

REVIEW

by

Assoc. Prof. Vassil Gospodinov Svechtarov, DMD, PhD

**(Department of Dental, Oral and Maxillofacial Surgery, Faculty of Dental
Medicine, Medical University – Sofia)**

**External member of the Scientific Jury based on order No. 109-226/26.07.2024 of
the Deputy Rector "Academic Activities" of the Medical University "Prof. Dr. Paraskev
Stoyanov" - Varna**

Subject: competition for the occupation of an academic position "associate professor" in the scientific specialty "Maxillofacial Surgery" for the needs of the Department of General and Operative Surgery at the Faculty of Medicine of the Medical University "Prof. Dr. Paraskev Stoyanov" - city of Varna and the Clinic of Maxillofacial Surgery at the University Hospital "St. Marina" - city of Varna, announced in the State Gazette number 45 of 28.05.2024 with a single candidate Ch. Assist. Prof. Yanko Georgiev Yankov, MD, PhD - specialist in maxillofacial surgery at the Clinic of Maxillofacial Surgery at the University Hospital "St. Marina" - city of Varna and chief assistant at the Department of General and Operative Surgery of the Faculty of Medicine at the Medical University "Prof. Dr. Paraskev Stoyanov" - city of Varna.

The set of documents I received meets the requirements of the Law on the Development of the Academic Staff of the Republic of Bulgaria, the Regulations for the Implementation of the Law on the Development of the Academic Staff of the Republic of Bulgaria and the Regulations for the Development of the Academic Staff of the Medical University "Prof. Dr. Paraskev Stoyanov" - city of Varna for the academic position of "associate professor".

1. Analysis of the candidate's professional development

In 2014, Yanko Georgiev Yankov, MD, PhD graduated with a **master's degree in "Medicine"** at the Medical University "Prof. Dr. Paraskev Stoyanov" - city of Varna, and in 2016 - a **master's degree in "Health Management"** at the same educational institution. From 2015 until now, he has been working as a doctor in the Clinic of Maxillofacial Surgery

at University Hospital "St. Marina" - city of Varna, and in 2020 acquired a **specialty in maxillofacial surgery**. From February 2019 to October 2019, he was a **part-time assistant** in Oral and Maxillofacial Surgery at the Department of General and Operative Surgery and the Department of Oral Surgery at the Medical University "Prof. Dr. Paraskev Stoyanov" - city of Varna, and since October 2019, after winning a competition, he is a **full-time assistant** in maxillofacial surgery at the same department. In the period 2021 - 2022, he is an independent doctoral student at the Department of General and Operative Surgery, Faculty of Medicine, majoring in Surgery at the Medical University "Prof. Dr. Paraskev Stoyanov" - city of Varna and in December 2022 he obtained the **educational and scientific degree "PhD"** after successfully defending his dissertation on the topic "Values of procalcitonin and the delta neutrophil index in surgery for inflammatory diseases of the head and the neck". From July 2023 until now, after winning a competition, he works as a **chief assistant professor** in maxillofacial surgery at the Department of General and Operative Surgery of the Medical University "Prof. Dr. Paraskev Stoyanov" - city of Varna. Yanko Georgiev Yankov, MD, PhD as an assistant, teaches maxillofacial surgery to fourth and fifth year dental students in Bulgarian and English. From all this it is clear that he actively participates in the academic activities of the department where he works.

2. Scientific activity

In the competition, Yanko Georgiev Yankov, MD, PhD presents scientific papers that fully meet the scientometric requirements of the Medical University "Prof. Dr. Paraskev Stoyanov" - city of Varna for the occupation of the academic position of "associate professor", indicated in the certified (No. 281/03.06.2024) from the Library of the Medical University - city of Varna academic certificate (No. 13 from the list of submitted by applicant documents). The scientific activity of Yanko Georgiev Yankov, MD, PhD includes the following scientometric indicators:

2.1. Dissertation work for obtaining the educational and scientific degree "PhD" (A1) - 1 piece;

2.2. Full-text scientific publications in publications referenced and indexed in world-famous databases with scientific information (B4) – 10 issues;

2.3. Published book based on a protected dissertation work for the award of the "PhD" (D6) - 1 issue;

2.4. Full-text publications published in scientific publications, referenced and indexed in world-famous databases with scientific information (G7) – 1 issue;

2.5. Full-text publications published in non-refereed journals with scientific review (G8) – 5 issues;

2.6. Full-text publications in scientific journals and anthologies, beyond the minimum scientometric requirements for occupying the academic position "associate professor" - 1 item.

