

REVIEW

from

Prof. Dr. Karen Briyanov Dzhambazov, MD, PhD

Head of the Department of ENT Diseases, Faculty of Medicine, Medical University - Plovdiv, Executive Director of the Multiprofile University Hospital for Active Treatment "St. Georgi" EAD, Plovdiv, habilitated in Professional area 7.1. Medicine, Medical University - Plovdiv, member of the Scientific Jury, following order №P-109-365/21.09.2022 of Medical University - Varna „Prof. Dr. Paraskev Stoyanov" of s competition for the appointment for the academic title “Professor” in Oto-rhino-laryngology, announced in the State Gazette

59/26.07.2022.

Related to:

Competition for awarding the academic title “Professor” in Higher education area 7. Health care and sports, Professional domain 7.1. Medicine, Specialty „Ear-nose-throat diseases“, announced in State Gazette, issue 59/26.07.2022.

Candidate: Assoc. prof. Dr. Nikolay Roumenov Sapundzhiev, MD

1. Biodata of the candidate: Assoc. d-r Assoc. prof. Nikolay Roumenov Sapondzhiev was born in Varna in 1972. He graduated from a language high school in his hometown. 1991-1997 he studied medicine and graduated as a master's doctor at the Faculty of Medicine of the Medical University of Varna "Prof. Dr. Paraskev Stoyanov". From 2002 to 2004 he was a full-time PhD student at Philipps Universität in Marburg, Germany. In 2003 he obtained his specialty in Otorhinolaryngology. In 2005 he defended his doctorate in Germany. The educational and scientific degree "Doctor" was also confirmed by the VAK (BAK) in 2006 according to the current order at that time. In 2011, he graduated with a master's degree in "Health Management" at MU-Varna. In 2019 Assoc. prof. N. Sapundzhiev completed two-year degree in Specialization Course in the Sciences of the Voice, Speech and Singing at the Institute of Interdisciplinary Research of the Universidade de Coimbra, Portugal (distance education). He specialized in otorhinolaryngology clinics in France, Belgium and Germany.

In the period 1997-1998, he was initially resident physicia at the ENT Clinic of the Medical University of Varna. He then became a member of the team at the University Clinic in Marburg, where he completed his specialization. After his return to Bulgaria, he was a resident physician at UMBAL Tsaritsa Ioanna, Sofia (2004-2005). Since 2006, he has been an assistant in ENT diseases at the Medical University - Varna, since 2008 - a senior assistant, in 2013 he obtained his habilitation and became an associate professor. Since 2014, the head of the Department of ENT Diseases at the Department of Neurosurgery and ENT Diseases of the Medical University of Varna.

He has authored of many scientific publications, participated in international symposia as invited-speaker.

He is member of the editorial board /reviewer for Sanamed, Scripta Scientifica Medica, Frontiers in Surgery, Frontiers in Allergy, European Journal of Inflammation, Biomedical Reviews, Research Square, Cureus Journal of Medical Science, International Bulletin of Otorhinolaryngology, Oxford Medical Case Reports, Clinical, Cosmetic and Investigational Dermatology.

Assoc. prof. Nikolay Sapundzhiev is a member of international scientific and professional organizations in the field of otorhinolaryngology, head and neck surgery, phoniatics, plastic surgery, somnology, etc. Bulgarian National Society of Otorhinolaryngology, Head and Neck Surgery, Deutsche Gesellschaft für HNO-Heilkunde, Kopf- und Hals-Chirurgie e.V., Bonn, European laryngological society, European academy of sleep medicine, Bulgarian Rhinologic Society, European Rhinologic Society, European Academy of Facial Plastic Surgery, Union of the European Phoniaticians, European Airway Management Society, Österreichische Gesellschaft für HNO-Heilkunde, Kopf- und Halschirurgie.

He is fluent in both written and spoken English, German, Russian and French languages.

He is married and has three children.

2. Overall evaluation of the material, handed in for the competition: After having familiarized myself in detail with the materials provided for participation in the competition for a professorship, I believe that the procedure for disclosure, announcement and participation has been fully complied with. The documents for the competition have been prepared in accordance with the requirements of the Law on the Development of the Academic Staff in the Republic of Bulgaria and the Regulations for its implementation in Medical university - Varna.

