

To the Chair of the Scientific Council,
appointed by order of
The Rector of the Medical University - Varna,
№ P-109-200/ 15.07.2024

STATEMENT

**By Assoc. Prof. Tsvetelina Iliyanova Borisova-Papancheva, MD, PhD,
Head of the Department of Conservative Dentistry and Oral Pathology,
Faculty of Dental Medicine,
Medical University - Varna**

**Address and contacts:
Varna 9000, 84A Tsar Osvoboditel Blvd.
Phone: 0887561097**

About: Dissertation for awarding the educational and scientific degree "Doctor" in the scientific specialty "Therapeutic Dentistry" of higher education 7. Health and Sports in the professional field 7.2. Dentistry; Therapeutic Dentistry at the Department of Conservative Dentistry and Oral Pathology, Faculty of Dental Medicine, Medical University - Varna.

Author: d-r Silviya Evtimova Stankova
Form of doctoral study: full time PhD student

Topic: „**STUDY OF THE INFLUENCE OF SOME FACTORS ON TOOTH BLEACHING**”

Scientific supervisor: Prof. Vladimir Emanuilov Panov, DMD, PhD, DSc, Department of Conservative Dentistry and Oral Pathology, FDM, MU-Varna.

General presentation of the procedure and the PhD student

The presented set of materials on paper and electronic media is in accordance with the Procedure for acquiring the educational and scientific degree “Doctor” in the field of higher education 7. Health and Sports in the professional field 7.2. Dentistry; Therapeutic dentistry at the Department of Conservative Dentistry and Oral Pathology, Faculty of Dental Medicine, Medical University - Varna and includes all necessary documents.

Structure of the dissertation:

The dissertation contains 190 standard pages and is illustrated with 30 tables, 94 figures and 4 applications. The bibliography consists of 424 sources, 23 of which are in Cyrillic and 401 are in Latin.



The abstract meets all the requirements of the Law for the Development of the Academic Staff in the Republic of Bulgaria.

Publications and scientific events

The PhD student has attached 3 publications. In them, she is the first and only author.

Biographical data about the PhD student:

Dr. Silvia Evtimova Stankova was born on 17.07.1978 in Vidin. In 2003 she graduated in dentistry from the Medical University of Plovdiv. Since September, 2008 she has been an assistant professor at the Department of Conservative Dentistry and Oral Pathology, FDM, Medical University - Varna. In 2012 she acquired a Specialty: "Operative Dentistry and Endodontics" at the Faculty of Dental Medicine, Medical University - Varna. He speaks Russian and English.

Assessment of the relevance of the topic

The dissertation examines an actual problem in modern dentistry, namely the influence of certain factors on teeth bleaching. The topic is dissertationable and a subject of interest to dentists. Tooth bleaching is the simplest, cheapest and non-invasive method of removing dental stains and lightening the color of vital and devitalized teeth, very successful in properly selected patients and appropriate means and protocol of work. Tooth bleaching improves the smile, appearance and quality of life of the patient. The bleaching effect is most often achieved with peroxide-based chemical products as it generates free radicals that break down the organic structure of the pigment molecules in dentin and its color lightens.

The application of highly concentrated bleaching agents in the dental office is a subject of scientific researches for many years not only in terms of bleaching effect, but also in terms of potential side effects on hard tooth tissues (HDT), dental pulp and soft tissues in order to search for a relationship with the type and concentration of the bleaching agents, their pH, frequency and duration of administration, application of additional means for activation of the bleaching agent.

Significance of the problem and formulation of aim and tasks:

Dr. Stankova has made a critical analysis of the literature on the topic, which gives her the base to formulate exactly the aim of her study: *"To study the experience of dentists and patients on tooth bleaching methods and to investigate the influence of certain physical and chemical factors on the bleaching mechanism and the effects of the application of tooth bleaching products"*.

To achieve the aim, she sets herself the following tasks:

1. Survey of attitudes and experiences of dentists (DDM) and patients on tooth bleaching methods.



- 1.1 Survey of DDM's opinion and experience on tooth bleaching methods (questionnaire method)
- 1.2 Survey of patients' knowledge, attitudes and experiences about tooth bleaching (questionnaire method)
2. Study of the influence of some physical activators (LED light, electric current) on the rate of HP decomposition in tooth bleaching products
 - 2.1. To investigate by chemical method the influence of two physical factors – blue light (LED, 450 nm) and electric current (2mA) on the concentration and decomposition rate of HP incorporated in two tooth bleaching products.
 - 2.2. To compare by UV-VIS spectroscopy the influence of blue light (LED, 450 nm) and electric current (2mA) on the bleaching effect of HP incorporated in a tooth bleaching product on black tea extract.
3. Study of the potential of metal salts and enzymes to activate tooth bleaching products with different HP concentrations.
 - 3.1. To compare the potential for achieving bleaching effect of bleaching products with different HP concentrations with/without chemical activation in vitro.
 - 3.2. To compare the possibilities of assessing the bleaching effect of methods for determining tooth colour by standard colour shade guide and by spectrophotometer.
4. Measurement of surface microroughness parameters of the enamel of teeth subjected to in vitro bleaching in task 3 with bleaching products with different HP concentrations with/without chemical activation.

Analysis of conclusions and contributions:

In the summaries and discussions, the PhD student scientifically discusses the results obtained, striving to objectify the authentic conclusions made on the assigned tasks.

I accept the presented in this way contributions made by Dr. Stankova, which are of a scientifically applied and applied character.

Critical Notes

I recommend Dr. Stankova to publish the results not only in one and the same journal, but also to promote them in different journals so that they can reach more colleagues.

Conclusion

The dissertation of Dr. Silvia Evtimova Stankova on the topic: "STUDY OF THE INFLUENCE OF SOME FACTORS ON TOOTH BLEACHING" is presented in a complete and well-structured form, meeting the **requirements** of the Law for the Development of the Academic Staff in the Republic of Bulgaria, the Regulations for its implementation and the Regulations for the Development of the Academic Staff of MU-Varna. Taking into account the relevance and significance of the topic, the volume and the way of conducting the study, the processing of



materials, conclusions and contributions, I therefore confidently vote with YES for awarding Dr. Silvia Evtimova Stankova **the scientific and educational degree "DOCTOR"** in the field of higher education 7. Health and sports in the professional field 7.2. Dental medicine.

09.09.2024

Prepared the Statement:

Ass. Tsvetelina Iliyanova Borisova-Papancheva, MD, PhD

