vascular pathology.

Subsequent publications Next Posts regarding important immunological responses; biological therapy

-Idiopathic pulmonary fibrosis - a small experience that along with commentary, on clinical presentation, methods of diagnosis contributes to national consensus building

-Following publications include prominent diseases: COPD - obstructive syndrome, COPD and asthma of different severity. Care analysis is done: pulmonologists follow more severe COPD patients. It was found that mostly male smokers with impaired lung function used more oral corticosteroids. The problem of asthma in outpatient settings (within a national survey) was also reported, indicating a high prevalence of asthma. Smoking and especially arterial hypertension appear to be important factors contributing to exacerbations. Various modern treatments are being commented on e.g. with Foster. Data from a study of patients with severe COPD showed an increase in mean volume in FEO1 and FVC, good symptom control and a shift in the proportion of patients from category C and D to AB.

-Characteristics of patients with severe asthma in primary and secondary care considered suitable for biologic therapy - Bulgarian RECOGNIZE study, which opened a new era in asthma treatment, highlighting the importance of characterizing patients with clinical indications for medication administration.

-Mucolytics.

Community-acquired pneumonia – (PPO), immunosuppressed patients and appropriateness of empiric treatment recommendations.

The next direction in Assoc. Prof. Dr. Petkova's research is COVID 19 - clinical characteristics - treatment of pulmonary manifestations. Data on patients with COVID undergoing treatment at the COVID Clinic of Thoracic Surgery and IRO are summarized. Severe cases in the COVID patients with pulmonary cavitation and COVID 19 pneumonia transplanted are presented in publications and communications. Data from obduction protocols are also reported.

Some of the articles summarize and provide current scientific knowledge and evidence for a methodological guideline for management and approach to diagnosis and treatment.

Assoc. Petkova has an interest not only in the history of medicine, which is reflected in the biographical reference. The monograph on Ludwig van Beethoven (Pathography of a Genius) is aimed at all readers and comments on medical records and historical facts concerning the great composer's illnesses. Assoc. Petkova has an interest in other great personalities and most generally in the history of medicine .

Initiator and founder of the Bulgarian Lung League - Varna, within an international project with the St. Galen Lung League – Switzerland

LUNG LEAGUE Varna, offers and carries out provision, maintenance, control and monitoring in the use of devices that support home treatment.

As a member of the Board of BD and BD 2012 -2023 and as chairman of BDBB actively participates in the organization and conduct of national events with international participation with speakers from Germany, Switzerland, UK, Austria, Italy, Canada, USA, Japan,. He also organizes courses for young pulmonologists with different topics.

Contributions:

1. In Bulgaria, in the scientifically applied field of **sleep medicine, the various aspects of breathing disorders during sleep.**
2. **Home oxygen therapy.**
3. **The diagnosis and treatment of patients with pulmonary hypertension (STERN)** are relatively new in terms of world experience. For Bulgaria - regarding world science and practice have a confirmatory character.
4. The national studies **initiated and implemented in the field of bronchobstructive diseases** are some of the first national projects that have collected data from outpatient and inpatient care on the clinical characteristics, disease severity, treatment and management of exacerbations in this group of patients, allowing for comparison and searching for potential for future optimization of diagnosis and treatment strategies nationally, but that is not all.

Assoc. Prof. Dr. Petkova is a knowledgeable physician and scientist, looking for new challenges and "niches" in the field of pulmonology that have not yet been developed in Bulgaria. She is able to work in both interdisciplinary and international teams, including new markers detailing the disease.

Conclusion: Growing up in front of my eyes, (but the student has to get ahead of her teacher) with her undeniable and leadership skills, and the capabilities of modern technology, she can go very far. I am proud to call her "my alumna and follower". I had once called "lung terra cognita et incognita" . I wish Assoc. Diana Petkova to continue on the path of terra incognita, and to meet the criteria required by the law for the development of the AU of the Republic of Bulgaria and MU- Varna.

I recommend with conviction to the esteemed members of the scientific jury to award Assoc. Petkova Ph.D. the academic position (title) "Professor".

A handwritten signature in blue ink, consisting of several loops and a vertical line extending downwards.

REVIEWER: (Prof. Dr. Krasimira Kisiova, DMS)