Two more full-text publications published in a non-refereed journal with scientific review (G8) are presented, which are not subject to review in the current competition because they were used in a previous procedure for obtaining the educational and scientific degree "PhD".

For ease of understanding and analysis, the scientific publications presented by the candidate are entered and compared with the minimum scientometric indicators required for the occupation of the academic position "associate professor" in Table 1.

Group of indicators	Number of publications in the group	Minimum number of points required to occupy an academic position "associate professor"	Points with which Dr. Yanko Georgiev Yankov, d.m. participates in the competition for the academic position "associate professor"
A1	1	50	50
V4	10	100	329
G6, G7 and G8	7	200	205
Outside the minimum минималните	1	1 piece	1 piece

Table 1. Minimum required points by groups of indicators and points with which Dr. Yanko Georgiev Yankov, d.m. participated in the contest

In addition to the dissertation work for the acquisition of the educational and scientific degree "PhD", Yanko Georgiev Yankov, MD, PhD is the **independent author** of:

- a published book based on a protected dissertation work for the award of the degree "PhD";
- 4 full-text publications in scientific publications, referenced and indexed in world-famous databases with scientific information;
- 2 full-text publications in non-refereed publications with scientific review.

Of scientific publications published in collaboration with colleagues, he is the **first author** of:

- 6 full-text publications in scientific publications, referenced and indexed in world-famous databases with scientific information;
- 5 full-text publications in non-refereed publications with scientific review;
- a full-text publication submitted outside the evidence for meeting the minimum requirements for holding the academic position of "associate professor".

From scientific publications published in collaboration with colleagues, Yanko Georgiev Yankov, MD, PhD is **second author** of:

- full-text publication in a scientific publication, referenced and indexed in world-renowned databases with scientific information;
- full-text publication in a non-refereed peer-reviewed journal.

Participating in the current competition, Yanko Georgiev Yankov, MD, PhD submits, through the attached academic reference, 10 **citations** in full-text publications in non-refereed peer-reviewed journals (indicator "D12"), self-citations excluded, and thus he collects the required total of 50 points (10 citations x 5 points) of indicators D10 -12.

At the present moment (05.08.2024), the individual h-index of Yanko Georgiev Yankov, MD, PhD is 5 and has a total of 82 citations, of which 26 for 2023 and 56 for 2024 (**Google Scholar** - <https://scholar.google.com/citations?user=58wHinwAAAAJ&hl=en>).

The candidate's scientific interests are combined in the following clinical directions:

- **Procalcitonin and delta neutrophil index in head and neck diseases - A1.1., V4.6., V4.7., G6.1., G8.1. (dissertation), G8.2. (dissertation)**

The scientific publications of Yanko Georgiev Yankov, MD, PhD in this direction are related to the first ever research and analysis not only in Bulgaria, but also worldwide of the two inflammatory markers procalcitonin (PCT) and delta neutrophil index (DNI) in inflammatory diseases in the maxillofacial region of patients, have reached the age of 18. He divided the patients studied by him into two main subgroups - with odontogenic and non-odontogenic origin of the infection, analyzing and comparing the two subgroups both separately and between them. He examines and analyzes their demographic gender and age distribution in detail and logically. Through his ROC curves, he calculates their sensitivity, specificity, and predictability and derives their cut-off diagnostic values. All the characteristics of PCT and DNI he compares and analyzes with already known and established in clinical practice for decades markers of inflammation C-reactive protein (CRP), leukocytes (WBC) and neutrophils (Neu), calculating all positive and negative correlations between them .

