

## REVIEW

By Prof. Dr. Hristo Georgiev, DSc. Head of Department of Orthopedics and Traumatology,  
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By Procedure for Occupation of Academic Position "Professor" in Higher Education 7. "Health and Sports" in professional field 7.1 "Medicine" and scientific specialty "Orthopedics and traumatology" at the Faculty of Medicine, Department "Orthopedics and traumatology" for the needs of Department of Orthopedics and Traumatology, Medical University "Prof. Dr. Paraskev Stoyanov" - Varna, in connection with a competition announced in the State Gazette, no. 8 / 28.01.2020

The review has been prepared in accordance with the Law for the Development of the Academic Staff in the Republic of Bulgaria, Rules for the implementation of this law, Rules for the development of the academic staff at the Medical University - Varna, November 28, 2016, Annex No. 1 to these Rules and Order No. P -109 – 195 / 03.06.2020 r. of the Rector of the Varna University.

Only one candidate, Associate Professor Margarita Mihailova Kateva, MD, Head of the " Hand Surgery and Reconstructive Surgery Clinic " at the University Hospital "Sofamed" participated in the competition.

Assoc. Prof. Dr. Kateva DM is 61 years old. Graduates high school with learning German and English in Montana. She obtained his higher education in medicine from the Medical Academy, Faculty of Medicine, Medical University of Sofia, Bulgaria (Diploma No. 003972 of 1983) and a specialty in Orthopedics and Traumatology in 1993 (Diploma No. 07687 from 09.03.2001). In 2008, the Higher Medical Academy awarded her Doctor of Science on the basis of a dissertation on the subject "Emergency reconstruction of traumatic defects of the fingers with retrograde homodigital and metacarpal island flaps" (Diploma No: 32197 / 24.03.2009). By decision of the National Assembly of UMBALSM "Pirogov" from October 2012 the candidate occupies the academic position "Associate Professor" (Certificate No: № A-000011 of 10.10.2012). Assoc. Prof. Kateva holds a Health Management Qualification from Southwestern University , " Neophyte Riski " - Blagoevgrad.

The entire length of service of Assoc. Prof. M. Kateva, MD was as a surgeon in operating clinics. She began as a resident physician at the Surgery Department at Elin Pelin Regional Hospital (1983-1987). She works as an intern at the Department of Surgery at the Surgery at

UMBALSM "NI Pirogov". (1987 - 2011) and Head of the 1st Traumatology Clinic at the UMBALSM "NP Pirogov" (2011-2014). Since 2014, Assoc. Prof. Kateva is Head of the Department of Hand Surgery and Reconstructive Surgery at the University Hospital "Sofiamed". Her total length of service is 35 years and 2 months, of which 24 years as a doctor specializing in orthopedics and traumatology. (Certificate 25 / 30.01.2020, University Hospital "Sofiamed").

Assoc. Prof. Kateva has many specializations, including many years in reconstructive surgery, peripheral nerve surgery, hand surgery, microsurgery and more. at the Milezi Center, Vienna, Clinic " Rehts der Isar ", Munich, specialized clinics in Budapest, Ankara, Florence, etc. She has recognized competence in " Jurisdiction in microvascular surgery"MU - Sofia (since 11.03 .2014, Diploma - No RC 36-393) and " Jurisdiction in Surgery of the Hand " MU - Sofia (since 18.04.2013, Diploma - No RC 36-842).

She is the chairman of the examination committee for VSD " Surgery by hand " (Order No. PK 36-180, dated 13.02.2019).

Assoc. Prof. Kateva is a member of prestigious professional organizations: Bulgarian Orthopedic Traumatology Association (BOTA), Bulgarian Society of Surgery of the Hand of which she is also President, FESSH (Federation of European Societies for Surgery of the Hand) and IFSSH (International Federation of Societies for Surgery of the Hand),

Assoc. Prof. Kateva is a research assistant of PhD students in the Doctoral Program "Orthopedics and Traumatology".

She was a member and reviewer in scientific juries for awarding degrees and academic positions at the Medical University of Sofia, TU Ruse and the Medical University of Pleven.

She is a scientific supervisor of 3 residents in orthopedics and traumatology.

