

**TO: The Chair of the Scientific Jury,
appointed by Order No. R-109 133/16.03.2026
of the Rector of Medical University of Varna
“Prof. Dr. P. Stoyanov”**

REVIEW

from Associate Professor Dr. Nina Dimitrova Dimcheva, Ph.D.

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REGARDING: Competition for the academic position of 'Associate Professor'; field of higher education 4. Natural Sciences, Mathematics, and Informatics; Professional Area 4.2. Chemical sciences; scientific specialty 'Physical Chemistry with Colloid Chemistry' for the needs of the Department of Chemistry at the Faculty of Pharmacy with the Medical University - Varna.

The review has been prepared in accordance with the requirements of the Law on the Development of the Academic Staff in the Republic of Bulgaria (ZRASRB), the Regulation for the Implementation of the Law on the Development of the Academic Staff (PRASRB), and the Regulation for Academic Development at the Medical University 'Prof. Dr. Paraskev Stoyanov', Varna. The sole candidate admitted by the scientific jury to participate in the competition for the position of 'Associate Professor', announced in the State Gazette No. 6 of 16 January 2026, is Chief Assistant Professor Dr. Anelia Tsvetanova Gerasimova-Peneva.

1. PRESENTATION OF THE PROCEDURE

I have been appointed as a member of the scientific jury for the competition by order of the Rector of MU – Varna No. R-109 133/16.03.2026.

The set of materials for the competition, submitted by the candidate on an electronic medium, fully complies with the legal requirements, criteria, and indicators for occupying the respective academic position, in accordance with the Higher Education Law, the Law for Academic Career Development of the Republic of Bulgaria (ZRASRB) and its implementing regulations, as well as the Regulation for occupying the academic position of 'Associate Professor' in the Rules of Organisation and Activity of Medical University - Varna. All administrative deadlines for the competition have been met. The submitted evidentiary materials do not duplicate those used to

obtain the educational and scientific degree of 'Doctor', nor those used by the candidate in the competition for the academic position of Chief Assistant Professor.

The documents for participation in the competition presented on electronic media by Dr. Anelia Gerasimova-Peneva include:

- Application to the Rector for admission to participate in the competition;
- Curriculum vitae, signed by the candidate;
- Verified copy of the diploma for the Master's degree with annex;
- Verified copy of a diploma for the acquired Higher Education Degree 'Doctor' in Chemistry;
- Verified copy of a document for acquired specialisation in the field of healthcare;
- Certificates of professional experience in the speciality and teaching experience;
- Certificate of teaching load
- Medical certificate and certificate of good conduct;
- Notice of data protection;
- Declaration of authenticity of the submitted documents, completed and signed by the candidate;
- Academic reference issued by the library of MU-Varna, including:
 - ✓ Publications and citations covering the minimum national requirements;
 - ✓ Full-text publications and citations beyond the minimum national requirements for the candidate's scientometrics (Appendix 1);
 - ✓ List of scientific works and citations used for obtaining the Doctor of Philosophy (Ph.D.) degree (Appendix 3) and for being appointed at the academic position of Chief Assistant Professor and for sustaining an Academic Degree (Appendix 2);
 - ✓ Application for active profiles on Google Scholar, ORCID, and scientific networks such as ResearchGate;
 - ✓ Application for the Impact Factor of the journals in which the candidate's works have been published;
- Publications equivalent to a monographic work, accompanied by a list of publications and a Habilitation extended report on scientific contributions;

- Abstracts of scientific works in Bulgarian and English languages;
- Certificate of the original scientific contributions, signed by the candidate;
- List of participations in National and International scientific forums
- Other documents, including 4 Appendices.

