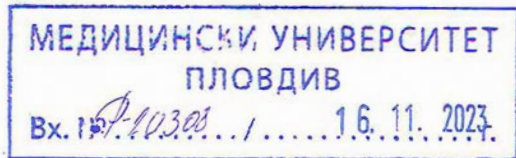


## REVIEW



**By: Assoc. Prof. Dr. Kossara Venelinova Drenovska, MD, PhD**

Department of Dermatology and Venereology, Medical University - Sofia

**On:** PhD thesis for awarding the educational and scientific degree „**Doctor**”

In area of higher education 7. Healthcare and sport,  
professional filed: 7.1. Medicine,  
scientific specialty: Dermatology and Venereology

**Author: Dr. Zhaneta Hristova Zhelyazkova - Cheradzhyska**

Department of Dermatology and Venereology,  
Medical University - Plovdiv

**Topic:** „Epidemiological, clinical and immunological aspects in pemphigus”

**Scientific supervisor: Assoc. Prof. Dr. Tsvetana Abadjieva, MD, PhD**

### **1. General presentation of the procedure and the PhD student**

In execution of Order № P-3039/ 23.10.2023 г. of Prof. Dr. Mariana Murdjeva, Rector, Medical University (MU) – Plovdiv, I am appointed a member of the scientific jury for the public presentation of procedure and awarding of the scientific degree “Doctor” to Dr. Zhaneta Hristova Zhelyazkova – Cheradzhyska, a regular PhD student to the Department of Dermatology and Venereology, Medical faculty (MF), MU - Plovdiv.

The procedure materials were submitted to me within the necessary time frame and regarding the requirements of the Law for development of the academic staff in the Republic of Bulgaria and the Regulations for its application, as well as the Regulations of MU – Plovdiv for awarding the educational and scientific degree „Doctor”.

#### **Short CV of the PhD student**

Dr. Zhaneta Hristova Zhelyazkova – Cheradzhyska has graduated from the Medical University of Plovdiv in 2019. Since March 2020 she has been enrolled as a regular PhD student in the Department of Dermatology and Venereology, MU – Plovdiv. She is a resident in the Clinic of Dermatology and Venereology, UMHAT “Sv. Georgi”, Plovdiv from April 2020 till present.

### **2. Importance of the PhD thesis**

The topic of the PhD thesis is very contemporary and important for the medical and dermatological practice. Pemphigus is a group of severe, chronic and relapsing autoimmune blistering diseases, that are subject of numerous recent scientific studies throughout the world. Dr. Zhelyazkova focuses on the problems of the diseases in the light of the internationally accepted new classifications, methods for objective evaluation of disease severity, diagnostic algorithms, clinico-laboratory correlations, input of the pandemic on the disease therapy and prognosis.

### **3. Knowledge of the PhD student on the problems presented in the PhD thesis**

Dr. Zhelyazkova presented an extremely exhaustive review of the literature and a very rich bibliography which demonstrates her knowledge on the details of the problem.

### **4. Structure, general characteristic and evaluation of the PhD thesis and its contribution**

The PhD thesis consists of 150 standard printed pages of which: contents – 3 pages, abbreviations – 1 page, introduction – 2 pages, review of the literature – 52 pages, aim and tasks of the study – 1 page, material and methods – 6 pages, results – 28 pages, discussion – 16 pages, conclusion – 2 pages, conclusions - 2 pages, contributions – 1 page, publications on the topic – 1 page, bibliography – 29 pages, summary in Bulgarian and English language – 4 pages, acknowledgements – 1 page. The main parts correspond completely to the academic requirements. The PhD thesis is illustrated with two tables and 35 figures, of which 6 images from personal archive (4 clinical, 1 histological and 1 immunofluorescent photos) and 29 diagrams, all with excellent quality and correspondence to the illustrated material. The figures reflect personal observations and studies, and are partially included in the literature review, while the others are in the results chapter.

*The review of the literature* is highly comprehensive and covers almost all aspects of the disease. The large scope of the observation demonstrates the PhD doctor's perfect knowledge of the studied problem. The review of the literature presents some historic data on pemphigus, recent data on its epidemiology, incidence, environmental risk factors, genetic predisposition, pathogenesis. Detailed picture of the clinical manifestation, diagnostic procedures, therapeutic measures, tools for evaluation of disease severity and quality of life are discussed in the light of the contemporary trends in the understanding of pemphigus.

