

STATEMENT

By Assoc. Prof. Stanislava Katelieva Georgieva, PhD

Department of Chemistry, Medical University "Prof. Paraskev Stoyanov" - Varna

Related to Competition for acquiring the Academic Position "Professor"

in the area of higher education 4. Natural sciences, mathematics and informatics, professional field 4.2. Chemical Sciences and the scientific specialty Chemistry

for the needs of the Department of Chemistry, Faculty of Pharmacy at the Medical University - Varna, announced in the State Gazette No. 7 / 23.01.2024.

1. Information about the competition procedure

By order of the Rector of the Medical University - Varna No. P-109-94/ 21.03.2024 and addendum P-109-134/ 05.04.2024, I have been elected as a member of the Scientific Jury and I am assigned to prepare an opinion (Protocol No. 1/04.04.2024 d) in connection with the procedure for occupying the academic position "Professor" in the area of higher education 4. Natural sciences, mathematics and informatics, professional field 4.2. Chemical Sciences and the scientific specialty Chemistry.

Documents for the announced competition were submitted only by a candidate Associate Professor Albena Vasileva Merdzhanova, Ph.D. The submitted documents are arranged, correctly described as being in accordance with the requirements of the Law for development of the academic staff in the Republic of Bulgaria, the Regulations for the Development of the Academic Staff of the Medical University – Varna and the conditions of the competition.

2. Education and career development of the candidate

Assoc. Prof. Albena Vasileva Merdzhanova, Ph.D. has started her professional development at the Institute of Oceanology - BAS, Varna in 1993 immediately after graduating from University of Chemical Technology and Metallurgy - Sofia as a master's degree in "engineer - biotechnologist". At the Medical University - Varna, she started the position of chief assistant in the Department of Medical Chemistry. In 2014, she successfully defended her dissertation and obtained a doctorate in the specialty "Bioorganic Chemistry, Chemistry of Natural and Physiologically Active Substances", at the Department of Chemistry of the Medical University – Varna. From 2018 until now, she holds the academic position of "Associate Professor" in Chemistry, Faculty of "Pharmacy" at the Varna University of Medical Sciences. Assoc. Prof. Merdzhanova has acquired the Postgraduate training specialty "Theoretical Foundations of Medicinal Chemistry" in the Health Care System since 2020. From June 2023, she was elected Head of the Department of Chemistry.

3. Educational and teaching activities.

Assoc. Prof. Merdzhanova has 19 years of teaching experience, leading lecture courses in "Chemistry" for students in „Medicine“; "Inorganic and Organic Chemistry" of students „Medical Laboratory Assistant“, College of Medicine; "Inorganic Chemistry" of students "Assistant Pharmacist" from College of Medicine; elective disciplines: "Food composition and

safety" for students in Pharmacy and "Perfumes and fragrances in cosmetic production" for students in "Cosmetology". She conducts exercises in Chemistry for students of Medicine and Dentistry. Participates in the development of curricula, handbooks, exam tests, etc.

4. Scientific research activity

4.1. Scientific indicators and implementation of the minimal national requirements (MNR)

To participate in the current competition, Assoc. Prof. Albena Merdjanova submitted an academic report for the fulfillment of the minimal requirements (MNR) and evidentiary material for her scientific activity, distributed by indicators as follows:

Indicator A (A) – The PhD thesis for the acquisition of the educational and scientific degree of "PhD" - **50 points**.

Indicator B3 - Published habilitation thesis - monograph - 1 issue - **100 points**.

Indicator G7 (Г7) - Scientific publications in journals referenced and indexed in the Web of Science and Scopus databases – 18 items. - with a total points - **298 points**, which significantly exceeds the required minimum of 200 points. In addition, 4 publications in scientific journals are presented, which are beyond the minimum requirements for holding the AP "professor". Both the PhD thesis and the scientific researches and publications of Assoc. Prof. Merdzhanova are in the scientific field of the announced competition. The total impact factor (IF) of 15 publications, submitted for participation in the competition, is 37.928 (according to the submitted academic reference).

Indicator D - Citations in scientific publications, referenced and indexed in world-renowned databases. According to the presented reference, the number of citations of Assoc. Prof. Merdzhanova's scientific works is 52, which corresponds to **104 points** according to this indicator (with a required minimum of 100 points).

Indicators from group E: Assoc. Prof. Merdzhanova actively participates as an expert and researcher in 8 national scientific and educational projects - a total of 80 points (according to indicator E14) as well as in two international scientific projects - 40 points (according to indicator E15) and is the head of one national scientific project - 20 points (according to indicator E16). According to indicator E18 – 24 points for attracted funds for a project led by the applicant. According to indicators E19 and E20, in the academic reference Assoc. Prof. Merdzhanova presents a total of 4 published textbooks and study aids - 50 points.

The total number of points for the sum of indicators E12 - E20 is **214 points** (with a required minimum of 150 points).

