

SCIENTIFIC OPINION

from

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Medical University "Prof. Dr. P. Stoyanov"- Varna

**Member of a scientific jury on the based on order № P-109-292 of 5.09.2024
of the Rector of Medical University-Varna.**

**According to the protocol of the first meeting of the Scientific Jury held on
16.09.2024 I have been appointed to prepare a scientific opinion.**

REGARDING: Competition for the academic position of "Associate Professor" in the Scientific Specialty "Toxicology", Higher Education Area 7. Health Care and Sports, Professional direction 7.3. Pharmacy, for the needs of the "Pharmacology, Toxicology and Pharmacotherapy" Department, Faculty of Pharmacy at MU-Varna. The competition for this procedure was announced in the State Gazette, issue 57/05.07.2024.

The reviewing of the materials submitted for the competition is based on the requirements of the Law for Development of the Academic Staff in the Republic of Bulgaria, as well as the Regulations for the Application of the Law and the Regulations for the Development of the Academic Staff at MU-Varna. The documents are accompanied by supporting material and have been accurately prepared.

The explicit requirement that the candidate has the specialty "Toxicology and Toxicological Analysis" in the health system has been met.

One candidate participated in the competition - NADEZHDA RUMENOVA KARKKESELYAN, MScPharm, PhD - chief assistant professor at the Department of Pharmacology, Toxicology and Pharmacotherapy, Faculty of Pharmacy at MU-Varna.

Biographical data and professional development

Nadezhda Rumenova Karkkeselyan was born in Varna (1987). She completed her secondary education (2006) at the First Language School, Varna "Foreign Language Profile" with German language. In 2011 she graduated in Pharmacy from Faculty of Pharmacy at MU-Plovdiv (diploma № 008379).

The work experience of Nadezhda Karkkeselyan includes experience in a community pharmacy, where she worked as a Master Pharmacist in the period 2011-2013.

Professional development and growth of Nadezhda Karkkeselyan is strictly consistent. In 2013 she was appointed as an ASSISTANT PROFESSOR in Pharmacology at the Department of "Preclinical and Clinical Sciences", Training Sector "Pharmacology and Toxicology", Faculty of Pharmacy, MU-Varna, after which she continued her professional path as an assistant professor in pharmacology and toxicology at the newly formed Department of "Pharmacology, Toxicology and Pharmacotherapy", Faculty of Pharmacy, MU-Varna. In 2016, she was enrolled as a PhD student in the specialty "Toxicology" at MU-Varna under the supervision of Assoc. Prof. Marieta Georgieva, MD, PhD. In 2018 she obtained the educational and scientific degree "Doctor" in the scientific specialty "Toxicology" (diploma № 316) after successfully defended dissertation on the topic "Pharmacotherapeutic study, potential side and toxic effects of cardioactive drugs in the treatment of hospitalized patients with chronic heart failure" under the supervision of Prof. Marieta Georgieva, MD, PhD. Since 2019 she holds the academic position of CHIEF ASSISTANT PROFESSOR at the Department of "Pharmacology, Toxicology and Pharmacotherapy", Faculty of Pharmacy, MU-Varna.

In 2020. chief assist. prof. Nadezhda Karkkeselyan acquired a specialty in "Toxicology and Toxicological Analysis" (diploma № 023463/12 February 2020) at the Medical University "Prof. Dr. Paraskev Stoyanov", Varna. She has also successfully completed the individual training plan for the specialty "Hospital Pharmacy" at the Medical University of Varna. The candidate has an excellent command of German and English.

Professional interests

The professional interests of chief assist. prof. Nadezhda Karkkeselyan are related to the safe use of medicinal and natural substances. The main directions of her scientific research work are related to the analysis of pharmacotherapy of hospitalized patients, as well as to conducting *in vitro* and *in vivo* studies of herbal, natural products and medicinal substances. After successfully completing a further training course on "Protection and welfare of experimental animals used for scientific or educational purposes", the candidate gained extensive experience with conducting *in vivo* studies, mastering numerous experimental models with experimental animals. This experience can be traced in the publications submitted to the competition.

The scientific interests of chief assist. prof. Nadezhda Karkkeselyan are in the field of toxicology, pharmacology and pharmacotherapy. Candidate's scientific production is focused on various aspects of the pharmacotherapy of patients with cardiovascular diseases, including

drug interactions, as well as application of medicinal and natural substances (pharmacokinetics, biological activity, interactions and adverse reactions).

The active participation of the candidate in the life of the scientific and toxicological community in Bulgaria is noteworthy. Chief assist. prof. Nadezhda Karkkeselyan is a member of the following scientific organizations: Bulgarian Pharmaceutical Union, Bulgarian Society of Clinical Toxicology, Bulgarian Society of Pharmacology, Clinical Pharmacology and Therapy and Bulgarian Society of Nutrition and Dietetics.

Teaching and learning activity

As of the date of the announcement of the competition, chief assist. prof. Nadezhda Karkkeselyan has a work experience of 12 years 06 months and 22 days. My overall impressions from her teaching and learning process, as well as from our joint scientific research work is that chief assist. prof. Nadezhda Karkkeselyan is a successful, proactive and erudite assistant professor with in-depth knowledge not only in the core but also in the complementary educational disciplines, possessing an enviable level of scientific culture and literacy. She is an established tutor with proven skills.

The teaching activity of the candidate is in the disciplines "Toxicology" and "Pharmacology", and she participates in the conduct of seminar exercises and lectures for students studying for the degree of Master of Pharmacy and also for students of the specialty "Assistant Pharmacist. In addition, she is a member of the examination committees in Toxicology and Pharmacology. It should be noted here that in these disciplines, she is also actively involved in the preparation of materials for students. She participated as a co-author in the publication of 5 textbooks with theses and tests in pharmacology and toxicology for pharmacy students.

