

To the **Chairperson** of the Academic Evaluation Committee
determined by Order Nr. ПД/26-2401/14.12.2023
of the Executive Director of
UMHATEM Pirogov - Sofia

R E V I E W

Drawn up by Prof. Dr. Rosen Gospodinov, MD
Department of General and Operative Surgery at the Faculty of Medicine of
Medical University - Varna

Regarding: *carrying out a competition for holding the academic position of ASSOCIATE PROFESSOR in NEUROSURGERY in the field of higher education:*

7. Healthcare and Sport, professional field

7.1. Medicine and degree program Neurosurgery

for the needs of the Department of Maxillofacial Surgery at UMHATEM Pirogov, Sofia, announced in SG issue 67 dated 04.08.2023.

Pursuant to Order Nr. ПД/26-2401/14.12.2023 of the Executive Director of UMHATEM Pirogov, Sofia, I am determined for a member of the Academic evaluation Committee with the task to draw up a review.

One applicant is participating in the competition: Dr. Svetoslav Vasilev Slavkov, MD. Presently the applicant is on the position Head of Department of Maxillofacial Surgery at UMHATEM Pirogov.

The materials regarding the competition were submitted to me in the legal term, and the set of documents is in correct order and complies with the requirements of the Act on Development of the Academic Staff of the Republic of Bulgaria.

I. Biographical data of Dr. Svetoslav Vasilev Slavkov, MD

Dr. Svetoslav Slavkov, MD was born on 19.01.1970.

In 1996 the same graduates higher education at the Medical University, Faculty of Dental Medicine, Sofia, with the educational degree Master of Stomatology.

In 2014 he graduated second higher education at the Medical University, Faculty of Medicine, Sofia, with educational degree Master of Medicine.

In 2015 Dr. Slavkov completed the master's degree course in Health Management at the Faculty of Public Health and health Management, MU - Sofia.

In 2002 the same acquired a specialty in Oral Surgery.

In 2007 acquired a specialty in Maxillofacial Surgery.

From 01.02.2001 to 2019 the same worked at SHAT of MFS - EOOD, Sofia. He was in charge of medicinal activity in SHAT of MFS.

After the merger of SHAT in MFS with UMHATEM Pirogov, the same has worked in the Department of MFS of Pirogov, and presently he is temporarily on the position of Head of Department.

Dr. Svetoslav Slavkov has total length of service of 28 years, of which 25 in the specialty.

In 2018 Dr. Slavkov defended successfully a thesis entitled: **Diagnostic, medicinal and epidemiological characteristics in patients with tumors of salivary glands** and acquired the educational degree PhD.

He was the head of post-graduate students in Oral Surgery and in Maxillofacial Surgery

Dr. Slavkov is a member in the following organizations:

- Bulgarian Dental Association
- Bulgarian Medical Association
- European Association in Craniofacial Surgery

He has a command of English and French on a basic written and spoken level.

II. Research activity of Dr. Svetoslav Vasilev Slavkov, MD

Dr. Slavkov participates in the competition with a total of 41 research works distributed, as follows:

Publications	Number
Research articles	30
Monographs	1
Participations in research forums	9
Participation in an international research project	1

The thesis of Dr. Svetoslav Slavkov is entitled: **Diagnostic, medicinal and epidemiological characteristics in patients with tumors of salivary glands.**

The same and publications related to it are not a subject of review.

Research publications in magazines:

The research publications of Dr. Slavkov are published in competent editions, such as:

- Journal of IMAB
- Oral Diseases
- Applied Sciences (Switzerland)
- Medical review
- Bulgarian journal of public health
- Medinform
- Oncology
- Military Medicine
- Emergency Medicine

Out of 30 articles submitted for review, 13 are in English and 17 are in Bulgarian. 10 of them are published in reviewed and indexed in world-famous databases with scientific information (Scopus and Web of Science), and 15 are publications in editions included in the National Reference List) with scientific review.

Dr. Slavkov took part in **one international research project Contract 78/2015 GRANT 2015 mu - Sofia**, (reg. Nr. 337/15.01.2015, ORDINANCE Nr. 3/27.11.2015 of MES) - Pilot study of human papilloma virus and herpes viruses in oral precanceroses and neoplasms.

