

## **REVIEW**

**From:** Prof. Zlatka Borisova Paskaleva, MD, PhD, habilitated in Professional Field 7.1. Medicine, within the Higher Education Area 7. Healthcare and Sports, Academic Specialty 'Occupational Diseases' (03.01.55), Specialist in Neurology and Occupational Diseases, appointed as an external member of the Scientific Jury by Order No. 102-1460/18.06.2026 issued by the Rector of Medical University 'Prof. Dr. Paraskev Stoyanov' – Varna

**Regarding:** A competition for the academic position of 'ASSOCIATE PROFESSOR' in the Higher Education Area 7. Healthcare and Sports, Professional Field 7.1. Medicine, Specialty 'Occupational Diseases' at the Department of Optometry and Occupational Diseases, Faculty of Public Health at the Medical University of Varna, opened in accordance with the Regulations for Development of the Academic Staff of MU-Varna and announced in the State Gazette No. 50 of June 2, 2026

Pursuant to the Act on Development of the Academic Staff in the Republic of Bulgaria (ADASRB), the Regulations for Application of the Act on Development of the Academic Staff in the Republic of Bulgaria (RAADASRB), and the Regulations for Development of the Academic Staff (RDAS) of the Medical University of Varna, a procedure has been opened for occupying the academic position of 'ASSOCIATE PROFESSOR' in the Higher Education Area 7. Healthcare and Sports, Professional Field 7.1. Medicine, Specialty 'Occupational Diseases' at the Department of Optometry and Occupational Diseases, Faculty of Public Health of the Medical University of Varna. Within the legally established deadline following the announcement of the competition in the State Gazette, only one candidate submitted the required documents and was admitted to participate in the competition—Dr. Vladina Miroslavova Dimitrova-Kirilova, MD, PhD, Chief Assistant Professor at the Department of Optometry and Occupational Diseases, Faculty of Public Health of the 'Prof. Dr. Paraskev Stoyanov' Medical University – Varna (MU-Varna).

### **1. General Requirements for the Candidate**

#### ***Education***

- **2002 – 2007:** Secondary education at the 'Ivan Vazov' High School of Mathematics and Natural Sciences – Dobrich;
- **2007 – 2013:** Higher education at the Medical University of Varna, graduating with honors in 'Medicine'. She holds a Master's degree diploma, Series MUV, University ID No. 001580, Registration No. 002378, issued on November 6, 2013, by the Medical University of Varna;
- **2015 – 2020:** Residency in Neurology. She holds a Certificate of Recognized Specialty in 'Neurology', Series MUV, No. 4517, Registration No. 024513, issued on February 12, 2021, by the Medical University of Varna;
- **2019 – 2023:** Full-time PhD student at the Department of Optometry and Occupational Diseases. She holds a PhD diploma (Educational and Scientific Degree 'Doctor') in the 'Occupational Diseases' doctoral program for a successfully defended doctoral dissertation entitled '*Occupational Predisposition in Asymptomatic Strokes*', No. 586, issued on May 22, 2023, by the Medical University of Varna;
- **2023 – present:** Resident in Occupational Diseases at the Medical University of Varna."

**Professional Experience** (according to Certificate Ref. No. UTSIO-787/June 11, 2026, issued by 'St. Marina' University Specialized Hospital for Active Treatment EAD – Varna):

- **2013 – 2015:** Physician at the Emergency Medical Care Center (EMCC) – Varna;
- **2015:** Physician at the Emergency Department, 'St. Marina' University Hospital EAD – Varna;
- **2015 – 2020:** Resident Physician at the Second Neurology Clinic with Intensive Care Unit for Neurological Diseases and Stroke Unit, 'St. Marina' University Hospital EAD – Varna;
- **2021 – 2024:** Assistant Professor - Physician in Neurology (0.5 part-time position) at the Second Neurology Clinic with Intensive Care Unit for Neurological Diseases and Stroke Unit, 'St. Marina' University Hospital EAD – Varna;
- **2024 – present:** Chief Assistant Professor - Physician in Neurology (0.5 part-time position) at the Second Neurology Clinic with Intensive Care Unit for Neurological Diseases and Stroke Unit, 'St. Marina' University Hospital EAD – Varna.

