

## REVIEW

by **Assoc. prof. Hristina Viktorova Lebanova, Ph.D.,**

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Member of the scientific jury under Order No. R-109-318/29.07.2022. of Prof. Dr. Valentin Ignatov, MD, Rector of the Medical University "Prof. Dr. Paraskev Stoyanov" - Varna for obtaining the academic position of "Professor"

**REGARDING:** procedure for obtaining the academic position "professor" in the scientific specialty "Management of public health (process management in pharmacology)", professional field 7.4. Public health, the field of higher education 7. Health care and sports for the needs of the Department of "Pharmacology, Toxicology and Pharmacotherapy" in the Faculty of Pharmacy of the University of Varna, announced in the State Gazette, No. 41/03.06.2022.

By Order No. R-109-318/29.07.2022. of the Rector of MU-Varna, I was appointed as a member of the Scientific Jury, and according to Protocol No. 1 of held on 12.08.2022. At the first meeting of the Scientific Jury, I was elected as a reviewer under the procedure for obtaining the academic position of "professor" in the scientific specialty "Management of public health (process management in pharmacology)", professional field 7.4. Public Health. The only candidate in the procedure is Associate Professor Kaloyan Dobrinov Georgiev, D.Sc. The competition procedure has been observed and the applicant's documents are following the requirements of the Law on the Development of the Academic Staff in the Republic of Bulgaria, the Rules for its Application, and the Rules for the Development of the Academic Staff at the Medical University "Prof. Dr. Paraskev Stoyanov" - Varna and the criteria laid down in it for obtaining the academic position of "professor".

### **Biographical data and career development**

Assoc. prof. Georgiev was born in the city of Varna in 1978. He graduated from the Faculty of Pharmacy of Medical University - Sofia in 2003. He started his professional career as a master pharmacist in a community pharmacy, and from 2005 until now, he has successively held the academic positions of "assistant", "chief assistant" and "associate professor" at the Medical University - Varna. In 2013 he successfully defended a dissertation in professional field 4.2 Chemical Sciences on the topic "Design, synthesis and pharmacological characterization of peptide mimetics of endomorphin-2, morphiceptin and RGD with analgesic and antitumor activity" at the Institute of Molecular Biology "Acad. Rumen Tsanev" of the Bulgarian Academy of Sciences. Assoc. prof. Georgiev also has 2 recognized medical specialties - Pharmacology (2010) and Clinical pharmacy (2018). In 2020 Assoc. Prof. Georgiev also defended a dissertation work for the award of the scientific degree "Doctor of Sciences" in the professional field 7.3



Pharmacy on the topic "Identification, analysis and evaluation of pharmacokinetic and pharmacodynamic drug interactions".

The candidate is fluent in German, English and Russian languages.

### Evaluation of quantitative and qualitative indicators

From the provided academic reference, it is clear that the candidate meets the minimum national requirements laid down in the Law on the Development of the Academic Staff in the Republic of Bulgaria for obtaining the academic position of "professor" and the requirements of MU-Varna (Table 1). With a required sum of 550 points, Associate Professor Georgiev has presented evidence for 854.66 points (55% above the requirements).

Table 1. Certificate of compliance with the requirements of the position.

A group of metrics		Minimum National Requirements (MNR) - sum of points	Minimum requirements MU - Varna - sum of points	Associate Professor Kaloyan Georgiev, D.Sc.
A	Indicator 1	50	50	50 points
B	Indicator 2	-	-	-
IN	Indicators 3 or 4	100	100	100 points
D	Sum of indicators 5 to 9	200	200 (≥100 points for non-clinical specialties from indicator 7)	238.8 points (144.14 from indicator 7)
D	Sum of indicators from 10 to 12	100	100	135
Well	Sum of the indicators from 13 to the end	100	100 (≥80 points from indicator 14)	330.86 points (80 points from indicator 14)
<b>Total points</b>		<b>550 points</b>	<b>550 points ( ≥ 180 points from indicators 7 and 14)</b>	<b>854.66 points (224.14 points from indicators 7 and 14)</b>

