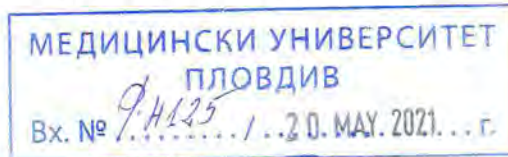


To the Chairman of the Scientific Jury
designated by Order No. P-496/07.04.2021 of the
Rector of the Medical University of Plovdiv.



OPINION

by Assoc. Prof. Dr. Georgi Papanchev, PhD

Department of Oral Surgery

Faculty of Dental Medicine,

Medical University of Varna

Address and contacts:

Varna 9000, 84A Tsar Osvoboditel Blvd.

Phone: +359 889306465

Under the procedure for defense of a dissertation for awarding doctoral degree in sphere of higher education: 7. Healthcare and Sports, professional field: 7.2. Dental Medicine; Oral Surgery, at the Department of Oral Surgery, Faculty of Dental Medicine at the Medical University of Plovdiv.

Author of the dissertation: Dr. Tanya Ivanova Sbirikova

Form of doctoral study: self-training

Theme: “Control of postoperative pain – psychological, fMRI and immunological studies”

Academic supervisor: Assoc. Prof. Dr. D. Neychev, PhD

General presentation of the procedure and the doctoral candidate:

The presented set of materials in paper and electronic form is in compliance with the Procedure for Awarding Doctoral Degrees in the sphere of higher education: 7. Healthcare and Sports, professional field: 7.2. Dental Medicine: Oral Surgery, at the Department of Oral Surgery, Faculty of Dental Medicine at the Medical University of Plovdiv and contains all the necessary documents.

Notes and comment on the documents:

The dissertation was written on 175 pages. The dissertation is illustrated with 20 tables, 18 figures, 33 diagrams and 7 appendices. The literature review is in-depth and shows a detailed knowledge of the problem. The bibliography includes 271 references. The literature review is presented on 37 pages; objective and tasks – 1 page; material and methods – 19 pages; own results and discussion – 67 pages; conclusions – 1 page; contributions – 1 page.

The author's summary meets all requirements of the Act for the Development of the Academic Staff in the Republic of Bulgaria.

The doctoral candidate enclosed 3 publications related to the dissertation. Dr. Sbirkova is the first author of two of the publications. She has 2 participations in conferences related to the dissertation.

Biographical notes and career development:

Dr. **Tanya Ivanova Sbirkova** was born on 04 December 1981. In 2000 she graduated from the French Language School "Antoine de Saint-Exupery", Plovdiv. In 2006 she graduated from the Faculty of Dentistry of the Medical University of Plovdiv. In 2011, she acquired a specialty in Oral Surgery. For the period 01.11.2012 - 01.02.2014, works in the University Hospital "St. Georg" at the Clinic of Maxillofacial Surgery, as an oral surgeon. Since 2007 and until now Dr. Sbirkova is an assistant at the Department of Oral Surgery of the FDM, MU - Plovdiv. She conducts practicals and seminars in oral surgery for Bulgarian speaking and English-speaking dental students. She supervises the work of postgraduate students. She participates in the implementation of the scientific program of the department. She has a good command of English and French.



Assessment of the personal participation of the doctoral candidate in the dissertation:

The dissertation deals with a current problem in modern dentistry, namely the study of postoperative pain and its impact in the surgical removal of affected third mandibular molars. Dr. Sbirikova has made a thorough critical analysis of the literature on the subject which has enabled her to precisely define the objective of her research, namely: **“To study the possibilities for influencing the pain symptoms after surgical removal of impacted third mandibular molars using various drugs, using fMRI, immunological and psychological tests.”**

To achieve this objective, the following **tasks** were set:

1. Registration of pain intensity after surgical removal of impacted third mandibular molars:
 - To study the intensity of pain using the Visual analog scale (VAS) and the factors (age, sex, smoking, difficulty and duration of surgical intervention, preemptive analgesia, postoperative complications) affecting the sensation of pain.
 - Activation of areas in the brain after surgical removal of impacted third mandibular molars.
2. To find the relationship between the intensity of postoperative pain and reactive inflammatory process by examining Procalcitonin and CGRP.
3. To examine the serum levels of neurotransmitters and inflammatory pain mediators - Procalcitonin and CGRP (calcitonin-gene related peptide), and their response to the drugs administered.
4. To study the influence of anxiety on the intensity of postoperative pain and on the physiological parameters – blood pressure, pulse rate and saturation in young adults.

The following research and analysis methods were used to perform and evaluate the set tasks: descriptive, correlation, regression, and graphical analysis. The statistical hypotheses were tested by parametric analysis (t-test - ANOVA with repeated measurements, z-test - Shapiro-Wilk test) and nonparametric analysis - sign rank Wilcoxon test.

The results are presented appropriately and interpreted correctly. The dissertation was written in appropriate literary language, finishes with a discussion and conclusions, which are



based on the research on the tasks set. The contributions are balanced and have both theoretical and scientific-applied character.

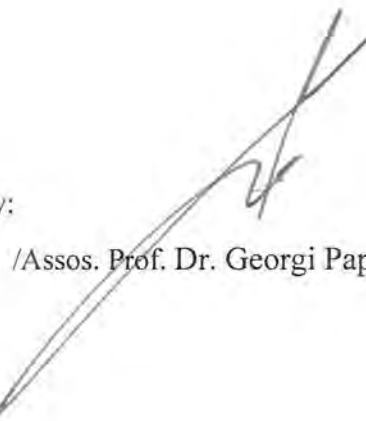
The presentation and illustration of doctoral candidate's own research with figures and charts in terms of materials and methods is at the required level. The conclusions are directly related to the obtained results.

Conclusion:

The dissertation of Dr. Sbirkova contains scientific and applied results which are *an original contribution to science and meet all requirements set* in the Act for the Development of the Academic Staff in the Republic of Bulgaria and its Implementation Rules as well as in the regulations of the Medical University of Plovdiv. The dissertation is productive and significant and is entirely personal work of the doctoral candidate. Based on the above, I propose **awarding Dr. Tanya Ivanova Sbirkova a doctoral degree** in sphere of higher education: 7. Healthcare and Sports, professional field: 7.2. Dental Medicine

17.05.2021

Opinion by:



/Assos. Prof. Dr. Georgi Papanchev, PhD/