2. BRIEF BIOGRAPHICAL DATA AND PROFESSIONAL EXPERIENCE

Dr. Anelia Gerasimova-Peneva graduated with a Bachelor's degree in Chemistry in 2010 and obtained her Master's degree in Environmental Chemistry one year later from Shumen University 'Episkop Konstantin Preslavski'. From 2010 until completing her Master's in 2011, she worked as a specialist (chemist) at the Department of Chemistry, Faculty of Natural Sciences at ShU 'Episkop Konstantin Preslavski', Shumen. In 2011, she was appointed as an assistant professor in the discipline of 'Analytical Chemistry' at the Department of Chemistry, Faculty of Natural Sciences at ShU, and from 2012 to 2018, she was an assistant professor in the discipline of 'Physical Chemistry with Colloid Chemistry' at the Department of Chemistry, Faculty of Pharmacy at MU 'Prof. Dr. Paraskev Stoyanov', Varna. Between 2016 and 2017, she was a doctoral student in independent preparation at the Department of Chemistry at MU 'Prof. Dr. Paraskev Stoyanov'. After successfully defending her dissertation titled 'Kinetic behaviour of foam films from aqueous solutions of bovine serum albumin and n-dodecyl-D-maltoside', she was awarded the degree of PhD in the scientific speciality of 'Bioorganic Chemistry, Chemistry of Natural and Physiologically Active Substances'. Since 2018, Dr. Anelia Gerasimova-Peneva has held the academic position of Chief Assistant Professor and performs duties as an administrative assistant in the discipline of 'Physical Chemistry with Colloid Chemistry' at the Department of Chemistry, Faculty of Pharmacy at MU 'Prof. Dr. Paraskev Stoyanov', Varna.

2.1. Educational-methodical and teaching activities

Dr. Anelia Gerasimova-Peneva has extensive teaching experience, including delivering lecture courses, conducting seminar sessions, and leading laboratory practice. As an assistant professor at Shumen University "Bishop K. Preslavski" – Shumen, she has delivered lectures, seminars, and laboratory exercises on the disciplines of "Physical Chemistry" Part I and Part II for students specialising in "Medicinal Chemistry", "Chemistry and Environmental Protection",

and “Biology and Chemistry”, as well as in the discipline of “Colloid Chemistry” for students from the specialities “Medicinal Chemistry” and “Chemistry and Environmental Protection”.

Her teaching experience at MU 'Prof. Dr. Paraskev Stoyanov' – Varna again includes conducting both seminar and laboratory exercises, as well as lectures on the subject 'Physical Chemistry with Colloid Chemistry' for students specialising in Pharmacy.

Furthermore, Dr. Gerasimova-Peneva is actively involved in conducting seminar and laboratory exercises in the following disciplines:

- Chemistry for students specialising in Medicine and Dental Medicine;
- General and Organic Chemistry for students specialising in Medical Laboratory Technician;
- Inorganic Chemistry for students specialising in 'Pharmacy Assistant';
- Analytical Chemistry for students specialising in 'Pharmacy Assistant' and 'Medical Laboratory Technician'.

Dr. Gerasimova-Peneva's teaching and methodological skills are directly expressed through the lecture course she developed on the elective subject 'Environment and Health' for students specialising in Pharmacy, her participation in the development and updating of the curriculum for the subject 'Physical Chemistry with Colloid Chemistry', as well as in the development of new laboratory and seminar exercises. Furthermore, her methodological skills are demonstrated in the co-authored textbooks on Colloid Chemistry and Physical Chemistry with Prof. Zhanna Angarska from Shumen University 'Bishop Konstantin Preslavski', as well as in her involvement in two collections of problems for preparing prospective medical university students in chemistry. She also has experience as a supervisor of a diploma thesis in the Chemistry programme at Shumen University 'Bishop Konstantin Preslavski'. This substantial volume of teaching and educational-methodical work attests to her organisation and self-discipline, as evidenced by the fact that, from 2020 to 2025, her average annual classroom workload far exceeded the mandatory 360 hours.

In addition to the activities mentioned above of Dr. Anelia Gerasimova-Peneva, she works with prospective students as a teacher or examiner, as well as with pupils from the 'First Language High School' in Varna, where she teaches in the 'School of Chemistry' at the school.

3. SCIENTIFIC RESEARCH AND PROJECT- ORIENTED ACTIVITY

3.1. Significance and relevance of scientific research

All 20 full-text publications presented, which are referenced and indexed in the global databases Scopus and Web of Science, as well as one published patent application, have been accepted for review. The publications have a distinctly interdisciplinary character, combining research from the fields of colloidal, organic, and phytochemistry; cosmetics; pharmacy; physics and biophysics; and microbiology. Ten of them are thematically linked and form the legally required extended habilitation report. The remaining ten works are published in high-impact scientific journals. The patent application for a utility model concerns the development of an optical 1xN switch, but provides no detailed information on the nature of the invention or the applicant's specific contribution.

The extended habilitation report consolidates 10 thematically related publications, which can conditionally be divided into two parts. The first part investigates and optimises the emulsifying ability of natural products – extracts from various types of algae- and considers their potential applications in the food, pharmaceutical, and cosmetic industries. The possibility of using green algae as emulsifiers in functional foods and dietary supplements is examined. The influence of different hydrocolloids on calcium alginate beads containing extracts of spirulina is studied, as well as the extraction conditions affecting the stability of the protein blue pigment phycocyanin, extracted from spirulina. As a continuation of this research, the chemical characteristics of spirulina supplied by different producers have been evaluated.