3. Evaluation of the research activity, characteristics of publication activity and scientific production of the candidate: The list of all publications in foreign and Bulgarian language of Assoc. prof. N. Sapundzhiev includes a total of 39 and reflect his scientific and research activities in the period 2013-2022. There are 16 publications in Bulgarian and 23 in a foreign (English) language. According to the candidate's position in the authoring team of these publications (both in Bulgarian and in a foreign language), all from the period after the defense of the dissertation, the distribution is as follows: the candidate is sole author in 2 and a co-author in 37 publications, of which he is the first author in 5, second author – in 11 publications, third author - in 8, fourth author - in 8 publications, fifth and consecutive author - in 7 publications.

As required by the rules of the competition Assoc. prof. Dr. Nikolay Roumenov Sapundzhiev, MD has attached an Academic reference for publications, citations, monographs and scientific profiles. It includes information on:

- Dissertation work for the acquisition of the educational and scientific degree "Doctor" on the topic: „Incidence of lymph node metastases after piecemeal laser-surgical and *en bloc* cold steel resection of auricular VX2 carcinoma“, 2005 Philipps Universität, Marburg, Germany (Indicator A1)

- Full-text publications, equivalent to a habilitation thesis in journals that are referenced and indexed in world-renowned databases with scientific information - 10 (Indicator B4)
- Publications and reports published in scientific journals, referenced and indexed in world-renowned databases with scientific information - 9 (Indicator D7)
- Publications and reports published in non-referenced journals with scientific review or published in edited collective volumes – 9 items (Indicator D8)
- Chapter in a collective university textbook or texbook - 1 (in Indicator E20)
- Chapter in a published university textbook aid - 1. (Indicator E21)

The candidate has submitted further 11 articles, beyond the minimum scientometric requirements for acquiring the academic title "Professor".

The academic reference attached shows that the candidate has more than the requested points - 220,75.

Assoc. prof. Sapundzhiev submitted for participation in this competition: 12 citations with a total number of 180 points (Indicators D10-D12). It has to be noted, that the citing articles are published only in international journals. This contributes to the greater visibility among scientific circles of the scientific output of the Medical University - Varna.

Assoc. Sapundzhiev has directed a project under the "Science" Fund 14020/2014 "Study of anatomical characteristics of the larynx in newborns and toddlers in normal and pathological conditions with endoscopic methods." The latter document is presented apart of the whole academic reference and is not included in it. Otherwise it would have granted more points in Indicator E18.

To the documents submitted, the candidate has attached a list of participations in Bulgarian and international scientific forums with lectures, oral presentations and posters. There are 79 ones for the period 2014-2022. The list of oral communications at scientific forums depicts the leading role of the candidate as the only author, first or senior author.

Assoc. prof. Sapundzhiev has prepared a report on the contributions of his publications, in which they are described in greater details and in depth and ranged by several criteria language of publication, authorship and topics.

Distribution by the field of the topics:

1. Laryngology (15)
2. Rhinology (8)
3. Pharyngology (5)
4. Otology (3)
5. Bronchoesophagology (3)

The main directions of scientific works include 1) Oncology of the head and neck; 2) Children's otorhinolaryngology; 3) Epidemiology of specific otorhinolaryngological conditions and diseases; 4) Innovative surgical techniques and technologies in otorhinolaryngology; 5) Case studies in otorhinolaryngology; 6) Historical aspects of the specialty; 7) Current COVID-related issues and news.

The main directions of the research work and the resulting publication activity are related to the theoretical, applied and clinical aspects of otorhinolaryngology, its subspecialties, head and neck oncology, pediatric otorhinolaryngology, a set of socially significant and casuistic otorhinolaryngological diseases, some historical aspects of the specialty, as well as some current issues and news related to COVID. A clear continuity in terms of the topics is obvious, as well as an enrichment and diversification of the studied issues and the emergence of new, problem-oriented interdisciplinary scientific subfields.

One third of these projects involve actively students and young specialists, working under the mentorship of Assoc. prof. Sapundzhiev.