**Academic Career** (according to Certificate No. 099-1984/June 10, 2026, issued by the 'Prof. Dr. Paraskev Stoyanov' Medical University – Varna):

- **2018 – 2024:** Assistant Professor at the Academic and Research Sector of Occupational Diseases, Department of Optometry and Occupational Diseases, Medical University of Varna (teaching experience: 7 years, 4 months, and 4 days);
- **2024 – present:** Chief Assistant Professor at the Academic and Research Sector of Occupational Diseases, Department of Optometry and Occupational Diseases, Medical University of Varna (teaching experience: 2 years, 4 months, and 8 days).

## **2. Description of the Submitted Materials**

The candidate enters the competition with a body of scientific work published entirely after the defense of her PhD degree (Educational and Scientific Degree 'Doctor') and after the competition for her previous academic position. None of these materials have been used in prior academic procedures. All documents are correctly presented in accordance with the requirements of the ADASRB, RAADASRB, and the RDAS of the Medical University of Varna.

The list of scientific works and the candidate's self-assessment of contributions demonstrate that Dr. Dimitrova-Kirilova's publications possess a highly pronounced interdisciplinary character, bridging neurology with occupational pathology. The thematic scope is broad and includes:

- investigating insufficiently explored and highly relevant issues related to occupational risk factors, sleep pathology, and cerebrovascular disease;
- studying rare cases involving pathology of the central nervous system, focusing on cerebrovascular disorders resulting from carbon monoxide intoxication, occupational stress, whole-body vibration, and shift work;
- analyzing the role of occupational risk factors as cofactors in the epidemiology and etiopathogenesis of cerebral strokes;
- researching predictors for the onset and severity of cerebral infarction, as well as the manifestations of rare syndromes accompanying the infarction;
- implementing innovative therapeutic methods for successfully managing severe forms of parkinsonism of various etiologies;
- scholarly contributions in the field of sleep medicine, including sleep disorders of an occupationally conditioned nature.

According to the academic report prepared by the Central Library of MU-Varna (Appendix 13) in compliance with the requirements of the Regulations for the Application of the Act for the Development of the Academic Staff in the Republic of Bulgaria (PPZRASRB) and the Regulations

for Academic Staff Development (PRAS), the candidate is participating in the competition with a total of **32 scientific works**. These comprise one doctoral dissertation and **31 publications** in scientific journals—both with and without international scientometric indicators of prestige and influence (Scimago Journal Rank – SJR and/or Journal Impact Factor – JIF). The 31 publications submitted for review are entirely new and do not duplicate the research output from the defended doctoral thesis; 25 of them are refereed and indexed in the global databases Web of Science and Scopus, ensuring their international visibility. A significant international presence is evident in 21 of the publications appearing in journals with a Journal Impact Factor (JIF), including prestigious foreign publications with high impact factors in the respective clinical fields. Twelve of the articles were published in Bulgarian, and 19 in English.

Table 1 presents a structured summary of the data regarding the candidate's total research output and a systematized bibliometric report. All indicators fully comply with the national standards set by the National Centre for Information and Documentation (NACID) and the specific requirements outlined in Annex No. 1 of the Regulations for Academic Staff Development at the Medical University of Varna.

