

REVIEW
by
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Internal Member of the Scientific Jury, pursuant to Order No. R-4181/16.07.2026
of the Rector of Medical University – Plovdiv

Regarding: Competition for the academic position of “Professor” in “Theory and Methodology of Physical Education and Sports Training (including Methodology of Therapeutic Physical Exercise)”, in Higher Education Area 7. “Healthcare and Sports”, Professional Field 7.4. “Public Health”, for the needs of the Department of “Rehabilitation and Preventive Healthcare” at the Medical College, Medical University – Plovdiv, for teaching in Bulgarian in the discipline “Theory and Methodology of Physical Education and Sports Training (including Methodology of Therapeutic Physical Exercise)”, announced in the State Gazette, Issue No. 44/14.05.2026. The competition was announced following an approved proposal by the Council of the Medical College at Medical University – Plovdiv, Minutes No. 12 of 10.07.2026.

The only candidate participating in the competition is **Assoc. Prof. Maria Stamova Vakrilova-Becheva, PhD**, lecturer and Head of the Department of “Rehabilitation and Preventive Healthcare” at the Medical College, Medical University – Plovdiv.

At its first meeting, held on 22.07.2026, the Scientific Jury accepted the competition documents and established that the scientific output submitted by Assoc. Prof. M. Vakrilova-Becheva, PhD, complies with the national minimum requirements and the additional requirements of Medical University – Plovdiv, and she was admitted to participate in the competition.

At this meeting, I was elected Chair of the Scientific Jury and appointed to prepare this review. Upon examining and analysing the submitted materials, I established that there had been no procedural violations.

I. CAREER PROFILE OF THE CANDIDATE

Assoc. Prof. Maria Stamova Vakrilova-Becheva, PhD, graduated in 1992 with a degree in “Rehabilitation Therapy” from the Semi-Higher Medical Institute – Plovdiv. In 2006, she obtained a Bachelor’s degree in “Kinesitherapy”, and in 2007 a Master’s degree in the same specialty from the Faculty of Public Health, Healthcare and Tourism at the Vasil Levski National Sports Academy. In 2012, she defended her PhD in the scientific specialty “Theory and Methodology of Physical Education, Sports Training and Kinesitherapy” at the Vasil Levski National Sports Academy – Sofia. In 2024, she acquired a specialty in “Medical Pedagogy” at Medical University – Plovdiv.

Assoc. Prof. M. Becheva began her professional career as a rehabilitation therapist in 1994 at the Medical Centre in the town of Stamboliyski, Department of Rehabilitation. From 2000 to 2001, she completed clinical internships at public hospitals in Paris (AP-HP), France. During the

period 2001–2008, she worked as a rehabilitation therapist at the Department of Physical and Rehabilitation Medicine of St. George University Hospital – Plovdiv. Her teaching career began in 2008, when she became a lecturer at the Medical College of Medical University – Plovdiv, where she continues to work to the present day.

Since 2018, she has held the academic position of “Associate Professor” in the scientific specialty “Theory and Methodology of Physical Education and Sports Training (including Methodology of Therapeutic Physical Exercise)”, Professional Field 7.4. “Public Health”. The career development of Assoc. Prof. Maria Vakrilova-Becheva, PhD, encompasses all mandatory stages required for attaining the academic position of “Professor”.

The candidate’s educational and career development undoubtedly demonstrates that she possesses considerable teaching experience and has established herself as a competent specialist in her professional field. Assoc. Prof. M. Becheva continuously enhances her qualifications as a lecturer and researcher. This is evidenced by the diplomas, certificates and credentials attached to the documentation from postgraduate training courses (14 in total) and scientific forums in Bulgaria and abroad – 68 participations in international webinars and 10 participations in national webinars, registered on the electronic platform of Medical University – Plovdiv for recording participation in scientific forums.

She is a member of a number of reputable scientific and professional organisations: the Union of Scientists in Bulgaria; Bulgarian Association of Public Health; European Public Health Association (EUPHA); and the Association of Physiotherapists in Bulgaria.

She has an excellent command of French, both written and spoken, and a good command of English. She also possesses very good computer skills.

