

OPINION

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REGARDING: Competition for the academic position of Professor in the field of higher education 4. Natural Sciences, Mathematics and Informatics, professional field 4.3. Biological Sciences, scientific specialty “Immunology”, for the needs of the Department of Immunology, Laboratory of Experimental Immunotherapy, Institute of Microbiology “Stefan Angeloff” – Bulgarian Academy of Sciences (BAS), announced in the State Gazette, issue 84 / 10.10.2025.

Only one candidate has submitted documents for the competition – Assoc. Prof. Dr. Anastas Dimitrov Pashov, MD, PhD, from the Institute of Microbiology “Stefan Angeloff” – BAS. The set of documents contains all materials applicable to the candidate in accordance with Art. 65, para. 9 of the Regulations for the Conditions and Procedure for Awarding Scientific Degrees and Holding Academic Positions at the Institute of Microbiology “Stefan Angeloff” – BAS (PURPNSZAD-IM-BAS). In addition, during the competition the materials were accessible to the members of the jury online, which facilitated my work on this opinion.

Assoc. Prof. Pashov graduated in Medicine from the Medical Academy (now Medical University – Sofia). He began his medical practice at the Regional Health Inspectorate (HEI) in Kardzhali as a resident physician. This was followed by the defense of a doctoral dissertation at the National Center for Infectious and Parasitic Diseases and a scientific career at BAS, initially at the Institute of Biology and Immunology of Reproduction and later at the Institute of Microbiology, where he is currently an Associate Professor and Head of the Laboratory of Experimental Immunotherapy. He has completed several postdoctoral specializations at the French National Institute of Health and Medical Research (INSERM) and at the University of Arkansas for Medical Sciences, USA.

Assoc. Prof. Pashov participates in the competition with 45 publications in journals with an impact factor, 21 of which in Q1 journals, 2 book chapters, 1 invention, 1490 citations, leadership of 2 international and 2 national projects, participation in other 2 international and 5

national projects, supervision of two PhD students, and 24 participations in scientific forums for the period 2012–2025.

In the Group of indicators B (Habilitation thesis – scientific publications), 35 publications are presented: 17 in Q1 journals ($25 \text{ pts} \times 17 = 425 \text{ pts}$), 8 in Q2 journals ($20 \text{ pts} \times 8 = 160 \text{ pts}$), 4 in Q3 journals ($15 \text{ pts} \times 4 = 60 \text{ pts}$) and 6 in Q4 journals ($12 \text{ pts} \times 6 = 72 \text{ pts}$). This totals 717 points, with a required minimum of 100 points according to PURPNSZAD-IM-BAS. Assoc. Prof. Pashov is first author or corresponding author in 13 publications.

The remaining 10 articles, 2 book chapters, and 1 invention are included in the Group of indicators C. Five of the articles are published in Q1 journals ($25 \text{ pts} \times 5 = 125 \text{ pts}$), three in Q2 journals ($20 \text{ pts} \times 3 = 60 \text{ pts}$), one in a Q3 journal ($15 \text{ pts} \times 1 = 15 \text{ pts}$), one in a Q4 journal ($12 \text{ pts} \times 1 = 12 \text{ pts}$), four in journals without impact factor ($10 \text{ pts} \times 4 = 40 \text{ pts}$), two book chapters ($15 \text{ pts} \times 2 = 30 \text{ pts}$), and one invention ($25 \text{ pts} \times 1 = 25 \text{ pts}$), totalling 307 points, with a required minimum of 220 points according to PURPNSZAD-IM-BAS.