## **1. SCIENTIFIC PRODUCTION**

In this competition, Assoc. Prof. Margarita Mihaylova Kateva, MD, presented: List and available copies of the thesis abstract of the thesis "Emergency reconstruction of traumatic defects of the fingers with retrograde homodigital and metacarpal island flaps", two monographs "Flap for reconstruction of post-traumatic hand defects "2019 ISBN - 978-619-91405-1-2 and" Early surgical treatment after trauma to plexus brachialis "2019 ISBN - 978-619-91405-0-5, scientific publications in our and foreign countries journals, reports and announcements from participation in international and national conferences, symposiums and congresses - a total of 128 titles. This is part of the applicant's total scientific output, which

includes 152 scientific papers. The tabular presentation of the quantitative indicators submitted by the applicant for the competition is as follows:

Author place	Dissertation	Publications in refereed and IF journal	Monography	Publications in non-refereed journals	Participations in national and international forums in Bulgaria	Participations in international forums abroad	Overall
1. Only author	1	0	2	2	15	14	34
2. First author	0	2	0	24	16	13	55
3. Second author	0	0	0	4	13	9	26
4. Third author	0	4	0	2	3	4	13
Overall	<b>1</b>	<b>6</b>	<b>2</b>	<b>32</b>	<b>47</b>	<b>40</b>	<b>128</b>

From the writings of Assoc. Prof. Margarita Mihailova Kateva, MD for participation in the Contest according to the ZRASRB, RASPRSRB and PRA of MU-Varna, I acknowledge 41 (forty-one scientific papers). Of these - 1 abstract of dissertation, 2 monographs, 32 publications in Bulgarian scientific journals and collections and 6 publications in scientific journals with IF (3 publications) and abstracted in a worldwide database (3 publications) in English (Comptes Rendues de L ' Academie Bulgare des Sciences, Journal of hand surgery-european volume and German Medical Science). Of these, the candidate has an overall IF of 0.321. (Academic reference of Varna University, March 18, 2020) According to Art. 100. item 4 of the Regulations for the Development of the Academic Staff at the Medical University-Varna and Annex 1, all publications were not used for the award of a scientific and educational degree "Doctor" and an academic position "Associate

Professor". Of the actual publications, 6 are in English, 17 in Bulgarian and English and 20 in Bulgarian.

According to para 1, item 10 of the DR of ZRASRB and the Regulations for the development of the academic staff at the Medical University - Varna, the monographic work of Assoc. Prof. Dr. M. Kateva - "Early surgical treatment after trauma of plexus brachialis". Single-issue Publishing House, Sofia, 2019, ISBN - 978-619-91405-0-5 is published in 100 copies. and in a volume of 102 pages. It has been reviewed by three habilitated surgical professors. The monograph does not repeat the dissertation submitted for the acquisition of the Doctor of Medical Sciences. It fully meets the legal requirements for this type of work and the requirements of this competition. The applicant presents the abstracts of the monograph work in Bulgarian and English.

In 31 (76%) of the scientific papers recognized for the competition, Assoc. Prof. Dr. Kateva is only author or the first author. They contain their own scientific research and scientific and practical conclusions.

According to the references of the applicant's scientific works, made by the Central Medical Library (Ex. № 102 / 16.03.2020) and copies from other sources, it has a total number of citations - 42 (4 citations in refereed journals from World Databases Web of Science and Scopus, 5 citations in monographs and dissertations and 33 citations in Bulgarian journals).

Assoc. Prof. M. Kateva, MD is a participant in 1 (one) research project in our country - project ".2108, No. H27 / 36 with the theme" Antenna technologies for wearable devices on the human body in the future communication networks "(Fund). Research)".As an added value for the high scientific output of Assoc. Prof. Kateva, I can also reflect the scientific reports and announcements at national and international congresses with podium presentations and posters, a total of 87 scientific papers. They are in the leading scientific forums in the field of FESSH, IFSSH, ICMS, German Nerv Club Meeting and others. Participations in national forums are at BOTA congresses mainly with international participation, conferences of the Society of Surgery of the Hand, congresses of the Balkan Association of Plastic, Reconstructive and Aesthetic Surgery and others. According to Art. 102 (1), item 177b of the Regulations for the Development of the Academic Staff at the Medical University of Varna, Assoc. Prof. M.Kateva submitted a registration to Google Scholar, with 6 scientific publications and 4 citations in her scientific profile (Academic reference MU Varna, March 18, 2020 and the Information of the Central Medical

