

REVIEW

of Prof. Angelina Pecheva Vlahova-Petrova, DMD, PhD
Head of the Department of Prosthetic Dentistry,
Faculty of Dental Medicine, Medical University-Plovdiv, Bulgaria

Of Dissertation for PhD Degree '**Doctor**'

Professional direction: Dental Medicine

Doctor's program: Therapeutic Dentistry

Author: Dr. Ivaylo Georgiev Hristov

Form of dissertation: regular

Department: Department of Periodontology and Dental Implantology, FDM, MU-Varna

Topic: „One-photon emission computer tomography with 99mTc MDP (methylene diphosphonate) of peri-implant bone tissue during the healing period after intraosseous osseointegrated dental implants placement”

Scientific Supervisor: Prof. Stefan Vasilev Peev

Assoc. Prof. Borislav Georgiev Chaushev

1. General presentation of the procedure and the PhD student

The presented set with the materials on paper and electronic variant includes the following documents:

- Report to the Rector of MU-Varna for disclosure procedure of PhD defense
- Signed CV in European format
- notarized copy of university diploma
- orders for PhD student and for deduction with the right to make final defense
- order for individual plan exam and protocol of PhD student exam according to the specialty

- protocol of department meeting for discussion of the dissertation with decisions for starting procedure of final defense and choice of scientific jury
- Dissertation
- Abstract book
- list of publications connected with the topic of the dissertation
- copies of the publications
- list of participations in scientific forums
- list of noticed citations
- declaration of originality and reliability of the documents
- other documents.

The PhD student has 3 full text publications in East European Scientific Journal.

Notes and comments for the documentation:

The documents are properly prepared and submitted.

2. Short CV data of the PhD student

Dr. Ivaylo Georgiev Hristov was born on 31.05.1988. He graduated MU-Varna in 2013 and from 2014 till now he is an Administrative Assistant Professor there.

Relevance of the topic and expediency of the aim and the tasks of the dissertation

The following of the healing period after dental implants placement is an important stage of the treatment process.

The methods that are used for this investigation are interesting. The bone morphology in the peri-implant zone can be evaluated via radiograph and histological examination. The use of computer tomography (based on the Hounsfield scale) defines the bone density but cannot measure the vitality and the functional condition of the bone structure. This can be done using nuclear medical examination. It ensures data for the physiological processes and activities in different organs based on the accumulation of different markers.

Today there is not enough systematic analysis in the literature about the osteoblast activity investigation in the peri-implant bone during the healing period after intraosseous osseointegrated dental implants placement.

The aim and the tasks of the dissertation are clear and precise formulated.

4. Knowledge of the problem

The PhD student Dr. Ivaylo Georgiev Hristov has an excellent knowledge about the problem and creative evaluation about the material. A proof of this is the detailed literature review based on 402 literature sources, 9 of them on Cyrillic, richly illustrated with figures and photos.

5. Methods of the investigation

The chosen methods of the investigation allow achievement of the aim and tasks of the dissertation.

6. Characteristics and evaluation of the dissertation

The dissertation of Dr. Hristov has 151 standard pages and is illustrated with 11 tables, 26 figures, 30 photos and 7 applications. The bibliography has 402 sources, 9 in Cyrillic and 393 in Latin.

The literature review is detailed and well structured.

The aim and the tasks of the dissertation are formulated according to the topic.

The presentation and the illustration with figures and graphics of the own investigations is on the desired level according to the materials and the methods.

The results are systemized and arranged according to the tasks. They are illustrated with photo material, final tables and schemes.

The discussion is made following the present requirements for the structure of the dissertation, separately for every task. There are also tables and diagrams with the statistical data.

The conclusions are in a direct connection with the evaluated results.

The contributions present the modern focus of the dissertation.

7. Contribution and significance of the dissertation for the science and practice

The contributions of the dissertation of Dr Hristov are systemized and divided into three groups: with confirmatory, with original character for the world and for Bulgaria.

The biggest interest is provoked of the contribution with original character for the world – for first time for the definition of the bone density according to CBCT was made software algorithm of the establishment of the Hounsfield units in preliminary defined bone volume.

8. Assessment of the dissertation publications

The full text publications and participations associated with the dissertation of Dr Hristov are 3 in East European Scientific Journal.

9. Personal engagement of the PhD student

According to my opinion the personal engagement of Dr Hristov in the dissertation study is dominant and the approved contributions and the final results are his own personal merit and a merit of his Scientific Supervisors Prof. Peev and Assoc. Prof. Chaushev.

10. Abstract book

The Abstract book of Dr Hristov is designed according to the requirements and presents the main results of the dissertation.

The contents and the quality of the Abstract book meet the requirements.

11. Critical notes and recommendations

I have no critical notes connected to the final variant of the dissertation of Dr. Hristov.

12. Personal impressions

Unfortunately, I do not know Dr. Hristov, and I have no personal impressions of him.

13. Recommendations for future application of the dissertation contributions and results

I recommend to Dr. Hristov to continue his work in the field of the evaluation of the peri-implant bone tissue during the healing period.

CONCLUSION

The dissertation has scientific, scientific-practical and practical results that are an original contribution in the science and respond to all the requirements of the Law for academic development in Bulgaria (ЗПАЧРБ), the Regulations of ЗПАЧРБ and the Regulations of MU-Varna. The materials and results of the dissertation respond to all the specific requirements of MU-Varna.

The dissertation present that the PhD student Dr. Ivaylo Georgiev Hristov has exhaustive theoretical knowledge and professional skills of the scientific specialty "Therapeutic Dentistry" and demonstrates qualities and abilities for self-conduct scientific study.

Due to the above, I confidently give my **positive assessment** for the investigation presented in the Dissertation, Abstract book, Results and Contributions, and propose to the honorable scien-

tific jury to award an educational and scientific degree „Philosophy Doctor (PhD)” to Dr. Ivaylo Georgiev Hristov in PhD program of “Therapeutic Dentistry”.

10/05/2022

Reviewer: 

(Prof. Angelina Vlahova, DMD, PhD)