Assoc. Prof. Georgiev participates in the procedure with 1 dissertation work for the educational and scientific degree "Doctor", 1 dissertation work for the acquisition of the scientific degree "Doctor of Sciences", 1 monograph, 14 publications published in peer-reviewed journals, referenced and indexed in Scopus Web of Science, 7 publications in non-indexed peer-reviewed journals and 1 chapter of a collective monograph (in English), referenced and indexed in Scopus. 17 of the publications are in journals with an impact factor, and according to the reference provided by the library of MU-Varna, Assoc. prof. Georgiev has a total IF of 37.364. In total, Assoc. Prof. Georgiev participated in the competition with 25 scientific works, all of them, except for the dissertation work for the EDS "doctor", after obtaining the academic position of "associate

professor". Separately, 3 publications beyond the minimum scientometric requirements for occupying AP "professor" are also presented. In 12 of the publications (57%), the applicant is the first or the last author.

Assoc. Prof. Georgiev also presents a list of 20 participations in national and 7 in international scientific forums.

The published monograph examines the principles of the regulatory assessment of the potential for drug interactions in the preclinical and clinical stages of testing a new drug product. The processes are discussed in detail the in vitro drug interaction studies and the possibility of in vitro-in vivo extrapolations. Physiology-based pharmacokinetic (BPK) modeling has also been considered as part of the new drug evaluation process. Many examples of its application are discussed, including in therapeutic proteins/biopharmaceuticals - a topic extremely relevant today. The examples in the monograph are supported by the author's research, a total of 16 of his studies are cited. The presented monographic work fully meets the requirements for it, laid down in law.

#### **Evaluation of the candidate's research activity and contributions**

Assoc. Prof. Georgiev's research work is mainly focused on the pharmacokinetics of plant fractions and extracts, the risks of drug interactions (including their regulatory assessment), intoxications from various substances, etc. The topic of the scientific papers is in the field of the competition.

I accept the author's reference prepared by the candidate for the **contributions**, which can be formulated in 7 directions, significant for public health:

1. Regulatory aspects related to drug interaction studies in both the preclinical and clinical stages of new drug development
2. Isolation, purification and analysis of plant fractions and extracts used in traditional medicine and determination of their pharmacokinetics and risk of drug interactions with conventional drugs, as well as pharmacodynamics and organ protection possibilities ( publication 1 (IF 4.088), publication 13 (IF 1.015), publication 3 (IF 3.411), publications 5 and 14).
3. Retrospective studies and analysis of potential drug interactions in patients receiving polypharmacy (Publication 2 (IF1.512), Publication 6).
4. Clinical case descriptions and therapeutically oriented reviews (Publication 4 (IF 0.966) and Publications 3 and 5).
5. Retrospective Studies of Intoxications with Medicines, Narcotics, Pesticides, Mushrooms, Fish Toxins, and Alcohols (Publications 6,7,8,9,10 and 11; Publications 1 and 2 (G8)).



6. Studies on the effects of probiotic strains (Publication 4 and published monograph chapter).
7. Teaching and learning activity.

In the presented areas, I would like to highlight the following more important original and scientific-applied contributions:

➤ Original contributions:

- (1) Investigation of potential interactions between sildenafil and Japanese green tea Bancha, including the first developed FBFC model to predict potential interactions between sildenafil and green tea in humans.
- (2) The organ-protective effect of the methylxanthine fraction from Bancha was investigated.
- (3) Phenolic compounds from Prunus fruit extract have been isolated and analyzed for the first time using paper chromatography, thin-layer chromatography, and high-performance liquid chromatography.
- (4) The antiviral effects of Lycium barbarum extract have been investigated for the first time and methylxanthines isolated from Bancha and Pu -er
- (5) For the first time, studies were conducted on acute poisoning with narcotic substances, methanol, ethylene glycol, benzodiazepines, sleeping pills, and mushrooms in the Varna Region
- (6) hepatoprotective effects of a probiotic food containing *Lactobacillus strains* have been investigated for the first time *Lactobacillus bulgaricus* DWT1, *Lactobacillus helveticus* DWT2, *Lactobacillus lactis* DWT3 and *Streptococcus thermophilus* DWT 4,5,6,7,8 in acute induced hepatotoxicity in rats.

➤ Applied contributions:

- (1) Development of HPLC-UV method for the qualitative and quantitative determination of sildenafil and fractions in Bancha. The developed method would find wide application in practice.
- (2) The modern capabilities of FBFC modeling for predicting the pharmacokinetic behavior of drugs and the risk of potential drug interactions are investigated.
- (3) The role of RIPK3 as a biomarker for progression-free survival in patients with metastatic colon cancer was investigated.
- (4) Individual forecasts for the duration of hospital treatment of patients with acute exogenous intoxications with organophosphate pesticides have been developed.