Contributions related to the main directions of scientific works:

In Direction 1: Assoc. prof. Sapundzhiev presents an extensive study on a large Bulgarian group of patients with a socially significant subgroup ENT diseases - oncological diseases: carcinoma with primary localization in the head and neck region. The proportion of the oncologic conditions with this primary localization in our country is just over 4% of cancer cases. Analyzed is demographics of patients with oncological diseases of the organs of the head and neck. Presented are results concerning the diagnostic value and of some modern imaging methods (FDG-PET-computed tomography) compared to the gold standard in the specialty- endoscopy. Published are representative studies focused on the etiology of laryngeal carcinoma, its treatment and the rehabilitation of patients with this condition. An interesting differentiation has been established between the directly inducing and merely precipitating role of smoking for the occurrence of laryngeal carcinoma. The study confirms the importance of this risk factor in the etiology of the disease. A detailed analysis of a rare clinical case of *low grade* fibromyxoid sarcoma of the larynx induced by radiotherapy is presented. Of interest is the publication on own experience of endoscopic transfer of autologous adipose tissue as an attempt to repair pharyngocutaneous fistula after laryngectomy. This is an worrisome naturally occurring complication of this operative intervention, for which there is no standardized management protocol but only scarce clinical recommendations. An review on the topic of voice rehabilitation of laryngectomees together with original results of are presented. The surgical intervention developed by Assoc. prof. Sapundzhiev for tracheoesophageal puncturing shows some potential for reducing operative trauma especially in at-risk patients after radiotherapy and with complex anatomy, compared to the majority of the existing established techniques. The phonatory results after speech rehabilitation with voice prosthesis after laryngectomy appear to be comparable to corresponding reports published more than a decade ago by the working group from the ENT clinic in Plovdiv.

In Direction 2: A review of the literature together with own clinical experience and some new technical aspects of laryngeal surgery in young children with laryngeal stridor are presented.

The evolution of diagnostic and therapeutic options in congenital hemangiomas involving the large airways has been interestingly analyzed over time. The publication is excellently illustrated, and thus very useful for the everyday clinical otorhinolaryngological practice. Diagnostic and treatment algorithms for children with rarer diseases such as recurrent plastic bronchitis, tracheal stenosis in Wegener's granulomatosis, etc. are presented.

Extensive developments in the field of sleep-disordered breathing in the pediatric population are presented - this is an often underestimated condition. Assoc. prof. Sapundzhiev and colleagues reported good therapeutic results with two different therapeutic modalities - surgical treatment and physical therapy.

In Direction 3: Presented are publications focused on the frequency of specific otorhinolaryngological conditions and diseases in our country. This type of studies are based on a local patient and oncologic database established by Assoc. prof. Sapundzhiev. Of interest are the statistics on the demographics of patients with oncological diseases of the head and neck, the incidence of the vomeronasal organ, hereditary hemorrhagic telangiectasia. From the publication on the latter problem, an algorithm can be derived for a systemic approach in these patients, aimed at detecting involvement of other visceral organs and the central nervous system to prevent life-threatening complications. For the first time to my knowledge, a reliable anatomical-pathophysiological explanation of the occurrence ear lobe crease (Frank's sign) is presented, which correlates with the typical concomitant cardiac pathology.

In Direction 4: This direction includes publications aimed at technical and some technological aspects in routine surgical practice in our specialty. An innovative modification of the technique for tracheoesophageal fistulization, which was developed by Assoc. prof. Sapundzhiev deserves special attention. A technique for endoscopic autologous fat tissue transfer for obturation of pharyngocutaneous fistula after laryngectomy is presented. The results of a technique developed by the doyen of otorhinolaryngology in Bulgaria Prof. Ivan Tsenev and Assoc. prof. Sapundzhiev for open arytenoidchordectomy with long-term intralaryngeal stenting in patients with bilateral paralysis of the vocal cords are presented. In 2014 a publication summarized clinical practices regarding tonsillar surgery and their evolution over time. This article marked the beginning of a change in the established routines of our specialty in this surgical area. During the following 8 years, in many centers in our country, intracapsular tonsillar surgery was established in the surgical practice, especially in cases of obstructive sleep apnea in children. Of particular interest for the surgical work is the comparative study of the safety profile of numerous surgical powered devices used routinely in modern otorhinolaryngological surgery. An extensive review of the current possibilities of endoscopic access for diagnosis and surgery of diseases of the ENT organs and the head and neck region is published. It clearly shows the trend for exponential development of endoscopic approaches and techniques. Assoc. prof. Sapundzhiev and his team present their own method for standardized quantitative endoscopic evaluation of the larynx in children. Further research based on this protocol followed. The project led to the development of registered utility model of a modified laryngological instrument. New results with this method were presented at the last congress of our society a month ago, which shows its potential for application in other studies as well.

