

OPINION

By Assoc. Prof. Dr. Delyan Penev Delev, MD, MSc - member of the scientific jury in a competition for the academic position of "Associate Professor" with candidate Dr. Silvia Gancheva Marinova, MD in 7.1 "Medicine", specialty "Pharmacology (incl. Pharmacokinetics and chemotherapy), announced in SG No. 61 / 23.07.2021.

The opinion was prepared on the basis of a protocol from the Faculty of Medicine of the Medical University "Prof. Dr. Paraskev Stoyanov" - Varna under protocol № 49- / 09.09.2021 and by order № P-109-396 / 20.09.2021 of the Rector of MU - Varna and under protocol № 1 of the first meeting of scientific jury. Its content complies with the requirements of the Law for the Development of the Academic Staff in the Republic of Bulgaria (RASRB), the Regulations for its implementation (PPZRASRB) and the Regulations for the Development of the Academic Staff in MU - Varna.

In structural terms, the opinion consists of eight parts and a conclusion, which provides an assessment of career development, research, teaching, administrative and social activities, personal impressions of the candidate and recommendations and comments on his work.

I. Analysis of the candidate's career profile.

Dr. Silvia Gancheva Marinova was born on December 20, 1982 in the town of Silistra. In 2001 he graduated from the High School of Natural Sciences and Mathematics "St. Kliment Ohridski" in his hometown. He continued his education from 2001-2007 at MU - Varna. He defended his doctoral dissertation at the same university in 2018. He holds a degree in Pharmacology. She has held the positions of "Assistant" (2008-2019), "Administrative Assistant" (since 2018) and "Chief Assistant" (since 2012 - present).

II. General description of the submitted materials in the competition.

The materials presented in the competition include:

1. Application for admission to the competition,
2. Creative CV,
3. Master's degree diploma,
4. Diploma for ONS "Doctor",
5. Certificate of specialty,
6. Certificate of work experience in the specialty,
7. Certificate of teaching experience,
8. Reference for study load,
9. Medical certificate,
10. Criminal record certificate,
11. Declaration of Assurance,
12. Academic reference,
13. Monograph and its summary,
14. Declaration of copyright,
15. Summaries of scientific papers,

