

OPINION

by Assoc. Prof. Emilia Borislavova Petrova, PhD, Institute of Experimental Morphology,
Pathology and Anthropology with Museum – Bulgarian Academy of Sciences,
member of Scientific jury appointed by Order № HO-05-05-12/21.10.2025 of the Director of
IEMPAM

Regarding: Competition for the academic position Professor in scientific specialty Parasitology and Invasive Diseases of Animals and Humans, Professional field 6.4. Veterinary Medicine, Field of higher education 6. Agricultural Sciences and Veterinary Medicine, in the Department of Experimental Parasitology, IEMPAM, announced in the State Gazette no. 81 of 03.10.2025

In the current competition for the academic position Professor documents have been submitted by one candidate – Dr Mariana Stancheva Panayotova-Pencheva, PhD, Associate Professor at the Department of Experimental Parasitology of the Institute of Experimental Morphology, Pathology and Anthropology with Museum (IEMPAM). The applied materials for participation in the competition are in accordance with the requirements of The Law on Academic Staff Development in the Republic of Bulgaria, the Regulations for its implementation and the internal regulations of IEMPAM. The required documentation has been presented in full.

Mariana Panayotova-Pencheva graduated with honors in 1995 from the Higher Institute of Zootechnics and Veterinary Medicine in Stara Zagora, specialty Veterinary Medicine, with a qualification Doctor of Veterinary Medicine. In the same year, she was appointed as a specialist veterinarian in the Fauna and Parasite Circulation Section at the Institute of Experimental Pathology and Parasitology at the Bulgarian Academy of Sciences. From 1995 to 2007, she held the positions of Research Associate III and Research Associate II at the same institute, and in 2007 she was appointed Assistant Professor. In 2009, Mariana Panayotova-Pencheva successfully defended her PhD Thesis and obtained a PhD in Parasitology and Invasive Diseases of Animals and Humans (*Indicator A*). In 2014, she won a competition for Associate Professor in the “Experimental Parasitology” section at the Institute of Experimental Morphology, Pathology and Anthropology with Museum, where she currently works. The candidate’s total work experience is more than 30 years.

Assoc. Prof. Mariana Panayotova-Pencheva was an honorary lecturer at the Department of Infectious Pathology, Technology, and Control of Food of Animal Origin at the Faculty of Veterinary Medicine, University of Forestry – Sofia in the disciplines of Parasitology (1998-2015) and Wildlife Diseases (2011-2015).

Dr. Panayotova-Pencheva’s scientific interests are in the field of veterinary medicine, primarily veterinary medical parasitology. She carries out field, experimental, and theoretical research on the etiology, epidemiology, distribution, pathogenesis, pathomorphology, and control of various parasitic diseases.

In her research work, the candidate applies classical (parasitological autopsy, light microscopy, scanning electron microscopy, drawing of microscopically examined objects, etc.) and modern (computer morphometry, PCR analyses, molecular phylogenetics) methods.

The results of Assoc. Prof. Panayotova-Pencheva's research activity since the beginning of her academic career are presented in a total of 106 publications with a total impact factor (IF) of 22.328 and an individual IF of 9.729.

In the current competition, the candidate submitted **54** publications (11 under *Indicator B* and 43 under *Indicator I*). Of these, 13 are in publications with an impact factor (total IF: 11.855, individual IF: 3.218). The candidate is the first author in 22 of the publications, 3 of which are single-authored. I believe that this demonstrates her personal contribution to the scientific research conducted and her growth as a researcher. The list of citations (*Indicator II*) includes **308** citations of 51 publications. Of the citations, 168 are in scientific publications referenced and indexed in Web of Science/Scopus with IF/SJR, and 56 are in dissertations and scientific theses abroad. The publications and citations in this competition do not repeat those submitted for the PhD degree and for the academic position of Associate Professor.

The scientific contributions of Dr. Panayotova-Pencheva, based on the works submitted for evaluation, can be systematized into five thematic areas corresponding to the profile of the announced competition: **1)** Etiology and distribution of parasitic diseases; **2)** Epidemiology of parasitic diseases; **3)** Immunity, pathogenesis, and pathomorphology of parasitic diseases; **4)** Control of parasitic diseases; **5)** Bee pathology and bee products.

Contributions of fundamental value include research on the parasitofauna of various animal species, the morphology, taxonomy, and development of parasites, as well as the epidemiological, pathogenetic, and pathomorphological characteristics of nosological units of a parasitic nature. The contributions with applied scientific value are related to the potential use of the generated morphometric data in parasitological diagnostics, the treatment and prevention of parasitic diseases in wild and exotic animals, as well as studies in the field of bee pathology and the use of bees and bee products as bioindicators of the environment.

