STATEMENT

by Assoc. Prof. Dr. Tsvetana Ivanova Abadjieva, MD, PhD
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On dissertation for awarding the scientific degree of Doctor
in the field of higher education 7. Health and sports,
professional field: 7.1. Medicine,
scientific specialty: Dermatology and Venereology

Author: Dr. Gergana Zaprinova Vazheva
Department of Dermatology and Venereology, Medical University - Plovdiv

Title: Application of PCR methodology in modern diagnostics of fungal infections caused by dermatophytes

1. **General presentation of the procedure and the doctoral candidate.**

Pursuant to Order № P-415/24.02.2023 of the Rector of the Medical University – Plovdiv, I have been selected as member of the Scientific Jury for awarding the scientific degree "Doctor".

The set of materials presented to me on electronic media is consistent with Art. 70 (1) of the Procedure for acquisition of the scientific degree of Doctor in MU - Plovdiv; the Regulations of MU-Plovdiv of 28.01.2021, and includes all required documents.

Copies of 3 publications related to the topic of the dissertation were submitted.

Short biography of the doctoral candidate

Dr. Gergana Zaprinova Vazheva was born on September 10, 1992. She worked as a trainee doctor at the Clinic of Dermatology and Venereology, St. George's University Hospital, Plovdiv from 2018 to 2022. Dr Vazheva acquired a speciality of Dermatology and Venereology in 2022. She was a full-time doctoral student at the Department of Dermatology and Venereology from 2019 to 2020. She was appointed assistant professor and independent doctoral student at the Department of Dermatology and Venereology, Medical University, Plovdiv in 2020

Dr. Vazheva teaches both Bulgarian and English-speaking students.

2. Topicality of the subject

The dissertation is relevant and explores a contemporary problem with scientific and practical orientation. Conventional methods for diagnostics of dermatophyte infections were compared with real-time polymerase chain reaction (real-time PCR) technique, innovative for mycology in Bulgaria.

3. Knowledge of the problem

Dr. Vazheva has presented a comprehensive overview and bibliography, which means that she is familiar with the problem in detail.

4. Research methodology

The chosen research methodology is pertinent to the intended goal and has obtained an adequate answer to the tasks in the dissertation. The statistical analyses used are appropriate.

5. Characteristics and assessment of the dissertation work and contributions

The dissertation consists of 142 standard pages, of which: content - 2 pages, abbreviations used - 2 pages, introduction - 2 pages, literature review - 35 pages, purpose and objectives of the study - 1 page, material and methods - 18 pages, own results - 31 pages, discussion - 23 pages, conclusion - 1 page, conclusions and contributions - 3 page, bibliography - 20 pages, publications and participations in scientific forums related to the dissertation - 1 page. The dissertation contains 46 figures and 28 tables.

The literature review presents current data on the characteristics of fungi, clinical pictures of dermatophyte diseases and methods of their diagnostics.

The aim and tasks are clearly stated.

In connection with the dissertation work, 196 patients with suspected dermatophyte infections were examined, of which 144 for onychomycosis, 29 for skin infections, 21 for mycosis of scalp, and 2 for mycosis of beard. The etiologic agents and frequency of onychomycosis in patients with and without diabetes mellitus were compared using microscopy mycological examination, cultural examination, histological examination, and real-time PCR/ using microscopy, cultural, histological, and real-time PCR examination. The advantages of using PCR in real time in the diagnostics of dermatophyte infections have been demonstrated.

The bibliography consists of 172 literary sources, of which 10 are in Cyrillic and 162 are in Latin.

The contributions are divided into contributions of original and scientific-practical nature.

Real-time PCR with DermaGenius Complete multiplex real-time PCR kit was performed with hair, skin and nails materials and the results were compared with microscopy, culture, and histological examination for diagnostics of dermatophyte infections. The frequency and etiological agents of onychomycosis in patients with and without diabetes mellitus have been performed in parallel with real-time PCR, microscopy, culture, and histological examination, and have been compared. These are the first studies in scientific literature. A histological examination of nails for onychomycosis has been conducted in a large-scale study for the first time in our country. DermaGenius Complete multiplex real-time PCR kit has been used as the main method for diagnosing dermatophyte infections of hair, skin, and nails for the first time in our country. An algorithm including real-time PCR has been proposed for diagnostics of superficial mycotic infections.

6. Assessment of the publications and personal contribution of the doctoral candidate

The publications related to the dissertation are 3, of which 2 published in an indexed journal, and Dr. Vazheva is the first author. The publications comply with the requirements under the Regulations of MU - Plovdiv.

Dr. Vazheva has personally participated in the research of the dissertation. The results and contributions obtained are her personal merit.

7. Abstract

The abstract contains 64 pages and is written in accordance with the requirements and reflects the main results, conclusions and contributions achieved in the dissertation.

CONCLUSION

The dissertation work of Dr. Gergana Zaprinova Vazheva contains scientific and scientifically applied results with original contribution to the medical science and is fully compliant with the requirements of the Law for Development of Academic Staff in the Republic of Bulgaria (ZRASRB), Regulation for the implementation of ZRASRB, and the Rules of MU - Plovdiv. The materials presented and the results are fully compliant with the specific requirements of MU – Plovdiv.

In consideration of the above, I confidently give my **positive** assessment of the research conducted in the dissertation, review, abstract, results and contributions, and recommend to the honorable scientific jury **to vote positively** for awarding the scientific degree of Doctor to Dr. Gergana Vazheva in the field of higher education. 7. Health and sports, professional field 7.1. Medicine and scientific specialty Dermatology and Venereology.

Заличено на основание
Чл.5 §1, б."В" Регламент (ЕС)2016/679

Statement prepared by
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