**Table 1. Summary of the candidate's scientific results by indicator groups**

| Group of indicators                                                    | Indicator/ Requirements                                                                                                                            | Number of scientific papers presented                                                                                                                                               | Design Specification (Clinical Cases / Reviews)                                                                                                                                                                   | Actual points | Criterion status                                                                                                                              |
|------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Group A (A1)</b>                                                    | Dissertation for the Educational and Scientific Degree of "Doctor" / 50 points                                                                     | 1                                                                                                                                                                                   | Dissertation                                                                                                                                                                                                      | 50 pts.       | ✓ Covered                                                                                                                                     |
| <b>Group B (B4)</b>                                                    | Habilitation thesis / at least 10 publications in journals indexed in WoS/Scopus; 100 points.                                                      | 11 articles in WoS/Scopus with JIF                                                                                                                                                  | <ul style="list-style-type: none"> <li>9 in WoS / 8 in Scopus</li> <li>Total JIF: 10.635</li> <li>(Personal IF: 2.771)</li> <li>9 clinical cases, including 2 with reviews</li> <li>2 original studies</li> </ul> | 140.5 pts.    | <ul style="list-style-type: none"> <li>✓ Exceeded</li> <li>✓ (+62 pts.)</li> <li>✓ +1 in WoS/Scopus</li> </ul>                                |
| <b>Group G (G7)</b>                                                    | Publications in refereed journals / at least 8 in WoS/Scopus and at least 4 publications with JIF; 60 pts                                          | 14 abstracts in WoS/Scopus-indexed/refereed publications, 10 of which have JIF                                                                                                      | <ul style="list-style-type: none"> <li>1 clinical case</li> <li>13 original studies</li> </ul>                                                                                                                    | 200 pts.      | <ul style="list-style-type: none"> <li>✓ Exceeded</li> <li>✓ (+140 pts.)</li> <li>✓ + 6 articles in WoS/Scopus</li> <li>✓ +6 c JIF</li> </ul> |
| <b>Group G (G8)</b>                                                    | Articles in non-indexed, peer-reviewed journals                                                                                                    | 6 articles                                                                                                                                                                          | 6 original studies                                                                                                                                                                                                | 42 pts.       | ✓ Completed                                                                                                                                   |
| <b>TOTAL GROUP G</b>                                                   | Sum of indicators G5 to G9 / at least 15 publications in total; at least 4 publications with JIF; less than 40% clinical cases and reviews 200 pts | 20 publications<br>14 abstracts in WoS/Scopus<br>10 publications with JIF                                                                                                           | 14 reports and posters<br>10 clinical cases and reviews (32.26%)                                                                                                                                                  | 242 pts.      | <ul style="list-style-type: none"> <li>✓ Exceeded</li> <li>✓ (+42 pts.)</li> <li>✓ +6 articles with JIF</li> </ul>                            |
| <b>Group D</b>                                                         | Citations / At least 5 in WoS/Scopus; 80 points.                                                                                                   | <ul style="list-style-type: none"> <li>5 citations in WoS/Scopus or in monographs and edited volumes</li> <li>3 citations in peer-reviewed monographs and edited volumes</li> </ul> |                                                                                                                                                                                                                   | 105 pts.      | <ul style="list-style-type: none"> <li>✓ Exceeded</li> <li>✓ (+25 pts.)</li> </ul>                                                            |
| <b>Total scientometric score of the candidate – minimum 430 points</b> |                                                                                                                                                    |                                                                                                                                                                                     |                                                                                                                                                                                                                   | 537.5 pts.    | ✓ Exceeded (+107.5 pts.)                                                                                                                      |

Dr. Dimitrova-Kirilova's participation in relatively small, effective research teams is substantial, holding a key position in a significant portion of her works. She is the first author in 5 of them (16%), serving as the corresponding author in 1 of these; she is the second author in 18 (58%), the

third author in 6 (6%), and the fourth author in 2 (6%). Consequently, she is the leading author (1st or 2nd author) in 24 out of 31 (77%) publications. This reflects a genuine and substantial scientific contribution by the candidate, rather than nominal co-authorship in collective research.

Instead of a traditional monograph, the candidate utilizes the more modern and scientifically prestigious alternative for entering the competition—submitting 11 scientific publications in editions indexed and peer-reviewed in the global databases Web of Science and Scopus (Indicator B4), which is 1 article above the mandatory minimum of 10. Of these, 6 articles are peer-reviewed simultaneously in both WoS and Scopus, 3 solely in WoS, and 2 solely in Scopus. Crucially, all of them possess a Journal Impact Factor (JIF), thereby significantly exceeding the minimum mandatory requirement that at least 4 of the publications have a JIF. The publications are presented in full text and completely satisfy the requirements for the primary scientific contribution of a habilitation thesis. With a total score of 140.5 points, the candidate substantially exceeds the mandatory minimum of 100 points (Table 1, Appendix 13). This demonstrates Dr. Dimitrova-Kirilova's serious personal commitment and her active participation in prestigious publications with high baseline scoring weight. Although a large portion of these publications (9 out of 11) present clinical cases, the international medical community has recognized these case studies as exceptionally valuable for clinical practice, as they are thoroughly enriched with current literature data. The high scientific value of this research is confirmed by the fact that all 11 articles in Group B4 possess an impact factor. In 9 of them (81.8%), Dr. Dimitrova-Kirilova is the leading author (occupying either first or second place).

**The cumulative Journal Impact Factor (JIF by WoS, Clarivate) of the publications under Indicator B4 amounts to 10.635. The adjusted personal cumulative impact factor (the sum of the impact factors divided by the number of co-authors for each individual publication) is 2.771.** This metric reflects the actual mathematical weight of the candidate's personal measurable scientific contribution within the research teams. Such a result represents an impressive individual achievement for a relatively young scientist in clinical medicine and serves as a clear indicator of high academic potential and robust research productivity.

