

To

**The Chair of the Scientific jury**

**According to Order № P - 102/ 25.01.2022**

**Of the rector of MU-Plovdiv**

**Bul. Vasil Aprilov 15A, 4002 Plovdiv**

***Attached I present: Opinion***

In regard with the procedure awarding "Doctoral degree"

Of **Dr. Lilyana Hristova Shtereva**, self-training PhD student at the department of Pediatric Dentistry, FDM, MU-Plovdiv

***Prepared the opinion:***

**Assoc. Prof. Dr. Liliya Borisova Doichinova, PhD**

Faculty of Dental Medicine-Sofia, MU-Sofia

Scientific specialty- Pediatric dentistry

Faculty of Dental Medicine-Sofia, Department of Pediatric Dentistry

## OPINION

By Associate Professor Dr. Liliya Borisova Doichinova, PhD

Faculty of Dental medicine-Sofia

Department of Pediatric Dentistry

In regard with the procedure for awarding educational and **scientific degree „Doctor“** in doctoral program “Pediatric dentistry” **Dr. Lilyana Hristova Shtereva**, self-training doctoral student at the department of Pediatric Dentistry, FDM, MU-Plovdiv **for the development of dissertation on the theme: “Diagnosis and control of silanization of first permanent molars”** with academic supervisor Assoc. Prof. Dr. Veselina Kondeva-Glavinkova PhD in professional field 7.2. "Dental Medicine" and scientific specialty "Pediatric Dentistry", sphere of higher education 7. Health and sports.

The presented set of materials on paper and electronic media is in accordance with Art. 115(1) of the Procedure for awarding "doctoral degree" in MU - Plovdiv; Regulations of MU-Plovdiv from 06.11.2014.

### **1. Biographical data and professional development.**

**Dr. Lilyana Hristova Shtereva** was born on November 8, 1991 in the city of Plovdiv. She graduated from high school in 2010, EG "Plovdiv" Plovdiv. In 2016 she graduated from FDM, MU-Plovdiv. In 2017, through a competition, she was appointed as a full-time assistant at the Department of Pediatric Dentistry, FDM, MU - Plovdiv, where she still works today.

Her teaching activities include conducting practical and seminar exercises in pediatric dentistry with students.

Dr.Shtereva is a member of BDA, BSSDM, NAPD.

Fluent in written and spoken English.

### **2. Significance of the theme**

The topic of the dissertation, developed by Dr. **Lilyana Shtereva**, has been the subject of unceasing scientific interest over the years. Dental caries is a multifactorial disease that affects most populations around the world and is considered to be the most important oral health problem. Its development is a dynamic process that can progress, be stationary or reverse. The highest risk of developing caries of permanent teeth is in the first two years after the eruption of molars and premolars. In recent years, European and global institutions have published a number of documents stating that oral diseases, as part of the group of non-communicable diseases, are a serious health and financial problem for many countries, and the governments of these countries must urgently take preventive measures.

Currently, the WHO considers the prophylactic sealing of pits and deep fissures of molars and premolars with sealants as a basic preventive measure and one of the most effective and least invasive dental procedures, providing full protection and complete prevention from occlusal caries. From the occlusal anatomy, pits and deep fissures are considered to be the areas most at risk of dental caries, as in these areas controlling the accumulation and removal of dental biofilm is often difficult, even unsatisfactory. Data from the literature show that about 90% of carious lesions are in the pits and fissures of molars and premolars in the first two years after their eruption.

All this determines the relevance and significance of the dissertation presented by Dr. Shtereva.

### **3. Knowledge on the problem by the doctoral candidate**

The dissertation is written on 166 pages and is illustrated with 1 table, 11 figures, 71 diagrams and 6 appendices. The bibliography includes 259 titles - 6 in Cyrillic and 253 in Latin.

Dr. Shtereva shows high awareness of the research problem. With a short **introduction** presents the essence of the topic.

The **literature review** is 39 pages long and ends with a discussion of the literature data, which points to the chosen dissertation topic. Dr. Shtereva presents a rich literary reference, confirming her good information and in-depth knowledge of the problem.

### **4. Research methodology**

The purpose of the scientific work is clearly stated. It is realized through six tasks, with demonstration of good clinical thinking and use of appropriate clinical and statistical methods. The methodologies are described in detail. Modern statistics are used for statistical analysis.

