

OPINION

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Related to Competition for the occupation **academic position "Associate Professor"** in scientific specialty **Biochemistry**, in the area of higher education 4. Natural sciences, mathematics and informatics, professional field 4.3. Biological sciences,

1. Information about the competition procedure

The competition was announced in State Gazette No. 07/23.01.2024 for the needs of the Department "Biochemistry, Molecular Medicine and Nutrigenomics", Faculty of Pharmacy of the Medical University "Prof. Dr. Paraskev Stoyanov", Varna. I am a member of the Scientific Jury according the Order of the Rector of the Medical University - Varna (No. P-109-119/22.03.2024) and the decision of the Faculty Council (Protocol No. 71/28.02.2024). Only one applicant participates in the competition: Ch. Assist. Professor Deyana Georgieva Vankova, PhD.

All documents submitted by the applicant are in compliance with the regulative requirements for participation in the competition for the occupation of the academic position "Associate Professor" in Medical University – Varna

2. Education and career development

Deyana Vankova graduated as a Master in Molecular Biology at Sofia University "St. Kliment Ohridski" in 2004. He began his professional career as a medical representative at "Chaikapharma - high-quality drugs", and in the period 2004-2008 he worked as a laboratory specialist at SGS - Bulgaria" LTD, where she acquired skills for highly specialized molecular biology methods.

In 2008 Deyana Vankova was enrolled as a full-time doctoral student at the Department of Biochemistry, Molecular Medicine and Nutrigenomics, and in 2009, she was appointed as an assistant in the same department. After defending a dissertation in 2015, Vankova was awarded the Educational and Scientific Degree "Doctor" in the scientific specialty "Biochemistry", and after a competition from 2016 until now, she is a Chief Assistantin in the Department of Biochemistry, Molecular Medicine and Nutrigenomics. She has acquired a specialty in "Biochemistry".

3. Educational and teaching activities.

Chief Assist. Prof. Vankova has 15 years of teaching experience. According the attached reference, she covered an average of approximately 400 teaching hours for the last 5 years. Teaching activities of Deyana Vankova include conducting exercises in biochemistry for students in Medicine - in Bulgarian and English, Dental Medicine - in Bulgarian and English and Pharmacy. She has been assigned individual lectures on several elective courses for students in Medicine (in Bulgarian and English) and Pharmacy and she was involved with

separate lectures in the teaching of the Master's programs "Technology Transfer and Innovation in Pharmacy", "Cosmetology" and "Artificial Intelligence in Biomedicine".

4. Scientific research activities

In her research activities Deyana Vankova has acquired knowledge and skills for working with cell cultures and experimental animals and for conducting interventional studies in healthy volunteers and patients. Thanks to her excellent skills in applying highly informative molecular biological and biochemical methods and her good theoretical training, Vankova conducts in-depth research to evaluate the changes in the biochemical and transcriptional levels of selected molecular and molecular markers, testing and optimizing methods for extracting RNA from cell cultures, from animal and human biopsy preparations and human peripheral mononuclear cells, as well as in application of *in vitro* and *in vivo* methods for the analysis of medicinal plants and biologically active substances.

4.1. Scientific contributions

The areas of scientific activity of Ch. Assist. Prof. Deyana Vankova are:

1. Study of biomarkers related to socially significant diseases
2. Study of the antioxidant and anti-inflammatory properties of medicinal plants and biologically active substances *in vitro* and *in vivo*.

In the **first thematic area**, Vankova works in collaboration with clinical departments within the framework of several interdisciplinary projects. The main significant contributions are:

- A group of molecular markers has been identified for the assessment of endothelial dysfunction in patients with metabolic syndrome
- A correlation was established between the expression levels of the matrix Gla proteins with impaired regulation of lipid metabolism in cardiovascular pathologies
- The role of vitamin D deficiency as an independent risk factor for assessing the severity of cardiovascular pathology and increased coronary calcium deposition has been established

The main contributions in the **second area** are related to the study of the antioxidant and anti-inflammatory properties of medicinal plants and biologically active substances *in vitro* and *in vivo*:

- Antioxidant, anti-inflammatory and adaptogenic properties of extracts from the herbs agrimony and dwarf elderberry have been proven in different models on macrophages and preadipocytes cell cultures
- An antihyperlipidemic effect of agrimony has been established in experimental animals

4.2. Fulfillment of the Minimal National Requirements (MNR) for holding the academic position "Associate Professor"

The scientific papers submitted by the applicant for participation in the competition have summarized the scientific work of Deyana Vankova for the period from the acquisition of the Doctoral degree until now. In fulfillment of the MNR for the occupation of the academic

position "Associate Professor" in the scientific specialty "Biochemistry" according to indicator A1, a diploma for awarded ESD "Doctor" is presented and according to the MNR for the current competition, this gives required **50 points** according to this indicator.

Vankova participates in the competition with 1 monograph in indicator B (**100 points**), 14 full-text publications in journals indexed in Web of Science/Scopus in indicator G7 and 2 chapters in books in indicator G8 (**total of G7 and G8, 255 points**). In addition, the applicant has attached three publications in scientific journals of the Academic Press of the Medical University - Varna, out of the required MNR. From the attached evidences for the citations, it can be seen that the applicant covers the MNR with 27 citations, which equals **54 points** according to indicator D.

All points summarized according Academic Reference of the applicants compared with NMR are presented in the Table 1.

Table 1. Summarized quantitative scientometric indicators of Ch. Assist. Prof. Deyana Vankova, compared with MNR

Group of indicators	MNR	Applicant reference
A	50	50
C	100	100
D	200	255
E	50	54
Total required for “Associate Professor”	400	459

Apart the MNR, Vankova is a co-author in 4 practical textbooks in Biochemistry for students in Medicine and Dental Medicine (Bulgarian and English language) and Pharmacy. She has participated in 9 scientific conferences abroad and 13 scientific forums in Bulgaria, Vankova was a team member in 10 scientific projects, including one internationally funded, and 4 funded by the Scientific Research Fund.

5. Personal impressions

My personal impressions of Deyana are based on our joint scientific and teaching work for 15 years. I know her as very executive and responsible person in her work, correct and ethical towards her colleagues. She has always been highly appreciated by her students as a competent teacher interested in their problems and success. In her work as an administrative assistant of the department for 8 years, Deyana managed to show herself as an organized and collaborative colleague. Both my personal impressions and the evidence submitted for the competition present Deyana Vankova as an established scientist with in-dept knowledge in the field of biochemistry and molecular biology, respected by her colleagues and students.

1. Conclusion

Based on the submitted documents and evidentiary material, I believe that Ch. Assistant Professor Deyna Vankova, PhD is an established specialist, scientist and teacher. With her excellent professional qualifications, scientific achievements and teaching experience, she meets all the requirements of the Act on Development of Academic Staff of the Republic of Bulgaria and the Regulations of the Medical University-Varna for occupying the Academic Position "Associate Professor".

I declare my positive assessment and confidently support the candidature of Ch. Assistant Professor Deyana Georgieva Vankova, PhD for holding the Academic Position "Associate Professor" in the scientific specialty "Biochemistry" for the needs of the Department "Biochemistry, Molecular Medicine and Nutrigenomics", Medical University "Prof. Dr. Paraskev Stoyanov", Varna.

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Varna

Member of the Scientific Jury
(Assoc. Prof. Milka Nashar)

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