The minimum national and specific institutional requirements have been exceeded in both Group G and Group D.

The stringent quality filter imposed by the RDAS of the Medical University of Varna in Group G structures the scientific production into two main categories. The first includes publications in peer-reviewed and indexed editions (Indicator G7). In this area, the candidate presents 14 scientific conference publications (13 original studies and 1 case report) indexed in *Scopus* and *Web of Science (WoS)*, 10 of which possess a *Journal Impact Factor (JIF)*. Under Indicator G7 alone, 200 points were generated, which exceeds the mandatory minimum of 60 points more than threefold. The second category (Indicator G8) encompasses 6 articles in non-indexed but peer-reviewed scientific journals, yielding 42 points. In total for Group G, Dr. Dimitrova-Kirilova achieved 242 points from 20 scientific works, completely fulfilling the requirements. Although published as conference abstracts/communications, the 14 items under Indicator G7 were presented at international forums and printed in the official supplements (13 items) or regular volumes (1 item) of leading global journals in the field of clinical neurology, including *Movement Disorders* and *European Stroke Journal*. They are indexed in the most prestigious scientometric index for medical sciences within the *WoS* platform—*SCIE (Science Citation Index Expanded)*. Each of these works legitimately reflects the Journal Impact Factor (JIF) and the highest quartile (Q1) of the respective publication for that specific year. Having the publications rank among the top 25% of journals in the scientific field is an excellent testament to their high value. The total *Clarivate JIF* for 10 of these materials amounts to a remarkable 60.8045, while the adjusted personal impact factor is 14.1591—substantial evidence of individual scientific contribution. In the context of the ADASRB, such a substantial volume of Q1 publications with a high impact

factor, achieved within a short period, is a vivid indicator of intensive international activity, high quality, and a pronounced scientific interest in the candidate's research.

Under Indicator G8, 6 full-text publications are presented, printed in non-indexed peer-reviewed scientific journals or in edited collective volumes at the national level. These are published in reputable, peer-reviewed Bulgarian editions, including the *Varna Medical Forum* and the *Proceedings of the Union of Scientists – Varna*, yielding a total of 42 points (Appendix 13). With these included, the total number of the candidate's scientific works in Group G amounts to 20, of which 14 are in the form of internationally peer-reviewed conference publications (Indicator G7), while the remaining 6 are national full-text studies (Indicator G8).

The qualitative restriction imposed by the Medical University of Varna requiring the proportion of literature reviews and case reports to remain below 40% has been fully taken into account and strictly observed; their total number is 10, which represents 32.26% of the entire scientific output submitted for the competition (excluding the doctoral dissertation).

The requirements in Group D (Citations) have also been completely fulfilled. The candidate achieves a total of 105 points against a mandatory minimum of 80 points in accordance with the ADASRB. The specific quality filter of the RDAS of the Medical University of Varna, which requires at least 5 actual citations in international databases, is entirely met. Dr. Dimitrova-Kirilova presents exactly 5 international citations under Indicator D10 (in *Scopus / Web of Science*). Each of these carries 10 points according to the minimum national requirements for the field of 'Medicine', forming a sum of 50 points. The remaining 55 points up to the total score are generated by citations in peer-reviewed monographs and collective volumes under Indicator D12. The remaining 30 points up to the total score are generated by 3 citations in peer-reviewed monographs and collective volumes under Indicator D12 (at 10 points per citation).

Along with the 50 points for the doctoral dissertation to acquire the PhD degree (Educational and Scientific Degree 'Doctor'), the total number of points for the scientific production and research assets of Dr. Vladina Dimitrova-Kirilova amounts to an impressive 537.5 points, which significantly exceeds the mandatory minimum of 430 points. Attached to the research materials is also one literature review, which has been left as a publication outside the minimum scientometric requirements. Given that all submitted materials have been duly verified in the official institutional report of the Medical University of Varna, and the vast majority of the scientific communications have undergone rigorous selection in leading global journals with a high impact factor, I accept the requirements as completely fulfilled in both quantitative and qualitative terms. All presented results are in full compliance with the state standards of NACID, and the candidate entirely satisfies and exceeds both the minimum national requirements and the specific criteria of the RDAS of the Medical University of Varna for occupying the academic position of 'Associate Professor'.