According to the place of Dr. Slavkov, as an author in the authors' group, the distribution is as follows:

➤ first author	8 items	(27%)
➤ second author	10 items	(33 %)
➤ third and following author	12 items	(40%)

The scientific production of Dr. Slavkov demonstrates wide awareness and scientific research in various fields in the specialty Maxillofacial and Oral Surgery. His long professional and surgical experience gives him the reason to focus his attention at modern and technological aspects from the areas of the specialty, such as oncology, traumatology, maxillofacial plastic-restorative and reconstructive surgery, orthognatic surgery and therapy of congenital and acquired defects in the maxillofacial area. Such are 3D modeling and printing, the contemporary concepts in surgical control of malignant diseases of the deep zones of the oral cavity and pharynx, etc.

Dr. Svetoslav Slavkov presents his scientific production in the following fields connected with:

- *Maxillofacial, plastic-restorative and reconstructive surgeries;*
- *Microsurgical operative methods;*
- *Oncology;*
- *Cancer of oral cavity;*
- *Oral pathology;*
- *Tumor of salivary glands;*
- *Odontogenic tumors;*
- *Rare diseases;*
- *History of medicine;*

Publications connected with maxillofacial, plastic-restorative and reconstructive surgeries:

In publication Nr. 1 of the list submitted by Dr. Slavkov, namely: “„Three dimensional virtual planning, modelling and printing in fibula free flap mandibular reconstructions – initial case series in a limited resource environment“, is presented a modern approach in surgical therapy of large defects of the head and neck after oncological recissions. Virtual computer planning, simulation of surgical resection/reconstruction and three-dimensional modeling and printing are used. In this way, the positive effects in computer planning on reconstructions in

the maxillofacial area are shown. The development of similar surgical techniques depends both on the availability of apparatuses and on the training of the medical team.

In publications №№ 14,15,16, namely: Nr. 13 - “Complex oropharyngeal reconstructions, Nr. 14 - Modern concepts in surgical accesses to oro- and hypopharynx” and Nr. 15 - „Oral cavity changes during and after cancer therapy“, are described the modern concepts in surgical control of malignant diseases of the deep zones of oral cavity and pharynx, directly connected to the opportunities for adequate anatomic and functional restoration of the removed specific tissues, Historically, surgical approaches in these zones have been prevented mainly by the severe functional deficit in inadequately reconstructed patients.

In publications Nr. 18 and 19 from the list of Dr. Slavkov, namely: Nr. 18 “Three reconstructive approaches in the therapy of patients with mandibular ameloblastoma” and Nr. 19 “Microvascularized iliac transplants used for one-stage restoration of mandibular defects”, are analyzed mandibular resections which are carried out most often in the cases of ablation of tumors. It is proved that one-stage reconstruction of defects through microvascular transplantations are successful in oral and maxillofacial surgery. They have intact blood circulation due to initially performed vascular anastomose. In order to restore the form and function of the mandible, the most often used are transplants obtained from the iliac crest and the fibula.

Publications connected with microsurgical operative methods:

In publications Nr. 7 “One-stage (primary) reconstructions of resection mandibular defects by means of autogenic vascularized iliac and fibular transplant” and nr. 19 “Microvascularized iliac transplants used for one-stage restoration of mandibular defects”, are used microsurgical operative techniques which secure the use of considerable volume of vascular hard and soft tissues. They have intact circulation through the realized vascular anastomosa. The vascularized iliac transplant is preferred for reconstruction of complex defects of the mandible. Its transveric vessels are a. et v. circumflexa ilium profunda which are anastomized with a. et v. facialis or other ones of a similar caliber. Microvascularized iliac transplants are used in two patients with developing benign mandibular tumors. The postoperative Doppler analyses confirm the vascularization of the transplants, and with computer-tomographic 3D reconstructions also their survival. The results confirm that the method is effective after tumor ablations and give the reason to assume that it is applicable in other cases of bone deficit.

Publications connected with oncological diseases in maxillofacial area:

In publications Nr. 12 and nr. 25, namely: Nr. 12: “Systematized diagnostic and treatment algorithm for tumors of the parotid salivary gland “and nr. 25: “Tumors of the salivary glands in Bulgaria 2007-2017. Epidemiologic study of frequency, localization and histology”, algorithms are developed for better diagnostics, therapy and tracing of patients with tumors of the salivary glands. The behavior of the specialist is improved by a multi-specialty approach, and the errors are reduced to the minimum. Standardized tracing is introduced, with which the survival rate of patients is improved.