Library of the Republic of Bulgaria Issue 102 / March 16, 2020). According to the National Minimum Scientometric Requirements for Occupation of the Academic Position "Professor", Professional Degree 7.1 Medicine, under which the competition is held, Assoc. at the Medical University, Varna:

Group of indicators	Content	Minimal requirements for professor	Evidence of participation in a competition for "professor" at the MF of Varna Medical University	Points	% implementation
A	Indicator 1	50	Disertation	50	100%
B	Indicator 3	100 monography	Monography ISBN - 978-619-91405-0-5	100	100%
C	Sum of indicators 4-9	200	Monography not main habil - 1 refereed. -6 non-refereed.- 25	532.7	266%
D	Sum of indicators 10-12	100	International - 4 Bg monography. - 5 Bg journals - 33	275	275%

**Qualitative analysis of the works of Assoc. Prof. Margarita Mihailova Kateva, MD**

All the scientific works of Assoc. Prof. Kateva are in the field of orthopedics and traumatology of the Regional State Administration. Of the total number of scientific papers, 49% (72) deal with problems of peripheral nerve surgery - 1 monograph, 20 actual publications, 30 posts with published abstracts and 21 reports in scientific forums. The publications are mainly in journals with the focus - " Emergency Medicine and in the Journal of Orthopedics and Traumatology. Most of the announcements were made at FESSH congresses and national conferences and major congresses - hand surgery. Flaps for reconstruction of post-traumatic hand defects is the subject of 1 dissertation, 1 monograph, 22 publications and 28 scientific reports - 35% of scientific papers. The remaining 16% can be

summarized as upper limb and varia orthopedics. The thematic distribution is in no small degree conditional because of the complexity of the problems under consideration in the individual works.

The thematic distribution of works is:

Topics	Real Publications and Monographs Reports	Participations, Plenary lectures	Overall
Early surgical treatment after plexus brachialis injury	8	16	24
Anatomy	2	1	3
Surgical reconstruction of plexus brachialis trauma in the newborn	1	12	13
Postoperative behavior	5	3	8
Description and application of neurotisation in the treatment of plexus lesions	6	12	18
Algorithm of treatment in recovery of movements in the parquet become	3	7	10
Behavior algorithm for abduction, rotation, and stabilization in the shoulder joint	3	5	8
Nerve transfers with high peripheral nerve damage upper limb	6	20	26
Nerve transfers in n.medianus injury	3	5	8
Nerve transfers in case of n.ulnaris injury	2	8	10
Nerve transfers in n.radialis injury	1	7	8
Surgical treatment for peripheral nerve injury of the lower limb	4	3	7
Flap for reconstruction of posttraumatic hand defects	23	28	51
Upper limb orthopedics	7	7	14
Varia	9	3	12

## **A brief analysis of the contributions by topic sections**

**Early surgical behavior after plexus brachialis injury.** The contributions are mainly scientifically applied. The main clinical features of the different degrees of trauma of plexus brachialis are described. The basic rules of approach for obstetric palsy are outlined. Algorithms of operative behavior at different levels and degrees of damage to the plexus, postoperative protocols and reporting of postoperative results have been developed. The implanted methods of supra-, - and infraclavicular dissection of the plexus brachialis in the newborn and the resection of the neuroma with an autologous grafting are new to Bulgaria and the contributions are confirmatory. The topic is cited in 8 publications.

**Description and application of neurotisation in the treatment of plexus lesions.** The topic is covered in 1 monograph and 6 publications. The main contributions to this topic are: A built-in and imposed algorithm for behavior in restoration of movements in the elbow joint and behavior for abduction, rotation and stabilization in the shoulder joint after neurotisation n.accessorius / n.suprascapularis, neurotisation fasciculus posterior / n.axillaris, .radialis / n.axillaris and neurotisation of n.phrenicus / n.axillaris. The contributions are scientifically applicable and confirmatory. **The citations in this section are in 5 publications**

**Nerve transfers for high peripheral nerve injury of the upper extremity subject to 5 publications.** At the national level, an algorithm for operative behavior at high injury of the following has been introduced: 1.N.radialis-nerve internals + selective nerve transfer (n.medianus / n.interosseus posterior), 2.N.medianus-nerve internals + selective nerve transfer n .radialis / n.interosseus anterior and r.profundus n.ulnaris / r.thenaris n.medianus and 3.N.ulnaris- nerve internals + selective nerve transfer n.interosseus anterior / n.ulnaris and r.thenaris n.medianus / r .profundus n.ulnaris. **Quotations are 5.**