Similarly, the second part of the habilitation report is dedicated to the study of the bioactive properties and therapeutic potential of herbal extracts, as follows:

- The elemental composition and radionuclide content of black elderflower inflorescences collected from different regions of the country have been determined.
- The species diversity of medicinal chamomile has been studied, with the research mainly focusing on the essential oils from two types of chamomile with medical significance.
- The therapeutic potential of jujube extract has been investigated, and its potential application in dermatology has been considered.
- The chemical composition and biological activity of Bulgarian St. John's Wort essential oil have been determined.
- The bioactive components in the moringa leaves have been examined, and their spectral characteristics have been determined in fluorescent, infrared, and Raman spectra.

The main points outlined in the extended habilitation report have a scientific and applied character of contributions. These are in the field of colloidal chemistry (stabilisation of colloidal dispersions – emulsions) and Physical Chemistry, insofar as they relate to the optimisation of extraction processes and are in accordance with the scientific speciality under which the competition is announced. The relevance and importance of these scientific contributions are indisputable, as the use of natural products as functional foods and biotherapeutics aligns with the latest trends in pharmaceutical science.

The remaining scientific publications that meet criterion G7 of the minimum National requirements for holding the position of 'Associate Professor' are characterised by a multi- and interdisciplinary nature of the research, of which nine are published in journals with an impact factor and Q1 quartile, and one in a journal with an impact factor and Q3 quartile. Unfortunately, the personal contributions of Dr. Gerasimova-Peneva to each of the articles have not been specified, which makes it difficult to form an objective opinion on the significance of her involvement in each of them. Based on the declared competencies and the professional experience of the other authors, as far as I am aware, I can assume that Dr. Gerasimova-Peneva's personal contribution involves optimising extraction processes, conducting the experimental study of biological activity, and processing and analysing the data related to it, which is an essential part of the research.

3.2. Publication activity and participation in projects and scientific forums

According to the global database Web of Science, for the period 2018 – 2025, Dr. Anelia Gerasimova-Peneva has published 18 articles, of which 11 are research articles, 4 reviews, 2 conference papers, and 1 scientific forum abstract. In the competition, Dr. Gerasimova-Peneva participated with a total of 15 publications with an impact factor (IF), mainly published in the last two years. Five of the publications with IF are part of her habilitation extended report, while the remaining 10 are presented as participating in criterion G7 of the minimum national requirements for holding the academic position of 'Associate Professor' and are distributed as follows: 1 article from 2020, 5 published in 2024, and 4 in 2025.

A similar report on the candidate's publication activity for the period 2018-2025, conducted through the European database Scopus, shows a total of 22 publications referenced in Scopus, 20 of which were published in the last two years. Such an uneven distribution of research results is directly related to Dr. Gerasimova's work on research projects.

After taking up the academic position of 'Chief Assistant Professor', Dr Gerasimova-Peneva has participated in four projects, three of which are funded internally by the university and one funded under Bulgaria's Recovery and Resilience Plan. It is in this large scientific research project that she declares participation in a total of three research groups, mistakenly treating the three types of activities within the project as three separate projects with national funding. This involvement in the project also explains the significant number of publications over the past two years.

The scientific forums in which Dr. Anelia Gerasimova-Peneva has participated total 23, of which 7 are international and 16 are national. Of these, 13 have been held after she took the position of Chief Assistant Professor. It makes a good impression that in the majority of the 13 scientific reports presented at the conferences, Dr. Gerasimova is the first or sole author, and their topics are directly related to the discipline she teaches at MU-Varna – Physical Chemistry and Colloid Chemistry.

3.3. Citations of the candidate's publications

For the purposes of the competition, Dr. Gerasimova has submitted an academic reference showing the presence of 65 independent citations of her works, with the list of citations conditionally divided into two – those that meet the minimum national requirements for holding the position of 'Associate Professor' and those outside these requirements. It is noteworthy that the list of citations covers the period 2024-2026, i.e., a quite high citation intensity has been reached in just two years, which can serve as an indicator of the relevance and high research interest in her scientific works.

