

STATEMENT

by Assoc. Prof. Diana Milenova Radkova, MD, PhD
Department of Infectious Diseases, Parasitology and Dermatovenereology, MU-Varna

regarding a dissertation for the award of the educational and scientific degree “**Doctor**”

Field of higher education: 7. Healthcare and Sports

Professional field: 7.1. Medicine

Doctoral program: “Infectious Diseases”

Author: Ekaterina Lyutsova, MD

Form of PhD training: Full-time

Department: Infectious Diseases, Parasitology and Dermatovenereology

Title: “Fecal calprotectin as a diagnostic and prognostic marker in acute intestinal infections in children”

Scientific supervisor: Prof. Margarita Gospodinova, MD, PhD, Department of Infectious Diseases, Parasitology and Dermatovenereology, Medical University – Varna

In accordance with Order No. R-109-125/11.03.2026 issued by the Rector of the Medical University – Varna, **I have been appointed** as a member of the Scientific Jury. Based on Protocol No. 1/23.03.2026, **I have been assigned** to prepare an opinion (in Bulgarian and English) within the procedure for awarding the educational and scientific degree “Doctor” to the candidate Dr. Ekaterina Lyutsova at the Medical University – Varna.

1. General Overview of the Procedure

The submitted set of materials, in both paper and electronic format, complies with the requirements of the Bulgarian Law on the Development of the Academic Staff, its implementing regulations, as well as the Regulations on the Development of the Academic Staff at the Medical University – Varna. It contains all the necessary documents.

2. Presentation of the PhD Candidate

Ekaterina Lyutsova, MD was born in 1983 in Tashkent, Uzbekistan. She graduated from high school with honors in 2000. In 2006, she graduated with honors in Medicine from Yaroslavl State Medical University. In 2009, she obtained a specialty in Internal Medicine and until 2014 worked as an internist near in the area of Moscow- .

In 2015, she successfully passed the state examinations for recognition of her medical qualification in the Republic of Bulgaria. Since 2016, she has been appointed as an Assistant Professor at the Department of Infectious Diseases, Parasitology and Dermatovenereology at Medical University – Varna and worked as a resident in Infectious Diseases at the First Clinic of Infectious Diseases, St. Marina University Hospital, Varna. In 2020, she obtained her specialty in Infectious Diseases.

Ekaterina Lyutsova, MD is actively involved in teaching medical students and also participates in the training of medical professionals, including state clinical internships and specialized courses.

Her professional development demonstrates a strong interdisciplinary focus – in 2025, she obtained Master's degrees in Health Management from Burgas Free University and in Artificial Intelligence in Healthcare from Medical University – Varna, both with honors.

Her research interests include clinical and applied aspects of infectious diseases, with a focus on acute infectious diarrhea, diagnostic biomarkers, and the implementation of AI in clinical practice. She is the author and co-author of scientific publications in national and international journals, actively participates in national and international scientific congresses and conferences, and serves as a reviewer for the international forum Medical Informatics Europe (2026).

She participates in international scientific and educational initiatives, including specialized courses organized by the European Society of Clinical Microbiology and Infectious Diseases (ESCMID), e.g. Postgraduate course “Basic Principles in Diagnostic Stewardship”, Zadar, 2025 and AMS Certificate Program “Antimicrobial Stewardship and Infection Prevention and Control”, Athens, 2025.

In 2026, she successfully completed an international faculty development training program at the University of California, San Diego, focused on contemporary models of medical education and academic teaching.

Ekaterina Lyutsova, MD is a member of the Bulgarian Medical Association, the Bulgarian Society of Infectious Diseases, and ESCMID. She is fluent in Bulgarian and Russian and has a B2 level in English (Cambridge English First Certificate – FCE).

3. Relevance of the Topic

Acute intestinal infections with diarrheal syndrome are among the leading causes of morbidity and mortality in children under five years of age. They are most commonly caused by bacteria and viruses, and less frequently by parasites, presenting with similar symptoms but varying in severity. Timely identification of the probable causative agent is essential for selecting appropriate treatment.

Traditional indicators of bacterial infection, such as the presence of blood and mucus in stool, are subjective and not always reliable. Microbiological testing requires time, while modern methods for detecting viral pathogens are not widely accessible. This highlights the need for rapid, affordable, and reliable markers to distinguish the etiology of these infections.