My Scopus check dated 18.01.2026 showed that the 37 publications indexed in this database out of the 45 submitted by Assoc. Prof. Pashov have been cited 717 times, excluding self-citations of the author. The report submitted by Assoc. Prof. Pashov is from the OpenAlex.org database and includes 1490 citations (as of 15.09.2025) of all his publications. An official report from NACID is missing. My Scopus check from 18.01.2026 showed that all 69 publications by author Pashov, Anastas D. have 1794 citations (excluding self-citations) and an h-index of 22. Since the regulatory documents do not specify which citations are to be counted, I am inclined to accept the citation report submitted by Assoc. Prof. Pashov. Regardless of whether all citations excluding self-citations or only citations of the publications submitted for the competition are counted, the requirement of 60 citations ($2 \text{ pts} \times 60 = 120 \text{ pts}$) under PURPNSZAD-IM-BAS is not only fulfilled but exceeded many times over.

The Group of indicators E includes supervision of one PhD student and co-supervision of a second PhD student ($50 \text{ pts} \times 1.5 = 75 \text{ pts}$), participation in 5 national projects ($10 \text{ pts} \times 5 = 50 \text{ pts}$), participation in 2 international projects ($20 \text{ pts} \times 2 = 40 \text{ pts}$), leadership of 2 national projects ($20 \text{ pts} \times 2 = 40 \text{ pts}$), and leadership of 2 international projects ($50 \text{ pts} \times 2 = 100 \text{ pts}$). The total amount of attracted funding is BGN 744,200 ($744,200 \times 0.0002 = 149 \text{ pts}$). The total number of points in Indicator Group E is 454 points, with a required minimum of 150 points according to PURPNSZAD-IM-BAS.

With the scientific production listed above, Assoc. Prof. Pashov not only meets the requirements for holding the academic position of Professor at the Institute of Microbiology – BAS but exceeds them sevenfold. With a required minimum of 640 points under PURPNSZAD-IM-BAS, he has presented evidence for 4508 points in this competition.

As an immunoinformatician, I would like to highlight Assoc. Prof. Pashov's scientific contributions in the field of immunoinformatics and vaccine design.

- Assoc. Prof. Pashov has made a significant contribution to the development of vaccines based on carbohydrate mimetic peptides (CMPs), including the concept of "reverse immunology." It has been shown that CMPs can induce T-cell-dependent antibody responses against tumor-associated carbohydrate antigens, defining the concepts of polyspecific/polyvalent epitopes and quantitative (threshold) tolerance without the risk of autoimmune pathology.
- The first publication on COVID-19 Immunology from Bulgaria originates from the team of Assoc. Prof. Pashov [Shivarov V, Petrov PK, Pashov AD. Potential SARS-CoV-2 Preimmune IgM Epitopes. *Frontiers in Immunology*, 2020, 11, 932]. Three linear IgM epitopes were identified: two in ORF1ab and one in the S protein.
- Assoc. Prof. Pashov has contributed to elucidating the molecular and thermodynamic basis of polyreactivity, including the role of solvation, antigen density, and induced-fit mechanisms. These results are of direct relevance for the optimization of therapeutic antibodies and immunoglobulin preparations.
- Assoc. Prof. Pashov is among the leading scientists in the analysis of the antibody specificity repertoire (the so-called Ig-ome) using mimotope libraries, peptide microarray analyses, and graph models. It has been demonstrated that the public IgM repertoire can serve as a source of diagnostic biomarkers for a number of diseases.

Conclusion

The research activity of Assoc. Prof. Anastas Pashov fully meets, both qualitatively and quantitatively, the requirements for holding the position of Professor in professional field 4.3. Biological Sciences, as specified in all national and institutional regulatory documents.

I vote positively for the election of Assoc. Prof. Dr. Anastas Dimitrov Pashov, MD, PhD, from the Institute of Microbiology "Stefan Angeloff" – BAS, to the academic position of Professor in the field of higher education 4. Natural Sciences, Mathematics and Informatics, professional field 4.3. Biological Sciences, scientific specialty "Immunology", for the needs of the Department of Immunology, Laboratory of Experimental Immunotherapy, Institute of Microbiology "Stefan Angeloff" – BAS.

23.01.2026

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