

REVIEW

by

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Member of the Scientific Jury approved by order of the Rector of Medical University of Varna (№ P-109-68/ 28.01.2026) concerning the procedure for awarding the academic position “Professor” in the field of higher education 7. “Healthcare and Sport”, professional direction 7.3. “Pharmacy” and scientific specialty “Pharmaceutical Technology and Biopharmaceutics” in Department of Pharmaceutical Technologies of the Faculty of Pharmacy at the Medical University of Varna. The announcement for the competition was published in the State Gazette No. 102/ 28.11.2025.

Assoc. Prof. Velichka Yordanova Andonova from the Department of Pharmaceutical Technologies of the Faculty of Pharmacy (Medical University of Varna) is the only applicant in the competition.

Qualification and teaching activity of the candidate

Velichka Andonova graduated from the Faculty of Pharmacy at the Medical University of Sofia with a master's degree in pharmacy in 1996. In 2005 and 2014 she was successively appointed as an Assistant Professor and Principal Assistant Professor in the Department of Pharmaceutical Sciences at Medical University of Plovdiv. In 2018 she holds the academic position of Associate Professor in the specialty "Pharmaceutical Technology and Biopharmaceutics " in the Department of Pharmaceutical Technologies at the Medical University "Prof. Dr. Paraskev Stoyanov" – Varna (MU-Varna). She defended dissertation titled “Indomethacin loaded nanoparticles – drug delivery systems for ocular administration” in the scientific specialty “Pharmaceutical Technology and Biopharmaceutics” and acquired a PhD degree in 2014. The candidate has acquired a specialty in “Drug Technology and Biopharmacy” in 2012. From 29 June 2020 to 25 June 2024 she was the Deputy Dean for Academic Affairs, Accreditation and Quality of the Faculty of Pharmacy at MU-Varna. At the moment Assoc. Prof. Andonova is the Head of the Department of Pharmaceutical Technologies at the Faculty of Pharmacy at MU-Varna.

It is important to note that the candidate has completed the following training courses:

- “Pedagogical competence” (I level) in MU-Varna in 2022
- “Safety assessment of cosmetic products” in MU-Varna in 2023
- “Innovative educational technologies” within the National Program "Digital Qualification" in 2024
- “Design of Scientific Research and Statistical Analysis” in MU-Varna in 2024

Assoc. Prof. Andonova participates in the teaching of the courses “Pharmaceutical Technology”, “Biopharmacy and pharmacokinetics” and “Radiopharmacy” as well as in the specialties “Cosmetology”, “Technology Transfer and Innovation in Pharmacy”, “Artificial

Intelligence in Healthcare” and “Artificial Intelligence in Biomedicine”. Her academic employment in the teaching during the last 4 years was 1634 hours. She also participates as a lecturer in the training courses of the Bulgarian Pharmaceutical Union. Assoc. Prof. Andonova was the supervisor of 5 diploma theses, of which 2 of students from the specialty “Cosmetology”, 2 students from the specialty “Artificial Intelligence in the Healthcare” and 1 in the specialty “Artificial Intelligence in Biomedicine”.

Assoc. Prof. Andonova has an extensive expertise:

- Member of the Expert Council on Advertising of Drug Products, Bulgarian Drug Agency (2018 - 2020);

- Member of the Supreme Council of Pharmacy with Order No. RD-02-360/06.12.2023 of the Minister of Health;

- Member of the Standing Committee on Health and Sports at the National Evaluation and Accreditation Agency since 2024;

- Member of the Program Council for the specialty “Pharmacy” at the Faculty of Pharmacy, MU-Varna;

- Chairman of the Program Council for the specialty of unregulated professions “Cosmetology” at the Faculty of Pharmacy, MU-Varna (2021 -2025);

- Member of the Program Council for the specialty “Transfer of Technologies and Innovations in Pharmacy” at the Faculty of Pharmacy, MU-Varna (2021 - 2025);

- Member of the Program Council for the specialty “Artificial Intelligence in Healthcare”, MU-Varna;

- Member of the Program Council for the specialty “Artificial Intelligence in Biomedicine”, MU-Varna;

- 24 participations as a member of scientific juries for awarding scientific degrees and holding academic positions.

Assoc. Prof. Andonova is a member of the European Federation for Pharmaceutical Sciences (EUFEPS), the Bulgarian Pharmaceutical Science Society and the Union of Scientists - Varna.

Evaluation of scientific indicators

The assessment of indicators includes:

- **Indicators “A”** – the candidate defended thesis for the acquisition of PhD degree in 2014 (50 points).

- **Group indicators “B”** (indicator B4) – The candidate presents 10 scientific publications in journals that are indexed in world-renowned databases of scientific information (4 of them with IF). The total number of the points from the presented publications is 165.81, which fulfills the required 100 points in the Regulations for the Development of Academic Staff in MU-Varna.

