

To the Chair of the Scientific Jury, appointed
by order No. P-109-46/16.01.2026
of the Rector of MU-Varna

STATEMENT

By Assoc. Prof. Biser Aleksandrov Makelov, MD
Associate Professor of Orthopedics and Traumatology at
Department of Special Surgery, Thoracic Surgery,
vascular surgery and angiology, pediatric surgery, orthopedics and traumatology
to the MF of Trakia University, Stara Zagora

Re: dissertation on the topic "**Post-traumatic stiffness of the elbow joint**", for the award of the educational and scientific degree "Doctor" in the field of higher education 7. "Healthcare and Sports," professional field 7.1. "Medicine," scientific specialty "Orthopedics and Traumatology," authored by Dr. Petar Valentinov Petkov, full-time doctoral student at the Department of Orthopedics and Traumatology, Faculty of Medicine, Prof. Dr. Paraskev Stoyanov Medical University – Varna.

Scientific supervisor: Prof. Dimitar Ivanov Raikov, MD, PhD

The dissertation was discussed at the Department Council of the Department of Orthopedics and Traumatology, held on December 17, 2025.

Dr. Petar Valentinov Petkov graduated with a degree in medicine from the Medical University of Varna in 2015 and obtained a specialization in orthopedics and traumatology in 2021. He is currently in his final year of a master's program in Health Management at the same university.

His professional development is related to clinical orthopedic and traumatology practice. He began working as a resident physician in the Department of Orthopedics and Traumatology at "St. Anna" Hospital in Varna, and subsequently worked as a specialist physician at "Maichin Dom" Hospital.

Dr. Petkov participates in national and international scientific forums, as well as in research projects at the Medical University of Varna, and has completed postgraduate training and specializations in Bulgaria and abroad, focusing on modern surgical and conservative methods in orthopedics and traumatology.

RELEVANCE OF THE TOPIC

Post-traumatic elbow stiffness is a well-known and clinically significant problem in everyday orthopedic practice. Due to the complex anatomy and biomechanics of the elbow joint, as well as its frequent involvement in traumatic injuries, even minimal structural disorders can lead to serious functional deficits. In this context, the topic of the dissertation is relevant and practically significant, as it addresses a problem that has a real impact on the quality of life and working capacity of patients.

Disruption of joint architecture due to fractures and ligament damage requiring prolonged immobilization often leads to contractures, which cause disabling elbow stiffness. Timely and adequate therapeutic management is crucial for the final functional outcome.

STRUCTURE AND CONTENT OF THE DISSERTATION

The dissertation is structured in accordance with the requirements of the Regulations for the Development of Academic Staff at MU-Varna and comprises 124 standard pages, divided into ten main sections.

It is illustrated with figures, tables, and graphs that facilitate the perception and analysis of the presented results.

The bibliography includes 172 literary sources, more than half of which have been published in the last five years, which attests to the relevance of the literature used.

LITERARY REVIEW

Dr. Petar Valentinov Petkov has presented a detailed literature review that demonstrates an in-depth study of the problem presented in the dissertation. It analyzes the etiology, pathogenesis, classifications, and clinical manifestations of post-traumatic elbow stiffness. Both established surgical methods and conservative treatment approaches are presented. Particular attention is paid to the conservative treatment approach, which involves the use of various orthoses in combination with a range of physical methods, which is essential in the early stages of recovery.

GOAL, TASKS, AND METHODOLOGY

The aim of the dissertation is clearly formulated and logically follows from the problems analyzed in the literature review – to perform a comparative assessment of functional recovery at different start points of active elbow joint mobilization in patients with post-traumatic elbow stiffness.

The tasks and hypotheses set are consistent and subordinate to the main objective.

The study included 90 patients randomly assigned to two equivalent groups.

The monitoring was carried out at three time points, which allows for an assessment of the dynamics of the recovery process.

Established clinical and functional assessment methods were used, including MEPS and a visual analog scale for pain.

The statistical methods used are appropriate for the design and objectives of the study.

RESULTS AND DISCUSSION

The results obtained are presented clearly and concisely, illustrated with appropriate tables and graphs. The analysis shows a statistically significant reduction in pain symptoms, an increase in range of motion, and an improvement in the functional status of patients.

Differences were found between the two therapeutic groups, with patients who started moving earlier achieving faster functional recovery.

Particularities in the recovery process in the different etiological subgroups are also noted, which emphasizes the need for an individualized approach in the treatment of this condition. The discussion is accurate and compares the results obtained with data from the current literature.

CONCLUSION, FINDINGS, AND CONTRIBUTION

The concluding section formulates clear and logically justified conclusions that correspond to the stated goal and objectives. The dissertation has a practical focus and offers opportunities for optimizing diagnostic and therapeutic algorithms in patients with post-traumatic elbow stiffness, with an emphasis on early functional treatment.

The abstract is structured in accordance with the requirements, its content corresponds to the dissertation, it contains 52 pages, 9 tables and 7 graphs are presented to illustrate the results obtained from the scientific research.

In conclusion, the dissertation developed by Dr. Petar Valentinov Petkov on the topic of "Post-traumatic stiffness of the elbow joint" is relevant and applicable and shows that the doctoral student possesses theoretical knowledge and demonstrates the necessary qualities and skills to conduct independent scientific research.

The research is correctly structured and executed. The dissertation contains relevant scientific-theoretical and scientific-applied contributions, meeting the requirements of the Law on the Development of Academic Staff in the Republic of Bulgaria (LDASRB) and the relevant Regulations of MU-Varna.

In light of the above, I give a positive assessment of the presented dissertation and appeal to the members of the Honorable Scientific Jury to vote positively for awarding the educational and scientific degree of "Doctor" in Medicine to Dr. Petar Valentinov Petkov in the doctoral program in Orthopedics and Traumatology.

February 26, 2026
Stara Zagora

Statement prepared
Assoc. Prof. Biser Aleksandrov Makelov, MD, Ph.D.

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