

## REVIEW

From Prof. Dr. Nadka Ivanova Boyadzhieva, MD

**Member of a scientific jury for conducting a competition for the academic position of "Associate Professor" in the scientific specialty "Pharmacoeconomics and Pharmaceutical Regulation"; field of higher education 7. Healthcare and sports, professional field 7.3. Pharmacy, scientific specialty "Pharmacoeconomics and Pharmaceutical Regulation" for the needs of the specialty "Assistant Pharmacist" - one in 0.5 staff, at the Medical College, Thracian University, Stara Zagora (State Gazette, issue 61 / 10.07.2020)**

### **I. For the competition**

In the competition for associate professor of "Pharmacoeconomics and Pharmaceutical Regulation" at the Medical College, Thracian University, Stara Zagora, two candidates have submitted documents - master pharmacist Nikolai Gerasimov, Ph.D. and master pharmacist Anna Mikhailova, Ph.D. The reviews for the two candidates are sorted by incoming number of the submitted documents.

Both candidates met the deadline for submitting the documents. They presented the necessary materials for the competition, the lists and the analyzes for their scientific achievements. Both candidates meet the requirements for an academic position in the field of education. There is no data on administrative errors / omissions so far in this competition. The documents are also presented according to the regulations of the Thracian University-Stara Zagora.

### **II. Biographical data**

#### **1. Nikolai Gerasimov**

Nikolay Gerasimov graduated in pharmacy in 1994 at the Faculty of Pharmacy, MU-Sofia. In 2001 he acquired a specialty in "Organization and Economics of Distribution and Pharmacy Practice" at MU-Sofia. In 2016 he obtained a doctorate in pharmacy with a dissertation on "Medical devices in the pharmaceutical nomenclature - legislative and social aspects of their provision in Bulgaria." He has a work experience as a master pharmacist in a hospital pharmacy in MBAL-Dobrich PLC and as a regional manager and warehouse manager for TE. He currently works as a manager of a pharmacy to serve the population in his hometown of Dobrich. In addition to experience in the field of pharmacy, the candidate Nikolay Gerasimov worked as a part-time lecturer in pharmacology for a period of about 3 years(1997-1999) at the Medical College of MU-Varna in Dobrich, and trained students in "nurse". In 2013 he was a part-time assistant at MU-Varna, where he conducted practical exercises and lectures for pharmacy students. The analysis of his professional experience shows that the candidate has both practical and teaching experience in the field of pharmacy. I appreciate his experience in

teaching pharmacology, which is important for the purposes of this competition. He speaks Russian, English and German at level B1. He is a member of BFU, BNDF and ISPOR.

## 2. Anna Mikhailova

Anna Mihailova has a specialty in rehabilitation since 1995. Up until 2004 she successively obtained bachelor's degrees in administrative and health management (1998 in Plovdiv University of Plovdiv) and in health care (2000 in MU Plovdiv). In 2004 she completed a master's degree in public health and health management at MU-Sofia, and in 2008 she obtained a master's degree in pharmacy at MU-Plovdiv. In 2018, the candidate defended her doctoral thesis on "Epidemiological and pharmaco-economic study of corticosteroid prevention of hyaline membrane disease in premature infants", which earned her the degree of "Doctor of Pharmacy". Anna Mihailova has 24 years of work experience, during which she worked as a rehabilitator at the University Hospital "St. George" (1996-1997), and from 1997 until now she holds the position of "senior lecturer" on main employment contract at the Medical College, MU Plovdiv for specialty "assistant pharmacist" (11 years of work experience), for which for the period 2009-2010 she was also a manager. From 2008 until now Anna Mihailova has a management contract with Pharmacy "Kanto Pharma" Ltd, where she holds the position of "pharmacy manager. The candidate is fluent in written and spoken English (level C1), and Italian and Russian - spoken. Ana Mihailova has a Master's degree in Pharmacy since 2008. She has teaching experience in the specialty "Assistant Pharmacist".