Through her professional qualities and high level of professionalism, Assoc. Prof. Becheva has earned the respect of the academic community and has repeatedly been elected as a member of scientific juries for awarding the educational and scientific degree of “Doctor” (PhD) and for appointments to the academic positions of “Chief Assistant Professor”, “Associate Professor” and “Professor”.

The appraisal form included in the documentation shows that her most recent performance evaluation was very good.

The professional biography of the candidate, Assoc. Prof. Maria Vakrilova-Becheva, PhD, as well as the scientific works submitted by her, demonstrate that her scientific interests, professional competence and qualifications correspond to the profile of the announced competition.

II. GENERAL DESCRIPTION OF THE MATERIALS SUBMITTED FOR THE COMPETITION

The set of documents submitted by Assoc. Prof. Maria Vakrilova-Becheva, PhD, has been precisely systematised and enables an objective and comprehensive assessment of her participation in the competition for the academic position of “Professor”.

All necessary documents stipulated by the Act on the Development of the Academic Staff in the Republic of Bulgaria, the Regulations for its implementation, and the Regulations on the Terms and Procedures for Acquiring Scientific Degrees and Holding Academic Positions at Medical University – Plovdiv are available.

The necessary supporting evidence for the candidate's publication and project activities has been provided, together with official reports on citations of her scientific works by Bulgarian and foreign authors, allowing for a precise quantitative and qualitative assessment of her overall academic development.

In addition to the mandatory documents, the supporting materials also contain supplementary reports, certificates, credentials, etc., certifying all circumstances related to the candidate's qualifications, professional activity and achievements. A declaration of originality and authenticity of the scientific works has also been submitted. All documents have been signed by the candidate.

III. EVALUATION OF THE CANDIDATE'S SCIENTIFIC WORKS

General Characteristics of the Submitted Scientific Works

The scientific output submitted by Assoc. Prof. Maria Vakrilova-Becheva, PhD, corresponds to the profile of the competition, meets the requirements and is accepted for review.

For participation in the competition, she has submitted 55 scientific works, published in Bulgarian and international publications, including:

- ✓ **1 monograph** – single-authored, submitted as a habilitation thesis: “Sport and Health”, 2024, Lax Book Ltd., ISSN: 978-619-189-266-2, 2024, 186 pages.
- ✓ **1 book based on a successfully defended doctoral dissertation**: “Kinesitherapeutic Approach to Chronic Low Back Pain”, 2026, Lax Book Ltd., ISBN 978-619-189-346-1, 124 pages.
- ✓ **53 full-text publications**, of which:
 - **34 publications** in journals indexed in Scopus and/or Web of Science, of which 23 have an IF and are indexed in **Clarivate Analytics (Thomson Reuters)**, and **11 publications have a SCImago Journal Rank; total IF = 27.83 and SJR = 1.664**;
 - **19 publications** in non-indexed journals;
 - **5 teaching aids**, of which 3 textbooks (one single-authored and two co-authored) and 2 manuals (one single-authored and one co-authored);
- ✓ **3 published abstracts** in journals indexed in Web of Science.

The list of publications is accurate and the necessary supporting documentation has been provided. A favourable impression is created by the fact that the scientific works are distributed relatively evenly over the years, which indicates purposeful and well-planned scientific development on the part of the candidate. A significant proportion of the submitted publications have appeared in established specialised scientific journals. An overall chronological review of the candidate's scientific publications reveals a progressive development and deepening of the research issues within the field of the competition.

In her publication activity, Assoc. Prof. M. Vakrilova-Becheva is the first author of 24 publications.

I have no doubts regarding plagiarism in the scientific works submitted for review.

The candidate's works are characterised by significant contributions, originality of the research approach and clearly defined results, which are applicable both in the academic environment and in practice. I fully accept the candidate's comprehensive and well-argued statement of scientific contributions.

The most significant scientific contributions of Assoc. Prof. M. Becheva are in the following areas:

- Public health and healthcare.
- Education, including education in an electronic environment.
- Research in the field of clinical pathology.

The studies conducted by the candidate are relevant, original and consistent with contemporary trends in the education of healthcare professionals and with public health issues at both national and international level.

