

OPINION

by

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member of the scientific jury pursuant to Order No. RD-185 / 08.05.2026 of the Rector of Burgas State University “Prof. Dr. Asen Zlatarov”

Regarding: competition for the academic position of “Associate Professor” in the higher education area 7. Healthcare and Sports, professional field 7.1. Medicine, scientific specialty “General Medicine”, for the needs of the Faculty of Medicine at Burgas State University “Prof. Dr. Asen Zlatarov”, announced in State Gazette No. 25/10.03.2026.

By Protocol No. 1 from a meeting of the scientific jury, appointed by Order No. RD-185 / 08.05.2026 of the Rector of Burgas State University “Prof. Dr. Asen Zlatarov”, I was assigned to prepare an opinion. One candidate participates in the competition, **Chief Assistant Professor Dr. Irina Ivanova Momcheva, PhD.**

The present opinion has been prepared in accordance with the regulatory requirements of the Development of Academic Staff in the Republic of Bulgaria Act, the Regulations for its implementation, as well as the applicable internal rules of Burgas State University “Prof. Dr. Asen Zlatarov” regarding the conditions and procedure for occupying academic positions.

I reviewed in detail the submitted competition materials, including the application for participation, curriculum vitae, diplomas and certificates, the report on fulfilment of the minimum requirements, the list of publications, the habilitation work, the documents related to teaching and clinical activity, the declarations of participation in scientific forums and clinical trials, as well as the materials related to the originality check of the monographic work.

The professional biography shows that Dr. Momcheva has had consistent development as a physician, clinician, university lecturer and researcher. She graduated in medicine from the Higher Medical Institute - Plovdiv in 1993. She holds recognized specialties in internal medicine and rheumatology, as well as a master’s degree in business administration and health management. In 2024, she acquired the educational and scientific degree “Doctor” after defending a dissertation entitled “Study of the participation of humoral factors of innate immunity in the pathogenesis of activated osteoarthritis”.

The candidate’s clinical and professional path includes work in outpatient care, an emergency department and university hospital structures, with lasting specialization in the fields of internal medicine and rheumatology. Since 2010, Dr. Momcheva has worked as Head of the Clinic of Rheumatology at UMHAT - Burgas, and since 2021 she has been part of the academic staff of

the Faculty of Medicine of Burgas State University “Prof. Dr. Asen Zlatarov”. The submitted certificate documents that since 09.12.2021 she has worked as an assistant professor, and from 20.01.2025 to the present as chief assistant professor in the department for which the competition has been announced.

The scientometric data presented in the report on fulfilment of the minimum requirements show a total of 479 points, with 430 points required under the university rules and 400 points under the minimum national requirements. Under group A, a dissertation for the educational and scientific degree “Doctor” is reported with 50 points. Under group B, a habilitation work, a monograph, is presented with 100 points. Under group C, 229 points from scientific publications and reports are reported, and under group D, 100 points from citations are reported, with 60 points required. Thus, the quantitative requirements for participation in the competition have been fulfilled and exceeded.

The scientific output of Dr. Momcheva, submitted for the competition, includes 16 publications, among them works in journals included in referenced and indexed databases, as well as publications in peer-reviewed scientific journals. The leading thematic line is osteoarthritis, examined through the prism of innate immunity, low-grade inflammation, the complement system, osteoimmunology, the biological complexity of the disease and the role of physical activity. The publications also include topics from clinical rheumatology, such as therapy with rituximab in polymyositis, TNF α inhibitors, psoriatic disease, interstitial lung disease in rheumatoid arthritis and systemic sclerosis, juvenile idiopathic arthritis in the context of COVID-19 and cardiovascular risk in inflammatory rheumatic diseases.

A particular place in the candidate’s scientific profile is occupied by the original work on activated gonarthrosis and the increased level of C3 in synovial fluid in patients from the Department of Rheumatology of UMHAT - Burgas. This line is logically connected with Dr. Momcheva’s dissertation work and gives the application a recognizable focus on the pathogenetic mechanisms of osteoarthritis, and not only on the symptomatic description of the disease.

The habilitation work “Modulation of the Epigenome through Physical Activity: A Different Approach to the Management of Arthrosis Disease” is presented as a monograph, published in 2025 by STENO Publishing House - Varna, with ISBN 978-619-7559-68-2. The work addresses contemporary issues in the pathogenesis of osteoarthritis, including the structure and biology of articular cartilage, mechanical stress, the role of crystals, mitochondrial function, low-grade local inflammation, the JAK-STAT signaling pathway, genetic and epigenetic mechanisms, aging and the limitations of available pharmacological approaches in osteoarthritis.

