

To the Chair of the Scientific Jury,
appointed by Order No. R-109-264/30.07.2026
of the Rector of the Medical University of Varna

Regarding Protocol No. 1 dated 10.08.2026

I hereby submit the following:

REVIEW

for the competition for the academic position of "**Associate Professor**"
in the scientific specialty "Periodontology and Diseases of the Oral Mucosa"
Professional Field 7.2 Dental Medicine
Field of Higher Education 7. Health Care and Sports

The competition has been announced for the needs of the Medical University of Varna,
Faculty of Dental Medicine, Department of Periodontology and Dental Implantology, in the
State Gazette, Issue No. 50/02.06.2026.

Reviewer: Prof. Antoaneta Miteva Mlachkova, DMD, PhD
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REVIEW
BY
PROF. ANTOANETA MITEVA MLACHKOVA, DMD, PhD
HEAD OF THE DEPARTMENT OF PERIODONTOLOGY,
FACULTY OF DENTAL MEDICINE, MEDICAL UNIVERSITY OF SOFIA
FOR
THE COMPETITION FOR THE ACADEMIC POSITION OF “ASSOCIATE
PROFESSOR”
AT THE MEDICAL UNIVERSITY OF VARNA

One candidate has applied for the announced competition for the academic position of “Associate Professor”: Chief Assistant Dr. Tsvetalina Ivanova Gerova-Vatsova, DMD, PhD

I. Analysis of the Candidate’s Career Profile

Chief Assistant Dr. Tsvetalina Ivanova Gerova-Vatsova, DMD, PhD, was born on 21 February 1992 in Novi Pazar, Bulgaria. In 2017, she graduated with a master’s degree in dental medicine from the Faculty of Dental Medicine, Medical University of Varna.

From 2017 to 2024, she worked as an assistant at the Department of Periodontology and Dental Implantology, Faculty of Dental Medicine, Medical University of Varna. Since 2024, she has continued her academic career as a Chief Assistant at the same department.

Dr. Tsvetalina Ivanova Gerova-Vatsova obtained her specialty in Periodontology and Diseases of the Oral Mucosa in 2023.

From 2019 to 2023, she was a full-time doctoral student at the Department of Periodontology and Dental Implantology, specializing in Conservative Dentistry, Faculty of Dental Medicine, Medical University of Varna. In 2023, she was awarded the educational and scientific degree “Doctor” (PhD).

Title of the doctoral dissertation: *“Investigation of the Outcomes of the Application of Autologous Platelet-Rich Plasma in the Regenerative Treatment of Vertical Bone Defects”*

Since 2023, she has also served as an Administrative Assistant at the Department of Periodontology and Dental Implantology, Medical University of Varna.

She is proficient in English.

II. General Description of the Materials Submitted for the Competition

The documents submitted to me for review are complete and have been presented in accordance with the requirements of the Regulations for Holding Competitions for Academic Positions at the Medical University of Varna. All materials submitted by the candidate, in terms of format, content, and completeness, comply with the minimum national requirements for scientific and teaching activities set forth in the Annex to Article 1a, Paragraph 1 of the Regulations for the

Implementation of the Development of Academic Staff in the Republic of Bulgaria Act (Field 7. Health Care and Sports; Professional Field 7.2. Dental Medicine), as well as with the Regulations on the Conditions and Procedure for the Acquisition of Scientific Degrees and Appointment to Academic Positions at the Medical University of Varna. The scientometric indicators have been certified by Academic Reference No. 1179/24.06.2026, concerning publications, citations, and scientific profiles, issued by the Library of the Medical University of Varna.

III. Overall Assessment of the Candidate's Academic Development

1. Indicator Group A – Doctoral Dissertation

The candidate was awarded the educational and scientific degree “Doctor” (PhD) in 2023 following the successful defense of a doctoral dissertation entitled: “*Investigation of the Outcomes of the Application of Autologous Platelet-Rich Plasma in the Regenerative Treatment of Vertical Bone Defects.*”. The candidate demonstrates in-depth theoretical knowledge and sound clinical rationale in the field addressed by the dissertation.

Scientific contributions of the doctoral dissertation:

1. For the first time, the effectiveness of guided tissue regeneration using a barrier membrane and autologous platelet-rich plasma (PRP) in the treatment of vertical bone defects was investigated.
2. For the first time, clinical and CBCT (cone-beam computed tomography) outcomes of the sole application of autologous platelet-rich plasma (PRP) and enamel matrix derivatives (EMD) in the regenerative treatment of vertical bone defects were compared.
3. For the first time, clinical and CBCT outcomes of guided tissue regeneration using a barrier membrane alone and guided tissue regeneration using a barrier membrane combined with autologous platelet-rich plasma (PRP) were compared.
4. For the first time in Bulgaria, the effectiveness of autologous platelet-rich plasma used as a sole regenerative treatment modality for vertical bone defects was investigated.