### 3. Evaluation of Citations

According to the bibliometric report prepared by the Central Library of the Medical University of Varna (Appendix 13) based on international scientific databases, the citations of Dr. Vladina Miroslavova Dimitrova-Kirilova (excluding self-citations) are as follows:

- **Indicator D10 (Citations in Scopus and WoS):** 5 citations  $\times$  15 points = 75 points. This completely satisfies the specific mandatory filter of the RDAS of the Medical University of Varna requiring a minimum of 5 actual international citations.
- **Indicator D12 (Citations in peer-reviewed monographs and collective volumes):** 3 citations  $\times$  10 points = 30 points.

The total score for the candidate's citations amounts to **105 points**, which entirely exceeds the mandatory minimum of 80 points required by the ADASRB.

The report reflects a steady interest in Dr. Dimitrova-Kirilova's scientific output. A total of 8 actual citations have been recorded, establishing a personal scientometric indicator of her research

productivity and citation impact—an **h-index of 2** in both the Web of Science platform and Google Scholar. This indicator serves as indisputable evidence of the international recognition and impact of her research within the scientific community (Appendix 14.2).

#### **4. Evaluation of Teaching Activity and Classroom Workload**

##### **4.1. Academic Teaching Experience**

The minimum requirement of the Medical University of Varna for occupying the academic position of 'Associate Professor' (prior holding of the position of 'Chief Assistant Professor' for a period of not less than 2 years, or a minimum of 5 years as an 'Assistant Professor') has been fully met. Dr. Dimitrova-Kirilova exceeds these criteria, with her teaching experience amounting to 7 years, 4 months, and 4 days as an Assistant Professor, and 2 years, 4 months, and 8 days as a Chief Assistant Professor in the Academic and Research Sector of Occupational Diseases at the Department of Optometry and Occupational Diseases of the Medical University of Varna. Consequently, the candidate completely satisfies and exceeds the conditions for minimum academic teaching experience.

##### **4.2. Classroom (Teaching) Workload**

The teaching workload report (Ref. No. 112-131/June 11, 2026), issued by the Academic Affairs Department of the Medical University of Varna, certifies an annual mandatory standard of 220 teaching hours for non-habilitated faculty members (in accordance with the resolution of the Academic Council, recorded in Protocol No. 30/April 11, 2011). Over the last three academic years, Dr. Dimitrova-Kirilova completed hours that exceed this standard, broken down as follows:

- **Academic Year 2022/2023:** 248 teaching hours;
- **Academic Year 2023/2024:** 300 teaching hours;
- **Academic Year 2024/2025:** 262 teaching hours.

These hours include conducting practical training sessions and delivering lectures in 'Occupational Diseases' for medical students (both Bulgarian and English-language programs) at the Faculty of Medicine, as well as in 'Neurology' for students of Speech and Language Therapy and Kinesitherapy at the Faculty of Public Health at the Medical University of Varna (Appendix 14.2). The subject matter taught by her fully aligns with the profile of the announced competition.

The candidate meets all quantitative and qualitative requirements for classroom teaching workload and academic teaching experience set forth in the ADASRB and the RDAS of the Medical University of Varna for occupying the academic position of 'Associate Professor' in the respective academic field.

#### **5. Administrative Requirements and Scientific Activity**

The candidate, Dr. Vladina Miroslavova Dimitrova-Kirilova, fully satisfies the additional administrative, specific, and professional requirements set forth in the RDAS of the Medical University of Varna for occupying the academic position of 'Associate Professor':

- **Participation in Scientific Forums:** The candidate has actively participated in 20 scientific forums, including congresses, conferences, and roundtables, as well as international virtual platforms. Since 2016, she has participated annually in the National Congress of Neurology with International Participation, as well as the prestigious congresses of the European Stroke Organisation (ESO). Dr. Dimitrova-Kirilova is also an active contributor to the organization and execution of the National Stroke Conferences and the annual Summer Stroke Schools.
- **Membership in Scientific and Professional Organizations:** She is a member of reputable Bulgarian and international scientific societies: the Bulgarian Medical Association (BMA),

the Bulgarian Society of Neurology, the European Stroke Organisation (ESO), and the Bulgarian Scientific Society of Occupational Diseases.

