

STATEMENT

By Prof. Dr. Hristo Bogdanov Zhelyazkov, dm

Subject: Procedure for occupying the academic position "PROFESSOR"

In the field of higher education 7. Health care and sports, professional direction 7.1 Medicine, the scientific specialty 03.01.41. neurosurgery, on the basis of art. 4 par. 2 of the Law on the Development of the Academic Staff in the Republic of Bulgaria, art. 2 par. 2 of the Regulations for the Implementation of this law, and in accordance with the Regulations for the development of the academic staff at "Ajibadem City Clinic UMBAL Tokuda" for the needs of the Neurosurgery Clinic of "Ajibadem City Clinic UMBAL Tokuda", announced in the State Gazette, No. 98 / 24.11.2023.

Appointed as an external member of the scientific jury under the announced procedure by order No. 15-05-09 /30.01.2024 of the Executive Director and Procurator of the hospital

One candidate participated in the competition:

Assoc. VLADIMIR STEFANOV NAKOV, dm

I ANALYSIS OF THE CANDIDATE'S CAREER PROFILE

1. Biographical data

Associate Professor Nakov was born on May 2, 1966. In 1992, he graduated as a Master of Medicine at the Medical Academy - Sofia. In the same year, he started working as a shop doctor in Kostenets. From 1993 to 2010, he worked as a resident, and later as a senior resident at the St. Sofia Medical School. In 2000, he acquired a specialty in neurosurgery. In 2010, he was appointed as a neurosurgeon at the Medical Academy - Sofia, where from 2012 to 2016 he was the Head of the Department. From 2016 until now, he has been working at Acibadem City Clinic UMBAL Tokuda, and since 02.01. is head of the Neurosurgery Clinic at the same hospital.

Prof. Nakov is a member of the Bulgarian Society of Neurosurgery; is a member of the Congress of neurological surgeons /CNS/.

Fluent in spoken and written Russian and English - level B2.

2. Academic development

In 2015, Dr. Nakov successfully defended his dissertation on "Results of early surgical treatment of ruptured brain aneurysms", with which he received the educational and scientific degree "**Doctor**". In 2017, after winning a competition, he was elected to AD "Associate Professor" at the neurosurgery clinic in Acibadem City Clinic UMBAL Tokuda.

In 2010, he completed a professional qualification course in health management.

Associate Professor Nakov has a number of specializations and acquired certificates in the field of spinal surgery, surgical treatment of cerebrovascular diseases

and brain tumors, microsurgery and skull base surgery. He was a lecturer in a course on operative treatment of aneurysms, Sofia Academy of Medical Sciences, Department of Neurosurgery; Lecturer at UpSurgeOn, Cadaver Free Training Course Skull base Surgery (Aneurysmal); July 2022 Sofia, Bulgaria and lecturer at UpSurgeOn, Cadaver Free Training Course, Glioma surgery course, September 2023 Sofia, Bulgaria.

II. DESCRIPTION OF THE SUBMITTED MATERIALS AND EVALUATION OF THE CANDIDATE'S SCIENTIFIC PAPERS FOR HIS OVERALL ACADEMIC DEVELOPMENT

After occupying educational and scientific degree "Docent" / from 2017 to 2024. / the candidate has a **total of 39 scientific publications**:

- In the competition for the acquisition of the academic position "Professor", Associate Professor Dr. Nakov participated with a **Habilitation work - 10 scientific publications in publications, referenced and indexed in world-famous databases with scientific information - 102.78 points.**

- publications in **publications referenced in international databases (Scopus, Web of Science) - 4 publications**, of which 3 - with an impact factor - **60.45 points**;

Total IF from all posts – 14,031.

- **publications with scientific review –113 – 69.65 points.**

- **author of 12 chapters of the monograph "neurosurgery" - 76.6 points=**

Total for publications – 206.61 points.

Assoc. Prof. Nakov is the first author in 3 of the 39 publications presented; second and subsequent author is in 22 publications and last author – 14 publications.