1. PUBLIC HEALTH AND HEALTHCARE

1.1. Thematic Area – Kinesitherapy and Therapeutic Massage

The scientific studies in this field are distinguished by original contributions of both a theoretical and applied scientific nature. This field includes a number of publications [Nos. 11.1, 12.2, 12.8, 12.10, 12.25, 12.26, 12.28, 12.29, 13.2, 13.9, 13.14, 13.17, 13.19, 23.1, 23.2, 24.1], reflecting Assoc. Prof. Becheva's many years of work and research interest in the problems of kinesitherapy for musculoskeletal dysfunctions at different stages of patients' recovery. The publications contain original theoretical, methodological and practical-applied contributions, since the therapeutic effect of kinesitherapy has been demonstrated in terms of restoring joint mobility, reducing functional impairments, preventing disability and improving patients' functional independence. The main advantages of the developed original kinesitherapeutic programme and specific diagnostic algorithm for the conservative treatment of chronic low back pain have been identified through the introduction of an accessible, effective and easily applicable therapeutic approach.

On the basis of an in-depth study, the effectiveness of various kinesitherapeutic interventions in obesity has been monitored, resulting in a significant reduction in body weight and the prevention of complications.

A specialised kinesitherapeutic programme for children with scoliosis has been developed, incorporating a variety of corrective and general developmental exercises, and practical guidelines for parents and teachers have been prepared.

1.2. Thematic Area – Disease Prevention and Prophylaxis

The contributions and merits in this thematic area are presented in publications [Nos. 12.1, 12.4, 12.5, 12.6, 12.9, 12.27, 12.31, 13.11], which reflect Assoc. Prof. M. Becheva's long-standing

work and research interest related to the prevention and prophylaxis of socially significant diseases. The prevalence of smoking and alcohol consumption as health risk factors among adolescents has been investigated and, in this regard, preventive programmes have been developed. A foundation has been established for the implementation of effective preventive strategies aimed at improving public health and the quality of life of patients with osteoporosis, diabetes mellitus, dementia, Alzheimer's disease and cardiovascular diseases. Knowledge of contraception among Roma women from the Plovdiv region has been studied in detail, with particular attention paid to the frequency of contraceptive use. Empirical findings have established a low level of use of methods for preventing unwanted pregnancy within this community.

1.3. Thematic Area – Rehabilitation and Occupational Therapy

[Publications Nos. 12.24, 12.34, 13.3, 13.10]

Special attention has been paid to chronic low back pain as one of the most widespread musculoskeletal disorders worldwide, leading to a reduced quality of life. The role of integrated interventions in chronic low back pain has been investigated, with emphasis placed on the interaction between rehabilitation, SPA therapies and wellness strategies. The potential benefits, available scientific evidence and future prospects for improving outcomes in patients suffering from this widespread condition have been specified.

The objective of occupational therapy in orthopaedic rehabilitation has been defined, and various assistive devices facilitating self-care and the performance of different household and occupational activities, which occupational therapists create for patients with motor deficits, have been described.

The importance of rehabilitation therapy as an essential and extensive component of dyslexia treatment, encompassing the entire diagnostic and therapeutic process, has been substantiated. Emphasis has been placed on the application of kinesitherapy, occupational therapy and training in activities of daily living, sensory stimulation, and the sensory and social integration of patients with dyslexia.

1.4. Thematic Area – Sport and Health

The contributions in this field are related to research into the influence of sport on various organs and systems and the benefits of sporting activities for the physical and mental health of adolescents. Information is presented regarding the appropriate choice of sport depending on adolescents' predispositions [Nos. 9.1, 12.7, 13.4, 13.6]. The role of sport as a biological stimulant for people with disabilities, with a positive impact on basic vital functions, has been analysed. The importance of sport as a means of resocialisation for people with disabilities, supporting their social adaptation and quality of life, has been substantiated.

Of particular significance in this area is the monograph "Sport and Health", which represents a systematic study of the relationship between sport and health. The objectives of sport and physical education have been defined, including the development of motor abilities, maintenance of health and organisation of physical activity throughout different age periods, as well as their role as educational and cognitive functions.