In his studies in this direction, Yanko Georgiev Yankov, MD, PhD proved that the average measured values of the five indicators he studied (CRP, WBC, Neu, PCT and DNI) in both studied subgroups of patients with odontogenic and non-odontogenic abscesses were significantly higher than the same in the control group of healthy individuals, that there is no substantial and significant gender differentiation between them. It also found that in the studied subgroups of patients with odontogenic and non-odontogenic abscesses, there were positive correlations between CRP and WBC and between CRP and neutrophils and a strong positive correlation between WBC and Neu. Estimates that there is no positive correlation between PCT and DNI. He reached the important conclusion that the predictability, sensitivity, and specificity of all the parameters he studied were highest for CRP and lowest for WBC, and that the same for PCT and DNI were higher than those for WBC, similar or better. higher than those of Neu and lower than those of CRP.

- **Inflammatory diseases of the head and neck - V4.1., V4.4., V4.5., G8.1., G8.3., G8.5.**

The scientific publications of Yanko Georgiev Yankov, MD, PhD from this group are based on retrospective studies conducted in which he investigated the bacterial and fungal agents of infectious diseases in the maxillofacial region in both adults and children. The studies he is conducting are on hospitalized and emergency operated patients with abscesses and phlegmons of odontogenic and non-odontogenic origin of the head and neck and in those with acute purulent cervical lymphadenitis in the Clinic of Maxillofacial Surgery at the University Hospital "St. Marina" – city of Varna, where he works as a chief physician assistant in maxillofacial surgery. In his scientific publications of this group, he analyzed their sex and age demographic characteristics, antibacterial and surgical treatment, the most frequently applied antibacterial drugs used in their treatment, and the prognosis of the outcome of their disease.

In them, he found that the resident bacterial microflora, represented by more than one bacterial species, was the most common cause of this type of purulent infections. Analyzed the causative agents of acute purulent lymphadenitis in children of unknown etiology and found that *Staphylococcus aureus* was the most common among them. He found that odontogenic infections were caused in a greater percentage of teeth in the lower dentition than in those of the upper dentition and that the most common cause of abscesses and phlegmons in the maxillofacial region was the lower right first molar (tooth 46).

• Benign diseases in the maxillofacial area – V4.2., V4.3.

This group of scientific publications includes two refereed articles with clinical cases of rare benign diseases in the maxillofacial area, which in terms of differential diagnosis can create difficulties even for the experienced clinician.

One of them (V4.2.) describes a case of a pigmented lesion of the buccal mucosa in a woman, which could easily be confused with a malignant disease, but the pathological analysis performed after its excision within healthy surgical limits showed that it was a rare found a pigmented lesion of amalgam origin - the result of a dental intervention in her youth.

In the second publication (V4.3.), a case of ameloblastoma of the lower jaw, operated in outpatient conditions under local wire anesthesia, is disclosed. In terms of differential diagnosis, it is assumed to be an odontogenic cyst, but the macroscopic appearance and histological analysis of the specimen show that it is an ameloblastoma. The patient's

postoperative period passed smoothly, no recurrence was observed, and dental implants were then placed at the site of the surgical intervention.

• **Malignant diseases in the maxillofacial region – V4.8., V4.10., G8.4., beyond the minimum scientometric requirements (one piece)**

Included in this group are four full-text publications that review rare malignancies of the maxillofacial region, as well as their main clinical manifestations, diagnosis, and treatment. Two of them are clinical cases of rare malignant pathologies.

One (V4.10.) is for a 14-year-old girl, in whom, on the occasion of the presence of a median cyst on the neck, a radical excision of the latter was performed together with resection of the adjacent median part of the hyoid bone, but unexpectedly, the pathological analysis showed that refers to papillary carcinoma of thyroid tissue within the cystic cavity. This pathology together with the thyroid hemigenesis in this patient make it only the third such case described in the world medical literature.

The other (V4.8.) article is about a rare phenomenon – a synchronous malignant process of the parotid and prostate gland in an adult man. The discovery of the two oncological diseases creates a diagnostic dilemma, which is solved by making two whole-body positron emission tomography (PET/CT) scans using different isotopes and performing an immunohistochemical (IHC) examination of the material resected within healthy surgical margins from left parotid gland.