There are 37 appearances with presentations at congresses. Among them - Participation in international congresses and symposia - in Venice - 1017; Brussels – 2018; Vienna 2019; Belgrade – 2020 and 2022 and Barcelona 2023.

Scientific works have been cited 50 times/ according to the presented reference/:

- **18 citations in Bulgarian** and foreign non-referenced and non-indexed publications - **90 points**;

- **32 citations - in refereed and indexed editions / Scopus and Web of Knowledge /part overlap in both databases/ - 480 points.**

Total for citations – 570 points.

Participation in projects:

- one international project: "Three dimensional Photorealistic Atlas of Neurological Surgery" 2022. The project belongs to the Scientific Research Fund at EANS. - **20 points.**

- two national projects:

- "Neurovascular layer-by-layer anatomy of the suboccipital fossa in revascularization of posterior cerebral circulation" 2022 - **15 points**.

- "Teaching anatomy students with three-dimensional photorealistic directional models presented through virtual and augmented reality" 2023 – **15 points**.

Total for projects – 50 points.

Assoc. Prof. Nakov is the supervisor of **three successfully defended doctoral students**: Dr. Milko Iliev-2023 and Dr. Lili Laleva-2023-**total 80 points**.

Participates in the **training of interns, specialists and doctoral students**:

Certificate No. 19-665 / 04.12.2023, issued by UMBAL "Tokuda"

Certificate No. 256/15.01.2024, issued by UMBAL "St. Georgi" Plovdiv. Total for training of specialists – **30 points**.

Has a **specialty** since 2000 - **40 points**.

The candidate's scientific contributions are in the following areas:

I. Cerebrovascular surgery

1. Surgical and endovascular treatment of bleeding and nonbleeding cerebral aneurysms (dissertation, publications 2, 7, 37, 38, 39). In his publications on this topic, the author systematized all aspects of this disease (37, 38), specified the indications for surgical or endovascular treatment; has detailed surgical techniques for access, dissection, and obliteration of aneurysms (38) with a special focus on giant and unruptured aneurysms (39), with one publication demonstrating an intraoperative video in the "How I do it" section of Acta Neurochirurgica .(2). All the author's publications are based on his own material, as only during the period after the acquisition of AD "associate professor" (October 2017 - January 2024), the author was the head of the surgical teams in the surgical obliteration of 176 aneurysms (145 in Tokuda UMBAL and 31 in UMBAL "St. George" EAD Plovdiv), and during his career he operated on a total of over 300 aneurysms. Personal contributions of the author are some innovative operative techniques: surgical coil extraction after failed embolization of aneurysms or after distal coil migration; clip reconstruction of complex aneurysms; clip-reconstruction in complex aneurysms after protective extra-intracranial bypass.

II. Extracranial - intracranial arterial bypass (12, 20). In the last 6 years, the author has been the main operator in performing 25 extra-intracranial bypasses in patients with occlusion of major arteries and in patients with giant complex aneurysms. The author's contribution is: formulation and introduction to the clinical practice of a reliable and valid and easy-to-perform test (Colorcoded Duplex-Sonography) to refine candidates for cerebrovascular bypass in patients with chronic cerebrovascular insufficiency (12); performing extra-intracranial arterial bypass in a patient with Moya's disease -My (20); application of innovative approaches (bypass with vein graft between

occipital artery and M3) in patients with simultaneous occlusion of internal carotid artery and external carotid artery and in the absence of arterial sources for donors (20).

III. Surgical treatment of mesenchymal vascularized tumors and CNS lesions (5, 13, 27, 29, 31). There are published "case reports" of cases with advanced high-risk mesenchymal tumors, "carotid body" tumor and cervical intramedullary hemangioblastoma, describing the specifics of the surgical intraoperative technique, and one of the articles with intraoperative video material is published in the section "How I do it" of Acta Neurochirurgica. Two of the publications are chapters in the collective monograph with the status of a textbook "Neurosurgery".