4. OVERALL ASSESSMENT of the Candidate's Work in Relation to the MINIMUM NATIONAL REQUIREMENTS under Article 2b, Paragraphs 2 and 3, respectively, and the Requirements under Article 2b, Paragraph 5 of the ZRASRB, as well as the Specific Requirements for MU-Varna Regarding the Directions for Units Without Clinical Activity, as Outlined in the Regulations for Academic Development at the Medical University – Varna

In the academic reference presented by Dr. Gerasimova-Peneva in tabular form, her scientific works are displayed, categorised according to criteria in accordance with the normative

requirements of the Rules for the application of the ZRASRB to professional field 4.2. Chemical sciences. The candidate's points are distributed according to criteria as follows:

- According to criterion A1 – dissertation for the award of the academic degree 'Doctor' - 50 points;
- According to criterion B4 – scientific publications in journals indexed and refereed in the global databases Scopus and Web of Science, 10 publications corresponding to the habilitation work are presented, covering 140 points;
- According to the following criterion G7 + G10 - scientific publications in journals indexed and referenced in the global databases Scopus and Web of Science, and a patent application for a utility model/invention, the total points amount to 252, with a minimum requirement of 200 points.
- According to criterion D11 – 130 points;

The total number of points scored by the candidate across the criteria from A1 to D11 is 572, exceeding the minimum requirement of 400 by 43%. Furthermore, the minimum requirements are significantly surpassed for each of the criteria B4, G7 + G10, and D11.

The existence of a patent application is a good indicator of an effort to connect fundamental scientific knowledge with the applied aspects of science.

5. CRITICAL NOTES AND RECOMMENDATIONS

I do not know Dr. Anelia Gerasimova-Peneva, nor have I had any contact with her scientific and academic work so far, but the documents she prepared for the competition prompt me to make the following critical remark.

The report on the original scientific contributions details all the important points from the co-authored published articles, which are essentially interdisciplinary, but nowhere in these descriptions is the personal contribution of Dr. Gerasimova-Peneva outlined. Given the number of co-authors, an external reviewer unfamiliar with the university would find it difficult to determine the purely scientific contribution of each co-author, and as a candidate for the academic position of Associate Professor, she should have anticipated that those evaluating her were not closely acquainted with her work.

Based on the habilitation extended report prepared by the candidate and the report on the contributions of her scientific works, I formulate the following recommendations:

- I recommend that Dr. Gerasimova-Peneva work on her writing style and refine her expression, as academic style and language are her primary means of communication both with students and for disseminating the results of her scientific work through publications and reports.
- I recommend that Dr. Gerasimova-Peneva develop her research topic in such a way that she becomes a leading author in her publications, rather than simply appearing on the list of co-authors who have supported ideas and concepts of colleagues with their work. The academic position of 'Associate Professor' not only grants the right to deliver independent lecture courses but also comes with the duties to establish her own research topic, to build a research infrastructure for attracting project funding, as well as the responsibility to supervise diploma and doctoral students.

The critical note and recommendations I have raised do not diminish Dr A. Gerasimova-Peneva's achievements; they are intended to encourage her to further develop in the academic field.

CONCLUSION

The presented documents prove that Chief Assistant Professor Dr. Anelia Gerasimova-Peneva is a developed specialist, expert, and consultant within the scope of the scientific speciality of the competition, successfully combining teaching and educational work with scientific research. Dr. Gerasimova-Peneva has gradually progressed through the stages of academic development, consistently participating actively and responsibly in the teaching and scientific activities of the department.

Chief Assistant Professor Dr. Anelia Gerasimova is an established and respected lecturer and researcher, with achievements valuable to teaching, science, and practice. Her scientometric indicators and many years of research and teaching experience demonstrate that she not only meets but significantly exceeds the criteria for the academic position of 'Associate Professor' set by the Legislation of Bulgaria.

Based on the positive assessment of the teaching and educational activities and the scientific and scientific-applied significance of the scientific works, I firmly support the awarding of the academic title 'Professor' to Senior Assistant Dr. Anelia Gerasimova-Peneva in the field of higher education 4. Natural Sciences, Mathematics and Informatics; Professional field 4.2. Chemical Sciences; Scientific speciality 'Physicochemical Chemistry with Colloid Chemistry',

for the needs of the Department of Chemistry at the Faculty of Pharmacy at the Medical University - Varna.

Based on the ZRASRB, its Implementing Regulations, and the Regulations for Academic Development at MU-Varna, I propose that the scientific jury vote positively for the awarding of the academic position of 'Associate Professor' to Chef Assistant Professor Dr. Anelia Tsvetanova Gerasimova-Peneva.

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Reviewer

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/Dr Nina Dimcheva, Assoc. Professor/