In publication Nr. 3 – “HPV status of Bulgarian patients with oropharyngeal and oral carcinomas”, the connection between HPV and oral cancerogenesis is examined by identifying

more than 150 sub-types of HPV; more than 40 types of HPV infect the anogenital area and oral cavity. Recommendations are drawn up for prevention by recommending each patient with questionable lesions in oral cavity to be tested for HPV. Determining the HPV status should become a standard practice in oropharyngeal and oral carcinoma. The growth of HPV-positive oropharyngeal carcinoma and their comparatively high sensitivity to chemo-radiotherapy often directs the therapeutic plans towards non-surgical therapy. It is considered that the modern surgical concepts give hopeful results simultaneously both in the radical and in the functional therapy of pharyngeal pathology.

Publications connected with cancer of the oral cavity

In publications Nr. 3 “HPV status of Bulgarian patients with oropharyngeal and oral carcinomas”, Nr.11 “Oral HPV prevalence in general healthy dental patients and patients with oral and oropharyngeal neoplasms in Bulgaria” and Nr. 15 “Oral cavity changes during and after cancer therapy”, it was found that presently cancer of the oral cavity is the sixth most often found carcinoma in the world, and flat-cell carcinoma consists of more than 90% of all cases. Possibilities for therapy increase with the progress of medicine, but at the same time complications during and after therapy of cancer become more frequent. Possible side effects from the therapy of cancer of oral cavity on the oral cavity (xerostomia, mucositis, ulcerations, radiation caries, osteoradionecrosis, secondary infections) are examined, as well as the ways in which they can be prevented and treated. Early diagnostics gives the opportunity for a better result from the therapy and prognosis. Most early cases of squamous-cellular carcinoma are subject to surgical medicinal therapy, while combine palliative therapy is applied normally in the far gone cases. Despite the recent progress in medicine, the survival rate in these patients is rarely higher than 5 years and the prognosis remains bad. The latest opportunities for treatment of oral flat-cell carcinoma through therapy with monoclonal antibodies, oncolytic virotherapy and immunotherapy with IL2.

In publication Nr. 20 “Oral malignant melanoma of the gum of the mandibula”, are examined the good results of therapy through resection in healthy limits of granulated cellular tumor in its capacity of a rare lesion in newborns, located on the alveolar crest. Particular attention is paid on histology and clinical behavior. Histologically these tumors are characterized with big eosinophilic granulated cells similar to the granulated cellular tumor in adults, which are often observed as tumors of Abrikosov. Granulosa cell tumor (GCT), known as Tumor of Neumann, tumor of Abrikosov or granulosa cell myoblastoma in medical literature, is quite rare in the term of the newborn. Etiology and histogenesis of the tumor are contradictory. GCT in newborns differs from the one in adults and has different immunohistochemical characteristics.

Oral pathology

Examinations and analyses are made of the access to the oral health of patients expecting liver transplantations. Diagnostic record is created on studying and evaluating the oral health and dental status, regarding their common health status. In Bulgaria, a number of liver transplantations are made, for whose patients should be carried out carefully tests for

active or potentially active centers of infection, which on a certain stage could compromise the intervention.

Tumor of salivary glands

Publication Nr. 25 “Tumors of salivary glands in Bulgaria 2007-2017. Epidemiological examination of frequency, localization and histology” presents the diagnostic value of thin-needle and nuclear biopsy in masses in salivary glands, and the advantages and disadvantages of these two methods are shown. The tumors of the salivary glands are a diagnostic challenge in the clinical practice and the precise diagnosis is of great significance for their adequate therapy. Thin-needle aspiration cytology and nuclear-needle aspiration cytology are useful methods for assessment of formations for which it is doubtful that they originate from the salivary glands. The presented diagnostic precision of FNAC can reach 98%, when an appropriate material is received, but the percentage of insufficient or non-diagnostic results reaches 29%.