1.5. Thematic Area – Medical Cosmetology

The applied scientific contributions of publications [Nos. 12.33, 13.12, 13.13, 13.18, 23.3] in this field include the evaluation of the effectiveness of non-invasive radiofrequency therapy as a method of stimulating collagenogenesis and elastinogenesis, leading to improvement in skin structure. The effect of active exercise of the facial muscles as a means of reducing wrinkles and improving facial contours has been studied and analysed in detail. A non-invasive therapeutic approach in aesthetic practice has been proposed, which may serve as an alternative to invasive cosmetic procedures.

The significance of aesthetic procedures for psychosocial well-being through improvement of self-perception and social adaptation has been established.

The results of the research within **Area 1, Public Health and Healthcare**, contribute to the development of public healthcare by offering effective and applicable solutions in the context of contemporary social and health challenges.

2. EDUCATION, INCLUDING IN AN ELECTRONIC ENVIRONMENT

Of particular significance are the scientific contributions resulting from the analyses reflected in works addressing educational issues [Nos. 12.32, 13.5, 13.7, 13.8, 13.15, 13.16, 24.2].

The contributory results in this area are of a theoretical, applied scientific and practical nature.

The studies and developments have a comprehensive scientific and educational contribution related to improving health education, behavioural models and pedagogical practices. They demonstrate the need for more targeted education in the fields of sexual and reproductive health, health behaviour at an early age, and the preparation of future healthcare professionals. The role of future medical professionals in promoting sexual and reproductive health as bearers of health culture and behaviour has been emphasised. The need to introduce specialised sexual health education into university curricula in order to enhance the professional competence of healthcare professionals has been substantiated. Teaching models – interactive, digital and discussion-based – have been developed and improved, enhancing learners' motivation, activity and competencies. Most of the ideas presented in the publications within this field are innovative in nature.

3. RESEARCH IN THE FIELD OF CLINICAL PATHOLOGY

Contributions in this field are evident in publications [Nos. 12.3, 12.11, 12.12, 12.13, 12.14, 12.15, 12.16, 12.17, 12.18, 12.19, 12.21, 12.22, 12.23, 12.30, 13.1].

New data have been provided on the course, treatment and long-term consequences of COVID-19. Relationships between oncological diseases, immune mechanisms and infections have been established. The effectiveness of contemporary therapeutic approaches (monoclonal antibodies, pharmacological treatment) has been confirmed. The diagnosis and treatment of gastrointestinal and liver diseases have been examined. Knowledge of the clinical course of complex diseases has been expanded through experimental, clinical and interdisciplinary studies.

Assoc. Prof. Becheva's scientific output represents a complete and consistent research activity developed in several interconnected fields within public health, medical and health education, as well as the application of modern information technologies in education.

The contributions in the individual areas have established national and international significance. They are both original and confirmatory in nature, building upon and complementing existing scientific concepts and practices.

- **SCIENTIFIC ACTIVITY**

The research activity of Assoc. Prof. Becheva, PhD, makes a favourable impression. She has actively participated with oral presentations and posters in 68 international and 10 national scientific forums, ensuring the dissemination of her scientific output. She has conducted individual scientific work with students, interns and doctoral students from Medical University – Plovdiv, resulting in five publications in Bulgarian and international journals and proceedings. Certificates confirming participation in the scientific forums have been submitted.

Assoc. Prof. Becheva has undertaken teaching mobility under the Erasmus+ Programme, delivering presentations and practical training in Brussels, Namur (two visits, the second at the invitation of Ecole Supérieure de Namur) and Liège, Belgium. Teaching mobilities have also been carried out in Lisbon and Dublin, where she delivered lectures.

- **PARTICIPATION IN AND MANAGEMENT OF PROJECTS**

Assoc. Prof. Maria Becheva's project activity is impressive. The candidate has submitted documents demonstrating her participation in 4 national and 2 international projects. In addition, Assoc. Prof. Becheva participates in one educational project as an academic mentor.

- **SCIENTIFIC SUPERVISION OF DOCTORAL STUDENTS**

Assoc. Prof. Maria Vakrilova-Becheva has served as scientific supervisor of two doctoral students who successfully defended their dissertations.