- **Registration in Scientific Databases:** The candidate maintains internationally verified profiles in the unified registry of scientists and researchers ORCID (ORCID ID: 0000-0002-9833-2702), the global scientific literature platform Google Scholar, and the academic network ResearchGate. Furthermore, her informational profiles have been duly established in both Bulgarian and English within the National Centre for Information and Documentation (NACID) for entry into the national registries of scientific activity.
- **Language Skills and Digital Competence:** She possesses an excellent command of the English language (both written and spoken), enabling her to actively conduct practical and theoretical training for international students within the university's English-language medical program. She demonstrates high computer literacy and professional proficiency in operating systems, office suites (Windows, Microsoft Office – Word, Excel, PowerPoint), internet media, and the specialized statistical package SPSS for the mathematical processing of scientific data.
- **Diagnostic and Clinical Activity:** Dr. Dimitrova-Kirilova began her professional career as an emergency medicine physician in 2013. Since 2015, she has been working at the Second Neurology Clinic with Intensive Care Unit for Neurological Diseases and Stroke Unit at the "St. Marina" University Hospital EAD – Varna, advancing sequentially through the positions of resident physician, assistant professor, and chief assistant professor. In this role, she actively participates in the daily intensive diagnostic and therapeutic processes, successfully combining clinical practice with the academic training of students.

#### **6. Scientific Contributions of the Works Submitted for the Competition**

The analysis of Dr. Dimitrova-Kirilova's overall research profile demonstrates a high degree of scientific maturity and scholarly continuity. In her subsequent work, she builds upon these research issues in depth, expanding her investigations into the fields of occupational stress, shift work, whole-body vibration, and subclinical brain injuries. While her doctoral dissertation focused on the epidemiological and general aspects of work environment factors and the work process as components in the development of silent (asymptomatic) cerebral infarctions, the candidate takes a qualitative step forward in her new works. By utilizing contemporary pathophysiological hypotheses and high-tech neuroimaging methods for objective verification, the submitted works mark a new milestone in the author's development, aligning completely with the profile of the competition in 'Occupational Diseases' (B4.10, G7.8).

**For the first time in Bulgaria**, the impact of occupational risk factors on workplace stress levels and the role of stress in socially significant cerebrovascular disorders are investigated, with a focus on early diagnosis and asymptomatic (silent) cerebrovascular disease in individuals of active working age (B4.10, G7.8). The candidate demonstrates a positive correlation between the level of stress and the duration of the workday, length of service, and shift work schedules.

**For the first time in Bulgaria**, the significance of occupational hazards is investigated—not only as independent risk factors for the incidence of cerebral strokes but also as co-factors in their etiopathogenesis among patients of active working age—thereby substantiating the need to expand prevention strategies for cerebrovascular pathology in light of the complex, multifactorial causal relationships involved (G7.5, G8.6).

The research thus formulated by Dr. Dimitrova-Kirilova contains original scientific-theoretical and scientific-applied contributions within the subject area of the competition. The candidate's scholarly pursuits and efforts hold distinct significance given their highly interdisciplinary nature,

bridging neurology and occupational pathology. The study examines how daily workplace exposures—with their specific characteristics, recurrence, and duration—impact cardiovascular risk and socially significant disorders of the central nervous system. This approach requires parallel, in-depth knowledge in both the field of neurological diseases and occupational medicine. Dr. Dimitrova-Kirilova achieves this synergy through her purposeful clinical and academic career path, as well as her specialized research interests in both disciplines.

**She investigates and analyzes specific cases of stroke** caused by rare etiological factors—such as complications of bacterial neuroinfection or cardiac embolism associated with a patent foramen ovale (B4.3, B4.4, B4.11). At the same time, the candidate proposes well-founded multidisciplinary diagnostic algorithms for timely recognition, appropriate therapy, and subsequent secondary prevention, specifically tailored to young patients.

**The candidate emphasizes the need for a differentiated and individualized therapeutic approach in rare clinical cases requiring endovascular treatment.** Cases of basilar artery thrombosis and large vessel occlusion occurring during the interventional treatment of a ruptured cerebral aneurysm are discussed. Particular attention is paid to the use of mechanical thrombectomy to prevent periprocedural thrombosis (B4.7, B4.9).

**Key predictors of unfavorable outcomes in the administration of intravenous thrombolysis (IVT)** have been investigated. High-grade and untreated hypertension, poor glycemic control in type 2 diabetes mellitus, and cardiac arrhythmias and conduction disorders were identified as the primary negative factors (G7.1).

**Quality indicators in the therapy of acute cerebrovascular events** were evaluated and analyzed using data from the international RES-Q registry. These analyses hold direct practical value regarding the future implementation of a National Stroke Registry in Bulgaria and the optimization of therapeutic outcomes in clinical practice (G7.2).

**Early humoral markers for disease prognosis** were researched. It was established that elevated levels of C-reactive protein (CRP) and leukocytes within the first 24 hours from onset in young patients act as independent predictors of mortality (B4.6).

**The high incidence of post-stroke complications** was demonstrated. The candidate established that over 50% of patients with acute ischemic stroke develop at least one complication, with the severity of the neurological deficit at admission being an independent risk factor. Furthermore, it was noted that hemorrhagic strokes are more likely to lead to the development of post-stroke epilepsy (G7.10, B8.4).

**The patients' quality of life** was monitored and evaluated. The results demonstrate a clear functional recovery (muscle strength, hand function, and emotional state) as early as the first month. Concurrently, a slower improvement in social participation was observed, which scientifically validates the necessity for long-term rehabilitation and targeted social adaptation (G7.3).

**The incidence, clinical features, and neuroimaging characteristics of cerebral venous and dural sinus thromboses**—which are rare in clinical practice—were retrospectively analyzed. The objective of these studies is to improve early diagnosis, refine prognostic assessment, and optimize therapy, which differs significantly from the management of clinically similar ischemic strokes (G7.12, G7.14).

**The epidemiology, clinical characteristics, and etiological risk factors of spinal stroke** among hospitalized patients were investigated (G7.11). The candidate also describes a rare, casuistic case of acute aortic dissection complicated by a spinal myeloischemic event (B4.8). Based on these analyses, the critical need for a multidisciplinary team approach for early diagnosis and timely therapy is argued to ensure a favorable outcome for the patient.

In summary, the submitted scientific works contain indisputable scientific-theoretical and scientific-applied contributions in the following key areas:

## **I. Contributions of an Original Scientific Character**

1. The clinical, laboratory, and imaging characteristics, as well as prognostic factors in various forms of cerebrovascular diseases—including rare etiological variants—have been determined. This contributes to the optimization of diagnostic and therapeutic management in clinical practice.
2. The independent prognostic value of C-reactive protein (CRP) levels and leukocytosis within the first 24 hours has been demonstrated for in-hospital mortality in young and middle-aged patients with acute ischemic stroke.
3. Scientific-theoretical knowledge regarding early functional outcomes following acute cerebral stroke has been expanded through a detailed determination of the incidence, structure, and risk factors for the development of in-hospital complications and post-stroke epilepsy, as well as the dynamics of quality of life recovery.

## **II. Contributions of a Scientific-Applied Character**

1. The practical adaptation and implementation of the international RES-Q registry into clinical practice have been achieved for the objective evaluation of treatment quality in ischemic brain events. This ensures reliable benchmarking against international standards and metrics while serving as a foundation for optimizing the overall organization of stroke care in Bulgaria.
2. It clarifies in detail the variations of cerebrovascular disease, its atypical clinical variants, and rare etiological alternatives.
3. Implementation of clinical algorithms for optimal diagnostic and therapeutic management across a diverse range of cerebrovascular pathologies.

## **CONCLUSION**

Based on the foregoing, it can be summarized that the candidate enters the competition with an impressive total asset of 537.5 points, which significantly exceeds both the minimum national requirements and the institutional criteria of the Medical University of Varna. Her scientific production demonstrates sustained international interest and successful collaboration within highly specialized research teams. The high impact factor, regular presence in top-quartile (Q1) journals, and strict adherence to university requirements regarding publication structure allow me to definitively evaluate the candidate's research activity as fully complying with the standards for occupying the academic position of 'Associate Professor'.

The thoroughly documented scientific metrics (citations and impact factor) and the high relevance of her research output—combined with the detailed scientific-theoretical and scientific-applied contributions of a distinctly interdisciplinary nature, alongside a substantial teaching workload and pedagogical experience—provide a solid argument for me to give my categorical positive evaluation. I confidently propose to the esteemed Scientific Jury to likewise vote in favor of awarding the academic position of 'Associate Professor' to Chief Assistant Professor Vladina Miroslavova Dimitrova-Kirilova, MD, PhD, within the academic field of this competition.

15.08.2026 г.

**Reviewer:**

(Prof. Zlatka Paskaleva, MD, PhD)

Заличено на основание чл. 5,  
§1, 6. „Б“ от Регламент (ЕС)  
2016/679