The following contributions stand out in the **first** thematic area:

1. For the first time in Bulgaria, a study of the pulmonary helminth fauna of wild goats has been conducted.
2. For the first time, the genus *Neostrogylus* has been identified in wild animals in Bulgaria.
3. For the first time, the specie *Protostrongylus cuculorum* has been identified as part of the helminth fauna of Bulgaria and South-Eastern Europe.
4. For the first time, the species *Spirocerca melesi*, *Filaroides martis*, and *Sobolevingylus petrowi* have been identified as part of the helminth fauna of Bulgaria and South-Eastern Europe.
5. The first case of telaziosis in a domestic cat in Bulgaria has been identified.
6. Original data on the genome of stomach nematodes of the species *Graphidioides affinis* has been obtained.
7. Two new genera, *Varestrongylus* and *Elaphostrongylus*, and six new species, *Muellerius tenuispiculatus*, *Protostrongylus hobmaieri*, *Protostrongylus rupicaprae*, *Protostrongylus cuculorum*, *Varestrongylus sagittatus*, and *Elaphostrongylus cervi*, have been identified in the parasitofauna of Bulgaria.
8. New hosts for the nematodes *Thelazia callipaeda* and *Protostrongylus caprae* and a new geographical distribution of *P. caprae* have been identified.
9. An original method has been developed for the preparation of permanent microscopic slides for taxonomic studies of lung tissue invaded by protostrongylids.

Significant contributions in the **second** thematic area include:

1. An original method for quantitative larval diagnosis of proto-strongylids in definitive hosts has been developed.
2. For the first time, the detection of Ehrlichia spp. in Rhipicephalus sanguineus ticks from Bulgaria, as well as Rickettsia spp. in Ixodes ricinus ticks collected from foxes in our country, has been reported.

The **third** thematic area comprises the following contributions:

1. A direct relationship between the immune reactivity of the host and the stage of development of the zoonotic nematode Trichinella spiralis has been established. A stimulating effect of trichinella has been established in the early intestinal and early muscular stages of their development, and an inhibitory effect in the migration stage.
2. Original criteria have been developed for the analysis and evaluation of macroscopic and microscopic changes in domestic and wild ruminants infected with lung nematodes of the family Protostrongylidae and in wild pigs infected with Metastrongylus spp., Ascarops strongylina, and Macracanthorhynchus hirudinaceus. For the first time, studies have been conducted and data published on pulmonary pathoanatomical changes in mouflons infected with protostrongylids.

The **fourth** thematic area includes the analysis and systematization of literature data on alternative methods used for parasite control, as well as antiparasitic drugs, their dosages, and methods of treatment.

A contribution to the **fifth** thematic area is a comparative study of honey bee diseases in Bulgaria and Estonia, in which varroasis, noseosis, American foulbrood, and European foulbrood have been identified in both countries. The main cause of nosematosis in Estonia is Nosema apis, and in Bulgaria N. ceranae.

Assoc. Prof. Mariana Panayotova-Pencheva is the supervisor of a successfully defended PhD student in the scientific field of Parasitology and Invasive Diseases of Animals and Humans (*Indicator E*). Since the beginning of her academic career, she has participated in 8 national and 4 international projects and has supervised 2 national and 3 international projects (one of which is ongoing). Almost all projects are funded by The Bulgarian National Science Fund and within the framework of cooperation between the Bulgarian Academy of Sciences and foreign scientific and educational organizations (the Lithuanian, Slovak, and Estonian Academies of Sciences). In the current competition under *Indicator E*, the candidate has included her participation in four of the above-mentioned projects (one national and three international).

Dr. Panayotova-Pencheva regularly participates in scientific events in Bulgaria and abroad. She has presented 40 reports and 25 posters at 49 scientific forums. She has reviewed 48 scientific articles and projects. She has prepared 12 reviews and opinions on procedures for academic positions and PhD degree. She is a member of the Management Board of the Bulgarian Parasitological Society and of the editorial board of two international journals – Russian Journal of Parasitology and Journal of Zoological and Botanical Gardens.

The materials submitted for the competition demonstrate the candidate's indisputably high scientometric performance, exceeding the required minimum in all indicators many times over, as follows:

Group of indicators	Required points	Candidate's points
A	50	50
Б	-	-
B	100	208
Г	200	264.5
Д	100	2520
E	100	155
TOTAL	550	3197.5

Conclusion

Based on the materials submitted for the competition, I consider that Assoc. Prof. Mariana Panayotova-Pencheva fully meets the requirements of The Law on Academic Staff Development in the Republic of Bulgaria, the Regulations for its implementation and the Regulations of IEMPAM for holding the academic position of Professor. She is an established scientist and specialist with a distinguished profile in the field of the announced competition. Her publications have fundamental and scientific-applied value for the development of veterinary medical parasitology.

Considering the above, I give my **positive assessment** with full conviction and recommend the honorable Scientific Jury to propose **Assoc. Prof. Mariana Stancheva Panayotova-Pencheva** for election to the academic position Professor in the scientific specialty Parasitology and Invasive Diseases of Animals and Humans, Professional field 6.4. Veterinary Medicine, Field of higher education 6. Agricultural Sciences and Veterinary Medicine.



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Assoc. Prof. Emilia Petrova, PhD

February 16th, 2026