

ACADEMIC STATEMENT

REGARDING THE SUBMITTED SCIENTIFIC PUBLICATIONS FOR PARTICIPATION IN A
COMPETITION FOR THE ACADEMIC POSITION ASSOCIATE PROFESSOR
ANNOUNCED BY THE INSTITUTE OF EXPERIMENTAL MORPHOLOGY, PATHOLOGY AND
ANTHROPOLOGY WITH MUSEUM TO THE BULGARIAN ACADEMY OF SCIENCES

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Candidate: Head assistant professor Ekaterina Hristova Pavlova, PhD

In the competition for the academic position Associate Professor in the scientific specialty Morphology for the needs of the Department of Experimental Morphology of the Institute of Experimental Morphology, Pathology and Anthropology with Museum (IEMPAM) to the Bulgarian Academy of Sciences (BAS), announced in the State Newspaper, Issue 16/23.02.2021, one candidate applied: **Head Assistant Professor Ekaterina Hristova Pavlova, PhD.**

Ekaterina Pavlova has a master degree in cell biology and pathology. In 2004 she started working as a biology specialist at the IEMPAM-BAS, in 2011 she was appointed assistant professor, and in 2014 Pavlova was promoted to head assistant professor in the Department of Experimental Morphology at the same institute. Following a successful defense of a doctoral dissertation entitled "Morphofunctional characteristics of estrogen action on mammalian spermatogenesis" in 2014 she was awarded a PhD degree in the scientific field of morphology. Pavlova is a member of the Bulgarian Anatomical Society, a collective member of the International Federation of Associations of Anatomists (IFAA) and the European Federation of Experimental Morphology (EFEM), and she is also a member of the Network for Young Researchers in Andrology (NYRA) and the International Society of Andrology (ISA).

Dr. Ekaterina Pavlova has more than 16 years of academic professional experience, certified by a document from the institute, out of which 7 years as a head assistant professor. She presents a list of a total of 54 scientific publications, including 7 publications in relation to her doctoral dissertation (not subject to review). Pavlova participates in the current competition with 47 scientific papers, published after acquirement of the scientific degree by the applicant, the PhD thesis summary, an extended abstract and 8 abstracts, which appeared in impact factor journals. The profile of these scientific publications includes 18 papers in journals indexed in the largest abstract and citation database of peer-reviewed literature and 29 articles in peer-reviewed referred journals or in edited scientific conference proceedings which do not repeat the above-mentioned papers. All scientific articles for participation in the competition are a

collective work and in twelve (>25%) of them Pavlova is the first co-author. Attached to the documentation is a reference from the candidate for the impact factor of the scientific journals in which her articles were published. According to it, the total impact factor of these journals is 62.293, formed by impact factor 43.708 of 19 publications and IF 18.585 of 8 abstracts. Pavlova's individual impact factor is a total of 10.244. Her scientific activity also includes 113 communications reported at scientific events in Bulgaria and/or abroad, presented in a separate list. Two of these contributions were awarded. Ekaterina Pavlova has been a member of the research teams for the implementation of 16 research projects, including six international (one under the EU's Seventh Framework Program, three under the Human Resources Development Operational Program and two under bilateral scientific cooperation), four national projects financially supported by the Bulgarian National Science Fund and six institutional research projects funded by the BAS and the Sofia University "St. Kliment Ohridski". In two of these projects (one institutional of the BAS and one national) Pavlova was the principal investigator.

The research activity of Ekaterina Pavlova is characterized with originality, novelty and clinical orientation. Her scientific interests are in the field of experimental morphology, toxicology and biochemistry. The main research topic of the candidate, with which deal her doctoral thesis and most of publications, is the study of the morphofunctional aspects of mammalian spermatogenesis. The scientific contributions of these studies are essential for the identification of biomarkers for endocrine and metabolic disorders, for the elucidation of pathomorphological and biochemical alterations in the testis and its reproductive capacity following use of medications and other prescription drugs as risk factors of male infertility. Along with these studies, Pavlova has also investigated changes in angiotensin II receptor type 1 expression in some limbic areas and the effect of the administration of its antagonist losartan in order to develop a therapeutic strategy for the treatment of comorbid hypertension and epilepsy. An important challenge in her research is the study on the mechanisms of action of chemical agents, such as sodium and cobalt salts, used as dietary supplements in the clinic and sports medicine due to their stimulating effect on erythropoiesis, as well as the potential application of two ionophore antibiotics as antidotes for lead intoxication.

The research achievements of Ekaterina Pavlova reflect in national and world literature. According to the candidate's data, 16 of her scientific articles have 114 total citations in Bulgarian and international bibliographic data sources. The report in Scopus shows that 7 documents by this author have been cited a total of 34 times in the database and that Ekaterina H. Pavlova has an h-index = 5. She also has experience as a peer reviewer of research projects

and scientific articles, as well as participation in the organization of a scientific event with international participation.

In conclusion, I found that Dr. Ekaterina Pavlova has extensive research experience and methodological training, possesses good computer literacy and language skills, and has provided a convincing evidence for an excellent morphologist. She complies with the formal requirements of the The Law on the Development of Academic Staff in the Republic of Bulgaria, i.e. she holds a PhD degree, has held the position of a head assistant professor for 7 years, and presents sufficient number of publications, apart from those for obtaining a PhD degree, which contribute significantly to the scientific specialty and have become available to the scientific community in Bulgaria and abroad. The scientific activity and metrics indicators of the applicant meet the mandatory national requirements for competition candidature in the professional field 4.3. Biological sciences and correspond to all the minimum criteria and additional specific requirements for taking the position of associate professor in Appendix 1 of the Regulations on the terms and conditions for acquiring scientific degrees and for holding academic positions at the IEMPAM-BAS, as can be obtained from the table:

Group of indicators	Indicator	Mandatory quantitative criteria to become an Associate Professor (minimum number of points)	Scientometric indicators of Dr. Ekaterina Pavlova (verified number of points)
A	1. PhD thesis	50	50
B	4. Habilitation work – scientific publications, appeared in journals referred and indexed in the leading databases with scientific information (Web of Science and Scopus)	100	100
G	7. Publications in peer-reviewed journals, indexed in the leading databases with scientific information (Web of Science and Scopus), outside the habilitation work	Total number = 220	Total number = 264
D	10. Citations in scientific journals, monographs, collective monographs and patents referred and indexed in the leading databases with scientific information (Web of Science and Scopus)	60	68
Total number		430	482

The analysis of the overall activity of the candidate to become an associate professor convinces me to conclude that she has all the needed professional traits, methodological skills, language grasp and research experience. Therefore, I recommend to the members of the scientific jury to vote positively for the appointment of Head Assistant Professor Ekaterina Hristova Pavlova, PhD to the academic position Associate Professor in the area of higher education 4. Natural

sciences, mathematics and informatics, professional field 4.3. Biological sciences, scientific specialty Morphology, for the needs of the Department of Experimental Morphology of the Institute of Experimental Morphology, Pathology and Anthropology with Museum to the Bulgarian Academy of Sciences.

Sofia, 04.06.2021

Written by: 
(Prof. Dr. Nikolai Lazarov, PhD, DSc)