Odontogenic tumors

Publications Nr. 18 “Three reconstructive approaches in the therapy of patients with mandibular ameloblastomas” examines odontogenic tumor - Ameloblastoma. It is from 10% to 25% of all odontogenic tumors and in 80% is localized in the body and limb of the mandibular. It has epithelial origin, expansive and locally-destructive growth. Its non-radical removal results in relapses. It becomes malignant in 1 to 4% and can turn into metastases. Resection of the mandibula, which requires subsequent reconstruction, is deducted as an important determinant in its therapy. Three reconstructive approaches in the therapy of patients with mandibular ameloblastoma are presented.

Publications connected with some rare diseases:

In publication Nr. 22 “Difficulties in the diagnostics of the syndrome of Eagle. Surgical therapy of syndrome of Eagle with transcervical access - clinical case” are presented the difficulties in diagnostics and therapy with Eagle syndrome. The good result in the performed surgical therapy is reported. An operation with transcervical access is realized. The illness is described in its entirety and is of particular interest for the practicing surgeons. A clinical case of a 44-year woman is presented in the department of maxillofacial surgery with complaints of pain in the area of the neck, dysphagia, a feeling of a foreign body in the throat and when swallowing. The patient is with anamnesis for made consultations with a neurologist, gastroenterologist, neurosurgeon, otolaryngologist, psychiatrist and stomatologist. The computer tomography of the neck shows that the two styloid processes are enlarged. The patient is diagnosed with the Eagle syndrome.

In publication Nr. 26 “Actinomycosis of the mandibula with a patient with thalassemia mayor” is presented Actinomycosis, as a rare disease which causes both suppurative and granulomatous infection. It is pointed out that the occurrence of the actinomycotic infection in the area of the head and neck is relatively rare. It is also underlined that the diagnosis “actinomycosis” is often omitted because it can imitate neoplasm. On the other hand, it is pointed out in the article that thalassemy or sickle cell anemia is a genetic disease connected

with incorrect formation of hemoglobin. A patient combining both diseases is presented in the article.

In publication Nr. 27 “Surgical therapy of intraosseous hemangioma of the maxilla - a clinical case of cavernous hemangioma of the maxilla in an adult” is presented a clinical case of a patient with cavernous hemangioma of the maxilla. A standard reference concerning hemangioma as a disease was made. It is pointed out that in the past hemangiomas were determined as anomalies in the development of the blood vessels. The contemporary classifications determine them as benign tumors typical of the early childhood, revealing with a phase of rapid development and proliferation of endothelial cells and a phase of involution. The intraosseous hemangiomas of the maxilla are exceptionally rare. Mainly they are described in the caraniofacial area in the mandible, zygomatic area and the orbit. The intraosseous hemangiomas are typically asymptomatic, slowly growing formations which cause discomfort and spontaneous bleeding. In adults they can be observed most often in women in their second decade. The diagnosis is placed on the basis of clinical data, histopathomorphological analyses, CT, MRI, angiography, Doppler. A clinical case is presented of a 46-year old patient from the Department of Maxillofacial Surgery, directed by an othopharyngologist, on the occasion of a vascular formation engaging the alveolar crest and the body of the maxilla to the left. The patient complains from prolific bleeding. CT and conventional angiography are carried out, a vascular formation in the left maxillary area. Surgical therapy is carried out, first stage embolization of feeding vessels, followed by resection of the maxilla to the left.

Publications connected with the History of Medicine

Publications Nr. 9, 10, 24, 28, 29, 30 represent explorations of the roots of medicine, whether it refers to surgical or therapeutical specialties. They are serious contribution for the rationalization of the future of this science and adds additional prestige in training students and post-graduate students who have chosen its specialties.

Monograph

Monographic work entitled: **“Diagnostic-medicinal algorithms in patients with tumors of salivary glands”** - publishing house: Central Medical Library - Medical University - Sofia ISBN 978-619-7491-75-3

The monographic work of Dr. Slavkov is developed on 124 pages, Bibliography from 121 sources is used, including Bulgarian authors. It consists of five main chapters and finishes with conclusions and recommendations. The second chapter forms the main idea of the study. Three main tasks are assigned for implementation. They are formulated adequately. The studied clinical material includes 185 patients with tumors of salivary glands. The same is completely sufficient for implementation of the main idea.

