

S T A T E M E N T

by **Prof. Bistra Dimitrova Kostova, PhD**

Department: "Technology of drugs with biopharmacy", Faculty of Pharmacy, Medical University Sofia, external member of a Scientific Jury assigned by order № **P-109-68/28.01.2026** of the Rector of Medical University – Varna

Concerning: competition for the academic position "**Professor**" in the Higher Education Area 7. "Healthcare and sport", Professional Field 7.3. Pharmacy, scientific specialty "Technology of Pharmaceutical Dosage Forms and Biopharmaceutics", with the sole applicant **Assoc. Prof. Velichka Yordanova Andonova, PhD**. The competition was announced in accordance with the due procedure and was published in the "State Gazette", issue **102** of **28.11.2025**.

I. Brief curriculum vitae and activities of the candidate

Velichka Yordanova Andonova was born on 19.07.1973, in the city of Pazardzhik. In 1996, she graduated as a Master of Pharmacy at the Faculty of Pharmacy of the Medical University - Sofia. In 2012, she received a diploma for the acquired specialty " Technology of Pharmaceutical Dosage Forms and Biopharmaceutics ". In 2014, she defended her doctoral dissertation in the scientific specialty " Technology of Pharmaceutical Dosage Forms and Biopharmaceutics " as an independent doctoral student at the Department of Pharmaceutical Sciences, Medical University - Plovdiv. Her academic development began at the Department of Pharmaceutical Sciences, Medical University - Plovdiv, where she successively held the positions of "assistant" and "chief assistant" from 2005 to 2018. Since 03.09.2018, she has held the academic position of "Associate Professor", specialty " Technology of Pharmaceutical Dosage Forms and Biopharmaceutics ", Department of "Pharmaceutical Technologies", Medical University "Prof. Dr. Paraskev Stoyanov" - Varna, where she works up to this day. Velichka Yordanova Andonova also holds significant additional qualifications, such as: "Safety Assessment of Cosmetic Products", "Design of Scientific Research and Statistical Analyses", "Innovative Educational Technologies", as well as training in the protection and humane treatment of experimental animals. A three-month international research mobility was also carried out at Universitatea Ovidius din Constanța, Romania.

She is a member of many Bulgarian and international scientific organizations. She is fluent in English and Russian.

For the competition, Assoc. Prof. Velichka Andonova has submitted the necessary documents in accordance with the requirements of the Academic Staff Development Act and the Regulations for its implementation and the Rules for the Development of the Academic Staff at the Medical University "Prof. Dr. Paraskev Stoyanov" - Varna.

II. Evaluation of the candidate's scientific activity

Assoc. Prof. Velichka Andonova presents the following scientific works for the competition:

- habilitation thesis – **10** scientific publications – **165.81** points (minimum 100);
- scientific publications – **20** (twenty), of which **17** with an impact factor - **242.22** points (minimum 200). **3** (three) publications with an impact factor beyond the minimum scientometric requirements for holding the academic position of "PROFESSOR" are also presented;
- *h-index* in Scopus or Web of Science – **13** (thirteen) (minimum ≥ 5), as of today it is already **14** (fourteen);
- published university textbook – **5** (five) issues – **27.33** points;
- participation in international scientific forums – **43** (forty-three) in our country and **12** (twelve) abroad;
- leadership and participation in scientific projects – **3** (three) – **75** points;
- according to the information provided, the candidate participated in the competition with **30** (thirty) citations in Scopus – **450** points (minimum 300).

Of the **33** scientific publications submitted, **30** are in refereed international journals, **24** are in journals with an impact factor. The total impact factor of the candidate's entire scientific output after taking the title of Associate Professor is **93.1**. This indicator, as well as the data that the works submitted in the competition have been cited **374** times, although Assoc. Prof. Andonova participated in the competition with **30** citations, shows serious scientific significance of the presented research, which is also confirmed by the fact that a large part of the publications are in very prestigious journals in the field of pharmaceutical science, namely: Current Pharmaceutical Design, Pharmaceuticals, Gels, Pharmaceutics, Pharmacia.