- **IMPACT (CITATIONS) OF THE CANDIDATE'S PUBLICATIONS IN NATIONAL AND INTERNATIONAL LITERATURE (PUBLICATION IMPACT)**

Assoc. Prof. Becheva has accurately submitted evidence of a total of 114 citations, distributed as follows:

- Citations in full-text scientific journals published in internationally recognised refereed and indexed scientific databases – Scopus and Web of Science – **68**;
- Citations in scientific publications refereed and indexed in other internationally recognised scientific databases, or citations in non-indexed peer-reviewed journals – **36**;
- Citations in monographs – **10**.

The citations appear in both Bulgarian and reputable international publications, confirming the quality of the scientific output produced by the candidate. With her expertise, Assoc. Prof. Maria Becheva has also served as a reviewer of three monographs.

IV. EVALUATION OF THE MONOGRAPH

The monograph by Assoc. Prof. Maria Vakrilova-Becheva, "Sport and Health", is devoted to an exceptionally significant and topical contemporary issue related to the benefits that sport

provides for our health, as well as the role of the discipline “Physical Education” within the educational system in forming healthy habits among adolescents.

The role of physical activity in cognitive development has been highlighted, including improvements in concentration and academic performance through physiological mechanisms. The importance of sport for physical development has been demonstrated, including the maintenance of muscle mass and flexibility and the slowing of ageing processes. The contribution of physical activity to quality of life through its comprehensive effects on physical and mental health has been substantiated. It has been empirically demonstrated that sporting activities have a beneficial effect on the mental state and personality of adolescents and are identified as a major factor in maintaining, preserving and improving health and a healthy lifestyle.

The monograph by Assoc. Prof. Becheva fully complies with the requirements of the Act on the Development of the Academic Staff in the Republic of Bulgaria for a habilitation thesis. Based on my analysis of this work, I find no evidence of plagiarism.

V. EVALUATION OF TEACHING ACTIVITY

Assoc. Prof. Maria Vakrilova-Becheva, PhD, is an established and respected lecturer and actively participates in the teaching activities of the Department of “Rehabilitation and Preventive Healthcare” at the Medical College, Medical University – Plovdiv.

She delivers lectures and practical classes to students in the “Rehabilitation Therapist” programme at the Medical College in the following disciplines: kinesitherapy, therapeutic massage, manual muscle testing and adapted physical activity.

She teaches the disciplines Kinesitherapy and Clinical and Pathokinesiological Diagnostics of the Musculoskeletal System in the two Master’s programmes in “Rehabilitation, Wellness, SPA and Balneotherapy” – two- and four-semester programmes at the Faculty of Public Health of Medical University – Plovdiv.

According to the departmental reports submitted for the last three years, the candidate has had an average annual teaching workload of approximately 450 hours of lectures and practical classes, exceeding the established norm of 360 teaching hours per academic year for an Associate Professor at Medical University – Plovdiv. This demonstrates that the competition is supported by the required teaching workload.

Her commitment as a lecturer is also reflected in her participation in the preparation of two teaching manuals and three textbooks supporting students’ education. Her teaching activity has been highly rated by students, who have nominated her for the “Best Lecturer” Award for three consecutive years.

Assoc. Prof. Becheva participates in numerous examination committees for state and semester examinations. She also provides training to interns and postgraduate trainees.

VI. PERSONAL IMPRESSIONS

I would like to express my excellent impressions of Assoc. Prof. Maria Vakrilova-Becheva. In my assessment, she is an erudite lecturer and researcher who adheres to academic ethics,

demonstrates integrity in her relations with colleagues and students, and displays excellent communication skills and responsibility. Her academic career to date is a natural result of her overall scientific and teaching activity.

VII. CRITICAL REMARKS AND RECOMMENDATIONS

I have no critical remarks or recommendations regarding either the submitted set of materials or the candidate's activities and achievements in the competition. I wish her continued successful development in the scientific fields towards which she has directed her research interests.