The candidate's research and relevant contributions have a direct link to the protection of public health.



According to the presented academic reference, Assoc.Prof. Georgiev has 9 citations in refereed and indexed publications. It should be noted that this is the minimum number of citations required to meet the requirements for holding the academic position of "Professor". Google database reference Scholar shows that Assoc. Prof. Georgiev's publications have been cited over 230 times.

### **Assessment of teaching and learning activities**

Assoc. prof. Georgiev has a total professional experience in the specialty of 17 years, 6 months, and 3 days, of which more than 16 years are teaching experience at MU-Varna. He teaches pharmacy students, nurses, X-ray and medical laboratory technicians, rehabilitators, midwives, and assistant pharmacists in the disciplines of Pharmacology, Toxicology, Pharmacotherapy, Fundamentals of Clinical Pharmacy, and Biopharmacy and Pharmacokinetics. For the last 4 academic years, Associate Professor Georgiev has had a total of 930 hours of classroom workload. The candidate actively participates in the training of the specialists in "Pharmacology and Pharmacotherapy", "Clinical Pharmacy" and "Hospital Pharmacy".

In the current competition, Assoc. Prof. Georgiev also participated with 3 manuals used in the training of pharmacy students - manuals for exercises in Pharmacology and in Toxicology (in 2 editions). The manuals are tailored to the new trends in both disciplines. In the new toxicology edition, the study material is mainly focused on drug toxicology.

Associate Professor Georgiev is the supervisor of two successfully defended doctoral theses and supervises 6 doctoral students who are still studying at the time of the current procedure.

Assoc. prof. Georgiev's teaching activity can be rated very highly - he has courses in all specialties and he is actively involved in the training of doctoral students and specialists.

### **Participation in scientific projects and other activities**

Assoc. Prof. Georgiev is the lead of 2 national scientific projects financed by the Science Fund of MU-Varna - (1) A study of drug interactions at the level of biotransformation and (2) A pharmacological study of methylxanthine fraction isolated from green tea. In addition, he is a participant in 2 other projects financed under the same mechanism.

### **Conclusion**

Those presented by Assoc. prof. Kaloyan Dobrinov Georgiev, D.Sc. scientific works, necessary documents, and references show that he exceeds the recommended criteria and the scientometric requirements of Law on the Development of the Academic Staff in the Republic of



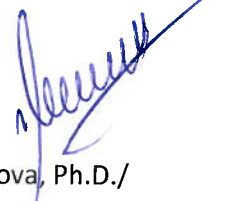
Bulgaria and the Regulations for the development of the academic staff of the MU-Varna for obtaining the academic position "professor" in a quantitative and qualitative aspect. The dissertation work, the topics that are included in the monographic work and manuals, the publications in peer-reviewed journals, and the reports presented at scientific forums, fully correspond to the subject of the announced competition. The quantitative and qualitative characteristics of Assoc. Prof. Georgiev's scientific publications, including the number of citations and impact factor, are such that they significantly exceed the requirements for obtaining the academic position of "professor". The academic workload, the teaching activity, the project activity, and the duration of the occupation of the position of "associate professor" also meet the criteria.

Based on the comprehensive review of the presented scientific works, their significance, the original and applied contributions contained in them, the educational, project, and overall activity and taking into account the presence of full compliance of the scientometric and other indicators with the requirements of the Law on the Development of the Academic Staff in the Republic of Bulgaria and the Rules for development of the academic staff of the University of Varna for obtaining the academic position "professor", I find it reasonable to vote **positively for Assoc. Prof. Kaloyan Dobrinov Georgiev, D.Sc. to be appointed to the academic position "professor"** in the scientific specialty "Management of public health (process management in pharmacology)", professional field 7.4. Public health, field of higher education 7. Healthcare and Sports in the Department of "Pharmacology, Toxicology and Pharmacotherapy", Faculty of Pharmacy of the Medical University "Prof. Dr. Paraskev Stoyanov" - Varna.

07.10.2022

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Reviewer:



/Assoc.prof. Hristina Lebanova, Ph.D./