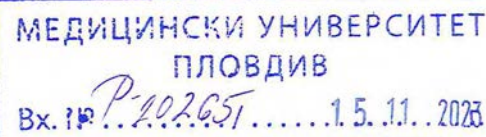


## OPINION



by Prof. Dimitar Konstantinov Gospodinov, MD, PhD, DSc  
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**About :** dissertation work for the award of the educational and scientific degree "PhD" in the Higher Education Department: 7. Health care and sports; Professional direction: 7.1 Medicine; Doctoral Program "Dermatology and Venereology"

**Author :** Zhaneta Hristova Zhelyazkova, MD

**Form of doctoral studies:** full-time

**Department:** Dermatology and Venereology, Faculty of Medicine, MU – Plovdiv

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

**Research supervisor :** Assoc. Prof. Tsvetana Abadzhieva, MD, PhD from the Department of Dermatology and Venereology in MU-Plovdiv.

I have been appointed as a member of the Scientific Jury (Order No. R-3039/20.10.2023 of the Rector of MU-Plovdiv) and assigned to prepare an opinion at the first meeting of the Jury.

The presented set of materials on paper and electronic media is in accordance with the requirements of the regulations in the country and in MU-Plovdiv.

The dissertation is written on 150 standard typewritten pages. Contains 1 p. Introduction, 52 p. Literature review, 7 p. Aim, tasks and materials, 34 p. Results, 16 p. Discussion, 3 p. Conclusion, 3 p. Conclusions and Contributions, 1 p. publications on the topic of the dissertation, 29 pages. Bibliography, 4 pages. Summaries in Bulgarian and English languages. The dissertation is illustrated with two tables and 35 figures. The bibliography contains 336 literary sources, 18 are in Cyrillic and 318 in Latin.

With its set goal and tasks, the current dissertation work focuses on optimizing the knowledge and analysis of some modern epidemiological, clinical, therapeutic and immunological aspects in patients with pemphigus in the regions of the towns Plovdiv, Pazardzhik, Smolyan, Haskovo and Kardzhali at the time of the COVID-19 pandemic.

Research work includes several main points, the most important of which are:

- To study the ethnicity of patients with pemphigus in the South Central region of Bulgaria;
- To investigate specific Desmoglein 1 and 3 autoantibodies in dermatosis and to study the correlation between their value and the clinical severity of the disease;
- To investigate the prevalence and course of SARS CoV-2 infection in pemphigus patients and the impact of COVID-19 on them.

In this sense, the goal of the scientific work is clearly formulated, and the 7 tasks correctly reflect the methods and sequence for their implementation. For their

implementation, retrospective and prospective clinical-epidemiological studies and clinical-immunological analysis were carried out for:

- Determining the ethnicity of 109 hospitalized patients in the Plovdiv skin clinic over a 13-year period.
- Assessment of risk factors from the domestic and occupational environment in 68 pemphigus patients compared with 70 healthy controls;
- Study of the impact of the Coronavirus disease 2019 (COVID-19) pandemic on the course of dermatosis in 65 patients;
- Histological and immunofluorescence (DIF) diagnostic verification of the disease. Investigation of IgG Anti-Desmoglein-1 and IgG Anti-Desmoglein-3 antibodies in 38 pemphigus patients and 38 controls, 17 of them with other AIBD and 19 healthy people.

The obtained results cover the tasks set in the dissertation work. The sufficient number of studied patients and the applied methodologies determine the reliability of the published results, for the processing of which conventional statistical models and software were used. At the same time, the results are well visualized through 35 figures and 2 tables.

Regarding their ethnicity, the studied patients defined themselves in 75.2% as Bulgarians (average age  $65.33 \pm 15.577$  years), in 21.1% as Roma (average age  $45.35 \pm 10.434$  years) and in 3.7% as Turks (mean age  $68.50 \pm 21.142$  years).

When assessing risk factors, no correlation was found between the diet of pemphigus patients and bullous disease. No familial relationship was established in any of the patients. No statistically significant data were found for the presence of psycho-emotional stress preceding the onset of the disease. The most common chronic accompanying disease is arterial hypertension.

The distribution according to classic and modern clinical variants of pemphigus shows that the most common is Pemphigus vulgaris (87.2%), and its subvariants Pemphigus vulgaris mucosae oris in 12.8% and Pemphigus vegetans in 4.6%.

During the SARS-CoV-2 pandemic and 6 months after its end (March 2020 to September 2022), 31 pemphigus patients were hospitalized, 20 of whom were newly diagnosed and 11 were patients with exacerbation. There are 19 patients with COVID-19. In compliance with anti-epidemic measures, patients with pemphigus on conventional therapy with corticosteroids and immunosuppressants are not more susceptible to coronavirus infection compared to healthy individuals.

The results of serological tests for anti-desmoglein antibodies do not fully confirm the literature data on the existence of a relationship between the values of anti-desmoglein antibodies in patients with pemphigus and the severity of the disease.

In the discussion, Dr. Zh. Zhelyazkova was able to present the comparison between the results obtained by her and those known from the scientific literature, proof of sufficient knowledge of the problem and correct interpretation of her own data, comparable or different from those already published.

The conclusions are 9 in number, the contributions of the dissertation are 7 (2 original, 2 original for Bulgaria and 3 scientific-theoretical and confirmatory). I accept them without objection

On the topic of her scientific development, Dr. Zh. Zhelyazkova presents 4 publications, 2 of which are indexed in WOS/S . Participated in a university research project on the subject of the dissertation.

The abstract is properly structured and accurately reflects the purpose, tasks and results of the dissertation work.

**In conclusion** , I accept that the dissertation of Dr. Zhaneta Zhelyazkova fulfills the requirements for scientific work to acquire the ONS "doctor". The scientific development is original in terms of subject matter and methodology and has a scientific contribution. Its results and conclusions have their indisputable importance for knowledge of the modern pathomorphosis of autoimmune bullous diseases and for the practice of modern clinical dermatology.

I vote positively to award the educational and scientific degree "Doctor" in the scientific specialty "Dermatology and Venereology" to Dr. Zhaneta Hristova Zhelyazkova.

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

November 13, 2023

Prepared the opinion:  
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