**In 4 publications, Associate Professor Kateva presents an algorithm for operative behavior in the peripheral nerve injury of the lower limb.** The contributions are confirmatory about n.ischiadicus grafting in high traumatic injury, n.femoralis-neurotisation (n.obturatorius / n.femoralis) in high damage n.femoralis, and n.peroneus autographing and nerve transfer from n.tibialis. **The citations of the publications are 4.**

**In one monograph and 22 publications, the applicant presents his / her own experience with the application of a flap for reconstruction of post-traumatic hand defects.** An objectively applicable algorithm of operative behavior for the reconstruction of

the thumb, for skin defects of the fingers and reconstruction of the first annulus is introduced.  
**are 2.**

Associate Professor Katva, MD in the team has scientific and practical contributions in the field of surgical treatment of III-IV lunatomalacia, reconstruction of bone and soft tissue defects of the thigh and foot, treatment of skin defects in the field of Achilles tendon and others.

## **2. TEACHING ACTIVITIES**

Assoc. Prof. Margarita Mihailova Kateva, MD is actively involved in teaching activities as a lecturer at the Aftergraduate Education. She is a lecturer and supervisor of orthopedics and traumatology residents at IORTOPs and traumatologists at SPC. For the period 2011-2014 she was a former lecturer and supervisor of summer internships for medical students. (References from the Department of Scientific Activity of UMBALSM "Pirogov", from the Department of Orthopedics and Traumatology of the MF, the Medical University of Sofia and the Rectorate of the Medical University of Sofia).

As a trainee lecturer, Assoc. Prof. Kateva has lectured in the Basic Traumatology Course of 2017 and has conducted emergency training in orthopedics and traumatology for the period 2011-14. She is the scientific supervisor of three trainees under Ordinance 1. (Sl. note from UMHB "Sofamed").

Dr. Kateva, MD, is a Chair of the Examination Committee (2019) and a lecturer in courses (since 2013) for VSD "Hand Surgery" and "Micro Vascular Surgery".

The total teaching experience of the applicant is 9 years, with total employment of lectures, exercises and extra-curricular employment that fully meets the requirements of Art. 100. item 2 of PRA of MU-Varna.

Assoc. Prof. M.Kateva, MD, PhD, is a scientific supervisor of three PhD students in the PhD program "Orthopedics and Traumatology". One of them, Nadezhda Antonova Popova, successfully defended the Doctor of Science in 2017. This meets the requirement of this competition.

Prof. Kateva was a member of the Scientific Jury for occupation of scientific degrees and academic positions at the Medical University of Sofia, the Medical University of Pleven and the Technical University of Ruse.



### 3. DIAGNOSTIC AND MEDICAL ACTIVITY

Assoc. Prof. Margarita Mihailova Kateva, MD is a fully established orthopedic traumatologist. Performs independently complex and very complex operations in the field of operative orthopedics and trauma of the RSA. The surgical load of the candidate in recent years is higher than required by the standard "Orthopedics and traumatology". According to the attached information, for the period 2017 - 2020 it performed 957 operations, 88% (876 operations) of which have a large and very large volume of complexity. (Information of UMHB "Sofamed").

For the first time in Bulgaria, Kateva introduces new operative techniques, medical and diagnostic methods, develops practice-relevant protocols for algorithm, pre- and postoperative application in a number of diseases, which I have discussed in detail above.

**In conclusion:** The analysis of all administratively required documentation, based on the applied works, their quantitative and qualitative analysis as scientific production and their compliance with the requirements of the Law, give me a reason to vote "**positive**" and to offer the Honorable Jury, as well as the members of the Academic Council of Varna Medical University, the only one to submit the necessary documentation for the announced competition (announced in the State Gazette, issue 8 / 28.01.2020) for occupying an academic position "Professor" in the field of higher education 7. "Health and Sports" by professional But the direction 7.1 "Medicine" and the scientific specialty "Orthopedics and traumatology" at the Faculty of Medicine for the needs of the Department of Orthopedics and Traumatology of the MU "Prof. Prof. Dr. Paraskev Stoyanov" - Varna, Assoc. Prof. Margarita Mihailova Kateva, MD, was elected Professor of Orthopedics and Traumatology

03.07.2020 г.

Prof. Dr. Hristo Georgiev DSc