VIII. COMPLIANCE WITH THE MINIMUM REQUIREMENTS FOR THE SCIENTIFIC AND TEACHING ACTIVITIES OF CANDIDATES FOR THE ACADEMIC POSITION OF "PROFESSOR" IN PROFESSIONAL FIELD 7.4. PUBLIC HEALTH AT MEDICAL UNIVERSITY – PLOVDIV

With regard to compliance with the minimum national requirements and the requirements of the Regulations on the Terms and Procedures for Acquiring Scientific Degrees and Holding Academic Positions at Medical University – Plovdiv for holding the academic position of "Professor" in Higher Education Area 7. "Healthcare and Sports", Professional Field 7.4. "Public Health", it is evident from the submitted list and supporting materials concerning scientific works and citations that **Assoc. Prof. Maria Becheva meets the requirements and not only fulfils the established standards, but exceeds the requirements many times over in the individual groups of indicators.**

Table 1. Comparative characteristics of the results of Assoc. Prof. M. Vakrilova-Becheva, PhD, and the minimum required points for the academic position of "Professor", by groups of indicators

Indicators	Academic Position "Professor MU - Plovdiv	Assoc. Prof. M. Vakrilova- Becheva
Indicator A	50	50
Indicator B	-	-
Indicator C	100	
(C) 3. Habilitation thesis – monograph	-	100
Indicator D	300	775,8p.
(D) 6. Published book based on a defended doctoral dissertation for the award of the educational and scientific degree "Doctor" or the scientific degree "Doctor of Sciences"	-	40
(D) 7. Publications and papers published in scientific journals refereed and indexed in internationally recognised scientific databases	-	517

(D) 8. Publications and papers published in non-indexed peer-reviewed journals or in edited collective volumes	-	218,8 points
Indicator E	400	1315 т.
(E) 10. Citations or reviews in scientific publications refereed and indexed in internationally recognised scientific databases, or in monographs and collective volumes	-	1020
(E) 11. Citations in peer-reviewed monographs and collective volumes	-	100
(E) 12. Citations or reviews in non-indexed peer-reviewed scientific publications		195
Показател F	150	331,6p.
(F) 14. Supervision of a doctoral student who has successfully defended their dissertation		80
(F) 15. Acquired medical specialty		40
(F) 16. Participation in national scientific and educational projects		57
(F) 17. Participation in an international scientific or educational project		40
(F) 18. Management of a national scientific or educational project		-
(F) 19. Management of an international scientific or educational project		-
(F) 20. Published university textbook or textbook used in the school system		61,3
(F) 21. Published university teaching aid or teaching aid used in the school system		23,3
(F) 22. Training of interns, postgraduate trainees and doctoral students		30
Indicator G	500	2050,8p.
Teaching workload (lectures and practical classes)	300	1250, 8
Academic position	200	800
TOTAL	1500 p.	4623.2 p.

IX. CONCLUSION

Having familiarised myself with the submitted materials and scientific works demonstrating significant professional experience as a lecturer, and on the basis of the comprehensive assessment of compliance with the mandatory quantitative scientometric criteria and the additional qualitative criteria for scientific activity and teaching, I consider that Assoc. Prof. M. Vakilova-Becheva fully meets the requirements of the Act on the Development of the Academic Staff in the Republic of Bulgaria (ADASRB), the Regulations for the Implementation of the Act on the Development of the Academic Staff in the Republic of Bulgaria, and the

Regulations for the Development of the Academic Staff of Medical University – Plovdiv for holding the academic position of “Professor”.

My overall impressions of Assoc. Prof. Maria Vakrilova-Becheva lead me to the conclusion that all the professional and personal prerequisites for holding a higher academic position are present: thoroughness and systematic approach in her work, a strong sense of responsibility, and consistency in seeking new developments in her chosen scientific field. Her dedication and commitment to academic activity are evident, as is her ability to inspire and motivate her students and colleagues.

On the basis of the submitted scientific output in terms of volume, quality and thematic relevance to the field of the announced competition, the indisputable scientific contributions associated with it, and taking into account the nature of the candidate’s research and teaching activities, **I cast a positive vote** and confidently recommend to the esteemed members of the Scientific Jury that **Assoc. Prof. Maria Stamova Vakrilova-Becheva, PhD, be awarded the academic position of “Professor”** in “Theory and Methodology of Physical Education and Sports Training (including Methodology of Therapeutic Physical Exercise)”, in Higher Education Area 7. “Healthcare and Sports”, Professional Field 7.4. “Public Health”, for the needs of the Department of “Rehabilitation and Preventive Healthcare” at the Medical College, Medical University – Plovdiv.

08 September 2026
Plovdiv

Review prepared by: 
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