

STATEMENT

by **Assoc. Prof. Dr. Georgi Stoyanov Nikolov, MD,**
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on the dissertation work for the acquisition of a PhD degree at the Medical University - Plovdiv, Faculty of Dental Medicine Department of Diagnostic Imaging, Dental Allergology and Physiotherapy”

Professional field: **Medicine**

Scientific specialty: **Dental clinical allergology**

Author: **Dr. Mariana Petrova Tsekova-Yaneva, PhD**

Title: **Treatment of sensitized patients with biocompatible dental materials.**

Biocompatibility of dental materials is important for the modern society, as each of us is exposed to more and more anthropogenic chemical agents in our daily lives.

The huge amount of various dental materials of different origins, chemical and physical characteristics with diverse biological activity, incl. allergenic, requires a detailed assessment of their biocompatibility in each patient at risk through the understanding of the patient’s individual reactivity.

It is in this direction that Dr. Mariana Tsekova's PhD’s thesis is a detailed description of many years of personal clinical and practical experience in determining approaches to diagnosing and treating sensitized patients with biocompatible dental materials and monitoring their early and late remediation effect, which is of great theoretical and practical significance for both dentists and researchers studying the manifestations of the oral immune response in this category of patients.

The dissertation work is done according to the generally accepted academic form.

In a well-structured literature review it summarizes current data on the main sensitizing agents in dental practice, presents new technologies that allow the creation of new biocompatible materials for use in dentistry, especially in patients with allergic diseases.

The review shows that there is no comprehensive data on the immune mechanisms of the occurrence of contact allergic reactions to novel dental materials. No specific, pathognomonic, clinical markers for the presence of intraoral contact allergy have been defined when using both classical and newly developed dental materials.

In this regard, the main aim of the doctorate is to monitor the effectiveness of treatment of sensitized patients with biocompatible dental materials through long-term comparative analysis of early and late therapeutic results.

To achieve the set aim, Dr. Tsekova has focused her efforts on solving 6 clearly formulated tasks, which give structure to a well-founded approach to the study. The study included an impressive number of patients - 565, divided into two groups: main - with allergic, autoimmune and oral diseases and a control - without evidence of allergies, or reactions. A lot of work has been done in several years. Various, modern, clinical, laboratory and dental practice-specific diagnostic methods, modern allergological and immunological approaches to assess the sensitization of patients to dental materials and other conventional allergens, as well as some key indicators of their immunological reactivity are used. The statistical processing of the results with the help of the most modern tools and analyses makes a very strong impression, and contributes to accepting the presented results as reliable.

The obtained results are very accurately and appropriately illustrated, which makes their understanding easy and convincing. In the course of their analysis, Dr. Tsekova has proven herself as a very well-prepared professional - dentist and allergist, able to interpret the obtained data in a competent and scientific manner.

The conclusion and the summarizing implementations of the dissertation are well formulated and reflect the essence of the obtained results. Dr. Tsekova presented 8 final implementations, which are derived from the specific results of the study. They emphasize the relevance of the research and can serve for theoretical justification and practical application of adequate preventive measures, both in sensitized patients and in dentists who are at double risk - both as patients and as professionals.

I take the formulated contributions to be of original and confirmatory nature and I believe that they objectively reflect the real results of the conducted research.

I consider the following contributions to be particularly significant:

- Modern biocompatible dental materials have been identified, providing a good medical and socio-economic prognosis for the dental treatment of sensitized patients. In this regard, the great importance of cross-sensitization to different monomers has been established, which requires a test with all composite materials before treatment initiation.
- A complex of laboratory immunological methods for assessment of the rehabilitation effect in sensitized patients, easily applied in everyday practice, has been developed.
- Anamnestic, clinical and therapeutic approaches have been developed, providing effective treatment with modern biocompatible dental materials for patients sensitized to major specific and / or group allergens.

- The most important, in my opinion, contribution is not only the established significant improvement of the oral status, but also the suppression of the systemic immune activation in patients in whom the sensitizing dental materials have been removed.
- The idea of Dr. Tsekova to make efforts to completely change the allergic reactivity in sensitized patients with clinically manifested IgE-mediated allergy alongside with localized oral treatment by conducting anti-allergic, symptom treatment and especially - allergen specific immunotherapy to allow a change in the type of immunological reactivity from type Th2 to type Th1 deserves special attention.

Related to the dissertation Dr. Tsekova has participated in the publication of 4 textbooks and monographs in Bulgaria. She has published 14 articles in international peer-reviewed scientific journals.

The dissertation is completed in a particularly precise manner and I have no significant remarks on the methodology, presentation of the results and their analysis.

The author's summary of the work fully reflects the conducted research and the obtained results.

CONCLUSION

The dissertation work fully meets all the requirements of the Act for the Development of the Academic Staff in the Republic of Bulgaria; The Regulations for application of the same act and the respective Regulations of Medical University - Plovdiv.

Through it, Dr. Mariana Tsekova-Yaneva presents herself as a full-fledged researcher, dentist and allergist with rich immunological knowledge, able to plan and solve responsible research tasks and continues to very successfully develop the immunological / allergological field in dentistry by revealing some intimate mechanisms underlying the immunological reactivity in sensitization to various dental materials.

Everything presented so far gives me ground to give a positive evaluation of the dissertation and to recommend to the esteemed members of the jury that Dr. Mariana Petrova Tsekova-Yaneva be awarded the degree of "Doctor of Science" in the scientific specialty "Dental Clinical Allergology". Professional field: Medicine.

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Assoc. Prof. Dr. Georgi Nikolov, MD

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