2. Indicator Group B – Habilitation Thesis – Monograph

The candidate is the author of the habilitation thesis – monograph entitled “Regenerative Periodontal Therapy” (Medical University of Varna, 2025, ISBN 978-619-221-542-2), comprising 190 pages. The reviewers of the monograph are Prof. Stefan Peev, DMD, PhD, DSc and Assoc. Prof. Maria Miteva-Hristova, DMD, PhD. The monograph is structured into ten chapters and represents a comprehensive and interdisciplinary scientific work devoted to contemporary regenerative periodontal therapy, which has undergone significant evolution, moving from a focus solely on the elimination of the inflammatory process toward the predictable structural and functional restoration of lost periodontal tissues.

Treatment success in infrabony and furcation defects depends directly on strict adherence to the fundamental principles of regenerative therapy, including primary tension-free wound closure, space provision, and stabilization of the blood clot. The application of minimally invasive surgical techniques, combined with a broad range of biomaterials—including barrier membranes, bone grafting materials, enamel matrix derivatives, and autologous platelet concentrates—provides an opportunity to achieve highly effective outcomes in contemporary regenerative periodontal therapy.

The monograph systematizes and analyses current scientific evidence and complements it with the following contributions:

1. This is the first publication of its kind in Bulgaria to provide a comprehensive review of the most contemporary materials used in regenerative periodontal therapy, with a specific focus on materials that are commercially available in the country.
2. Innovative biomaterials:
 - a. The monograph makes a significant contribution to the field of dental materials science, providing one of the first comprehensive reviews in the specialized literature in Bulgaria of the latest generation of resorbable magnesium barrier membranes, NOVAMag. The work provides a detailed analysis of their unique combination of mechanical stability and complete resorbability. The specific clinical protocol for their application described in the monograph has direct practical value for contemporary periodontal surgery.
 - b. For the first time in Bulgaria, a detailed review of laminar membranes (Cortical Laminar Bone Membranes) is provided. These are presented as an innovative type of resorbable membrane manufactured from xenogeneic cortical bone.
3. Integration of osteoimmunology – a theoretical contribution in which the intricate molecular balance underlying bone remodeling is elucidated in detail through the RANK/RANKL/OPG axis. The mechanism by which pro-inflammatory cytokines disrupt this balance in favor of RANKL, thereby driving pathological osteoclastogenesis and bone destruction in periodontitis, is explained.
4. Innovations in surgical design and soft-tissue management – five fundamental principles are formulated that are proposed to ensure predictable regenerative outcomes.
5. A practically oriented clinical algorithm is presented to facilitate and guide specialists in the decision-making process when selecting the appropriate regenerative approach.

3. Indicator Group C – Scientific Publications

The candidate has submitted 19 scientific publications for the present competition, of which the following have been included in the statement of compliance with the scientometric requirements:

- 9 publications in international and Bulgarian journals refereed and indexed in internationally recognized scientific databases (Web of Science and Scopus), of which 8 publications are in journals with an Impact Factor.

- 7 publications in Bulgarian and international non-indexed peer-reviewed scientific journals.
- 3 publications not included in the table of scientometric requirements.

The list of scientific publications shows that Dr. Tsvetalina Ivanova Gerova-Vatsova is the sole author of 7 publications, while 12 publications were co-authored, in which she is:

- first author – in 7 publications.
- third author – in 3 publications.
- fourth author – in 2 publications.

Dr. Tsvetalina Ivanova Gerova-Vatsova's scientific interests focus on the following major areas: innovative biomaterials used in contemporary periodontology and refinement of methodologies for their evaluation.

These research interests have resulted in numerous original contributions, confirmatory contributions, and applied contributions, which are described in detail in the statement of contributions of the candidate's scientific works.

1. Alternative Regenerative Approaches

a. Very good outcomes have been achieved with various regenerative approaches without the use of bone grafting materials. The study *"Beyond Bone Grafts: Exploring the Efficacy of Alternative Regenerative Therapies"* demonstrates that there are cases in which vertical bone defects can be successfully managed without the use of bone grafting materials.

b. Chitosan, a material capable of enhancing the biological properties of various materials used for bone regeneration – the study *"Evaluation of the Effectiveness of Chitosan-Modified Bone Regeneration Materials: A Systematic Review"* represents the first comprehensive systematic assessment of chitosan-based hybrid bone graft materials of its kind. It provides an in-depth and structured review of the available scientific literature, integrating findings from various in vitro, in vivo, and clinical studies on the application of chitosan as a modifier of bone regeneration materials.

The study highlights the key role of chitosan in enhancing the biocompatibility and biodegradability of bone graft materials, emphasizes its antimicrobial properties, demonstrates its osteogenic potential, and describes its ability to improve the mechanical and handling properties of the graft materials to which it is added.