### **III. Evaluation of scientific activity of the two candidates in the competition**

#### 1. Nikolai Gerasimov

Master pharmacist Nikolay Gerasimov, PhD, is applying in the current competition with 19 publications, of which 3 are related to the doctoral dissertation, 16 outside the doctoral dissertation (14 published publications and 2 under print). I review 9 of the publications that are in scientific peer-reviewed and indexed journals in world databases and 5 - in non-peer-reviewed journals with scientific peer-review. The scientific developments are in several main areas. In the first place and as a predominant number are the developments in the field of medical devices, as the main place is occupied by the developments for hernial sails. In addition, there are studies in the field of socially significant diseases, including Parkinson's disease, pulmonary abolition. The study of the economic characteristics of the intestinal Gel Levodopa + Carbidopa in patients with Parkinson's has a scientific contribution because it clarifies the cost-effectiveness of this product for reimbursement purposes. Pharmacoeconomic studies of medical devices are relevant for the purposes of the competition.

In the field of medical devices are also the analyzes of the Bulgarian and European legislation (Monograph and Publication №3). These developments have practical significance for the legislative changes at European level and the way of their implementation in Bulgaria.

The risks of using hernia sheets are studied in Publication № 4. The significance of this work is in the analyzes that the author presents about the hernia sheets offered in

medicine and the differences between them related to the material used, production methods, their physical and mechanical characteristics. This publication is complemented by the following scientific work of the candidate (№5), in which he analyzes the risks of hernia plaque and provides guidance to practitioners. An important element of this publication is the analysis that the author gives to the risks of implantable hernial plates, as well as comparing their mechanical characteristics with those of the abdominal fascia. The significance and characteristics of hernia sheets, the main problems in hernia surgery, as well as the different types of complications, reoperations and lethal outcome are discussed in Publication №7. I also appreciate this scientific work from the series of articles mentioned above and on the basis of the valuable conclusions that the author presents about the selection of these medical devices and the risk of mistakes that doctors can make. One new direction that medicine has put in the global aspect for each new drug / product is the analysis of the quality of life that patients have after treatment. Master Pharmacist Nikolay Gerasimov has focused in this modern direction, studying the quality of life of patients with hernia sheets and presenting the results in three publications. The basis of two of them are questionnaires studied in physicians and patients (Publications №8 and №15). I give a positive assessment of this group of scientific publications, evaluating them with both theoretical and significant practical contributions.

The second group of publications (5 issues) is devoted to socially significant diseases, respectively 4 are on cardiovascular diseases and 1 on COPD. Two of them consider the treatment of cardiovascular diseases with fixed dose combinations (Publication № 9 and 14). Publication №10 describes the economic burden and existing clinical practice regarding the use of drugs to control COPD. Pharmacoeconomic analyzes are presented in these publications. The assessment of costs and quality of life in socially significant chronic diseases such as COPD and cardiovascular disease is presented in this group of scientific papers. These analyzes and characteristics are the basis that these scientific publications correspond to the objectives of the competition for associate professor.

**The scientific metrics are as follows:**

Publications in connection with the doctoral dissertation -3

Publications outside the doctoral dissertation-16

Participation in congresses and conferences

Participation in connection with the doctoral dissertation-3

Participation outside the doctoral dissertation-8

Scientific project -1

Citations = 16 (Bulgarian 10; foreign 6). 6 publications in international journals are cited. There is a document from the Medical Library about the citations and factors of the publications. I accept the correct calculations of the candidate according to the table for point indicators. **The candidate Nikolay Mihailov Gerasimov, PhD has 662.8 points with 400**

points required by the minimum state requirements for holding the academic position of "Associate Professor" in District 7. "Health and Sports", Professional field 7.3. Pharmacy.

Minimum required points by groups of indicators for the various scientific degrees and academic positions:

<i>Group of indicators</i>	<i>Contents</i>	<i>Doctor</i>	<i>Doctor of Science</i>	<i>Assistant Professor</i>	<i>Associate Professor</i>	<i>Professor</i>
A	Indicator 1	50	50	50	50	50
B	Indicator 2	-	100	-	-	-
C	Indicator 3 or 4	-	-	-	100	100
D	Sum of indicators from 5 to 9	30	100	-	200	200
E	Sum of indicators from 10 and 12	-	100	-	50	100
F	Sum of indicators from 13 to the e	-	-	-	T. 15-40	100

