

## Written Opinion

from

**Prof Ilko Nikolaev Getov, PhD**

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On the dissertation paper for obtaining Doctor's Academic and Science Degree under a PhD Program  
"Social Medicine and Organization of Healthcare and Pharmacy",  
Higher Education Area 7. Healthcare and Sports; Professional Direction 7.3 Pharmacy

By **Mrs. STEFKA STOYANOVA STOYANOVA, MSc Pharm**

With topic:

**ANALYSIS OF DIAGNOSTIC AND THERAPEUTIC STRATEGIES IN PATIENTS WITH ARTERIAL HYPERTENSION BY THE METHODS OF MEASURING DRUG UTILIZATION AND RATIONAL DRUG USE AT THE MACRO LEVEL IN BULGARIA**

Scientific supervisor: Prof Emil Hristov, MD, PhD

The evaluated dissertation is a focused, in-depth and comprehensive study of diagnostic and therapeutic strategies, drug usability and macro-level rationality assessment. The studies, results and conclusions are representative for Bulgaria, the limitations, assumptions and applicability are defined and accounted for, which are relevant to the FIVE annual period of the studies 2017-2021, incl.

The total volume of the dissertation is 124 pages, sufficiently well illustrated with tables and figures. In the scientific work, a comprehensive list of 189 literary sources, mostly in English, is cited and presented. The dissertation is conventionally structured in 8 self-contained chapters and numerous sections, subsections and points.

The literature review examines, comments and analyzes the health problem "arterial hypertension" in almost all its clinical, epidemiological and laboratory dimensions, the treatment through the application of non-pharmacological and pharmacological approaches and a comparative analysis of pharmacotherapeutic guidelines. In a separate section to this chapter, a systematic review of publications on the subject is presented through the application of the PRISMA approach as a methodological framework. I believe that this section can be considered as part of the own research and results. A rationale for the thesis topic is presented, as well as the assumptions, limitations of the study, relevance and credibility of the generalizations and conclusions drawn.

The objectives are defined as primary and secondary, the set research tasks are 9, they are within the scope of the scientific specialty of the doctoral program and correspond to the content and the conducted studies. The methods and materials for each element of the studies are correctly selected and described. The PhD student shows excellent knowledge of the subject and a thorough approach. From the point of view of the formulated contributions, they are grouped as scientific-theoretical, scientific-applied and confirmatory. A wide range of specific and sensitive methods were used to measure drug usability, as well as unique measures for the country – cost as a proportion of gross domestic product (GDP) per capita, recalculated through PPP and "top-ten list" (list of the first 10),

and these features are not indicated in the methodical part and are found in the assessment of the achievements of the own studies and analyses.

The selection of the study topic has its continuation and solid foundation in the academic unit of the PhD student and is determined by her personal choice and interests. The PhD student demonstrates in-depth preparation and free handling of the terminology, research tools and makes serious, thorough and rational conclusions about the practice in Bulgaria.

The field studies include analysis of results by task and by year. Assumptions were adopted that comprehensively and correctly describe the use of antihypertensive drugs, the periods were defined and the available public data were analyzed year by year. An excellent impression is made by the identical presentation of tables and graphs of drugs under INN and brand name, which helps the reader to follow the author's logic, analysis and judgments.

The obtained data and conducted analyzes lead to a meaningful discussion and summary, with the PhD student defining specific questions to which she gives an answer. The deviations and problems in the provision of medicinal products available in the Positive drug list and the use of antihypertensive drugs among the Bulgarian population are shown and commented on.

I accept the results obtained and the conclusions drawn in the dissertation, which follow logically from the assumptions, the set goals and objectives and prove the research hypothesis.

Modern, scientifically accurate and grammatically correct language is used, the methodological toolset is modern and allows future international comparisons to be made.

The submitted abstract meets the requirements.

In connection with the dissertation work, publication activity that meets the requirements of the Regulations is presented. Publications in refereed and indexed editions and databases are TWO; publications in non-refereed journals and participation in scientific forums are 5.

There are no data on participation in scientific projects with targeted funding.

The formulated contributions correspond to the achieved results, but I believe that they are too many for a dissertation work for the acquisition of the PhD degree.

### **Conclusion:**

The dissertation presented for discussion and evaluation is of high quality and will contribute to the study of drug use, prescribing practice, clinical and regulatory options for antihypertensive drugs. The dissertation work for the acquisition of the PhD degree of Stefka Stoyanova Stoyanova, MSc Pharm, full-time PhD student fully meets the requirements. After having familiarized myself in detail with the presented set of materials for the protection procedure, I consider that the quantitative and qualitative criteria of the Regulations of Sofia University "St. Kliment Ohridski", the training was conducted under the PhD program of the Faculty of chemistry and pharmacy and the dissertation work is the result of the author's own research and development.

In view of the above outlined arguments and the dissertation thesis, **I confidently give my positive evaluation** and would like to suggest to the Honorable Members of the Scientific Jury to confer **Doctor's Academic and Science Degree (PhD) on Mrs. STEFKA STOYANOVA STOYANOVA.**

Signature: