

STATEMENT

by

Prof. Dr. Veselin Todorov Belovezhkov, MD

Head of the Department of "General and Clinical Pathology"

Medical University – Plovdiv,

acting as a member of the scientific jury based on an order issued by

the Rector of Medical University – Varna,

Order No. R-109-437 / 05.12.2024

regarding the procedure for occupying the academic position of Associate Professor, announced in the State Gazette, issue 85 of November 8, 2024, in professional field 7.1 Medicine, 7. Healthcare and Sports, specialty "General and Clinical Pathology", at the Faculty of Medicine, Medical University – Varna, Department of "General and Clinical Pathology, Forensic Medicine, and Deontology", Clinic of General and Clinical Pathology – University Hospital "St. Marina" EAD, Varna.

Materials were submitted for the competition in electronic format by Assistant Professor Dr. Nadezhda Todorova Stefanova, MD, including all necessary documents in accordance with the Law on the Development of the Academic Staff in the Republic of Bulgaria and the Regulations for the Development of the Academic Staff at Medical University – Varna.

I. Career Development of Dr. Nadezhda Stefanova, MD

Dr. Nadezhda Stefanova was born in Pavlikeni, where she completed her secondary education in 2005 at Bacho Kiro Secondary School, specializing in natural sciences and mathematics with intensive English language training. In 2011, she graduated with a Master's degree in Medicine from the Medical University – Varna.

From 2012 to 2017, she was a doctoral student at the Department of "General and Clinical Pathology, Forensic Medicine, and Deontology", specializing in Pathological Anatomy and Cytopathology. Her doctoral dissertation, titled "Expression of Autophagy and Necroptosis Markers in Colorectal Carcinoma", was successfully defended.

During this period, Dr. Stefanova worked as a resident in pathology at University Hospital "St. Marina" EAD, Varna, while also serving as an assistant professor. In 2018, she was promoted to chief assistant professor, and in 2019, she obtained a specialty in General and Clinical Pathology.

II. Description of the Scientometric Indicators of Dr. Nadezhda Stefanova, MD

Over the years, Dr. Stefanova has authored 33 publications (23 for this competition, 7 for the previous competition for chief assistant professor, and 3 related to her dissertation).

Among the 23 publications submitted for this competition, 11 are in peer-reviewed and indexed journals in globally recognized scientific databases, 5 of which have an Impact Factor (IF), with Dr. Stefanova as the first author in one of them. An additional 11 articles have been published in non-indexed peer-reviewed journals or edited collective volumes.

The total score of her scientific output amounts to 203.02 points, exceeding the required minimum of 200 points. Additionally, she has one extra publication assessed at 2.73 points, beyond the scientometric requirements for the position of Associate Professor.

Dr. Stefanova has also participated in: 23 national scientific forums with published abstracts, 4 international scientific forums with published abstracts, and 4 scientific forums without published abstracts.

She has authored a monograph titled "Myeloproliferative Neoplasms: Past, Present, and Future."

Her work has been cited 4 times in indexed journals.

She has contributed to 7 projects funded by the Science Fund and one project funded by the Scientific Research Fund.

III. Evaluation of Dr. Nadezhda Stefanova's Scientific Contributions

Dr. Stefanova's research focuses on the following key areas: Alternative molecular mechanisms of cell death and survival, Diseases of the hematopoietic system, Rarely diagnosed diseases, Experimental morphology, Infectious diseases, and General biological processes.

1. Alternative Molecular Mechanisms of Cell Death and Survival

The most significant contributions stem from her research on alternative mechanisms of tumor cell death, particularly autophagy and necroptosis.

Her original contributions include a comprehensive clinicopathological, molecular-genetic, and immunohistochemical characterization of autophagy and necroptosis in

colorectal carcinoma. She conducted an immunohistochemical expression analysis of Beclin-1 and RIP3, investigating their correlation with clinicopathological parameters using multiple assessment scales.

Key findings include:

High Beclin-1 expression is associated with poor overall survival in colorectal carcinoma patients, suggesting its potential prognostic value.

Low cytoplasmic and high nuclear RIP3 expression correlates with decreased survival, indicating its role as a necroptosis marker.

The identification of high-risk colorectal carcinoma patients based on clinicopathological features and the expression profile of Beclin-1 and RIP3.

2. Hematopoietic System Diseases

Her research focuses on myeloproliferative neoplasms (MPNs) and bone marrow changes in non-Hodgkin lymphoma.

She has analyzed the pathogenetic mechanisms of MPNs, summarized the diagnostic process, and highlighted challenges in clinical practice. A key contribution is the detailed visualization and documentation of bone marrow changes based on her own research material.

3. Rarely Diagnosed Diseases

Notable cases include:

Anorectal melanoma diagnosed at stage II,

A rare case of spinal paraganglioma, describing both histopathological findings and mutational status,

A solid pseudopapillary tumor of the pancreas, a rare tumor predominantly affecting young women.

4. Experimental Morphology

Her significant contributions include:

The protective effect of melatonin in an experimental model of gastric injury caused by burns,

The hepatoprotective effect of fustin, an active compound isolated from *Cotinus coggygia*, in an acetaminophen-induced colitis model in rats.

5. Infectious Diseases

Based on 27 autopsy cases of PCR-confirmed COVID-19, she analyzed pulmonary histopathological changes and identified:

The progression of early and late-stage lung damage,

The likelihood of severe long-term complications in post-COVID syndrome.

6. General Biological Processes

She has studied the interaction between the thymus and the pineal gland, highlighting its role not only in immune function maintenance but also in aging and age-related diseases.

IV. Evaluation of Dr. Nadezhda Stefanova's Teaching Activities

Dr. Stefanova has over 12 years of teaching experience.

Over the past 5 years, her teaching workload has ranged from 250 to 420 hours per year, exceeding the minimum university requirement of 220 hours.

She teaches pathology in both Bulgarian and English to students in Medicine, Dental Medicine, and Pharmacy.

From 2016 to 2023, she served as a course leader for fourth-year English-language medical students.

She is a member of: The Bulgarian Medical Association, The Bulgarian Society of Pathology, The European Society of Pathology, and The Union of Scientists in Bulgaria – Varna branch.

Conclusion

Dr. Nadezhda Stefanova's career development, scientometric indicators, PhD degree, and research contributions fully meet the requirements of the Bulgarian Law on Academic Staff Development and the regulations of the Medical University – Varna for the academic position of Associate Professor.

I therefore declare that I will vote in favor of awarding Dr. Nadezhda Stefanova, MD, the title of Associate Professor, and I strongly recommend that the esteemed scientific jury support her candidacy as well.

22.02.2025

Prof. Dr. V. Belovezhkov, MD

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