The comparison of the data presented in the academic reference with MNR for occupation of AP "Professor" shows that the scientific output of Assoc. Prof. Merdzhanova not only fully meets the requirements, but also significantly exceeds them (Table 1).

Table 1. Summarized scientometric indicators of the candidate for occupation of AP "Professor".

Group of indicators	Contents	MNR	Data from Academic reference
A	PhD thesis for the acquisition of the educational and scientific degree of "PhD"	50	50
B3	Published habilitation thesis - monograph	100	100
G7	Scientific publications in journals referenced and indexed in the Web of Science and Scopus databases	200	298
D	Citations in scientific publications, referenced and indexed in Web of Science и Scopus	100	104
E	sum of indicators E12 - E20	150	214
	Total for AP 'Professor':	600	766

4.2. Scientific contributions

Assoc. Prof. Albena Merdzhanova is the author of published and presented scientific works of a fundamental and scientific-applied nature in the field of evaluation and characterization of the composition, quality and safety of marine and freshwater organisms, grouped thematically in five main areas:

1. Quality and composition of Black Sea and freshwater organisms (fish, mussels, rapans, shrimps)
2. Influence of heat treatment on the composition and quality of marine and freshwater organisms as food
3. Safety of marine and freshwater organisms
4. Assessment of the "benefit - risk" ratio when consuming Black Sea organisms
5. Study of changes in the content of free and bound fatty acids in blood serum in relation to the study of metabolic syndrome and cardiovascular pathologies

Contributions of a scientific and scientific-applied nature:

A large part of the candidate's scientific output is in the direction of quality and composition of Black Sea and freshwater organisms. Important contributions are the new data obtained on the quality of various marine and freshwater organisms traditionally consumed in Bulgaria - chemical composition, fatty acid profile, as well as the content of fat-soluble vitamins and pigments. A major contribution with a markedly applied nature is the calculation of fatty acid ratios (n-6/n-3, PUFA/SFA) and indices (atherogenic (AI) and thrombogenic (TI)), which characterize the quality of lipids as food. The presented data on the changes occurring in the lipid composition during heat treatment are used to evaluate the nutritional qualities of Black Sea fish and molluscs.

An important contribution of Assoc. Prof. Merdzhanova's scientific research is the assessment of the benefit-risk ratio in the consumption of marine organisms, which was made

on the basis of the results obtained for the content of toxic and essential elements in fish and shellfish and the parameters characterizing the quality of lipids (fatty acid composition). A very good correlation was found between essential trace elements and biologically active fatty acids, suggesting positive synergistic effects of these important components in mussel tissue.

In the presented studies of the white clam *Chamelea gallina*, the authors found a very good antioxidant profile - it contains higher amounts of flavonoids, vitamins - A, D3, E and K, total alkaloids, carotenoids and phenols and omega-3 polyunsaturated fatty acids. The high levels of DHA, EPA and DPA omega - PUFA in the edible tissue of the clam also suggest its anti-inflammatory potential. The contributions in this direction are related to the established and proven positive effect of mussel lyophilisate from the white mussel *Chamelea gallina* with the potential for its protective action in cardiovascular pathologies, etc.

The published monograph provides data on the content of biologically active fatty acids, more specifically, the content of long-chain omega-3 fatty acids (EPA and DHA) in commonly consumed and delicacy species of marine and freshwater organisms. This will provide an opportunity for better awareness of health professionals and consumers in Bulgaria for the correct choice of affordable local foods rich in valuable biologically active fatty acids.

All the contributions described in the attached author reference demonstrate professional competence of Assoc. Prof. Merdzhanova in the field of the indicated areas and interdisciplinary knowledge.

5. Conclusion

Assoc. Professor Albena Merdzhanova is a long-time teacher of Chemistry, an established scientist and a highly respected colleague. In scientific work, she shows professionalism and dedication, which are due to her high scientific achievements. My personal impressions of her professional development, scientific developments and the presented scientific production give me reason to assume that she possesses the necessary qualities and professional competences to occupy the AP "Professor".

The documents and evidentiary materials submitted for the competition by Assoc. Prof. Albena Merdzhanova, Ph.D., fully meet the requirements of the Law for development of the academic staff in the Republic of Bulgaria, the Rules of its application, the Regulations for the Development of the Academic Staff of the Medical University – Varna and exceed the criteria for the acquisition of academic position "Professor". I confidently express my positive assessment and recommend to the members of the esteemed jury to make a decision Assoc. Prof. Albena Vasileva Merdzhanova, Ph.D. to occupy an academic position "Professor" in the specialty "Chemistry" in the area of higher education 4. Natural sciences, mathematics and informatics, professional field 4.2. Chemical Sciences.

14.05.2024

Varna

Member of the Scientific Jury:

(Assoc. Prof, Stanislava Georgieva)

Заличено на основание чл. 5,
§1, б. „Б“ от Регламент (ЕС)
2016/679