After a detailed analysis of the publications for participation in the competition, presented by Assoc. Prof. Velichka Andonova, the following generalizations can be made regarding the scientific contributions: several main directions can be differentiated, which are predominantly in the field of research of biologically active substances of natural origin and aquaculture, specific delivery of medicinal and biologically active molecules through nanostructured systems, as well as ensuring the stability and increasing the effectiveness of various types of dosage forms.

❖ *Formulation of dermal and cosmetic products incorporating biologically active substances of natural origin (publications B4: 1, 2, and 10)*

The delivery of biologically active substances is an important task for modern technological science, due to the great challenges associated with their stability, bioavailability, and the possibility of standardization. In this direction, the candidate's scientific research and contributions are related to the creation of bigels as carriers of *Hypericum perforatum L.* extract, which show improved effectiveness in terms of wound healing. Micellar systems for the delivery of α -bisabolol have also been developed, and the optimal characteristics ensuring the preservation of its antimicrobial and fungicidal activity have been determined. It is

important to note that the proposed compositions have the potential for practical application, which gives an applied nature to the contributions in this direction.

- ❖ *Specific delivery of medicinal and biologically active molecules through nanostructured systems (publications from B4: 4, 5, and 6 and from G7: 1, 2, 3, 6, 8, 9, 13, 17)*

The works in this direction are very significant and constitute a major part of the presented publications. One part of the research is focused on the development of lipid nanocarriers for *Hypericum perforatum L.* extract in order to improve its stability and therapeutic efficacy. Various lipid nanostructures have been developed, and optimal compositions with high loading efficiency have been derived, and microbicidal and antiviral effects have been established. The stability of the resulting particles has been observed for a period of 1 year. The formed nanostructures were used to obtain gel forms for dermal application, with promising results showing that this technological solution leads to the deployment of the cyto-/hepatoprotective potential of biologically active molecules and shows a very good wound healing effect in studies conducted on male *Wistar* rats.

The other part of the research is focused on the preparation of silver nanoparticles and their conjugates, with the focus on optimizing the preparation method and improving stability. The conjugation of silver nanoparticles with *chlorhexidine* leads to potentiation of the effects against *S. aureus* and *C. albicans* and synergism against *E. coli* at the minimum inhibitory concentrations used, which is a significant success from a therapeutic point of view.

- ❖ *Specific nasal and oromucosal delivery of therapeutic molecules (publications G7: 4, 11 and G8: 1, 3)*

The nasal route of administration in recent years represents a potential therapeutic opportunity for optimizing therapy and in this regard, the research of Assoc. Prof. Andonova is related to the inclusion of the indicated conjugates of silver nanoparticles with *chlorhexidine* in situ, thermogel for nasal administration. The results are promising and show very good biopharmaceutical characteristics of the resulting dosage form and provided anti-infective properties. A system for nasal delivery of *levodopa* has also been developed, with the inclusion of *α -bisabolol*, which improves the penetration of the drug substance, thus allowing for increased therapeutic effectiveness.

- ❖ *Extraction and application of biologically active substances from aquaculture (publications B4: 8 and D7: 5, 15 and 16)*

A major contribution in this direction is the determination of biologically active substances from the Bulgarian *Arthrospira platensis* and *Chlorella spp.*, which can be used as natural stabilizing agents in physically unstable systems. The method of obtaining *phycocyanin* from *Arthrospira platensis* has also been modified and an integrated approach has been applied for preliminary assessment of its activity and cytotoxicity. A very positive fact is that its possibilities for inclusion in various dosage forms have been studied, as a result of which oral introduction of modified release systems has been proposed, with a view to increasing its bioavailability and therapeutic possibilities.

