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

OPINION

by **Assoc. Prof. Dr. Elitsa Georgieva Deliwerska-Alexandrova, PhD**
Department of Oral and Maxillofacial Surgery, Faculty of Dental Medicine,
Medical University – Sofia
(Member of the Scientific Jury by Order No. P-109-468/09.12.2024
of the Rector of the Medical University – Varna)

Regarding:

Dissertation for the acquisition of the educational and scientific degree **"Doctor"**
in the doctoral program **"Oral Surgery"**,
Field of Higher Education: **7. Healthcare and Sports**,
Professional Field: **7.2. Dental Medicine**

Title:
"Anesthesia in Oral and Maxillofacial Surgery"

Author: Dr. Stole Zafiroski
Doctoral candidate in independent preparation at the Medical University – Varna,
Department of Oral Surgery

Scientific Supervisors:
Prof. Dr. Tihomir Georgiev, DSc, and Prof. Dr. Viliyan Platikanov, DSc

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General Overview of the Procedure and Scientific Work

This review has been prepared based on Order No. P-109-468/09.12.2024 of the Rector of the Medical University – Varna. The submitted materials in both paper and electronic format comply with the Regulations for the Development of the Academic Staff at the Medical University – Varna.

The dissertation consists of **134 standard pages** and is illustrated with **50 tables and 12 figures**. The literature review includes **287 sources**, all in Latin script. The doctoral candidate has provided **four publications**.

Brief Biographical Information about the Candidate

Dr. Zafiroski was born on **July 31, 1982**.

- He completed secondary education at **DMU "Dr. Panche Karagyozov"** in Skopje, North Macedonia.
- In **2012**, he graduated as a Master of Dental Medicine from the Faculty of Dental Medicine at **Medical University – Varna**.
- In **2018**, he obtained a specialty in **Oral Surgery**.
- In **2023**, he completed a **Medical degree (Master of Medicine)**.

- In **2023**, he also completed a **Master's degree in Public Health and Health Management**.
- From **2013 to 2018**, he was a full-time assistant in the Department of Oral Surgery.
- Since **2018**, he has been an **administrative assistant** in both the **Department of Oral Surgery** and the **Oral and Maxillofacial Surgery Section** of the **Department of General and Operative Surgery**.

Memberships:

- **Bulgarian Dental Association (BDA)**
- **Bulgarian Medical Association (BMA)**

Languages Spoken:

- English, Russian, and Bulgarian (both written and spoken)

Relevance and Significance of the Research

The dissertation addresses a significant issue in surgical practice related to anesthesia. The application of various successful, predictable, and effective anesthesia methods would facilitate clinicians in performing surgical interventions in outpatient settings.

Understanding of the Problem

Dr. Zafiroski has reviewed a large number of contemporary studies published in international scientific literature. The literature review demonstrates the author's strong theoretical background and well-motivated explanations regarding different anesthesia methods and techniques.

At the end of the literature review, the author highlights that certain questions remain unresolved, particularly concerning pain management and reducing perioperative morbidity related to local and general anesthetics, as well as anesthesia techniques. This forms the basis for the present study.

The research goal is clearly stated and well-formulated. The four research tasks align perfectly with the dissertation's topic and content. The scientific hypothesis is also accurately presented.

Materials and Methods

The study was conducted retrospectively and prospectively over the period 2019–2021, including a total of 1,794 patients:

- 1,024 patients treated at the Clinic of Maxillofacial Surgery, St. Marina University Hospital, Varna
- 770 patients treated at the University Medical and Dental Center (UMDC), Faculty of Dental Medicine, Medical University – Varna

Patient distribution by research task:

- Task 1: 500 patients
- Task 2: 270 patients
- Task 3: 240 patients
- Task 4: 784 patients

The patient selection criteria are clearly defined, following global standards for anesthesia selection. All ethical norms for conducting a clinical study have been observed.

The applied research methods are modern, well-described, and ensure reliable results.

The study includes:

- Diagnostic methods (clinical and imaging)
- Therapeutic methods (anesthesia techniques)
- Statistical methods

The research identifies the most common anesthesia-related complications in outpatient and day surgery and provides prevention strategies for these complications.

Results and Discussion

All results are clearly presented and analyzed, based on each of the four research tasks.

Key conclusions include:

1. Articaine is the most commonly used local anesthetic in practice.
2. Terminal anesthesia is the most frequently used local anesthesia in outpatient oral surgery.
3. Maxillary procedures mainly use terminal local anesthesia, with conduction anesthesia applied only in exceptional cases (e.g., abscesses).
4. Mandibular procedures primarily use conduction anesthesia.
5. Dental implant placement is exclusively performed under terminal local anesthesia.
6. Weisbram's technique is the most frequently used conduction anesthesia method.
7. Healthy patients predominantly receive local anesthesia, regardless of the procedure.
8. Midazolam combined with Articaine is the most common sedation regimen.
9. Propofol combined with Articaine or Lidocaine is the most common general anesthesia regimen.
10. Sedation is mainly used for short procedures in patients with comorbidities (cardiovascular diseases, hypertension, ischemic heart disease, diabetes).
11. General anesthesia is used for longer operations or multiple simultaneous procedures.
12. Older patients are more likely to receive general anesthesia.
13. Hemorrhage is the most common local anesthesia complication, while hypertensive crisis and syncope are the most frequent general anesthesia complications.
14. Propofol anesthesia lasts significantly longer than Midazolam sedation.

The discussion is supported by scientific evidence and compared with contemporary studies.

Scientific Contributions

The dissertation presents two original and four confirmatory contributions, expanding knowledge in anesthesia for oral surgery and aiding the development of effective, safe pain management strategies.

Personal Contribution of the Doctoral Candidate

The conducted research, observations, and conclusions are recognized as the doctoral candidate's own work.

Abstract

The abstract accurately reflects the dissertation's content and key findings, aligning with Bulgarian academic regulations.

Critical Notes

Minor stylistic, linguistic, and terminological inaccuracies are present but do not diminish the dissertation's value. It is recommended to include references to Bulgarian researchers who have worked on similar topics.

Conclusion

Dr. Zafiroski demonstrates **theoretical knowledge and research capability**, employing **modern, effective anesthesia techniques** with **low perioperative morbidity**. The research is **well-designed, methodologically sound, and clinically valuable**.

The dissertation **meets the academic criteria** and complies with the **Bulgarian Higher Education Law**.

Final Evaluation: POSITIVE

I will vote **"YES"** for Dr. Stole Zafiroski to be awarded the educational and scientific degree **"Doctor"** in **Oral Surgery**.

Sofia, February 16, 2025

(Assoc. Prof. Dr. Elitsa Deliwerska-Alexandrova, PhD)

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