### **5. Characteristics and evaluation of the dissertation and contributions**

The dissertation is a personal work of the doctoral student and its structure is in accordance with modern requirements and contains all necessary sections: introduction, literature review, purpose and tasks, material and methods, results, discussion and conclusion on individual tasks, conclusions, contributions, bibliography and conclusion. The results obtained are well illustrated. They are presented with analysis in tables and diagrams.

In the discussion Dr. Shtereva makes a very good comparative analysis of his own results with the data published in the scientific literature.

The **conclusions** made are a consequence of the achieved **results** and the discussion made and bring the scientific contribution of a dissertation.

I accept the **Contributions** formulated by Dr. Shtereva. They are the personal work of the

doctoral student.

#### **Contributions of original character**

1. For the first time in our country the reliability of the three diagnostic methods is compared: visual diagnostics according to ICDAS II, diagnostics under magnification with the help of VistaCamiX Macro according to ICDAS II, diagnostics with Vista Proof fluorescent camera and modified Ryge criteria for monitoring the caries prophylactic effect and retentiveness of sealants, and the results are compared within a 12-month clinical trial.

2. For the first time in Bulgaria VistaCam-Macro and Proof FC are used for one-year follow-up of silanized tooth surfaces of the first permanent molars of children aged 5-8 years.

3. For the first time in the country the retention and caries prophylactic effect of sealant-ionomer-based sealant in newly erupting the first permanent molars for 12 months is monitored.

4. For the first time in the country, recommendations have been prepared for the application of sealants according to the risk and the condition of the eruption.

#### **Contributions of a confirmatory nature**

1. The excellent caries-prophylactic effect of sealant-ionomer-based sealant in the newly erupting first permanent molars and its lower retention has been studied.

2. The excellent caries-prophylactic effect of a composite-based sealant in the first permanent molars in occlusion and its excellent retention were studied.

3. The need for silanization of the first permanent molars of children in the high-risk group has been studied.

4. The excellent comparability between visual diagnostics with and without magnification according to ICDAS II has been studied.

5. The use of Vista Proof FC has been shown to be unsuccessful in tracking occlusal surfaces that have been silanized with Fuji Triage Pink due to the overdiagnosis it makes.

#### **6. Assessment of the doctoral candidate's publications and personal contribution**

The list of scientific publications in connection with the dissertation includes 3 real publications in which Dr. Shtereva is a leading author. She has 6 participations in Bulgarian and international forums, where she is also a leading author. I believe that the relevance and use of new methods in the research work of Dr. Shtereva makes her publications on this issue extremely useful.

I have no critical remarks about the research and the materials presented.

I recommend Dr. Shtereva to promote the results of her dissertation, which are aimed at



pediatric dentists and dentists.

#### **7. Author's summary**

The author's summary reflects the content of the dissertation in summary form on 54 pages. It is prepared according to the requirements, reflecting the main results achieved by the dissertation, Scientific conclusions, contributions, publications and participations in Bulgarian and international congresses are included, as well as one project.

#### **8. Conclusion**

**Dr. Lilyana Hristova Shtereva presents a dissertation with thematic relevance, containing scientific and applied research results that represent an original contribution to science and meet the requirements of the Law for development of the academic staff in the Republic of Bulgaria , the Rules for application of the Law and the Rules of MU - Plovdiv.**

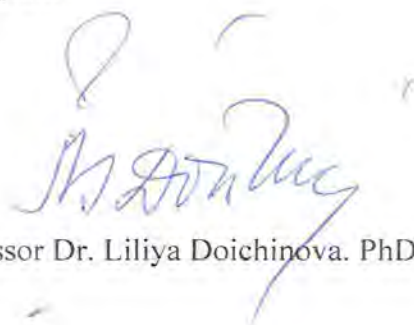
The presented materials and dissertation results fully comply with the specific requirements adopted in connection with the Regulations of MU - Plovdiv for application of of the Law for development of the academic staff in the Republic of Bulgaria.

The dissertation shows that Dr. Shtereva has in-depth theoretical knowledge and professional skills in the scientific specialty of Pediatric Dentistry, showing qualities and skills to conduct independent research and present the necessary publishing activity.

I give a positive assessment of the presented dissertation on the topic - "Diagnosis and control of silanization of first permanent molars " and I will confidently vote "YES" and propose to the esteemed scientific jury to award the educational and scientific degree "Doctor" of Dr. Lilyana Hristova Shtereva in PhD Pediatric Dentistry program.

28.01.2022

Sofia



Assoc. Professor Dr. Liliya Doichinova. PhD