A substantial value of the monograph is the positioning of physical activity not only as a general non-pharmacological recommendation, but as a potential epigenetic modulator with clinical significance in arthrosis disease. The author makes a connection between the biological mechanisms of the disease, personalized movement programs, the multidisciplinary approach and the real difficulties in patients’ adherence to preventive and therapeutic strategies. This approach is practice-oriented and is in line with the current trend toward earlier, personalized and active management of chronic musculoskeletal diseases.

Attached to the monograph are a similarity report and an opinion in relation to the procedure for prevention of plagiarism. The submitted opinion accepts that the reported similarities are within

permissible limits, are mainly related to scientific terminology, citation of literature sources and commonly used formulations, and do not call into question the authorial character of the work.

The teaching activity of Dr. Momcheva is directly related to the profile of the competition. A report on teaching workload has been presented, showing that during the winter semesters of the academic years 2024/2025 and 2025/2026 the candidate delivered lectures in the "Rheumatology" module within the discipline "Internal Medicine" for fourth-year medical students. There is also evidence of participation in the training of interns, as well as an order by which, from 01.01.2024, Dr. Momcheva was appointed as supervisor of a resident in rheumatology. This demonstrates accumulated practical teaching experience and work with trainees at different stages of medical education.

The candidate's clinical activity is significant and has been developed sustainably. As head of a rheumatology clinic, Dr. Momcheva combines daily diagnostic and therapeutic activity with teaching and scientific work. A declaration has been submitted for participation as a sub-investigator in clinical trials during the period 2023-2026 in the fields of seropositive rheumatoid arthritis, psoriatic arthritis and Sjögren's syndrome. This complements her profile as a clinician working in an environment of modern therapy and clinical research practice.

The candidate's scientific activity is further complemented by participation as a lecturer in national scientific forums in 2024 and 2025, including conferences in general medicine, dietetics and rheumatology, as well as by international participation with a poster within the World Congress on Osteoporosis, Osteoarthritis and Musculoskeletal Diseases in 2025. This activity shows an aspiration toward professional visibility and exchange of knowledge both in the rheumatology community and in the broader context of general and internal medicine.

In summary, the application of Chief Assistant Professor Dr. Irina Momcheva, PhD, is characterized by good compatibility between clinical experience, teaching activity and scientific output. The leading scientific contribution is concentrated in the field of osteoarthritis and its immunological, inflammatory and epigenetic aspects. This is relevant to the scientific specialty "General Medicine", since osteoarthritis, chronic pain, physical activity, multimorbidity and preventive behavior are problems of high prevalence and direct significance for primary and specialized medical practice.

The contributions of Chief Assistant Professor Dr. Irina Momcheva, PhD, presented in the competition documentation, are clearly focused on contemporary pathogenetic aspects of osteoarthritis. They bring together issues related to innate immunity, systemic low-grade inflammation, the complement system, ageing, cellular senescence and epigenetic regulation. In this respect, the candidate does not view osteoarthritis solely as a degenerative joint disease, but as a complex biological process in which inflammatory, immunological and metabolic mechanisms are of substantial importance.

Particularly significant are the contributions related to the analysis of the relationship between ageing processes and the development of osteoarthritis, the role of specific epigenetic mechanisms in the inflammatory process, the involvement of heat shock proteins and the possibility of considering physical activity as a tool for epigenetic modulation. The practical value of these developments is reflected in the proposed directions for the use of new biomarkers,

algorithms for clinical interpretation of laboratory indicators and an integrative model linking ageing, inflammation, cellular senescence and epigenetic regulation. These contributions give the application a recognizable scientific profile and demonstrate an effort to translate contemporary biological concepts into clinical reasoning and management in osteoarthritis.

I do not identify any substantial weaknesses that would call into question the eligibility of the candidate or the fulfilment of the regulatory requirements. The submitted materials demonstrate consistency between the dissertation topic, part of the publication activity and the habilitation work, as well as sufficient teaching and clinical engagement for occupying the academic position.

Conclusion

On the basis of the submitted materials, I consider that Chief Assistant Professor Dr. Irina Ivanova Momcheva, PhD, meets the requirements of the Development of Academic Staff in the Republic of Bulgaria Act, the Regulations for its implementation and the applicable internal regulatory documents of Burgas State University "Prof. Dr. Asen Zlatarov" for occupying the academic position of "Associate Professor".

I give a positive opinion and support the application of Chief Assistant Professor Dr. Irina Ivanova Momcheva, PhD, for occupying the academic position of "Associate Professor" in the higher education area 7. Healthcare and Sports, professional field 7.1. Medicine, scientific specialty "General Medicine".

Varna

15.06.2026

Signature: ...

/Assoc. Prof. Tsvetoslav Georgiev, MD, PhD/