

Statement from

Prof. Krum Stefanov Kafedjiiski, PhD

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**(External Member of the Scientific jury based on an order No. R-109-
335/29 Jul 2025 of the Rector of Medical University-Varna)**

REGARDING: Procedure for the defense of thesis for awarding the educational and scientific degree "doctor", Area of higher education 7. Healthcare and sports, PD 7.3. Pharmacy, in the doctoral program "Pharmacology (incl. Pharmacokinetics and chemotherapy"

Thesis title:

"Study of Hospital use of Antimicrobial drugs intended for prophylaxis and treatment of obstetric and gynecological infections"

Author of thesis:

Mag. Pharm. Plamen Stefkov Bekyarov- PhD student in regular form of education in
Medical University- Varna

Scientific supervisors:

Assoc. Prof. Silvia Georgieva Mihaylova, PhD

Prof. Dr. Marieta Petrova Georgieva, MD, PhD

Importance of the topic:

The treatment of bacterial infections caused by resistant pathogens represents one of the most significant challenges in modern medicine as every year they are responsible for approximately 35,000 deaths annually. The emergence and spread of resistant bacterial strains can be attributed to a range of factors such as intrinsic or acquired resistance, horizontal gene transfer, biofilm formation, cross-resistance, and heteroresistance. The irrational use of antibiotics significantly accelerates the selection and dissemination of resistant microorganisms as it includes the administration of antibiotics without a justified medical indication, the use of inappropriate antimicrobial agents, incorrect dosing or treatment duration and others. The implementation of antimicrobial stewardship programs represents a mechanism, which is of a key importance in the effort to fight antibiotic resistance. Systematic monitoring and analysis of antibiotic consumption sets the foundation for assessment of current practices, identification of critical areas and formulation of effective strategies aimed at optimising the antimicrobial therapy.

Relevance of the developed topic:

The thesis topic of Mag. Pharm. Plamen Stefkov Bekyarov is modern in conjunction with the increasing antibiotics resistance.

The evaluated thesis first covers a detailed review of the main resistance mechanisms in ESKAPE pathogens, including *Staphylococcus aureus*, *Enterococcus faecium*, *Acinetobacter baumannii*, *Pseudomonas aeruginosa*, and *Enterobacteriaceae*.

The evaluated thesis sets as main objective the investigation and analysis of the hospital antibiotic use, which are intended for treatment and prophylaxis of obstetric and gynecological infections at SHOGAT "Prof. Dr. D. Stamatov" – Varna over a 12-year period. Based on that were systemized the primary data on antibiotic use in four wards-ICU, GW, MW and HRPW for the period 2012–2023. Also, the the ratio between the Access, Watch, and Reserve groups according to the WHO AWaRe classification in hospital practice were analysed. In addition, trends in hospital antibiotic use at the

SHOGAT "Prof. Dr. D. Stamatov" – Varna for the period 2012–2023 were analysed as well as in the outlined four wards.

The conducted research, aim, and objectives of the thesis fall within the scope of the scientific specialty of the doctoral program and meet the indicators for scientometrics of the developments for obtaining the degree 'doctor'. The methodological part thoroughly and comprehensively describes the methods and materials of the studies, demonstrating the knowledge of the subject, a thorough approach and skills acquired by the PhD candidate during the execution of the doctoral program.

The Contributions of a scientific and applied nature were defined, the most important of which are as follows:

1. This study is the first of its kind within SHOGAT "Prof. Dr. D. Stamatov" – Varna, providing a foundation for comparison with future clinical and scientific research;
2. The use of a standardised unit (DDD/100 bed-days) ensures the comparability of results and allows both intra-hospital and inter-hospital control;
3. For the first time, a quantitative prospective analysis of antibiotic use was performed at SHOGAT "Prof. Dr. D. Stamatov" – Varna, contributing to existing national-level data and potentially helping identify risk trends.

In connection with the thesis, 4 publications were presented. The quantitative requirements of the Law on the Development of the Academic Staff in the Republic of Bulgaria (LDASRB), and the Regulations of the Medical University "Prof. Dr. P. Stoyanov" – Varna have been implemented, and the conclusions, recommendations, as well as the contributions of scientific-theoretical and scientific-applied nature have been excellently presented.

The submitted abstract meets the requirements.

Conclusion:

The presented thesis for the acquisition of the Educational and Scientific degree of "Doctor" of Mag. Pharm. Plamen Stefkov Bekyarov, full-time PhD student at the Medical University "Prof. Dr. P. Stoyanov" – Varna, meets the requirements, and is focused in the field of Pharmacology and will be of an interest to the academic society.

After I got acquainted in detail with the presented set of materials and documents on the procedure for defending the thesis of Mag. Pharm. Plamen Stefkov Bekyarov, I believe that the topic, volume, results obtained, conclusions drawn and the formulated contributions of a scientific and applied nature fully meet the requirements of the Law on the Development of the Academic Staff in the Republic of Bulgaria (LDASRB), RILDASRB, Regulation of the Medical University "Prof. Dr. P. Stoyanov" – Varna for a doctoral program, and are also a result of the author's own research and development under the expert guidance of the tandem of scientific supervisors.

Taking into account the above arguments and the presented thesis, I give a **POSITIVE ASSESSMENT** and recommend to the respected members of the Scientific Jury to vote for awarding the Educational and Scientific degree of "Doctor" to Mag. Pharm. Plamen Stefkov Bekyarov.

Sofia

25th Aug 2025

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

/Prof. Krum Stefanov Kafedjiiski, PhD/