



## **S T A T E M E N T**

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Of a dissertation for awarding the educational and scientific degree “**Doctor**”,  
Field of higher education 7. Healthcare and sport,  
Professional direction 7.1. Medicine,  
Doctoral program “Dermatology and Venereology”

**Author:** Lidiya Nikolova Todorova

**Form of doctoral study:** self preparation

**Department:** Dermatology and Venereology, Medical University - Plovdiv

**Topic:** **CLINICAL AND THERAPEUTIC STUDIES IN ALOPECIA AREATA**

**Research supervisor:** Assoc. Prof. Tsvetana Abadjieva, PhD

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### **1. General presentation of the procedure**

The set of materials presented to me on an electronic medium is in accordance with the procedure for acquiring the educational and scientific degree "Doctor" and the scientific degree "Doctor of Sciences" at MU - Plovdiv, described in the Regulations for Academic Development at MU - Plovdiv from 2021, and includes the following documents:

- Dissertation
- Abstract
- List and copies of scientific publications and communications on the topic of the dissertation

– Protocol from the Department Council on internal dissertation defense.

The doctoral candidate has attached 4 publications.

The documents meet the requirements for the implementation of the dissertation defense procedure.

## **2. Brief biographical data for the doctoral candidate**

Dr. Lidiya Nikolova Todorova was born on 23.07.1985 in the city of Plovdiv. In 2008, he graduated with a degree in philosophy from "Paisiy Hilendarski" PU - Plovdiv and worked for some time as a teacher. In 2018, he graduated from the Medical University of Plovdiv, majoring in medicine. Since November 8, 2019, she has been enrolled in full-time doctoral studies at the Department of Dermatology and Venereology at the MU - Plovdiv. Since December 2020, he has been conducting regular specialization in skin and venereal diseases at the Clinic for Skin and Venereal Diseases, UMBAL "St. Georgi" - Plovdiv and Department of Dermatology and Venereology, MU - Plovdiv. Since March 2020, she has been enrolled as a full-time doctoral student at the Department of Dermatology and Venereology. Since February 2020, she has been appointed as a full-time assistant in dermatology and venereology at the department of the same name at the MU - Plovdiv. To date, he has co-authored four full-text articles. She participated in scientific forums at home and abroad, at some of which she was an invited speaker or presented clinical cases and posters - 32nd Congress of the EAD, Berlin (2023), Salzburg Weill Cornell Seminar in Dermatology (2023), IMCAS World Congress, Paris (2024), Sofia Dermatology Days 2021-2023. Participated in a scientific project. He is a member of BLS, BDD and EADV. He speaks Bulgarian, German and English.

## **3. Relevance of the topic**

The dissertation is dedicated to the disease alopecia areata. It can affect both sexes at any age, occur with single hairless fields or loss of all body hair, affects the quality of life of patients, and its treatment can be a real challenge for the dermatologist. The dissertation examines some epidemiological and clinical aspects of the disease, its relationship with the infection of COVID-19, with the presence of thyroid antibodies, the changes in the quality of life and the therapeutic effect of the application of PRP. The data from the conducted studies contribute to the enrichment of knowledge about the disease and expand the range of therapeutic possibilities. This makes the topic of the dissertation current, original and practically oriented.

The assigned tasks are expedient and related to the purpose of the dissertation work.

#### **4. Knowing the problem**

It is clear from the extensive literature review that the doctoral student knows the problem to a sufficient extent.

#### **5. Research methodology**

In his dissertation study, the doctoral student used clinical methods - history, examination and assessment of the severity of the disease on a clinical scale, an index for assessing the quality of life, laboratory methods - ELISA for the determination of thyroid antibodies, and trichoscopy with a video microscope. The methods used are suitable for achieving the goal and obtaining an adequate answer to the tasks set to be solved in the dissertation work.

#### **6. Characterization and evaluation of the dissertation work**

The dissertation submitted for review is printed on a total of 148 standard A4 pages. It contains the following sections: contents (5 pages), abbreviations used (2 pages), introduction (2 pages), literature review (36 pages), aim and objectives (1 page), material and methods (6 pages), results (20 pages), discussion (18 pages), conclusions and conclusion (2 pages), contributions (1 page), bibliography (19 pages), list of publications and participations on the topic (3 pages), acknowledgments (1 page) and appendices (25). It is illustrated with 13 tables and 13 figures, as well as with clinical photos and trichoscopic photos included in the appendices.