16. List of original scientific contributions and
17. List of participations in scientific forums.

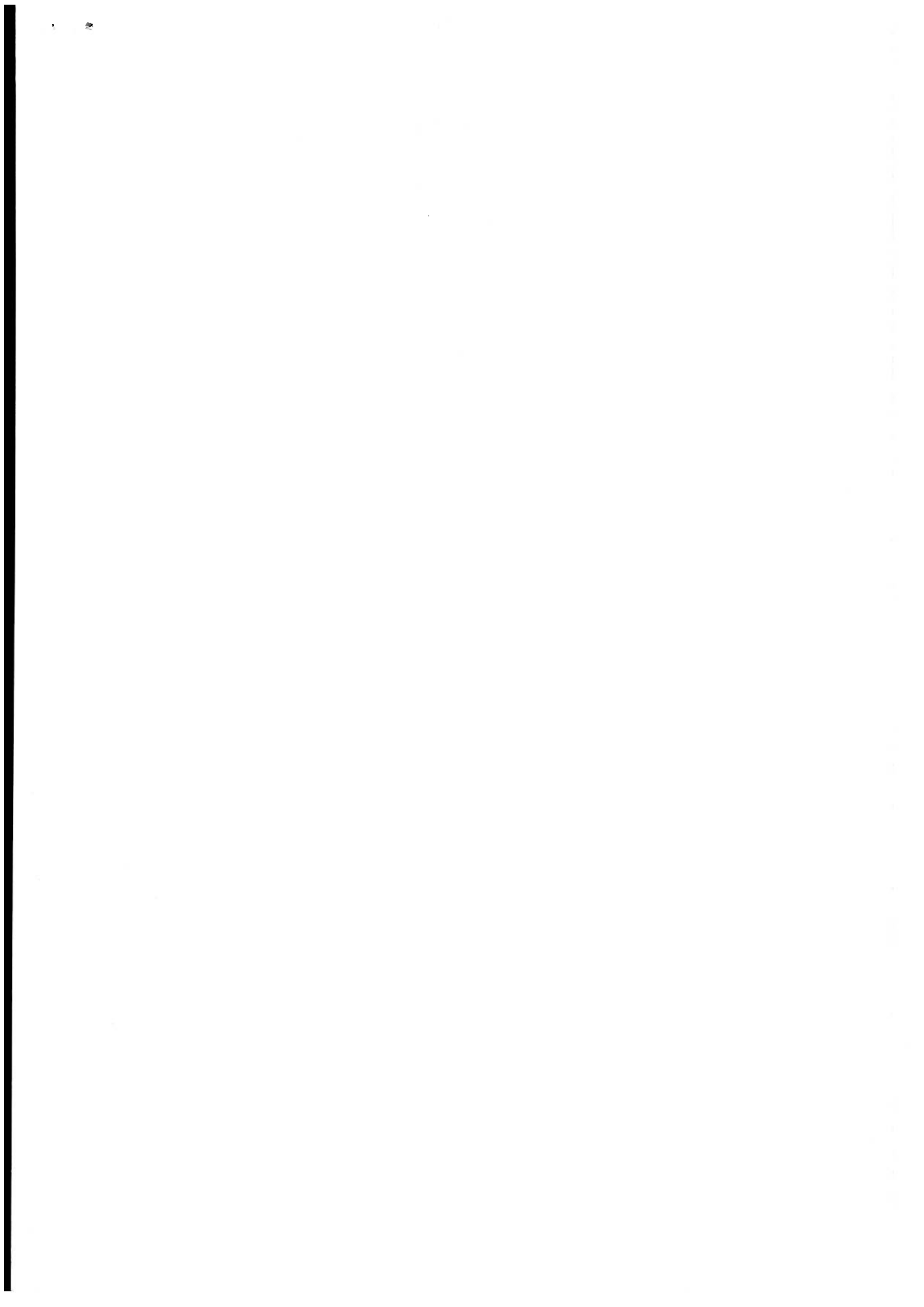
Evidence for the academic transcript is presented in a separate folder, which significantly facilitates the preparation of the opinion.

III. Evaluation of the candidate's scientific works for the overall academic development.

- The general characteristics of the scientific production and publishing activity of Dr. Silvia Gancheva Marinova are impressive. From the presented academic report at the moment it not only meets, but also significantly exceeds the minimum state requirements and those of MU-Varna for borrowing AD "Associate Professor".
- The scientific activity testifies to the dissemination and application of the scientific and practical achievements of the candidate among the scientific community, not only in Bulgaria but also at the world level;
- I evaluate participation in the implementation and management of projects as active - data for 5 participations in projects are presented.
- Scientific and creative achievements and contributions of the candidate:
 1. The publications present original research examining the role of the vitamin K-dependent protein osteocalcin in the regulation of energy metabolism and the behavior of experimental Wistar rats. The mentioned publications and reports show that non-carboxylated osteocalcin plays a hormonal role in the body of rats and regulates both energy metabolism and some central nervous functions - effects described so far only in mice. Experimental studies in rats were complemented by a slice clinical study involving patients with type 2 diabetes and healthy controls, which confirmed the regulatory role of osteocalcin in carbohydrate metabolism, but also showed that in all likelihood in the human body, in contrast to mouse and rat, the degree of carboxylation is not essential for its activity.

Among the presented publications is a review examining current data on the role of vitamin K in protecting bone and vascular health and the mechanisms by which it exerts its effects.

