

To the Chairman of the Scientific Jury,
appointed by order of the
Rector of Medical University - Varna,
No R-109-308/13.06.2023

STATEMENT OF ACADEMIC OPINION

By Assoc. prof. Dr. Georgi Papanchev, DMD, PhD,

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Under a procedure for defense of a dissertation for the award of educational and scientific degree "Doctor" in the field of higher education 7. Health and sport by professional field 7.2. Dental medicine; Oral Surgery at the Department of Oral Surgery, Faculty of Dental Medicine, Medical University - Varna.

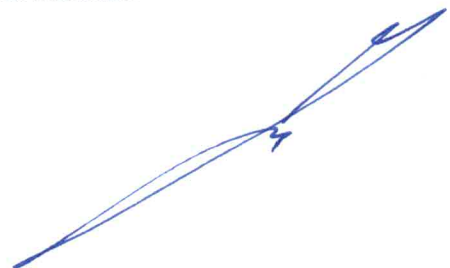
Author of the dissertation: Dr. Atanaska Yordanova Cheshmedzhieva

Form of doctoral studies : independent form of education

Topic: "CLINICAL RESULTS OF THE APPLICATION OF PLATELET CONCENTRATES IN POST EXTRACTION AREAS USING NEW PROTOCOLS FOR PLATELET RICH PLASMA"

Scientific supervisor: Prof. Rosen Kolarov, DMD, Department of Oral Surgery, Faculty of Medicine, Medical University - Varna

1. General presentation of the procedure and the doctoral student:



The presented set of materials in paper and electronic form is in accordance with the Procedure for acquiring the educational and scientific "PhD" degree in the field of higher education 7. Health and sport by professional field 7.2. Dental medicine; Oral Surgery at the Department of Oral Surgery, Faculty of Dental Medicine, MU-Varna and includes all necessary documents.

Notes and comments on the documents:

The dissertation contains 180 pages, illustrated with 45 figures, 28 tables and 24 photos. The literature reference includes 264 titles, of which 6 are in Cyrillic and 258 in Latin. The literature review is presented on 52 pages, purpose and tasks – 1 page, material and methods – 21 pages, own results and discussion – 72 pages, conclusions 2 pages, contributions – 2 pages.

The autoreferate meets all the requirements of the Law on the Development of Academic Staff in the Republic of Bulgaria.

The PhD student has attached 4 publications. She is the first author.

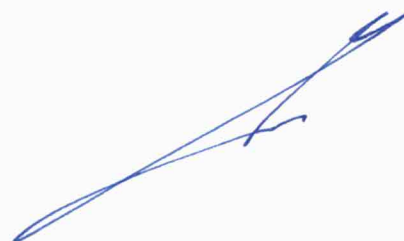
Biographical data and career development:

Dr. Atanaska Yordanova Cheshmedzhieva was born on 06.01.1978. She graduated from the Faculty of Dentistry at the Medical University, Sofia In 2001. She acquired educational and qualification degree "Master" and professional qualification "Health Management" in 2010. She acquired a specialty in "Oral Surgery" in 2014. She has been Chief Assistant at the Department of Oral Surgery, Department of Ocular, Ear, Nasal and Throat Diseases and Oral Surgery since October 2015. She has been Head of the Department of Oral Surgery, Department of Ocular, Ear, Nasal and Throat Diseases and Oral Surgery since September 2017.

Evaluation of the doctoral student's personal participation in the dissertation

The dissertation paper examines a current problem in modern dentistry, namely tissue healing in post extraction areas using new protocols for the extraction of platelet rich plasma. Serious obstacles to the normal course of the recovery process remain to this day superponed infection, used foreign bodies in the form of bone or soft tissue grafts, lack of stability in their fixation, etc. The repair of natural bone and the feeding of bone graft or bone replacement depend on the regeneration of new bone through the mechanisms of cell proliferation and osteoid synthesis (osteogenesis), on the migration of cells into the bone defect (osteoconduction) or on the processes of bone resorption and remodeling (osteinduction). PRP products, with a high level of growth factors contained in their platelets, promotes and increases bone wound healing. When they are added alone to the surgical wound or together with an autogenic graft, allograft, bone replacement or composite graft, stimulation of bone regeneration is observed. Platelet concentrates are widely used in surgical interventions, representing the current in the field of oral surgery.

Dr. Cheshmedzhieva has made a critical analysis of the literature on the topic, which gives her reason to formulate precisely the purpose of her study: **"To present clinical results in post-extraction areas after surgical removal of lower third molar teeth, using new nationally**



standardized four protocols for extraction of platelet concentrates from whole fresh autologous blood."