In the period 2016 – 2022, Nadezhda Karkkeselyan is a member of the Quality and Accreditation Committee at the Faculty of Pharmacy and Responsible for Quality at the Department of "Pharmacology, Toxicology and Pharmacotherapy". The qualities and abilities of candidate have also been evaluated by the Bulgarian Pharmaceutical Union and in the period 2016-2022 she was also a member of the Ethics and Quality Committee of the RFK- Varna.

Scientific and publication activity:

In terms of scientific and publication activity, chief assist. prof. Nadezhda Karkkeselyan participates in the current competition with 1 habilitation thesis/ monograph, 18 scientific publications and 5 study guides, which are not presented in the competitions for the educational and scientific degree "Doctor" and Chief assist. prof. From the publications:

- 8 full-text publications in scientific journals, refereed and indexed in world-known databases with scientific information (Scopus and/or Web of Science), and 7 of them are in journals with IF.
- 1 chapter in collective monograph (co-author) "Chapter 29. Probiotics: past, present, and future challenges" in "Probiotics in the Prevention and Management of Human Diseases A Scientific Perspective", ed. "Elsevier" 2022; ISBN: 978-0-12-823733-5.

- 1 habilitation thesis - monograph "Drug interactions in patients with cardiovascular diseases", ed. "Medical University - Varna", 2024; ISBN: 978-619-221-492-0.
- 5 study guides for pharmacy students (co-author):
 - "Guide to pharmacology for pharmacy students" edited by Assoc. Prof. Marieta Petrova Georgieva, MD, PhD and Assoc. Prof. Kaloyan Dobrinov Georgiev, PhD, Varna, 2017. ISBN: 978-619-221-076-2
 - "Manual of toxicology for pharmacists" edited by Prof. Marieta Petrova Georgieva, MD, PhD, 2018, ISBN: 987-619-221-137-0
 - "Manual of toxicology for pharmacy students" under the editorship of Prof. Marieta Petrova Georgieva, MD, PhD, 2020, Publishing House: Medical University - Varna; ISBN:978-619-221-292-6
 - "Collection of toxicology theses for pharmacy students" edited by Prof. Marieta Petrova Georgieva, MD, PhD, 2022, Publisher: Steno; ISBN:978-619-241-224-1
 - "Collection of test questions in pharmacology and toxicology for pharmacists" edited by Prof. Marieta Petrova Georgieva, MD, PhD and Prof. Kaloyan Georgiev, PhD, DSc, 2022, Publisher: Steno; ISBN: 978-619-241-251-7.

In 2 of the publications submitted for participation in the competition, the candidate is an independent author, in 5 of them she is the first author, and in 9 of the publications she is the second or third author.

The candidate's scientific output has also been presented at numerous scientific forums held both in Bulgaria and abroad. Chief assist. prof. Nadezhda Karkkeselyan has participated in 33 scientific events, including 4 oral presentations and 29 poster presentations. Four of the posters have been presented by the candidate at international events such as the 4th Annual International Conference on National Products Utilization (ICNPU) and the 13th International Symposium on Pharmaceutical Sciences (ISOPS) and the World Congress on Acute Heart Failure 2021.

Candidate's Impact factor reference of 11.827 is impressive, which shows the importance of the published scientific works (most of the scientific output is published in world-famous and recognized journals).

The scientific researches of chief assist. prof. Nadezhda Karkkeselyan, Ph.D. have undeniable contribution in the field of Toxicology, which is evidenced by the presented reference of citations in world-known databases at this time. SCOPUS: 42 citations (h-index 3), Google scholar - 75 citations (h-index 5).

The candidate's monograph on the topic "*Drug interactions in patients with cardiovascular disease*" deserves special attention. It reflects the growth of its author as a scientist in the field of socially significant diseases and modern pharmacotherapy. This monograph is a shining example of the unity of clinical pharmacy, clinical pharmacology and toxicology.

The monograph presents a contemporary overview of the problem of drug-drug interactions in patients with cardiovascular diseases, coupled with clinical benefits of administration as a way to prolong full human life. The monograph reflects in a summarized form the optimal use of medications, which is critical to reducing morbidity and mortality associated with cardiovascular diseases.

Chief assist. prof. Nadezhda Karkkeselyan is a member of the research team of 3 research projects funded by MU-Varna. I believe that she is a promising young scientist with an affinity for research and scientific interests in current areas of pharmacological and toxicological science and practice.

In the reference for the minimum scientometric requirements for the academic position of "Associate Professor", the candidate fulfills the required scientometric indicators.

Conclusion

Chief assist. prof. Nadezhda Karkkeselyan, holds the educational and scientific degree "Doctor in the specialty "Toxicology" and has a specialty in "Toxicology and Toxicological Analysis", which are directly related to the current competition – occupying of the academic position "ASSOCIATE PROFESSOR" in Toxicology.

The candidate's scientific activity meets the required qualitative and quantitative scientometric indicators laid down in the Law on the Development of Academic Staff in the Republic of Bulgaria, as well as the Regulations of MU-Varna for the acquisition of the academic position "ASSOCIATE PROFESSOR". This allows me to confidently suggest to the members of the Scientific jury to vote **POSITIVELY** for occupation of the academic position of "ASSOCIATE PROFESSOR" by **chief assist. prof. Nadezhda Karkkeselyan, PhD**, in the field of higher education 7. Healthcare and sports, professional field 7.3. Pharmacy, in the scientific specialty "Toxicology" for the needs of the Department of "Pharmacology, Toxicology and Pharmacotherapy", Faculty of Pharmacy at MU-Varna.

23.10.2024

Varna

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/ Prof. Dr. Marieta Petrova Georgieva, MD, PhD/