## **STATEMENT**

by Prof. Kiril Stefanov Slaveykov, MD, PhD

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Member of the scientific jury appointed by Order No. P-109-402/01.10.2925 of the Rector of the Medical University – Varna

Regarding the dissertation:

"Physical Activity in Hemodialysis Patients and Possibilities for Its Optimization"

for the competition for obtaining the educational and scientific degree "Doctor"

Professional field: 7.1. Medicine

Scientific specialty: General Medicine

Doctoral candidate: Dr. Magdalena Ivanova Bliznakova

1. General presentation of the procedure and the doctoral candidate - The submitted electronic materials comply with the Bulgarian Law for the Development of the Academic Staff (ZRASRB) for obtaining the degree of "Doctor" and include all required documents confirming the authenticity of the dissertation, scientific publications, participation in scientific forums, and the legality of the procedure.

Dr. Magdalena Bliznakova graduated from the Medical University of Varna. She currently works at the University Hospital "St. Marina", and since 2022 has been developing her scientific work as a doctoral student. During her studies, she has actively participated in doctoral schools, clinical research, and training in good medical practice. She has presented reports at numerous national and international scientific forums on the topic of her dissertation.

**2. Relevance of the topic -** The dissertation is timely and has practical significance. The topic, "Physical Activity in Hemodialysis Patients and Possibilities for Its Optimization" is relevant because chronic kidney disease (CKD) is a progressive, disabling, and increasingly common condition. The global average prevalence of CKD is about 10–12%, with a tendency to rise.

Although CKD is not a new problem, its growing frequency and impact on patients' quality and length of life make it a pressing issue. The medical community's understanding of this disease and its consequences has evolved. Renal bone disease is among the most serious complications of CKD, and its prevention requires a solid understanding of its pathogenesis mechanisms. Accurate and timely diagnosis and appropriate treatment are essential for prevention.

The dissertation comprises **153 pages** and includes the following chapters: Introduction, Aim and Tasks, Working Hypothesis, Materials and Methods, Results and Discussion, Conclusions, Contributions, Published Articles, Conference Participation, and Bibliography. It meets the formal requirements for such works and contains **35 figures**, **17 tables**, and **1 appendix**.

- **3. Knowledge of the problem -** The literature review includes **356 sources**, predominantly international. It is evident that the doctoral candidate is well-acquainted with the subject and has evaluated the literature creatively.
- **4. Research methodology -** The study involved **81 patients**, selected according to specific inclusion and exclusion criteria, divided into two groups experimental and control.

Clinical, laboratory, and instrumental methods were applied. For statistical data processing, **SPSS version 20** was used. The statistical methods included descriptive, correlation, graphical, and variance analysis.

The chosen research methodology enables the achievement of the stated objectives and provides adequate answers to the research questions.

5. Characteristics and evaluation of the dissertation and its contributions - The dissertation is well structured and includes all necessary components. It is 153 pages long, illustrated with 35 figures, 17 tables, and one appendix. The literature review is detailed and well referenced. The research tasks correspond logically to the stated goal.

The results are clearly presented in tables and graphs and fully address the research questions. In discussing the results, Dr. Bliznakova provides a thorough comparative analysis between her own findings and existing data from the literature.

All **five research tasks** have been completed. There are **seven conclusions**, each clearly linked to the research objectives. The contributions are both **original and confirmatory** in nature, and the study has significant **practical value**.

The **abstract** (author's summary) is prepared according to requirements and accurately reflects the key results of the dissertation.

6. Assessment of publications and the doctoral candidate's personal contribution - The doctoral candidate has submitted four publications in Bulgarian journals, in three of which she is the first author.

Critical remarks and recommendations:

- 1. The research should be **continued and expanded** on the same topic.
- 2. The **number of Bulgarian authors** cited is relatively small compared to the total number of references.

Conclusion. Despite the above remarks, the dissertation contains scientific, applied-scientific, and practical results that represent an original contribution to science and meet the requirements of the Law on the Development of the Academic Staff in the Republic of Bulgaria (ZRASRB), its regulations, and the rules of the Medical University of Varna.

The submitted materials and results fully comply with the specific standards for this scientific field.

The dissertation demonstrates that **Dr. Magdalena Bliznakova** possesses **profound theoretical knowledge** and **professional competence** in the field of **General Medicine**, as well as the ability to conduct independent scientific research.

I therefore **confidently give a positive assessment** of the research, the dissertation, and the author's contributions, and I **recommend** to the **Honorable Scientific Jury** that the educational and scientific degree "**Doctor**" be awarded to **Dr. Magdalena Bliznakova** in the doctoral program in **General Medicine**.

**04.11.2025**Stara Zagora

3аличено на основание чл. 5, §1, 6. "В" от Регламент (ЕС) 2016/679 ared by: *MD, PhD*)