In addition, I accept: A) the candidate's participation in 5 scientific national and international events, all of which are related to the regulatory and economic aspects of the application of medical devices; B) participation in a project entitled "Assessment of the safety of hernia sheets by examining their mechanical compatibility with tissues and the quality of life of patients"; C) Monograph on "Medical devices - legislation and economic aspects", reviewed by Prof. Genka Petrova, Ph.D. and Assoc. Prof. Miglena Doneva, Ph.D. In the monograph the author touches on current topics in the field of European and national legislation on medical devices. Two of the sections of the monograph consider the principles of application of the assessment of ancient technologies as a tool for providing financial market access and various economic studies of the application of medical devices in the treatment of Parkinson's patients and the application of hernia sheets; D) The candidate's contributions, both theoretical and practical. Among them are leading contributions with their practical significance that correspond to his future tasks in teaching students on pharmaceutical regulation and pharmacoeconomics.

Conclusion of the scientific activity of candidate master Pharmacist Nikolai Gerasimov. I accept and review the submitted works. I give a positive assessment. They are focused on modern scientific medical fields. I also appreciate the candidate's citations. But I have a note and it is the lack of articles in impact factor journals, although some of the articles are referenced by Scopus and / or Web of Science and have an impact rank (SJR). I also

appreciate the monograph, which is an in-depth scientific work and presents the candidate with training, knowledge and skills in the theoretical aspects of pharmacy and pharmacoeconomics.

## 2. Anna Mikhailova

Master pharmacist Anna Mihailova, PhD is applying for the current competition with 41 publications. Of these, 32 are in international magazines and 9 in Bulgarian. They are in various fields, including a number of clinical specialties (rehabilitation, obstetrics and gynecology, orthopedics, dentistry). I accept the directions that the candidate has indicated in her contributions as follows: 1. **Direction: Health economic assessment of the costs for premature babies with respiratory complications. Pharmacoeconomic and epidemiological studies of prenatal corticosteroid prophylaxis. Here I will analyze the publications:** Mihaylova A, Uchicova E, Parahuleva N, Parahuleva M, Prevention of hyaline membrane disease (hmd) in Preterm infants, World journal of pharmacy and pharmaceutical sciences, Volume 5, Issue 4, 09-16. 2016, Review Article ISSN 2278 - 4357; Mihaylova A, Uchicova E, Parahuleva N, Gueorguiev S, Use of corticosteroids to prevent complications in preterm birth, PHARMACIA., vol. 63, No.4 p. 42-51, 2016 ISSN 0428-0296; Mihaylova A, Uchicova E, Parahuleva N, Gueorguiev S, Use of corticosteroids to prevent complications in preterm birth, PHARMACIA., vol. 63, No.4 p. 42-51, 2016 ISSN 0428-0296. They analyzed: A) the short course of corticosteroid prophylaxis and documented that this course has a relatively better effect than the completed therapeutic course. B) The use of prenatal corticosteroid therapy has been documented to have a beneficial effect on premature infants born in the earlier week of gestation. This work is important for neonatology. C) Prevention of hyaline-membrane disease in premature infants. The disease occurs and it is important to find methods of prevention. My assessment of the mentioned scientific works, current problems in obstetrics and gynecology, scientific contributions on corticosteroid therapy is positive. But it is not clear how they are involved in pharmacoeconomics in this area of the competition. In one publication (Mihaylova A, Petkova-Georgieva E, Koleva P, Staynova R, Analysis of the costs for therapy in premature children with respiratory complications. Science and Youth - 2018, MU Plovdiv, Collection of scientific reports, 169-175) the candidate makes an analysis of the cost of treatment of premature infants. 2. **Direction: The good pharmaceutical practices in the training of assistant pharmacists.** This group of publications is dedicated to methodologies, innovations and systems of management and evaluation of training and practice in pharmacy. I appreciate the posts. To this group I review and accept the research project of master pharmacist Anna Mihailova "Study of the application of different methods for immunostimulation among the child population in different regions of Bulgaria and development of a model for application of complex immunostimulation programs in children of preschool and primary school age." I appreciate the positively documented facts about contributions regarding "Establishing the health status of children attending kindergarten or primary school and the general level of their immunity in terms of morbidity, number of days of absence due to illness, drug use and other indicators; Development of a model for application of complex immunostimulation programs in children in preschool and primary school age with the goal of prevention "

### Scientific-metric indicators of the candidate master pharmacist Ana Mikhailova

Publications in international journals 12 with a factor referred to in Scopus. There is no data for the journals indicated by the impact factor by the candidate on the document from the Medical Library.