In Direction 5: Rare clinical cases are presented here. A case of a patient with hemangiopericytoma of the larynx and fulminant course is presented. Presented is a case of a patient with a severe form of empty nose syndrome, with manifestations beyond the current classifications. The patient was followed for a very long period of time. Of interest is the case of a patient with an aberrant course of the two internal carotid arteries in the area of the nasopharynx. A comprehensive overview of the current information on the incidence, etiology and clinical manifestations of this condition, especially in relation to otorhinolaryngology, is presented. Carotid arteries with aberrant course unilaterally or bilaterally should be considered in clinical practice, since taking into account of this condition may change the diagnostic and therapeutic behavior and explain cases of severe and fatal postoperative hemorrhages. From an otorhinolaryngological aspect, a pediatric patient with a severe congenital heart malformation, corrected with a Fontan-type operation, requiring multiple bronchial deobstructions in the context of recurrent plastic bronchitis, is presented. The specific anesthetic and bronchoscopic technique is described. A detailed analysis of a rare clinical case of of a patient with low grade fibromyxoid sarcoma of the larynx is presented, most probably induced by past radiotherapy. Another publication co-authored by Assoc. Prof. N. Sapundzhiev depicts the interdisciplinary diagnostic and surgical approach in case of giant esophageal polyp.

In Direction 6: This set of publications is related to the history of specialty, the origin of eponyms, correlations between current scientific concepts and historical settings are presented, including the reflection of individual pathologies and conditions in art.

In Direction 7: The first world-wide description of histological findings from the olfactory bulbs and frontal lobes of patients deceased from SARS-CoV2 infection is presented. The findings were of necrotizing olfactory bulbitis with severe neuronal degeneration and neuronal necrosis. The topic of the subsided, but still ongoing pandemic is a "hot" one, and at the last congress of our society, an entire session was devoted to it.

Assoc. prof. N. Sapundzhiev has active scientific profiles in Google Scholar, ORCID, ResearchGate.

4. Evaluation of the teaching activity of the candidate: From the provided Teaching Experience Certificate, it can be seen that the candidate for the competition is an established long-term professor of otorhinolaryngology and has been working at Medical University - Varna since 1976. He was successively promoted consecutively to the academic positions of assistant, chief assistant and associate professor. He leads the courses in otorhinolaryngology and phoniatics for students of medicine and dentistry Bulgarian and English language training, nurses, midwives and speech therapists. He is an examiner in the listed disciplines.

Assoc. prof. N. Sapundzhiev actively works with the students on additional projects. Results of their projects represent our school of otorhinolaryngology with dignity at the demanding audience at the annual congress of the German Society of Otolaryngology and Head and Neck Surgery.

Assoc. prof. N. Sapundzhiev conducts training of specialists in otorhinolaryngology at the MU-Varna, annual basic lecture and thematic courses/seminars for otorhinolaryngologists in

training from other clinical centers and training of general practitioners. Assoc. prof. Sapundzhiev is the chairman of one of the State examination commissions for ENT diseases.

Assoc. prof. N. Sapundzhiev is an active member of the Bulgarian National Society of Otorhinolaryngology, Head and Neck Surgery. He was a member of the Medical Standards Commission. He is a member of the working group on Audiology, Otology and Neurotology, incl. cochlear implantation. On the initiative of Assoc. Prof. Sapundzhiev, after an energetic motivational campaign on his part and not without significant opposition at the founding assembly in 2009 in ISUL, the addition "head and neck surgery" was added to the name, in order to be in tune with the most common European and world practice.

Over the years, Assoc. prof. N. Sapundzhiev initiated and established the series of courses Otorhinolaryngologia practica. The first course in the series was organized in 2005 with main faculty Prof. Dr. B.M. Lippert, from the University of Mainz, Germany. The separate courses had different, often interdisciplinary focus, but were always practically oriented. In the next years the course had a total of 9 editions visited by many specialists and fellow otorhinolaryngologists.

Assoc. prof. N. Sapundzhiev successfully supervised four doctoral students as sole scientific supervisor. These include:

Dr. Petya Stefanova Genova MD - doctoral student in independent form of study: "Surgical approach to obstructive sleep disordered breathing in childhood".

Dr. Lora Teodorova Nikiforova MD - doctoral student in full-time form of study: "Pathologies of the Larynx in Neonates, Infants and Toddlers".

Dr. Asen Georgiev Asenov MD. - doctoral student in independent form of study: "Voice rehabilitation of laryngectomy patients through voice prosthesis".

Dr. Georgi Ivanov Davidov MD - doctoral student in full-time form of study: "Powered surgical tools applicable to otorhinolaryngology - comparative study".

At the moment, Assoc. prof. N. Sapundzhiev is the supervisor of the following doctoral students: Dr. Blagovesta Hristova Spasova - a full-time doctoral student in the doctoral program "Otorhinolaryngology" at the Department of "Neurosurgery and ENT Diseases", Faculty of Medicine at the Medical University - Varna; Dr. Desislava Kirilova Stoyanova - doctoral student full-time form of study in the doctoral program "Therapeutic dentistry" in the field of higher education 7. Health care and sports, professional direction 7.2 Dental medicine, at the department "Periodontology and dental implantology", faculty "Dental medicine" at Medical University - Varna with primary scientific supervisor Prof. Dr. St. Peev.

I believe that the data provided to the candidate fully meet the requirements of the recruitment competition for acquiring the academic position "Professor".

5. Evaluation of the medical and diagnostic activity: Assoc. Prof. N. Sapundzhiev is a practicing polyvalent surgeon in the field of otorhinolaryngology and head and neck surgery with 18 years of experience, an expert in endoscopic and minimally invasive diagnosis and treatment of diseases of the ENT organs and upper respiratory tract. Assoc. prof. N. Sapundzhiev has introduced the following diagnostic and therapeutic methods into the routine clinical practice of the Clinic for ENT-diseases at the Medical University of Varna: Functional endoscopic sinus surgery, paranasal sinuses and orbit (FESS) и орбитата; injection laryngoplasty, laterofixation with the Lichtenberger intervention in bilateral vocal fold paralysis; surgery of the big salivary glands (parotidectomy); otosclerosis surgery, surgery of the middle ear in malformative or traumatic conditions; extracapsular tonsillar surgery; endoscopic diagnosis and surgery for congenital laryngeal stridor in infants (laryngomalacia); drug induced sleep endoscopy in obstructive sleep apnea; endoscopic stenting in stenosis of the larynx and trachea; extended open resections of the larynx, pharynx and the neck (laryngectomy, neck dissection) in cancer of the head and neck; endoscopic resections of tumors of the hypopharynx with the Weerda technique; voice rehabilitation after laryngectomy with voice prosthesis. With his team he introduced for the first time in Varna ENT laser, microdebrider based surgery of the paranasal cavities and of the larynx, coblator resection of tumor of the larynx, ultrasound powered instruments, tissue fusion device.

CONCLUSION

The files submitted by Assoc. prof. Nikolay Sapundzhiev, MD are complete and meet the requirements of the Law on the Development of the Academic Staff in the Republic of Bulgaria. In my opinion, Assoc. prof. N. Sapundzhiev, applying for the position of "Professor", meets the requirements of Law on the Development of the Academic Staff in the Republic of Bulgaria and the Rules for its implementation and can be awarded the academic position "Professor". I am fully convinced that the candidate Assoc. prof. Nikolay Sapundzhiev after many years of professional experience as an otorhinolaryngologist, being a very good diagnostician, surgeon and innovator, is to be considered a good candidate for the academic position "Professor". His active scientific and teaching work in the academic environment of the Medical University - Varna gives me the reason to give a POSITIVE evaluation to the respected Scientific Jury and to recommend awarding the academic position "Professor" to Assoc. prof. Dr. N. Sapundzhiev.

25.10.2022

Plovdiv

Reviewer:

Prof. Dr. Karen Briyanov Dzhambazov, MD, PhD

Head of the Department of ENT

Medical University-Plovdiv