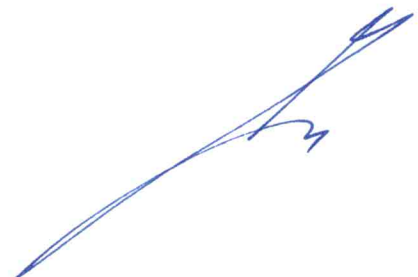
It has the following **tasks** to achieve this goal:

- 1. To make a summarized analysis of the objective and subjective symptoms associated with the healing process after surgical removal of lower third molar teeth.**
- 2. To analyze the early effects of platelet rich plasma in post extraction wounds after surgical odonectomy.**
- 3. To evaluate and discuss the influence of platelet concentrate in post extraction dental defects on bone healing.**
- 4. Based on the 4 new platelet rich plasma protocols used, a comparison based on postoperative clinical results should be made.**
- 5. To determine if there is a protocol of the new generation with absolute biological significance of growth platelet factors on early and later postoperative clinical symptoms after surgical extraction of third lower molar teeth.**
- 6. Based on the conducted study, an objective assessment of the therapeutic value of the methodology with the application of platelet concentrate in post extraction dental alveolus should be given.**
- 7. To create a diagnostic and therapeutic algorithm among servicemen in which the use of PC after extraction of lower third molar teeth to ensure stimulation and acceleration of healing of the operative wound and return to the daily workload in a shorter time.**

The results and discussion are accompanied by tables and diagrams. The conclusions correspond to the results obtained.

The self-assessment of the contributions in connection with the dissertation includes 1 contribution of an original nature for the country, 3 – of an applied nature and 4 contributions of a confirmatory nature:

Of original character:



1. For the first time in Bulgaria, in Military Medical Academy proposal for an avant-garde algorithm of behavior has been prepared for military aviation pilots who need surgical extraction of the lower third molar tooth, namely – addition to the post-extraction defect of autologous PRP. The main objective – as quickly and fully as possible to restore the official commitments in the flight space of the Republic of Bulgaria.

With attached character:

2. The difficulties of the most commonly used operational method in our oral department have been analysed – the surgical extraction of lower third molar teeth among servicemen.

3. The necessary optimization measures are outlined, needing stimulation of the bone healing process after surgical extraction of lower wisdom teeth, by use of autologous platelet concentrates.

4. An algorithm of behavior has been created in the Department of Oral Surgery at the Military Medical Academy in Sofia – after a surgical extraction of lower third molar among military persons to apply PRP in post extraction defects obtained according to standardized for our country protocols 3 and 4 (Ivanova et al).

Confirmatory in nature:

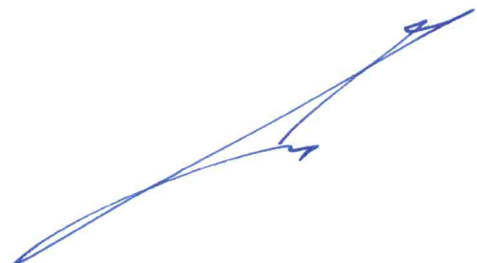
5. The stimulating effect of PC regarding the early recovery period after surgery of the lower sage.

6. Optimized bone regeneration in the surgical wound and prevention of subsequent pathology in the second lower molar, as a result of the actions of the platelet concentrate, 3 months after surgery.

7. It has been confirmed that the clinical postop results after third lower molar surgery correlate with the technique of obtaining platelet concentrate, that is, there is a direct dependence on the quantity, concentration of cellular components and the acting proteins in them.

8. It has been confirmed that PRP extraction is reliable using manual methods with a standard small laboratory centrifuge, without the aid of closed commercial kits. It makes the methodology easily feasible and reliable under standard conditions, even in an ambulatory dental surgical practice.

Conclusion:

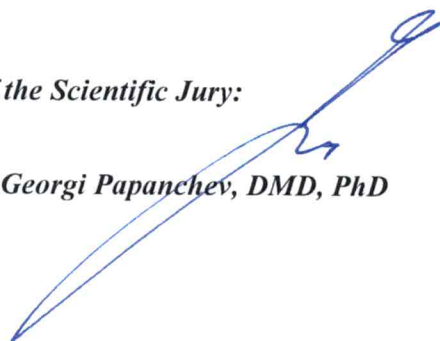
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Dr. Cheshmedzhieva's dissertation **paper contains scientific and applied scientific results that represent** an original contribution to science and meet all the requirements of the Law on the Development of Academic Staff in the Republic of Bulgaria, *the Regulations for the Implementation of the Law on the Development of the Academic Staff in the Republic of Bulgaria and the Rules of MU-Varna. The dissertation is a successful and significant and entirely personal work of the doctoral student. For these reasons I propose to award to Dr. Atanaska Yordanova Cheshmedzhieva the scientific and educational degree "DOCTOR"* in the field of higher education 7. Health and sports in the professional field 7.2. Dental medicine.

07.08.2023

Member of the Scientific Jury:

Assoc. Prof. Georgi Papanchev, DMD, PhD

A handwritten signature in blue ink, written over the printed name of Assoc. Prof. Georgi Papanchev. The signature is stylized and appears to be 'G. Papanchev'.