The content corresponds to the main text. Abbreviations used are correctly reflected.

The introduction and overview are written in sufficient volume, which shows that the dissertation student has a good awareness of the problem being developed. The overview includes several sections - epidemiology, etiopathogenesis, clinical picture, research, methods for assessing the severity of the disease, differential diagnosis, course and prognosis, quality of life, relationship with COVID-19, local and systemic therapy of the disease.

The purpose of the dissertation work and related tasks are clearly and specifically defined.

A total of 98 patients with various forms of alopecia areata, who passed through the Clinic for Skin and Venereal Diseases over a period of 4 years (2019-2023), were included in the studies related to the dissertation work. Demographics, comorbidities, presence of stressors, and the impact of COVID-19 infection and immunization were performed on all patients. In 30 patients, determination of thyroid antibodies was performed, PRP therapy was performed, trichoscopic examination was performed, and quality of life was evaluated before and after treatment.

Own studies are presented sequentially, described comprehensively and illustrated with a sufficient number of tables, figures, clinical and trichoscopic photos.

A study of demographic data shows that alopecia areata affects more women than men (ratio 2:1) at any age. 62% of patients had more than 1 episode of hair loss. The most common clinical form is alopecia areata partialis (41%).

In clinical studies, it was found that 73% of patients had concomitant diseases, of which Hashimoto's thyroiditis was the most common (21%).

In 58% of patients, the disease started after experiencing acute stress.

In the therapeutic study, patients were divided into 2 groups – 23 patients with normal and 7 patients with elevated thyroid antibodies. After PRP administration, 17% of patients experienced complete hair regrowth and 41% experienced significant hair regrowth. A better effect was observed in the group of patients with negative thyroid antibodies.

The observed clinical improvement is accompanied by an improvement in the patients' quality of life.

Disease-specific findings were observed on trichoscopic examinations, and their number decreased after PRP treatment.

In the "Discussion" section, the dissertation student makes a thorough analysis of his own results and literature data.

At the end of the presentation, 7 conclusions were drawn.

The book collection contains 205 literary sources, of which 10 are in Cyrillic and 195 are in Latin. 57 (28%) of the sources were printed after 2018.

The dissertation is written in correct and easy-to-read Bulgarian language.

## **7. Contributions and significance of the development of science and practice**

The dissertation student has defined a total of 6 contributions, which are distributed as follows: 1 original, 4 original for Bulgaria and 1 contribution of a practical-applied nature. All contributions are welcome.

## **8. Evaluation of publications on the dissertation work**

The list of scientific works related to the dissertation includes 4 real publications, of which 2 in Scopus-referenced journals, 1 in a national journal and 1 in a scientific collection. In 2 of the publications, the dissertation student is the first author.

The number of real publications presented meets the required quantitative criteria laid down in the Regulations for Academic Development of MU - Plovdiv.

## **9. Personal participation of the doctoral student**

The doctoral student was personally involved in conducting the research related to the dissertation work and their summarization and analysis.

## 10. Abstract

The abstract has a total volume of 47 pages. The abstract summarizes the material included in the thesis project.

## 11. Critical remarks and recommendations

The dissertation student complied with the recommendations made during the internal defense. I have no critical notes and recommendations.

## CONCLUSION

The presented dissertation contains scientific and applied results that represent an original contribution and meets the requirements of the Law on the Development of Academic Staff in the Republic of Bulgaria, the Regulations for its Implementation and the Regulations for Academic Development of the MU - Plovdiv.

The dissertation shows that the doctoral student Dr. Lydia Nikolova Todorova possesses in-depth theoretical knowledge and professional skills in the scientific specialty "Dermatology and Venereology", demonstrating qualities and skills for independent conduct of scientific research.

Due to the above, I give my *positive assessment* of the conducted research, presented by the above-reviewed dissertation work, abstract, achieved results and contributions and I propose to the honorable scientific jury to award the educational and scientific degree "Doctor" to Dr. Lydia Nikolova Todorova in a doctoral program in "Dermatology and Venereology".

29.02.2024.

Plovdiv

Залчено на основание  
Чл.5 §1, 6."В" Регламент (ЕС)2016/679  
Reviewer: .....

(Prof. Dr. Hristo Dobrev, PhD, DMSc)