Its contribution is outlined with original and practically applied characteristics and the following main diagnostic-medicinal recommendations are made:

1. Knowing the demographic distribution of patients with tumors of salivary glands, with the view to improve the early diagnostics, it is advisable to include additional para-clinical analyses, such as computer axial tomography with contrast, nuclear-magnet resonance and/or thin-needle aspiration biopsy, described in detail in the presented diagnostic algorithm, and in

this way the volume of operative intervention and necessity of lymphatic dissection are specified more precisely.

2. Following the presented algorithm for therapy and tracing of patients with tumors of the big salivary glands, the preservation of the facial nerve in the cases when it is not affected by the tumor process, is a compulsory condition, because it does not carry the risk of relapse in the malignant TSG.

3. It is advisable to apply intraoperative electrophysiological neuromonitoring as a reliable method for intraoperative finding of the facial nerve and its limbs.

4. The worked out algorithms for diagnostics and therapy of patients with tumors of the salivary glands in the Republic of Bulgaria specify the behavior and minimize the medicinal-diagnostic errors of the physicians engaged in the problem. By means of them tracing is standardized, the survival rate of patients is improved and the multi-specialty approach in therapy of patients with tumors of salivary glands is supported.

Monographic work entitled: “Diagnostic and medicinal algorithms in patients with tumors of the salivary glands”, developed by Dr. Slavkov, is a valuable manual for surgeons practicing maxillofacial surgery.

The reference for the impact factor of the publications shows the following distribution:

Three publications are presented in magazines with IF from Journal Citation Reports – THOMSON REUTERS.

MAGAZINE	(IF)-TOMPSON REUTERS	(SJR)-SCOPUS
Journal of IMAB	0.2	0.225
Oral Diseases	3,8	0.849
Applied Sciences (Switzerland)	2,7	0.492

Dr. Svetoslav Slavkov has **the following quotations** of his publications:

16 quotations in Bulgarian sources;

1 quotation from a foreign source in Scopus;

2 quotations from foreign sources in Web of Science;

Self-quotations are excluded.

Table according to indicators - Dr. Slavkov

Group of indicators	Content	ASSOCIATE PROFESSOR Minimum number of points according to national requirements	Required points according to the requirements of UMHATEM „N.I.Pirogov” EAD - Sofia	Available points according to the presented science-metric data of the applicant
A	Indicator 1	50	50	50
B	Indicator 2	-	-	-
C	Indicators 3 or 4	100	100	133

D	Sum of the indicators from 5 to 9	200 (160 for III 7.6)	250	252,56
E	Sum of the indicators from 10 to 12	50	50	60
F	Sum of the indicators from 13 until the end	-	-	200
G	IF (concerns only the requirements of UMHATEM „N.I.Pirogov”)	-	5	6,2

III. Academic load of the applicant

Dr. Slavkov teaches in three fields:

Students of Medicine and Dental Medicine - certification of practices and probations and conducting exercises to students in their 6th year at the Department of Emergency Medicine;

Post-graduate students - management of post-graduate students in the specialties Oral Surgery and Maxillofacial Surgery, participation in evaluation committees for conducting preliminary oral examinations;

IV. Conclusion:

One applicant participates in the competition for holding the academic position of ASSOCIATE PROFESSOR: **Dr. Svetoslav Vasilev Slavkov, MD**. From the documents submitted to me - publications, diplomas and certificates from scientific events, conducted courses, etc., it is obvious that Dr. Slavkov fulfills the requirements for holding the academic position of ASSOCIATE PROFESSOR.

The scientific production of Dr. Slavkov is rich. It is aimed at the research of some oncological diseases in the maxillofacial area, their surgical therapy with subsequent reconstructions. He shares his experience from the therapy of some rare diseases in the maxillofacial area, presents some casuistic cases, etc. The scientific production of Dr. Slavkov satisfies the requirements placed in the Act on the Development of the Academic Staff in Bulgaria and of the Regulation on Implementation hereof, as well as of the Regulation of UMHATEM Pirogov.

Dr. Svetoslav Slavkov is an established and sought physician with long practice. He is in command of the modern surgical methods for therapy in the specialty.

On the grounds of all expressed until now, I give my positive assessment to **Dr. Svetoslav Vasilev Slavkov, MD** for holding the academic position **ASSOCIATE PROFESSOR** in degree program **Neurosurgery** at UMHATEM - Pirogov - Sofia.

The review is drawn up by:

15. 01. 2024

Prof. Dr. Rosen Kolarov, MD

Calligraphy