- **Group indicators “Г”** - The candidate presents 20 scientific publications (after acquiring PhD degree), 17 of them are in journals indexed in world-renowned databases (indicator Г7) and 3 are related to the indicator Г8. The total points of the publications related to the indicator Г7 are 218.72 which exceeds the required number of 100 points for this indicator. There are 8 reviews, which meets the requirement of no more than 40% review articles. 17 of the presented articles are in journals with an impact factor, which exceeds the required number (8 articles). The total number of the points from the presented publications is 242.22, which fulfills the required 200 points for this group.

Beyond the minimum scientometric requirements, three more articles with IF have been included in the documents. The total impact factor for the entire scientific production of Assoc. Prof. Andonova after taking up the position "Associate Professor" is 93.1.

The scientific activity of the candidate is also represented through her participation in 55 scientific forums, of which 12 are international and 43 are national.

- **Group indicator "D"** – A reference represents 30 citations of the candidate's publications in journals with an impact factor, amounting to 450 points, which fulfills the requirement for 300 points for this indicator according to the Regulations for the Development of Academic Staff in MU-Varna.

- **Group indicator "E"**

Indicator E14 – under the supervision of Assoc. Prof. Andonova, 3 doctoral students have defended their dissertations (80 points), which fulfills the requirement of the Regulations of MU-Varna (80 points).

Indicator E15 – the candidate holds a specialty in "Drug Technology and Biopharmacy" since 2012 (40 points).

Indicators E16 and E18 – the candidate has participated in 1 national project (15 points) and has been the head of 2 national projects funded by the Science Fund at the Medical University - Varna (60 points).

Indicator E21 – the candidate is a co-author of 5 university textbooks (27.33 points), which exceeds the requirement for 1 textbook.

Indicator E22 - the candidate has submitted a report for the supervision of 2 postgraduate students (30 points).

The total number of points of the candidate for this group of indicators is 252.33 points, which exceeds the required 100 points.

The total number of the points that the candidate presents in the competition for the academic position "Professor" in the field of higher education 7. "Health and Sports", professional direction 7.3 "Pharmacy" is 1160.36, which meets the minimum national requirements according to the Law on the Development of the Academic Staff in the Republic of Bulgaria (LDASRB), the Regulations for the implementation of the LDASRB (550 points), as well as the requirements in the Regulations for the Development of the Academic Staff of MU-Varna (750 points).

Evaluation of scientific contributions

The contributions of the scientific research of Assoc. Prof. Velichka Andonova are in priority fields for pharmaceutical science. They can be distinguished in the following directions:

- *Inclusion of biologically active substances of natural origin in dosage forms for dermal application and cosmetic products*

The research in this direction is of great practical importance and includes the development of two innovative formulations: bigel semi-solid dosage form with St. John's wort extract for wound healing (1) and micellar solution of α -bisabolol with cleansing and antimicrobial activity for facial skin hygiene.

- *Nanoscale drug delivery systems*

In this field, lipid-based nanoscale drug delivery systems containing hyperforin-rich St. John's wort extract have been developed. The inclusion of the extract in the optimized lipid nanosystems increases photostability of hyperforin, as well as its wound healing effect.

Also, silver nanoparticles have been developed using a mild "green" method from *Camellia sinensis* (green tea), which were successfully conjugated with chlorhexidine. From a

practical point of view, the results are very important, since conjugation leads to potentiation of the effects of the single components against *S. aureus* and *C. albicans* and synergism against *E. coli*.

- Nasal and oromucosal drug delivery

The studies with the developed silver nanosized conjugates have been continued by their inclusion in a thermogelling carrier for nasal delivery, composed of poloxamer and hypromellose. The developed nasal dosage form is characterized by easy spraying, effective gelation at 31.9 °C and potential application as a protective nasal spray against respiratory infections.

- Ensuring the physical stability and rheological characteristics of liquid and semi-solid dosage forms

In this direction, a liquid dosage form with nitrofurantoin has been created, which contains xanthan gum and sodium carboxymethylcellulose. The dosage form successfully masked the bitter taste of the drug, improves its chemical stability and provides appropriate microbiological stability (30 days from the date of preparation at 4°C). Thus, the developed dosage form is suitable for extemporaneous preparation for age-specific groups. Of great interest is also the developed double self-emulsifying drug delivery system with the inclusion of sodium alendronate.

- Biologically active substances from aquaculture

The contribution of these studies is related to the developed "green" method of extraction of phycocyanin from *Arthrospira platensis*, which can be used for nutritional, cosmetic and biomedical purposes. *In silico* studies have shown that its inclusion in enteric-coated dosage forms would lead to excellent intestinal absorption and potential therapeutic benefits (e.g. anti-inflammatory activity, neuroprotection and immunomodulation).

Conclusion

On the basis of the presented documents, I do believe that the candidate completely meets the requirements for occupying the academic position "Professor" according to the LASDRB, the Regulations for the implementation of the LASDRB and the Regulations for the Development of the Academic Staff in MU-Varna. I state my positive assessment for awarding the academic position "Professor" to Assoc. Prof. Velichka Andonova, PhD in the professional direction 7.3 "Pharmacy" for the needs of the teaching in the Department of Pharmaceutical Technologies of the Faculty of Pharmacy at the Medical University of Varna.

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