The remaining two full-text publications in this group (G8.4.) and one publication beyond the minimum scientometric requirements) are review articles on papillary carcinoma in thyroglossal cysts and secondary lymph node involvement in head and neck malignancies.

• **Dental implantology – V4.9.**

In this scientific publication, Yanko Georgiev Yankov, MD, PhD describes how implant success is measured not only by implant survival but also by long-term esthetic and functional outcomes. Implant placement, according to this self-authored article, should be prosthetic, with proper three-dimensional positioning for optimal tissue support and stability. According to him, several procedures can be implemented to ensure this requirement. He writes that while socket preservation is performed at the tooth extraction stage, guided bone regeneration is performed before or simultaneously with implant placement.

The present referenced review article (V4.9.) aims to summarize and analyze the procedures that have been used for the preparation of the implantation site, the preservation of the existing tissues and their augmentation in cases of deficiency. Through this scientific work, he summarizes current knowledge regarding alveolar preservation and guided bone regeneration as prerequisites for future implant placement. Here, he thoroughly analyzes their indications, advantages and limitations and offers important recommendations for further research in this important direction for our time.

• **Rare syndromes in the maxillofacial region – V7.1., G8.2.**

This scientific group includes two peer-reviewed full-text review articles on two rare syndromes in the maxillofacial region - on their essence, etiology, diagnosis, differential-diagnostic difficulties, treatment and prognosis.

One (V7.1.) describes in detail the anatomy of the auriculotemporal nerve and the causes of the associated Frey syndrome, a condition in which parasympathetic innervation from the interrupted auriculotemporal nerve through aberrant connection of the nerve branches to the skin in the area it innervates, is transferred to it and the sweat glands and blood vessels containing it.

In the other article (G8.2.) Yanko Georgiev Yankov, MD, PhD examines Eagle syndrome and describes the highlights of the nature and treatment of this rare disease. In it, he examines in detail the two varieties of the course of the syndrome - classic, in which the symptoms are due to the pressure from the pathologically long proc. styloideus of the neighboring nerve structures, and a type of the carotid (carotid) artery, in which the clinical manifestation is due to its compression of the latter.

3. Educational and teaching activity

According to a study load reference with ex. No. 112-149/07.06.2024 and certificate of teaching experience No. 099-1976/30.05.2024, issued by Medical University "Prof. Dr. Paraskev Stoyanov" - city of Varna, the educational activity of Yanko Georgiev Yankov, MD, PhD is from the summer semester of the academic year 2019/2020, when he started working as a **part-time assistant**. As such, he has delivered exercises on oral and maxillofacial surgery to students of dental medicine for a total of 380 teaching hours - 220 in Bulgarian and 160 in English. As a **regular and chief assistant professor** for the period from 21.10.2019 until now, he conducts exercises in maxillofacial surgery for students of dental medicine from

Bulgarian and English studies with a total duration of 1076 hours, of which 716 in Bulgarian and 360 in English.

Thus, his **total teaching activity** includes 1456 teaching hours - 936 teaching hours in Bulgarian and 520 teaching hours in English.

4. Conclusion

According to the scientometric and teaching indicators provided to me, according to the Law on the Development of the Academic Staff of the Republic of Bulgaria and the Regulations for the Development of the Academic Staff of the Medical University "Prof. Dr. Paraskev Stoyanov" - city of Varna chief assistant professor Yanko Georgiev Yankov, MD, PhD fully meets the requirements for holding the academic position "associate professor".

On the basis of the above, I give my **positive assessment** to the candidate in the competition and recommend the members of the Scientific Jury to award **Chief Assistant Professor Yanko Georgiev Yankov, MD, PhD** the academic position "associate professor" in the scientific specialty "**Maxillofacial Surgery**" for the needs of the Department of General and Operative Surgery at the Faculty of Medicine of the Medical University "Prof. Dr. Paraskev Stoyanov" - city of Varna and the Clinic of Maxillofacial Surgery at the University Hospital "St. Marina" - city of Varna.

28.08.2024

Assoc. Prof. Vassil Gospodinov Svechtarov, DMD, PhD

Sofia

Заличено на основание чл. 5,
§1, б. „В“ от Регламент (ЕС)
2016/679