

To

the Chair of the Scientific Jury

appointed by **Order No. R-4186/16.07.2026**

15A Vasil Aprilov Blvd.4002 Plovdiv,
Bulgaria

Regarding your Minutes No. 1 of 28.07.2026

Attached, I hereby submit my Opinion

on the competition for the academic position of **Associate Professor**

in the scientific specialty Physiology,

announced for the needs of the Medical University of Plovdiv, Department of Physiology,

published in the State Gazette, Issue No. 44/14.05.2026.

Reviewer: Prof. Margarita Stefanova Velikova, MD, PhD

Scientific Specialty: Physiology

Institution: Department of Physiology and Pathophysiology, Medical University – Varna

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Заличено на основание
Чл.5 §1, 6."В" Регламент (ЕС)2016/679

I. Career profile of the candidate

Dr. Penka Angelova Hristova graduated in Medicine from the Medical University of Plovdiv in 2005. She joined the Department of Physiology, Faculty of Medicine, Medical University of Plovdiv as an Assistant Professor in 2007 and has held the position of Chief Assistant Professor since 2016. She obtained the specialties General Medicine (2007) and Physiology (2014). In 2015, she successfully defended her doctoral dissertation entitled "Characteristics and Non-pharmacological Treatment of Diet-Induced Metabolic Syndrome in Rats", thereby earning the educational and scientific degree Doctor (PhD).

The candidate has submitted all the documents required for participation in the competition for the academic position of Associate Professor at the Medical University of Plovdiv.

II. Evaluation of the candidate's scientific publications and overall academic development

• General Characteristics of the Scientific Output and Publication Activity

Dr. Angelova participates in the competition with one monograph and 28 scientific publications. Twelve publications have been published in journals indexed in Web of Science or Scopus (seven with an Impact Factor), fifteen papers have appeared in peer-reviewed journals not indexed in these databases, and one book chapter in a collective monograph is included under Indicator Group G of the self-assessment report according to the mandatory scientometric criteria of the Medical University of Plovdiv.

According to the submitted documentation, the publication activity corresponds to 244.372 points, exceeding the required minimum of 220 points. In eight of the publications, Dr. Angelova is the first author, highlighting her leading role in conducting the research and preparing the scientific publications.

• Participation in Research Projects

Dr. Angelova has participated in four university-funded research projects during the period 2012–2019. Within Indicator Group E, participation in an international educational project (2021), the acquired specialty in General Medicine, and authorship of educational materials contribute 105 points, exceeding the required minimum of 80 points.

- **Scientific Contributions**

The report on the original scientific contributions presents two major groups of scientific achievements, resulting from experimental animal studies and investigations involving human subjects.

- Two original experimental dietary models of metabolic syndrome in rats have been developed, one of which includes the development of insulin resistance, making them suitable for studying the pathogenesis of metabolic syndrome and evaluating therapeutic interventions. The studies demonstrated that reduced resting energy expenditure represents an important mechanism influencing the effectiveness of obesity and metabolic syndrome treatment. Furthermore, the effectiveness and limitations of non-pharmacological interventions were evaluated, identifying compensatory hyperphagia and alterations in energy expenditure as key determinants of therapeutic success.
- Knowledge in the field of exercise physiology has been expanded through the characterization of aerobic capacity, cardiovascular adaptations, and training responses in elite athletes from various sports disciplines.

III. Evaluation of the monograph

The monograph "Physical Activity and Chronic Non-Communicable Diseases" provides a comprehensive overview of the physiological mechanisms through which physical activity influences the human body, as well as its role in the prevention and treatment of the most prevalent chronic non-communicable diseases.

- The mechanisms of energy supply during muscular work and the factors determining physical performance are comprehensively presented.
- The adaptive mechanisms of the cardiovascular, respiratory, muscular, endocrine, and nervous systems responsible for improving functional capacity and physical performance are thoroughly discussed.
- The effects of physical activity on the major physiological systems, cognitive function, mental health, and quality of life are analyzed in detail.
- The pathophysiological characteristics of chronic non-communicable diseases and the role of physical activity in their prevention and treatment are comprehensively reviewed.

- Special attention is devoted to the physiological adaptations of the athlete's heart. A particularly valuable aspect of the monograph is the inclusion of the author's original research findings concerning cardiorespiratory parameters and functional capacity during physical exercise. These original data constitute an independent scientific contribution of the work.

The monograph possesses considerable scientific and practical value, providing a contemporary synthesis of current knowledge on the physiological effects of physical activity and convincingly demonstrating its importance as an effective strategy for the prevention and treatment of chronic non-communicable diseases.

V. Impact of the candidate's publications in scientific literature

Under indicator Group D, the candidate has presented citations (16 citations in journals indexed in recognized databases), corresponding to 240 points. The citations of Dr. Angelova's publications demonstrate the scientific impact of her research within the academic community. They attest to the relevance, scientific merit, and visibility of the candidate's scholarly output.

VI. Evaluation of teaching, educational, and methodological activities

Dr. Penka Angelova has 19 years of teaching experience at the Department of Physiology, Faculty of Medicine, MU-Plovdiv. During the last three academic years, she has maintained a very high teaching workload, exceeding 1,000 teaching hours annually, reflecting her strong commitment to the educational process.

She is actively involved in teaching students enrolled in the degree programmes Medicine, Dental Medicine, Pharmacy, Midwifery, Nursing, Public Health Inspector, Dietetics Instructor, and Rehabilitation.

A substantial contribution to educational and methodological activities is reflected in Dr. Angelova's participation as a co-author of 23 educational manuals, which support student learning and enrich the teaching process. This demonstrates her active involvement in the development and continuous improvement of the Department's educational and methodological resources.

I have no critical remarks or recommendations.

VII. Evaluation of the Candidate's Compliance with the Requirements

Dr. Angelova has submitted a body of scientific work that demonstrates substantial and diverse research, teaching, and educational activities, fully complying with the minimum national requirements under Article 2b, p. 2 and 3, the requirements of Article 2b, p. 5 of the Academic Staff Development in the Republic of Bulgaria Act, as well as the specific requirements of the Medical University of Plovdiv for the respective scientific field and for units without clinical activity, as stipulated in the University's Regulations for Academic Staff Development.

VIII. Conclusion

Dr. Penka Angelova Hristova is an accomplished teacher and researcher with consistent academic development, significant scientific output, and original scientific contributions in the fields of metabolic syndrome and exercise physiology. Her scientific publications, teaching and educational activities, together with the scientometric indicators achieved, convincingly demonstrate that the candidate **fulfills the mandatory and institution-specific requirements and scientometric criteria for appointment to the academic position of Associate Professor.**

I give a **positive assessment** and strongly support the election of Dr. Penka Angelova Hristova to the academic position of Associate Professor in the announced competition.

5 August 2026

Varna

Prof. Margarita Stefanova Velikova, MD, PhD


Залчено на основание
Чл.5 §1, 6, "Б" Регламент (ЕС)2016/679