Fecal calprotectin /FCP/ has emerged as a promising marker reflecting intestinal inflammatory activity. It is already used in chronic inflammatory diseases and, according to current studies, has the potential to differentiate bacterial from viral infections. However, in Bulgaria, sufficient research in children is lacking, emphasizing the theoretical and practical significance of the presented dissertation topic.

4. Understanding of the Problem

The literature review is comprehensive and professionally prepared, demonstrating in-depth knowledge of the clinical and epidemiological characteristics of diarrheal intestinal infections in children. The material is logically structured, with a clear connection between sections, covering both the historical development of knowledge and current understanding of the etiology, epidemiology, and pathophysiology of these diseases.

The review examines the main causative agents and their transmission routes in detail, with an emphasis on the current situation in Bulgaria. Attention is given to contemporary approaches in the clinical assessment of children with acute intestinal infections, logically transitioning to the role of laboratory diagnostics and the significance of FCP as a marker for disease severity, therapeutic response, and prognosis.

The aim of the dissertation is logically derived from the literature analysis, and the research tasks are clearly defined, methodologically sound, and oriented toward achieving practically significant results.

5. Research Methodology

The methodology of the study was appropriately selected and fully aligns with the stated aim and specific objectives of the dissertation. The applied clinical, laboratory, and statistical approaches allow for an objective assessment of the investigated parameters and ensure the reliability of the obtained results.

The study is logically and systematically designed, enabling the tracking of key dependencies outlined in the research concept. The applied methods provide a basis for precise analysis and correct interpretation of the data, which in turn guarantees the formulation of reliable, scientifically grounded conclusions with substantial practical significance.

6. Characterization and Evaluation of the Dissertation and Its Contributions

The dissertation comprises 183 pages and is illustrated with 23 figures and 26 tables. It is structured into the following main sections: Introduction, Literature Review, Aim and Objectives, Materials and Methods, Results and Discussion, Conclusion, Findings, and Contributions. The introduction convincingly argues the relevance of the topic, and the exposition is logically coherent, with each section ending with a summary of the main findings.

In line with the stated aim – to assess the diagnostic and prognostic value of FCP in acute infectious diarrhea in children – six specific research objectives were formulated. A thorough investigation was conducted on a carefully selected patient cohort, using modern methods and statistical analyses. The results are clearly presented, illustrated with tables and figures, and interpreted in the context of current scientific data. The conclusion emphasizes the significance of FCP as an important marker in clinical practice.

The formulated findings are logically derived from the results. Significant correlations were established between FCP levels and etiology, disease severity, therapeutic response, and prognosis, with clinically relevant cut-off values determined. The contributions of the dissertation are both original and practically applicable, representing the first prospective analysis in Bulgaria confirming the role of FCP in early monitoring of children with acute gastrointestinal infections.

The text is distinguished by clarity of style and high linguistic quality. The bibliography includes 159 sources, more than half from the last ten years, with approximately 20% from 2023–2025.

7. Evaluation of Publications and the Candidate's Personal Contribution

For the present competition, Ekaterina Lyutsova, MD submitted two scientific publications related to the dissertation, in which she is the leading author, clearly demonstrating her substantial personal contribution to the research. Both articles were published in journals indexed in recognized international databases. According to the Regulations on Academic Staff Development at the Medical University – Varna, this publication activity fully meets the minimum scientometric criteria for obtaining the educational and scientific degree of “Doctor.”

There are no critical remarks regarding Lyutsova's scientific work. In the future, the study could be expanded by including additional markers for acute intestinal inflammation that are rapid, accessible, and practically valuable.

8. Author's Abstract

The abstract submitted by the candidate complies with formal requirements and concisely presents all main sections of the dissertation. The research methods, the most important practical results, conclusions, and contributions of both original and applied nature are correctly presented.

CONCLUSION

The dissertation **contains** scientific and applied results that constitute an original contribution to the field and **meets** all requirements of the Bulgarian Law on the Development of the Academic Staff, its implementing regulations, and the Regulations of the Medical University – Varna for obtaining the degree of “Doctor.”

The work convincingly demonstrates that the candidate, Ekaterina Lyutsova, MD possesses in-depth theoretical knowledge and professional competencies in the scientific field of infectious diseases, showing the ability and skills to conduct individual scientific research.

Based on all of the above, I confidently give a positive evaluation of the dissertation and I recommend to the esteemed Scientific Jury to award the educational and scientific degree of “Doctor” to Ekaterina Lyutsova, MD in the doctoral program in Infectious Diseases.

01.04.2026

Varna, Bulgaria

Prepared by:

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§1, б. „В“ от Регламент (ЕС)
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