Publications in international journals with impact factor on Global (GIF) -20

Publications in refereed Bulgarian and international journals without impact factor-9

Publications in referenced collections - 9

Teaching aids -4

Scientific reports from foreign forums and abstracts published in international journals and collections -13

Scientific reports from national and international forums in our country -34

Table 1. Minimum required points by groups show for the various scientific degrees and academic positions:

Group of indicators	Contents	Associate Professor	Anna Mikhailova, df
A	Indicator 1	50	50
B	Indicator 2	-	-
C	Indicator 3 or 4	100	100
D	Amount of indicators from 5 to 9	200	738,5
E	Amount of indicators from 10 and 12	50	430
F	Sum of indicators from 13 to the end	T.15-40	136,6

**Anna Mihailova, df has a high total number of points represented by her calculations (I do not accept it due to inaccuracies found in sections D and E). However, despite the correction, her number of points exceeds the 400 points required by the minimum state requirements for holding the academic position of "Associate Professor" in Area 7. "Health and Sports", Professional field 7.3. Pharmacy.**

**In addition:** I accept the contributions made by the candidate. I also accept the monographs as follows: 1. Master pharmacist Anna Mihailova presents a monograph on "Good pharmaceutical practice in the training of assistant pharmacists", reviewed by Assoc. Prof. Desislava Bakalova, MD and Assoc. Prof. Stanislav Georgiev, MD. I appreciate the author's leading idea that the daily practice of pharmacists and especially the need from training of future assistant pharmacists in practice, as well as to have the opportunity to

choose the discipline "Good Pharmaceutical Practice" as an additional elective within MU-Plovdiv is an important element of their training. 2. Master pharmacist Anna Mihailova presented in the materials of the competition and participated in a joint monograph on "Health and economic assessment of the costs of premature babies with respiratory complications" co-authored by Dr. Nikoleta Parahuleva, MD reviewed by Assoc. Prof. Stanislav Georgiev, Ph.D. This work is contemporary, dedicated to an important medical problem - premature birth with a focus on respiratory complications in premature babies. It is also related to some of the publications of master pharmacist A. Mihailova. There is no data on the separation protocol required for participation in the competition to give an objective assessment of the contributions of the candidate Anna Mihailova through this monograph.

#### **Conclusion for the scientific activity of master pharmacist Anna Mihailova, Ph.D.**

I accept and review the scientific papers of the candidate. She participated in the competition with a sufficient and even greater number of scientific papers for the position of "associate professor". I mentioned my positive assessments above in the review. I have critical remarks as follows: a) The works are in different fields of medicine, a relatively small number are focused on the topic of the competition "**Pharmacoeconomics and Pharmaceutical Regulation**". In my opinion it is important for the associate professor to prove that there is focused research on the topic of the announced competition. b) The presentation of some of the articles according to the requirements does not correspond to the reference and list of publications submitted in the documentation of the candidate with reference from the Central Medical Library of TU - Stara Zagora. There is a discrepancy between the journals indicated by the candidate with impact factor and the data from the Medical Library. This is also transferred to the calculated number of points of the individual articles presented in her table, which I have presented above. This has led to a significant number of points in sections "D" and "E" and leads to an increase in the total number of points, which is correct not to accept it. The formulas for journals with impact factor or referenced in the databases of Scopus, Web of Science have been used, but the reference of NACID does not reflect it for individual publications. This affects my final decision for the competition.

#### **IV. STUDY WORK AND EXPERIENCE OF THE CANDIDATES IN THE COMPETITION**

Both candidates have experience and work as teachers, which I have indicated in the biographical data. I did not find the data on the number of academic teaching hours for the last years of master pharmacist Nikolay Gerasimov- it is required. There is data that he led a state before the diploma internship of 5th year students in 2018 and 2019, which documents his teaching activity before the competition. The indicated period of teaching of the candidate master pharmacist Anna Mihaylova is longer in her biography, as in the provided reference for the last 3 academic years the total workload amounts to 2451.6 hours, of which 1435 hours are in the field of educational practice.

