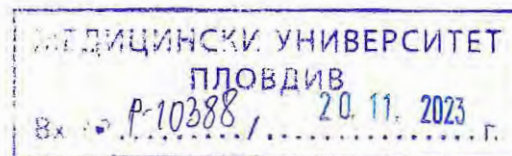


**To  
the Chairman of the Scientific Jury  
Order of the Rector of the Medical University of Plovdiv.  
No. P-3317/15.11.2023**

## **Opinion**



**by Prof. Dr. Tsvetan Lyubenov Tonchev, DMD, PhD, MHA  
Specialist in Maxillofacial Surgery, Oral Surgery, Dental  
Implantology  
Department of General and Operative Surgery of the Faculty  
of Medicine at the Medical University of Varna**

**Regarding:** Dissertation for awarding doctoral degree

**Professional field:** Dental Medicine

**Doctoral program:** Oral Surgery

**Doctoral candidate:** Nikolay Dimitrov Kanazirski, DMD

**Form of doctoral study:** Self-training PhD student at the Department of Oral Surgery at the Faculty of Dental Medicine of the Medical University of Plovdiv

**Theme:** Er:YAG Laser Implant Site Preparation for Placement of Dental Screw Implants: Clinical, Histological and Morphological Studies

**Academic supervisor:** Assoc. Prof. Dr. Deyan Neychev, DMD, PhD

This opinion was prepared in accordance with Order of the Rector of the Medical University of Plovdiv No. P-3317/15.11.2023, in connection with the defence procedure of the aforementioned dissertation in the scientific specialty: Oral Surgery 03.03.04. It is in compliance with the Act for the Development of the Academic Staff, its Implementation Rules, and the Rules governing the Structure and Activities of the Medical University of Plovdiv.

### **I. General Presentation of the Procedure and the Doctoral Candidate**

The provided set of materials, both in paper and electronic formats, complies with the Rules of the Medical University of Plovdiv. All materials were meticulously prepared and presented.

The doctoral candidate has submitted three articles related to the dissertation and two participations in scientific events. Additionally, the doctoral candidate has presented evidence of conducting lectures in

postgraduate education courses focused on the theme of the dissertation.

Dr. Kanazirski holds specializations in Oral Surgery, General Dentistry, and Dental Implantology. He has over thirty years of experience in teaching students, as well as in supervising doctors specializing Oral Surgery.

Based on the presented documentation and my personal impressions, I am convinced that Dr. Kanazirski possesses the necessary scientific competence and professional qualification for obtaining a doctoral degree.

## **II. Significance of the Theme**

The dissertation, and namely the part concerning the surgical stage of implantological treatment, addresses a substantial issue in oral surgery.

Given the major advancement in dental implantology in recent years, there is a continuous quest for new methods to enhance final clinical outcomes. This is a global trend, as evidenced by the large number of scientific publications on the subject. The main focus is on improving the primary stability of dental implants, and the possibilities for earlier functioning and definitive loading. The reason for this is that the patients seek more rapid restoration of masticatory function and improved quality of life. Meanwhile, the clinicians aim for predictability and assurance in the treatment process.

Given the above, the choice of the dissertation theme is significant and apt for a doctoral dissertation.

## **III. Understanding of the Issue**

The literature review encompasses 232 references, 3 using Cyrillic alphabet and 229 using Latin alphabet. The bibliography complies with the requirements. The literature review is comprehensive, targeted, analytical and covers all aspects of the issue. It is presented on 45 pages. The current status of the issue is adeptly outlined, and unresolved aspects are clearly delineated.

Based on this review, the objective of the scientific work "To assess the dynamics in the process of osseointegration during Er:YAG laser treatment of the implant site" was formulated.

Dr. Kanazirski demonstrates a deep understanding of the issue and approaches the literary material creatively.

## **IV. Characteristics and Evaluation of the Dissertation and Contributions**

The dissertation spans 152 pages, featuring 25 tables, 38 figures, and 4 appendices. The bibliography includes 232 references.

The structure of work aligns with the requirements for dissertation set in the Rules of the Medical University of Plovdiv and the Act for the Development of the Academic Staff in the Republic of Bulgaria.

To fulfill the set goal, the doctoral candidate formulated 4 tasks, with the third task encompassing two subtasks. These tasks sufficiently substantiate the developed thesis.

The clinical material used in the study is substantial. Both experimental models of mandibular osteotomy and patients in whom the author's original methodology was employed are included. The Material and Methods sections are constructed correctly and comprehensively. The results are well structured and supported with illustrations. The research conducted indicates a significant reduction in the amorphous layer of the implant site when utilizing the method described in the dissertation. This leads to increased implant stability, with measured stability at day 30 close to or equivalent to secondary stability, signifying rapid osseointegration development. This demonstrates the method's potential promotion and implementation in dental practice. Based on this, a useful model was created and registered at the Patent Office.

The analysis and discussion of the results demonstrate the doctoral candidate's strong professional training and profound clinical acumen.

Seven conclusions logically follow the obtained results.

The contributions are original, applied, and confirmatory.

### **Author's Summary**

The author's summary of the dissertation complies with the requirements and reflects the main results obtained by the author.

### **CONCLUSION**

The dissertation of **Dr. Nikolay Dimitrov Kanazirski** themed **Er:Yag Laser Implant Site Preparation for Placement of Dental Screw Implants: Clinical, Histological and Morphological Studies**, submitted to me for opinion, addresses a significant issue in oral surgery concerning the development of a method to enhance dental implant stability. Given the above, the choice of the theme of the dissertation is of great significance.

The extensive literature review and its creative assessment allowed Dr. Kanazirski to formulate the objective of the scientific work — "To assess the dynamics in the process of osseointegration during Er:YAG laser treatment of the implant site".

The dissertation contains clinical material that is of scientific interest. The presentation and interpretation of the results gives me reason to assume that the dissertation represents a completed scientific thesis and is the personal work of the doctoral candidate.

Evaluating the merits of this work, I state that it has been completed in accordance with the requirements for awarding a doctoral degree as stipulated in the Higher Education Act, the Development of the Academic Staff in the Republic of Bulgaria Act, and its Implementation Rules.

The submitted materials and dissertation results comply with the specific requirements of the Rules of the Medical University of Plovdiv, adopted in connection with the implementation of the Act for the Development of the Academic Staff in the Republic of Bulgaria.

Consequently, I express a **positive opinion** on the dissertation and I propose to the esteemed scientific jury to award **doctoral degree (PhD)** to **Nikolay Dimitrov Kanazirski, DMD**, under the doctoral programme Oral Surgery, code 03.03.04.

Заличено на основание  
Чл.5 §1, б. "В" Регламент (ЕС)2016/679

17 Nov 2023  
city of Varna

Opinion by:  
Prof. Dr. Tsvetan Tonchev, DMD, PhD, MHA