- ❖ *Ensuring the physical stability of liquid and semi-solid dosage forms (publications B4:3, 7, 9 and publication No. 3 of the full-text publications in scientific journals and collections, beyond the minimum scientometric requirements for occupying the title of "professor" from the academic reference)*

The contributions in this direction are in several areas. A liquid dosage form stabilized with natural polymers, with nitrofurantoin included, without preservatives, has been developed, which is a contribution of great practical value. Thermodynamically stable systems that self-emulsify in an aqueous environment with low pH to microemulsions have also been proposed. Cosmetic creams based on various natural oils have been developed, which have been studied and optimized in terms of their technological and biopharmaceutical characteristics.

Based on the analysis of the publication activity of Assoc. Prof. Velichka Andonova, it can be summarized that she conducts targeted scientific research in one of the most rapidly developing and promising areas of pharmaceutical technology, related to the development and optimization of delivery systems for biologically active substances and offers significant technological solutions that can improve the effectiveness of therapy.

III. Teaching and learning activity

Assoc. Prof. Velichka Andonova participates in the Department of Pharmaceutical Technologies, and for the last 4 years has a teaching load of 1643 hours, formed by lecture courses in the disciplines "Technology of Dosage Forms", "Biopharmacy and Pharmacokinetics" and "Radiopharmacy" for students of the specialty "Pharmacy"; in "Technology of Drugs with Biopharmacy" in the specialty "Pharmacist Assistant"; "Technology of Cosmetic Products Production" for the specialty "Cosmetology"; "Dosage Forms and Innovations" for the specialty "Transfer of Technologies and Innovations in Pharmacy", as well as courses related to digital healthcare, 3D printing and the application of nanotechnologies and nanomedicine in modern pharmaceutical and biomedical education.

Under the leadership of Assoc. Prof. Andonova, graduate students, postgraduates and doctoral students are trained. She is the scientific supervisor of 10 doctoral students, 3 of whom have already successfully defended their doctoral theses.

IV. General assessment of the candidate's compliance with the mandatory conditions and quantitative criteria and scientometric indicators according the requirements of the Academic Staff Development Act and the Regulations for its implementation and the Rules for the Development of the Academic Staff at the Medical University "Prof. Dr. Paraskev Stoyanov" – Varna for the academic position of "professor"

The presented data show not only compliance with the regulatory requirements, but also their significant excess in the main groups of indicators:

Group of indicators	Contents	"Professor" (minimum number of points)	Assoc. Prof. Velichka Andonova (number of points)
A	Indicator 1	50	50
B	Indicators 3,4	100	165.81
G	Indicators 7÷8	200	242.22
D	Indicators 10÷12	300	450
E	Indicators 13÷22	100	252.33
Total		750	1160.36

V. Conclusion

The analysis of the scientific and teaching assets of **Assoc. Prof. Velichka Andonova, Ph.D.**, shows that they **FULFILL** the requirements according to the regulations of the Academic Staff Development Act of the Republic Bulgaria and the qualitative and quantitative criteria for occupying the academic position of "**PROFESSOR**", specified in the Regulations for its implementation and Rules for the Development of the Academic Staff at the Medical University-Varna:

1. She has acquired the degree "DOCTOR" in Pharmacy in 2014.
2. She has a prominent teaching activity.
3. Her scientific indicators significantly exceed the quantitative criteria set out in the requirements according to the regulations of the Academic Staff Development Act of the Republic Bulgaria and Regulations for its implementation and Rules for the Development of the Academic Staff at the Medical University-Varna:

(with a required minimum for a total number of points - **750**, the candidate has submitted documents for **1160.36** points).

Due to the aforementioned, I confidently give my POSITIVE assessment and suggest to the members of the scientific jury to support the awarding of the academic position "PROFESSOR" to ASSOC. PROF. VELICHKA YORDANOVA ANDONOVA, Ph.D. in the Higher Education Area 7. "Healthcare and sport", Professional Field 7.3. Pharmacy, scientific specialty "Technology of Pharmaceutical Dosage Forms and Biopharmaceutics".

19.03.2026

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Prof. Bistra Kostova, PhD