#### **V. COMPARATIVE ASSESSMENT OF THE TWO CANDIDATES master pharmacist Nikolai Gerasimov, Ph.D. and master pharmacist Anna Mihailova, PhD FOR**

## **COMPETITION "ASSOCIATE ASSOCIATE" in Pharmacoconomics and Pharmaceutical Regulation.**

1. Both candidates have a master's degree in Pharmacy and a doctoral dissertation in the field of Pharmacy. They have experience of working in pharmacies, more important on in the case of the candidate Nikolay Gerasimov.
2. Both candidates have teaching experience in the field of pharmacy.
3. The scientific-metric indicators of candidate Anna Mihailova exceed those of candidate Nikolay Gerasimov. There are inaccuracies found in the reports of candidate Anna Mihaylova.
4. Both candidates have separate monographs related to their research, reflected in publications and scientific communications.
5. Both candidates have participated in research projects.
6. The scientific and creative activity of candidate Nikolay Gerasimov is more significant, even entirely focused on the topic of the competition, which is "Pharmacoconomics and Pharmaceutical Regulation". This activity has international and Bulgarian citations, which I appreciate. Despite the smaller number of publications, compared to the other candidate, Nikolay Gerasimov develops new directions in the field of pharmaceutical products and evaluates their regulation and economic effects. Scientific research is in modern areas of socially significant diseases.
7. The scientific and creative activity of candidate Anna Mihailova is diverse, from rehabilitation, obstetrics and gynecology, and other medical topics to pharmacy and the objectives of the competition. I appreciated her scientific publications. The main criticism is related to the smaller focus in the research of the candidate on the topic of the competition, compared to the other candidate.
8. Smaller and shorter experience in the field of pharmacy of candidate Anna Mihaylova (she graduated in 2008 with a master's degree in pharmacy and defended her doctoral dissertation in 2018), compared to candidate Nikolay Gerasimov, who graduated in pharmacy in 1994 in Faculty of Pharmacy, MU-Sofia. In 2001 he acquired a specialty in "Organization and Economics of Distribution and Pharmacy Practice" at MU-Sofia. In 2016 he obtained a doctorate in pharmacy with a dissertation on "Medical devices in the pharmaceutical nomenclature - legislative and social aspects of their provision in Bulgaria." I appreciate the efforts of master pharmacist Nikolay Gerasimov, in his 26 years of experience after graduation as a pharmacist, aimed at the goals of the competition, incl. with the indicated acquired specialty and doctoral dissertation.

## **VI. CONCLUSION**



Both candidates meet the state requirements for the competition for the academic position of "Associate Professor". They have teaching experience in the field of "Pharmacy", a sufficient number of scientific publications and citations, independent monographs, participation in research projects, have successfully defended doctoral dissertations in the field of pharmacy. The requirements in the assessments for the number of points of the scientific work are covered by both candidates. For the purposes of the competition I offer the candidate master pharmacist Nikolay Gerasimov, PhD in the first place in the competition based on the above indicators and assessments and mainly on his long and focused / focused creative and scientific experience on the topic of the competition. The candidate Anna Mihailova, Ph.D. has a diverse creative and scientific work in different medical areas, I appreciate her contributions through her publications, but I have not found convincing proof a more significant focus on the theme of the competition, in comparison with the other candidate, which determined to put her in second place in this competition.

Based on the analyzes and evaluations of the submitted documents for a competition for the academic position of "Associate Professor" in the scientific specialty "Pharmacoeconomics and Pharmaceutical Regulation"; field of higher education 7. Healthcare and sports, professional field 7.3. Pharmacy, scientific specialty "Pharmacoeconomics and Pharmaceutical Regulation" for the needs of the specialty "Assistant Pharmacist" - one in 0.5 staff, at the Medical College, Thracian University, Stara Zagora, I rank first candidate master pharmacist Nikolay Gerasimov, Ph.D. and I propose it to the esteemed jury for selection for "Associate Professor".

Date: 15.12.2020

Prepared the opinion:

Prof. Dr. Nadka Ivanova Boyadzhieva, MD, MD