

## **Review**

**by Prof. Nikolai Draganov Mladenov, DSc**

**Head of ICU, Agibadem City Clinic UMBAL Tokuda EAD**

**regarding the procedure for acquiring an academic position associate professor  
of**

**Dr. Bilyana Petkova Kamenova, PhD**

**specialty "Anesthesiology and Intensive Care"**

The competition was announced in SG No. 104/15.12.2023 for the acquisition of the academic position of "associate professor" for Dr. Bilyana Petkova Kamenova, PhD in the field of higher education 7. Health care and sports, professional direction 7.1. "Medicine" and the scientific specialty "Anesthesiology and resuscitation" for the needs of the Anesthesiology and Intensive Care Clinic of Acibadem City Clinic UMBAL Tokuda EAD. The composition of the scientific jury was determined on the basis of a decision at a meeting of the scientific council of Ajibadem City Clinic UMBAL Tokuda EAD from 01.11.2023, with Protocol No. 49/01.11.2023 and order No. 15-03-65#1/ 13.021.2024 of the executive director and the Procurator of the hospital.

The participant in the competition, Dr. Bilyana Petkova Kamenova, PhD, was born on June 18, 1973, with 33 years of work experience. He completed his higher education at Sofia Medical University in 1997. In 2003, he acquired a specialty in anesthesiology and intensive care. For the period from 1998 to 2016, he worked as a resident in the Anesthesiology and Intensive Care Clinic at the Tsaritsa Joanna Hospital. From 01.12.2006 until today, he has been working at the Tokuda UMBAL at KAIL. Education and training For the period from 01.11.2002 to 01.11.2003 he specialized in anesthesiology and intensive care at the "Claude Huriez" hospital, Lille, France. In the next years, 2009 specializes in the field of maxillofacial and plastic surgery, at the

Clinique de la Maye hospital, Versailles, France, and in 2015, anesthesiology and resuscitation in the field of liver transplantation, at the Pontchaillou hospital, Rennes, France. On October 20, 2020, he defended a dissertation for the acquisition of an educational and scientific degree "doctor" with the topic: Anesthesia and intraoperative neurophysiological monitoring in surgical corrections of scoliosis in childhood. Dr. Bilyana Petkova Kamenova, PhD, fulfills all the necessary requirements for participation in the competition for the academic position "docent" listed in the academic development regulations of Achibadem City Clinic UMBAL Tokuda EAD, namely: 1. Presents diplomas, certificates and certificates for completed higher education, acquired specialties, acquired educational and scientific degrees, as well as certificates for passed specializations, qualification courses and seminars. 2. Presents in the required volume a list of publications in specialized, scientific publications, monographs, textbooks, scientific projects. The entire scientific activity of Dr. Bilyana Petkova Kamenova, PhD is represented by a dissertation, a monograph, publications and participation in scientific forums as well as citations. The dissertation is on the topic "Anesthesia and intraoperative neurophysiological monitoring during surgical corrections of scoliosis in childhood", with a subsequent monograph on the topic "Electrophysiological neuromonitoring and anesthesia during surgical corrections of scoliosis" - Sofia: Vertas et Pneuma, 2024. - 152 pp. - ISBN 978-954-679-157-3. The program for surgical correction of scoliosis at Tokuda Medical Center started in 2009. This is a project of the SRS (Scoliosis Research Society). The first operations were performed by a mixed international team: surgeons from the Clinic of orthopedics and traumatology at Tokuda Medical Center, orthopedists from the USA and Spain, members of SRS, anesthesiologists from KAIL. The visiting SRS team also includes neurophysiologists who perform intraoperative neurophysiological monitoring (INM). During this program, an anesthesia team from the hospital is trained and certified in the clinical application of IONM. The team is a pioneer in the introduction of intraoperative neurophysiological

monitoring in anesthesiology in Bulgaria, and in particular it is the contribution of Dr. Kamenova. By integrating the recorded electrophysiological, anesthetic and physiological parameters, the anesthesia team ensures maximum safety for the patient and minimum risk of neurological damage. What makes her contribution so significant with this development?

1. On the one hand, the anesthesiologist faces challenges related to the use of IONM, and on the other hand, challenges caused by the peculiarities of the accompanying pathology and the specificity of the surgical activity: mainly children, respiratory diseases (including split ventilation when applying the Anterior scoliosis correction system Corrective Surgery also know VBT - Vertebral Body Tethering), cardiovascular, neurological systems, intraoperative positioning of the patient, blood loss and application of systems for its reduction.

2. More and more medical centers are showing interest in the possibility of performing IONM by an anesthesia team.

3. Is the concept of ANESTHESIOLOGY AND ELECTROPHYSIOLOGY IN ONE possible - in this case, yes. According to the REPORT ON THE FULFILLMENT OF THE MINIMUM NATIONAL REQUIREMENTS for participation in a competition for the academic position "associate professor", Dr. Bilyana Petkova Kamenova, PhD collects 424.29 for JSC "associate professor" with minimum required national requirements of 400 points.

In the section "Publications and reports published in scientific publications, referenced and indexed in world-renowned catabases of scientific information" 4 real publications are presented, in "Publications and reports published in non-refereed peer-reviewed journals or published in edited collective volumes" 7 real publications are presented, and the total number of registered publications is 11. When the reference was made in the Central Medical Library of the Medical University of Sofia, citations or reviews in scientific publications, referenced and indexed in world-famous databases with scientific information or in monographs and collective volumes as well as in

citations in monographs and collective volumes with scientific review, total 10. A total of 11 participations in scientific forums have been registered, both in Bulgaria and with international participation. The study load varies from 89.79 to 220 study hours. The following scientific contributions of Dr. Bilyana Petkova Kamenova, PhD can be highlighted, systematized in the following sequence:

- For the first time in Bulgaria, a systematic approach is applied in monitoring SSEP and MEP by an anesthesiologist during surgical corrections of scoliosis in childhood.
- The need to apply IONM in scoliotic surgery is substantiated, as a highly specific and sensitive method to prevent neurological complications.
- The need for a multidisciplinary approach and teamwork in this type of operative intervention is confirmed.
- The main specific problems regarding anesthesia in childhood scoliosis corrections are indicated. Effective methods for their resolution are also indicated.
- A protocol has been established for anesthetic behavior in this type of surgery.
- The protocol for anesthetic behavior is tailored to the specific features of IONM and the influence of neuromonitoring by the anesthetics used and the patient's physiological parameters.
- The intraoperative and postoperative complications of this type of surgery have been systematized.
- An algorithm was developed for the behavior of the neuromonitoring team when registering changes in electrophysiological parameters.

### **CONCLUSION**

The scientific activity of Dr. Bilyana Petkova Kamenova, PhD, meets the requirements for acquiring the academic position "docent", defined in the Regulations for the development of the academic staff for the needs of the Anesthesiology and

Intensive Care Clinic of Ajibadem City Clinic UMBAL Tokuda EAD. She is a member of the Bulgarian and European Society of Anesthesiology and Intensive Care. He speaks French and English, certified. I believe that Dr. Bilyana Petkova Kamenova, PhD, meets the academic and scientometric criteria for occupying the academic position "associate professor" for the needs of the Anesthesiology and Intensive Care Clinic of Achibadem City Clinic UMBAL Tokuda EAD.

Sofia

15.03.2024

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Prof. MD N. Mladenov, DSc /...../