#### ***Aim and tasks***

The aim of the PhD thesis is well and clearly postulated, namely to observe and analyse some epidemiological, clinical, therapeutic and immunological aspects among the pemphigus patients. To achieve the aim of the studies the investigator is defining 7 precisely and clearly formulated tasks.

#### ***Methodology of the observation***

The selected methods of investigation permit to achieve the determined aim and to answer adequately to the tasks formulated in the scientific work. The selected statistical analyses were suitably chosen. Strong personal participation of the PhD student is evident in the observations and interpretations related to the PhD thesis.

The number of patients included is sufficient, 109 in total, of patients who have been observed and followed in the Clinic of Dermatology and Venereology, UMHAT "Sv. Georgi", Plovdiv for the period 2010-2022. Of them 69 women and 40 men, are distributed according to the clinical variant of their disease based on the corresponding clinico-laboratory results.

The various methods of testing and observation include different number of participants from the total cohort of 109 patients. The role of potentially triggering environmental factors is evaluated in 68 pemphigus patients and 70 age and sex matched healthy controls. The effect of

COVID-19 pandemic was studied in 65 patients through personal interviews and phone calls. Anti-desmoglein autoantibodies ELISA was performed in 38 patients and 38 controls. Disease activity and severity was estimated by means of specialized tools - scales in 40 patients, personally evaluated by the PhD student. Patients' and controls' number in the different clinico-laboratory study groups is sufficient for a proper statistical evaluation through descriptive, frequency, correlation, regression and other methods for statistical analysis.

**The results and the discussion**, presented exhaustively on 28 and 16 pages respectively, give answers to the formulated aim and tasks. The study data and the illustrative material in the form of tables and figures, together with the discussion of the problem in the context of the Bulgarian and world scientific literature, reveal the quality of the present scientific work and demonstrate the thoroughness of Dr. Zhelyazkova.

**The Bibliography** consists of 336 sources, of which 18 in Cyrillic and 318 in English. Bulgarian studies and authors have been cited which illustrates the strong interest of the Bulgarian dermatologists in the problems of pemphigus. A balance between classical and contemporary sources has been achieved.

## **5. Conclusions, contributions, and importance of the work for the science and practice**

In her PhD thesis Dr. Zhelyazkova formulates 9 conclusions in general, that are derived from the results of her original studies and their analysis.

The contributions are divided into 4 original contributions, two of which for Bulgaria, and 3 confirmative and theoretical contributions.

For the first time in Bulgaria the correlation between the pemphigus autoantibody titers and the severity of the disease, calculated by means of specialized scale (PDAI) was studied. For the first time in Bulgaria analysis on the morbidity of SARS-CoV-2 infection, vaccination status and anti-epidemic measures application was studied in a large cohort of pemphigus patients.

## **6. Evaluation of the publications and the personal input of the PhD student**

Meeting the requirements, a sufficient number of publications related to the topic of the PhD thesis is presented – 4 in total, one of which is in English language where the PhD student is first author, thus emphasizing on her active scientific potential and personal input. Two of the publications are in world scientific data base referred and indexed journals, another two articles are published in national sources with editorial boards and reviewing process. The publications meet the requirements pointed out in the Regulations of MU - Plovdiv.

## **7. Abstract**

The Abstract covers 47 pages and reflects equally and adequately the main parts of the scientific work through the corresponding structure and illustrations.

## **8. Critical remarks and recommendations**

The PhD student has respected all previous critical notes and recommendations concerning the structure, contents, style, and illustration of the dissertation. Only few technical and typing mistakes are present.

## **CONCLUSION**

In conclusion, the PhD thesis of Dr. Zhaneta Hristova Zhelyazkova - Cheradzhyska on „Epidemiological, clinical and immunological aspects in pemphigus“ meets all the criteria for that kind of scientific work. The PhD thesis is correctly structured, the aim is suitably defined, the different studies are original. The presented materials are in complete accordance with the specific requirements of MU – Plovdiv and the requirements of the Law for the development of the academic staff in the Republic of Bulgaria.

**Based on the abovementioned, I confidently give my positive evaluation to the reviewed PhD thesis and suggest to the honorable scientific jury to award to Dr. Zhaneta Hristova Zhelyazkova – Cheradzhyska the educational and scientific degree „Doctor“ in area of the higher education 7. „Healthcare and sport“ in professional field 7.1. „Medicine“ and scientific specialty „Dermatology and Venereology“.**

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

Reviewer:

14.11.2023  
Sofia

Assoc. Prof. Dr. Kossara Venelinova Drenovska, MD, PhD