To the **Chairperson** of the Scientific Jury
Appointed by **Order No. P-109-468/09.12.2024**
of the Rector of the Medical University of Varna.

OPINION

By Assos. Prof. Atanaska Cheshmedzhieva, DDS, PhD

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REGARDING

The dissertation of **Dr. Stole Zafiroski**

an independent doctoral student in the Department of Oral Surgery at the Faculty of Dental Medicine, Medical University of Varna,

Titled: **"Anesthesia in Oral and Maxillofacial Surgery,"**

Submitted for the acquisition of the educational and scientific degree "Doctor" in the doctoral program "Surgical Dentistry."

Scientific Supervisors: Prof. Dr. Tihomir Georgiev, DSc, and Prof. Dr. Vilian Platikanov, DSc, Medical University of Varna.

Within the procedure for the defense of a dissertation for the award of the educational and scientific degree "Doctor" in the higher education field 7. Healthcare and Sports, in the professional direction 7.2. Dental Medicine.

General Overview of the Procedure and the Doctoral Candidate

This review has been prepared based on Order No. P-109-468/09.12.2024 of the Rector of the Medical University of Varna, appointing a Scientific Jury for the public defense of the described dissertation.

The submitted set of materials, both in paper and electronic format, complies with Article 24, Paragraph 6, and Article 30, Paragraph 3 of the Regulations for the Development of Academic Staff in the Republic of Bulgaria (PPZRASRB) and Article 68, Paragraph 1 of the Rules for the Development of Academic Staff at the Medical University of Varna. The materials were provided to me within the legally established deadline.

The doctoral candidate has submitted four publications related to the topic of the dissertation. All documents have been prepared and presented correctly.

Brief Biographical Information about the Doctoral Candidate

Dr. Zafiroski was born on July 31, 1982. In 2012, he completed his higher education, obtaining a Master's degree in Dental Medicine from the Faculty of Dental Medicine at the Medical University of Varna. In 2018, he acquired a specialization in "Oral Surgery." In 2023, he obtained a Master's degree in Medicine. In 2023, he also completed a Master's degree in "Public Health and Health Management." From 2013 to 2018, he served as a full-time assistant in the Department of Oral and Maxillofacial Surgery. Since 2018, he has been an administrative assistant in the Departments of Oral and Maxillofacial Surgery and General and Operative Surgery.

Dr. Zafiroski is a member of:

• The Bulgarian Dental Association (BDA)

• The Bulgarian Medical Association (BMA)

He is proficient in English, both written and spoken.

Relevance of the Topic and Appropriateness of the Defined Objectives and Tasks

The present dissertation addresses a significant and current issue in the field of dental medicine and surgical practice. The formulated objective is clearly defined, and the outlined tasks are methodologically substantiated and implemented through modern research approaches.

Depth of Scientific Research

Dr. Stole Zafiroski demonstrates familiarity with the subject matter and exhibits competence in conducting independent scientific research. The exposition is structured in an academic style, and the analysis of previous scientific studies logically leads to the formulation of the research objective: "To analyze the prevalence and characteristics of various methods of local and general anesthesia in outpatient dental and maxillofacial surgery."

Research Methodology

To achieve this objective, the following primary tasks have been defined:

1. Analysis of the application of local anesthesia in oral surgery.
2. Examination of the effectiveness of sedation and general anesthesia in oral surgery.
3. Evaluation of the local anesthetics used in maxillofacial surgery.
4. Investigation of sedation and general anesthesia in maxillofacial surgery.

Study Design

The hypothesis proposed by the author highlights the dynamic development of anesthesia in oral and maxillofacial surgery in recent years. It emphasizes the reduction of anesthesia-related complications and the integration of diagnostic and therapeutic procedures for patients with comorbidities requiring sedation and anesthesia.

Materials and Methods

Between 2019 and 2021, an analysis was conducted on 1,794 patients who underwent treatment at: • The Department of Maxillofacial Surgery at University Hospital "St. Marina" – Varna (1,024 patients) • The University Medical-Dental Center (UMDC) at the Medical University of Varna (770 patients)

The study was conducted using structured statistical methods, including:

• Analysis of variance (ANOVA) for factor significance assessment.

• Variance analysis for quantitative characteristics.

• Correlation analysis (Pearson, Spearman) for determining relationships between variables.

• Regression analysis for identifying functional dependencies.

• Comparative analysis using χ^2 and Student's t-test.

Results and Analysis

The research results are presented in tables and diagrams, with analysis confirming the relevance of the examined problem.

Key Conclusions:

1. The most commonly used local anesthetic is articaine.
2. Terminal anesthesia is the preferred method in outpatient oral surgery.
3. Terminal anesthesia dominates in the maxillary region, whereas conduction anesthesia is used in the mandibular region.
4. Dental implantation is exclusively performed using terminal anesthesia.
5. Sedation is most frequently used for short procedures in patients with comorbidities.
6. The most commonly used medications for sedation are Articaine + Midazolam and Articaine + Propofol.
7. The most common complications of local anesthesia are hematomas, while syncope and hypertensive crises are more frequent with general anesthesia.

Scientific Contributions

Original contributions for Bulgaria:

• For the first time in Bulgaria, a detailed study of anesthetic techniques in both outpatient and hospital settings has been conducted.

• The increasing role of sedation and general anesthesia in the treatment of anxious and uncooperative patients has been confirmed.

Confirmatory Contributions:

1. Terminal anesthesia predominates in the maxillary region.
2. Conduction anesthesia, using the Weissbrem method, is the most commonly applied technique in the mandibular region.
3. Dental implants are placed using terminal anesthesia.
4. Articaine is the most frequently used local anesthetic.
5. Sedation is primarily used in patients with cardiovascular diseases.

Conclusion

The dissertation titled **"Anesthesia in Oral and Maxillofacial Surgery,"**by Dr. Stole Zafiroski meets the criteria for the acquisition of the educational and scientific degree "Doctor" in accordance with the Law on the Development of Academic Staff in the Republic of Bulgaria (ZRASRB) and the regulatory requirements of the Medical University of Varna.

Based on the presented work, **I give a positive evaluation** and will vote "**YES**" for the awarding of the scientific degree "Doctor" to Dr. Stole Zafiroski.

Prepared by:

Assoc. Prof. Dr. Atanaska Cheshmedzhieva, PhD