

## REVIEW

by Prof. Dr. Mariela Geneva Popova, MD  
Medical University-Plovdiv

of a dissertation for the award of the educational and scientific degree 'doctor'  
Professional field 7.1. Medicine  
doctoral program " Rheumatology"

Author: Dr. Aleksandar Marinkov

Form of doctoral studies: independent doctoral student

Department: Propaedeutics of Internal Medicine, Faculty of Medicine, Medical University - Plovdiv

Topic: " SPREAD AND CLINICAL SIGNIFICANCE OF COVID-19 INFECTION IN PATIENTS WITH RHEUMATOLOGICAL DISEASES IN BULGARIA ".

Scientific supervisor: Prof. Dr. Rositsa Karalilova, MD, Medical University - Plovdiv, Faculty of Medicine, Department of Propaedeutics of Internal Medicine

Scientific consultant: Professor Dr. Rositsa Dimova, MD, MU-Plovdiv, Faculty of Public Health, Department of Health Management and Economics healthcare"

#### 1. General presentation of the procedure and the doctoral student

The author, Doctor Aleksandar Marinkov, presents a set of materials on paper/electronic media in accordance with Art. 115 (1) of the Procedure for Acquiring the ONS "Doctor" at MU - Plovdiv; Regulations of MU-Plovdiv dated 06.11.2014 and includes the following documents:

- dissertation
- abstract
- administrative package of documents

#### 2. Presentation of the doctoral student with an emphasis on biographical data in relation to the procedure.

Dr. Aleksandar Marinkov was born in 1988 in the Serbian city of Dimitrovgrad. In 2007, he graduated with honors from the Medical University "Dr. Milenko Hadžić", Serbia. In 2013, he graduated with a master's degree in medicine from the Medical University - Plovdiv. From 2013, he was a rheumatology resident in the Rheumatology Clinic at the University Hospital "Kaspela" until 2018, when he became a specialist in Rheumatology. Dr. Marinkov began his academic development in 2018, when, after a competition, he was selected as an assistant professor at the Department of Propaedeutics of Internal Medicine, Faculty of Medicine, Medical University - Plovdiv. In 2022, he began doctoral studies in independent preparation with the supervisor Assoc. Prof. Dr. Rositsa Karalilova, MD.

## 2. Relevance of the topic

COVID-19 pandemic has presented humanity with an unprecedented challenge in every sphere of social and economic life. Healthcare has also faced difficulties, especially in the early months of the pandemic in the fight against the unknown viral pathogen.

Even today, when we are already out of the pandemic, COVID-19, there are still many conflicting data and uncertainties regarding the incidence of COVID-19 infection, the severity of the disease in patients with chronic diseases. A key point that needs attention is the impact of concomitant therapy on both the viral infection and the rheumatic disease in the context of a concomitant infectious disease.

This led to the need to conduct similar studies, an attempt to establish the most accurate possible number of affected patients, factors influencing the therapy, course and outcome of patients with inflammatory and systemic connective tissue diseases.

The data discovered would have practical implications for a wide range of medical, social and economic specialties.

Because of all this, I believe that Dr. Aleksandar Marinkov's topic is relevant and significant, and carries great weight in the era of modern, personalized medicine.

## 3. Knowing the problem

The literature review of Dr. Marinkov extends over 138 pages, which present in detail the literature available to date in the world databases, described in detail and presented. The author refers to 152 literature sources, which are correctly cited in the course of the review and discussion. Both domestic and international collectives are cited. All of the above shows the deep knowledge of the dissertationist of the problem, as well as the time he has devoted to the study of this topic with a clear awareness of its importance.

## 4. Research methodology

The chosen statistical method for the study is cross-sectional study. Primary information was collected through a questionnaire filled out by patients with rheumatic diseases. Epidemiological method and sociological method were also used.

The team is developing an original, standardized, patient-oriented questionnaire – a survey. To achieve this, the author and his team are developing an online platform for easier collection of the necessary information in a pandemic. The developed questionnaire is extensive, complete and allows achieving the set goal and obtaining an adequate answer to the tasks solved in the dissertation.

## 5. Characterization and evaluation of the dissertation work and contributions

The dissertation covers 138 standard pages, has a correct structure and format. The author has created 26 figures, as well as 14 tables, and 6 appendices are available. The presented dissertation meets the requirements of MU-Plovdiv for structuring and volume content as follows: Introduction - 2 pages; Literature review - 31 pages; Aim and objectives - 2 pages; Materials and methods - 15 pages; Results - 32 pages; Discussion - 25 pages,

Conclusions - 1 page; Bibliography - 152 sources; Appendices - 30 pages. All abbreviations are correctly described.

The literature review is a systematic review, analyzing the pathogenesis and pathophysiology of Covid-19 in patients with rheumatic diseases and the influence of the course of the underlying disease. It correctly expresses the available world literature, which shows the depth of the dissertation in the problem, which refers to 152 sources, both international and from Bulgaria. All literary sources are correctly cited in chronological order of their appearance in the text.

The purpose of the dissertation is clearly formulated and corresponds to the tasks set.

The "Patients and Methods" section covers 15 pages and is logically developed. The study design and inclusion and exclusion criteria are properly structured and minimize the possibility of incorrectly included patients, which would compromise the quality of the collected data.

The results are real, objective, and consistent with world literature. Avotra well illustrates his data with a sufficient number of tables and figures. For their interpretation, he used modern statistical methods - intermediate, SPSS version 25 was used.

Discussion of the results is constructive, critical, scientifically compared with the available data in the world literature and once again shows us that Dr. Marinkov's work is contemporary and not inferior in quality to the world database.

The conclusions are properly reasoned and correspond to the set goal and the tasks performed.

The contributions are divided into methodological, scientific-applied and confirmatory in nature, correctly reflecting the collected patient data, as well as their logical and correct processing, the doctoral student's ability to extrapolate these conclusions and formulate contributions.

The bibliography includes both Bulgarian and foreign author teams, which gives the reader the opportunity to become familiar with the available world data in a synthesized and visual way and to once again appreciate the value of this dissertation work.

The dissertation is written competently.

6. The doctoral student personally participated in the conducted dissertation research, developed the study design, personally collected the primary patient data, as well as the subsequent processing, literature review and discussion.

7. Critical remarks and recommendations

I HAVE NO CRITICAL COMMENTS


## CONCLUSION

The dissertation work *contains scientific, scientifically-applied and applied results that represent an original contribution to science* and meet all the requirements of the Act on the Development of the Academic Staff in the Republic of Bulgaria (ADSRB), the Regulations for the Implementation of the ADSRB and the Regulations 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 the Implementation of the ADSRB.

The dissertation shows that the doctoral student Dr. Aleksandar Marinkov possesses in-depth theoretical knowledge and professional skills in the scientific specialty "Rheumatology", demonstrating qualities and skills for independently conducting scientific research.

Due to the above, I confidently give my **positive assessment** of the conducted research, to continue the procedure for finalizing the dissertation work through a public defense for obtaining *the educational and scientific degree 'doctor'* of Dr. Aleksandar Marinkov in the doctoral program in Rheumatology.

08.04.2025

Prepared the review :   
Prof. Dr. Mariela Geneva-Popova, MD

Заличено на основание  
Чл.5 §1, 6, "в" Регламент (ЕС)2016/679