IV. Skull base surgery (4, 17, 19, 21, 22, 23, 32, 33, 34, 35, 36). Three publications (4, 21, 22) presented the anterolateral transorbital approach, a technical description of the approach (21); description of anterior clinoidectomy in a translateroorbital approach (22) and an anatomical study of an innovative endoscopic transorbital and transcavernosal approach (4). The publication dealing with complications of anterior petrosectomy, retrolabyrinthine, and combined transpetrosal access is also helpful (17). Two of the publications are devoted to electrophysiological intraoperative control in skull base surgery (19, 23).

V. Intraoperative real-time functional physiological control (15, 19, 23, 24, 26). Assoc. Prof. Nakov has made a significant contribution to the implementation of electrophysiological monitoring. One of the publications (15) is devoted to the reasons for the suboptimal performance of the monitor and methods for their neutralization are proposed; another publication (24) presents the results of using intraoperative electrophysiological identification of the primary motor cortex and direct stimulation of the same in operations under general anesthesia, and a third publication confirms the importance of electrophysiological controls to reduce morbidity in operations for tumors in the diencephalic region (26).

VI. Three-dimensional visualization of normal anatomical structures and pathological processes in neurosurgery(1, 6, 8, 9, 10, 11, 14, 16, 25). Very interesting and with a serious personal contribution are the publications concerning modern technologies for three-dimensional visualization and their use both for preoperative planning based on image studies and simulation of the stages of the operation, and for training of specialists through 3D photorealistic layer-by-layer scanning of anatomical preparations.

III. COMPLEX, QUALITATIVE ASSESSMENT OF THE CANDIDATE'S EDUCATIONAL AND TEACHING ACTIVITY

Assoc. Prof. Nakov has experience and proven qualities as a teacher. He has been employed by AD "docent" for 6 years - 600 points. He teaches medical students,

neurosurgery specialists, participates in the examination committee for the neurosurgery specialty.

The study load of Assoc. Prof. Nakov is 666 points:

- **478 hours** - on average for the last 2 years, according to the reference for training of specialists and specialists in UMBAL- Tokuda - **478 points**.

- **144 hours** for the last two years of theoretical and practical training of interns and specialists at the Neurosurgery Clinic of UMBAL "St. Georgi " Plovdiv - **144 points**.

- **22 hours** - Lecturer at UpSurgeOn, Cadaver Free Training Course Skull base Surgery (Aneurysmal); July 2022 Sofia, Bulgaria – **22 points**.

- **22 hours** - lecturer at UpSurgeOn, Sadaver Free Training Course, Glioma surgery course, September 2023 Sofia, Bulgaria - **22 points**.

Total for teaching – 1266 points.

Scientometric evaluation of the candidate:

group A - dissertation - 50 points

group B - habilitation work -102.78 points.

group D - publications - 206.61 items.

group D - citations - 570 items.

group E- 200 t.

group G – 1266 items

Total - 2395.39 points, with which I believe that Assoc. Prof. Nakov repeatedly exceeds the mandatory scientometric criteria laid down in the Regulations of "Ajibadem City Clinic UMBAL Tokuda".

IV. CONCLUSION:

Based on the materials presented for the competition and referring to the Regulations of the "Ajibadem City Clinic UMBAL Tokuda", I consider that the personal qualities of the candidate, the presented scientific production, his academic training and his teaching activity meet the mandatory quantitative and qualitative criteria according to the employment regulation of **academic position "PROFESSOR"** professor at "Ajibadem City Clinic UMBAL Tokuda".

For these reasons, I find it completely justified to give a positive assessment and I recommend the respected scientific jury to vote positively for the election of Assoc. Prof. Vladimir Stefanov Nakov, MD for the acquisition of the academic position "Professor" of "Neurosurgery" at the Department of Neurosurgery of "Ajibadem City Clinic" UMBAL Tokuda'.

08.03.2024

Prof. Dr. Hristo Zhelyazkov, dm