This work addresses an important gap in tissue engineering by bringing together fragmented evidence on the synergistic effects between established bone regeneration materials and the natural biopolymer chitosan.

2. Refinement of the Methodology for Biomaterial Evaluation

A first-of-its-kind systematic review in the international scientific literature presents and analyzes trends in histomorphometric protocols for the assessment of bone regeneration.

It can be concluded that *"Histomorphometric Assessment of Non-Decalcified Plastic-Embedded Specimens for Evaluation of Bone Regeneration Using Bone Substitute Materials-*

A Systematic Review” makes a contribution to laboratory and histological assessment by systematizing the methods used for histomorphometric analysis of non-decalcified specimens. This approach enables the most accurate possible assessment of how different bone substitute materials integrate into tissues and contribute to actual bone regeneration.

4. Indicator Group D – Citations

The candidate, Dr. Tsvetalina Ivanova Gerova-Vatsova, has submitted an official academic reference issued by the Library of the Medical University of Varna, which indicates that the candidate has 12 citations, distributed as follows:

9 citations in scientific publications refereed and indexed in internationally recognized scientific databases;

3 citations in non-indexed Bulgarian and foreign peer-reviewed scientific journals.

5. Teaching Activities

The candidate, Dr. Tsvetalina Ivanova Gerova-Vatsova, has submitted a record of her teaching workload, as follows:

- 2017/2018 – 390 teaching hours
- 2018/2019 – 314 teaching hours
- 2019/2020 – 342 teaching hours
- 2020/2021 – 80 teaching hours
- 2021/2022 – maternity leave
- 2022/2023 – 371 teaching hours
- 2023/2024 – 374 teaching hours
- 2024/2025 – maternity leave

The teaching workload record demonstrates that dr. Tsvetalina Ivanova Gerova-Vatsova actively participates in teaching dental medicine students in both Bulgarian and English.

6. Participation in National and International Scientific Events

Dr. Tsvetalina Ivanova Gerova-Vatsova has submitted a list of participations in national and international scientific events, which shows that she has participated in 23 national and international scientific events and forums.

IV. Overall Assessment of the Candidate's Compliance with the Mandatory Quantitative Criteria and Scientometric Indicators According to the Regulations for Appointment to Academic Positions at the Medical University of Varna.

Based on the supporting documentation submitted by the candidate and the detailed analysis performed, I present the following comparative table demonstrating the compliance of the results achieved by Dr. Tsvetalina Ivanova Gerova-Vatsova with the quantitative criteria and minimum scientometric indicators for appointment to the academic position of "Associate Professor" at the Medical University of Varna, in Professional Field 7.2 Dental Medicine.

Indicator Group	Requirements for the academic position of "Associate Professor"	Candidate's Points
A: Doctoral dissertation for the educational and scientific degree "Doctor" (PhD)	50	50
B: Doctoral dissertation for the scientific degree "Doctor of Sciences"	—	—
C: Habilitation thesis: Monograph	100	100
D: Scientific publications		
— in refereed journals	200	402
— in non-refereed journals		62
Total		464
E: Citations		
— in refereed journals	80	135
— in non-refereed journals		15
Total		150
F: Medical specialty, participation in research projects, publication of textbooks and teaching materials, training of interns, residents and doctoral students	—	—
TOTAL	430	764

In assessing the overall academic and scientific activity of Dr. Tsvetalina Ivanova Gerova-Vatsova, I consider that she not only meets the minimum scientometric requirements for appointment to the academic position of "Associate Professor", but also substantially exceeds them. The results presented in the table demonstrate the high quality of her scientific, research, and teaching activities, as well as her significant contributions to the field of Periodontology.

V. Conclusion

The thorough review and analysis of the documents and supporting evidence submitted to me concerning the overall scientific and teaching activities of the candidate, Chief Assistant Dr. Tsvetalina Ivanova Gerova-Vatsova, PhD, in the competition for the academic position of "Associate Professor" in Field of Higher Education 7. Health Care and Sports, Professional Field 7.2 Dental Medicine, Scientific Specialty "Periodontology and Diseases of the Oral Mucosa", demonstrate that the candidate meets the mandatory requirements and minimum scientometric indicators established by the Development of Academic Staff in the Republic of Bulgaria Act (DASRBA), the Regulations for its implementation, as well as the Regulations on the Conditions and Procedure for the Acquisition of Scientific Degrees and Appointment to Academic Positions at the Medical University of Varna.

I therefore **cast a POSITIVE VOTE for the appointment of Dr. Tsvetalina Ivanova Gerova-Vatsova, PhD, to the academic position of "Associate Professor."**

28 September 2026

Sofia

Reviewer:

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