2. Studies on the problem of potential drug interactions are presented in publications and reports. One study included patients with cardiovascular disease taking statins, paying attention to both the combination of statins with drugs that potentially increase their toxicity, such as inhibitors of cytochrome P450 enzymes, and those that have a narrow therapeutic effect. width and are affected by statins such as coumarin anticoagulants and digoxin. Two other studies looked at the treatment of patients with psychiatric illnesses, taking into account all potentially dangerous drug combinations and analyzing the main risks to which patients were exposed. All studies also compared the frequency of potentially dangerous drug interactions during hospital therapy and in the treatment of patients at home. Studies in this area are extremely important from a practical point of view, as they show that the frequency of potential drug interactions leading to a risk to patients' health is high and additional attention needs to be paid to minimizing them. The presented publications also include a review examining the potential drug interactions



of grapefruit juice and the mechanisms of their development, which also has important practical value due to the widespread use of this fruit as an antioxidant.

3. Studies concerning the pharmacological effects of *Kochia scoparia* are presented in a monograph and in publications. The monograph examines in detail the botanical characteristics of the plant, the content of biologically active substances in its fruits and seeds, as well as the various pharmacological effects of these substances. The monograph also includes original research examining the effects of the aqueous infusion of plant seeds in healthy experimental animals, as well as in those with a model of metabolic syndrome. The results presented in the cited publications and the monograph show the presence of antioxidant and known anti-inflammatory effect of *Kochia scoparia* seed infusion and demonstrate that it has a beneficial effect on visceral obesity, energy metabolism disorders, liver damage and behavioral disorders and behavioral disorders. develop in experimental animals on a diet high in saturated fat and fructose. The study concerning the metabolic and central nervous effects of the aqueous infusion of *Kochia scoparia* seeds is the first in the available scientific literature - so far metabolic effects have been described only for alcoholic extract of the plant's fruit, and its central effects have not been considered. The results of these experimental formulations show that *Kochia scoparia* seeds have high biological activity in an easy to prepare and consume form and could be useful in the prevention and adjunctive therapy of socially significant diseases such as metabolic syndrome, type 2 diabetes, non-alcoholic fatty liver disease, anxiety and depression and cognitive changes.
4. The study examining the effects of biologically active substances of natural origin in various experimental models.

IV. Evaluation of the monographic work.

The presented monographic work KOCHIA SCOPARIA - THE HEALTH BENEFITS OF AN "ORDINARY" PLANT fully meets the requirements for a monograph within the meaning of the law. A very interesting topic is presented, and my assessment of the work is high.

V. Reflection (citation) of the candidate's publications in the national and foreign literature (publication image).

22 full-text publications were presented, 5 of them with IF and 4 with IR and participation in 48 scientific forums at home and abroad. I noticed 28 citations, which are probably many more, and I advise the authors to save them for future procedures. Participation in research projects - 5 pcs. - a respectful figure for the candidate.

VI. Complex, qualitative assessment of the teaching-methodical and teaching activity.

The presented certificate for teaching experience shows over 13 years of work as a lecturer (assistant, chief assistant) at MU-Varna at the Department of Pharmacology, Clinical Pharmacology and Therapy. The average workload of Dr. Silvia Gancheva Marinova is over 560 students. hours for the last 5 years, includes classes for students of Bulgarian and English language training and exceeds the norm. The candidate has also participated in the production of 4 pieces. teaching aids.

VII. Critical remarks and recommendations .

I have no significant critical remarks and recommendations, except for future co-authorship in a textbook on pharmacology in Bulgarian and English.

VIII. General assessment of the compliance of the applicant with the minimum national requirements under Art. 2b, para. 2 and 3, respectively to the requirements under Art. 2b, para. 5 of ZRASRB and the specific requirements of MU - Varna.

The candidate meets the minimum national requirements, as well as the specific requirements of MU - Varna, even exceeds them.

IX. Conclusion .

The candidate for employment of AD "Associate Professor" Dr. Silvia Gancheva Marinova, MD in direction 7.1 "Medicine", specialty "Pharmacology (incl. Pharmacokinetics and chemotherapy) - **MEETS** the mandatory and specific conditions and scientometric criteria - for the academic position" Assoc. and I am voting in favor of her award

11/15/2021

Prepared the opinion:

Assoc. Prof. Dr. D. Delev, MD, Ph.D.

