



## REVIEW

from **Prof. Yvetta Antonova Koeva, MD, PhD**, Department of Anatomy, Histology and Embryology of Medical University of Plovdiv, member of the scientific jury announced by the University "Dr. Asen Zlatarov" - Burgas competition for academic position *professor* in the field of higher education 7. Health and sport, professional department 7.1. Medicine, scientific specialty "Anatomy, Histology and Cytology" (SG 59/16.07.2021).

Materials for participation in the competition were deposited by **Assoc. Prof. Ivaylo Stefanov Stefanov**, Department of Anatomy, Faculty of Medicine, Thracian University – Stara Zagora.

The set of materials presented by the applicant is in accordance with the normative requirements for holding academic positions at the University "Prof. Dr. Asen Zlatarov" - Burgas and include all required documents.

### **I. Career profile of the applicant Assoc. Prof. Ivaylo Stefanov Stefanov.**

Dr. Ivaylo Stefanov was born on March 2, 1972 in Vratsa. In 1997 he graduated with a degree in Veterinary Medicine at the Thracian University of Stara Zagora. In 2000, Dr. Stefanov was selected as an Assistant professor in the Department of Veterinary Anatomy, Histology and Embryology, since 2006 he has been an Assistant in the Department of Anatomy of Domestic Animals, and since 2011 he has been Chief assistant. In 2011, he defended his dissertation on "*Morphofunctional aspects of the sinus paranasalis in the dog*" and was awarded the Educational and Scientific Degree (ONS) "Doctor" in "Anatomy, Histology and Cytology" In 2016 he was habilitated as an "Associate professor" in the Department of Anatomy of the Thracian University of Stara Zagora. He participated in the Secretariat in organising international scientific forums (2012, 2013, 2014 and 2019). He is a member of the Bulgarian Anatomical Society, the European Association of Veterinary Anatomists and the SUB Stara Zagora.

### **General description of the materials submitted in the competition**

Dr. Stefanov presents for review in the competition a total number of scientific papers - 18 articles published in various international and Bulgarian scientific journals in full text, in English, of which: 6 in journals with IF (total IF -2.358), 8 in journals with SJR, 4 in refereed journals without IF and SJR, 1 monograph published in 2021 on "*Morphometric, histochemical and immunohistochemical characteristics of mast cells in the gallbladder and extrahepatic bile ducts in domestic pigs*". He is a leading author in 7 scientific publications (42.8%), in 1 of which - independent author. In 5 he is the second author, and in 7 - the last author. In 8 of the publications with IF and SJR he is the leading author, in second and next place - 6, which unequivocally reveals the personal contribution of the candidate in research. The citations are 12 in total (total IF of the citations - 12,713). In addition, there are a total of 16 participations in 9 different scientific forums - of which 2 national, 6 in the country with international participation, and 1 abroad.

He participates in 4 competitively funded research projects, 1 of which is a leader, and 3 of the research projects include students in the team. Thematically, the projects are in the field of

cytology and histology with the application of modern immuno- and enzymohistochemical methods, closely related to the specialty of the announced competition. Scientific adviser of 1 doctoral student successfully defended his doctoral dissertation at the Department of Anatomy of the Medical Faculty of the Thracian University of Stara Zagora. He has participated in 8 scientific juries for the selection of Assistants, Chief assistants, Associate professors and ONS "Doctor" at the Medical Faculty of TU Stara Zagora, MU-Plovdiv and the University of Forestry. The candidate's review activity includes reviews of 4 scientific publications in international journals with IF (European Journal of Histochemistry; Anatomy, Histologia, Embriologia; Journal of Veterinary Anatomy; Biomarkers in Medicine) and 2 in national scientific journals (Bulgarian Journal of Veterinary Medicine). He is a member of author teams of 6 manuals on Anatomy, Cytology and Histology in Bulgarian and English for medical students. He was awarded 3 prizes for active participation in the publishing activities of the Thracian University in connection with the publication of 3 articles in impact factor journals.

From the table of recommended criteria it is established that the candidate meets the conditions for holding the academic position "Professor" and has ONS "Doctor" in the scientific specialty "Anatomy, Histology and Cytology", fully consistent with the competition.

#### **Evaluation of the candidate's scientific works**

To the documents Dr. Stefanov has attached a very well-prepared reference for the contributions from the scientific works, which accurately reflects his achievements in the separate scientific directions. The main scientific contributions of Dr. Stefanov are related to: morphometric, histochemical and immunohistochemical studies on mast cells and nerve structures in various organs of pigs, rats and humans in normal - some of the original contributions of Dr. Stefanov are related to histo- and immunohistologic and morphometric characteristics of mast cells in the bile ducts and gallbladder in pigs - immunohistochemical study by colocalization of tryptase and ghrelin positive mast cells for the first time established the expression of ghrelin in mast cells, which presents the candidate as one of the few on the study of this cell population of specific clinical significance; the data on the distribution of mast cells in the wall of the intramural part of the porcine ureter are also original; for the first time the presence of endocrine cells - ghrelin, serotonin and somatostatin positive cells in the extrahepatic bile ducts and gallbladder in pigs; enzymohistochemical study with NADPH-d for the first time presents a pattern of distribution of structures having a metabolic pathway for nitric oxide production such as neurons, nerve fibers, vascular endothelium and mast cells in the spinal ganglia in pigs; original in their nature are the first comparative morphological studies of the distribution of different types of mast cells in different parts of the lungs in normal rats of different ages; for the first time, data on mast cell involvement and the role of ghrelin in the development of respiratory distress syndrome (RDS) in neonates are presented. The scientifically applied nature of his research is particularly strongly demonstrated in the macromorphometric studies of the ureters in pigs by the application of silicone castings; new information has been provided on the macrovascularisation of the gallbladder in pigs using the corrosion method; the generally accepted protocol for diaphonization of fish, amphibians and reptiles has been optimized in order to develop better diaphonized objects that can be used as museum exhibits and in the training of students in veterinary medicine.



### **Evaluation of teaching activities**

Dr. Stefanov's teaching activities are related to lectures and practical classes, including in English, for students of Medicine in Anatomy, Cytology, Histology and General embryology. The candidate also leads part of the lecture course in Anatomy for students majoring in "Midwife", "Nurse", "Medical Assistant" and "Social Activities". He participates in the semester exams of students in these specialties. The teaching load of the candidate meets the requirements of the Law for the Development of the Academic Staff in the Republic of Bulgaria (ZRASRB) and the Regulations for its implementation.

### **II. Conclusion**

After the acquaintance and the analysis of the presented materials under the competition (SG, issue 59 / 16.07.2021) I consider that:

Associate Professor Dr. Ivaylo Stefanov Stefanov is a well-established lecturer and in-depth researcher with sustainable academic development and a definite contribution to morphological science.

The scientific production of Dr. Stefanov, the original and applied contributions, the scientometric indicators, the participation in scientific projects, etc. fully meet the requirements of the Law for Development of the Academic Staff in the Republic of Bulgaria, the Regulations for its implementation. Based on this, I confidently give my **positive assessment** and recommend to the esteemed jury to choose Assoc. Prof. Dr. I. Stefanov, for the academic position "*Professor*" in the field of higher education 7. Health and Sports, professional field 7.1. Medicine, scientific specialty "Anatomy, Histology and Cytology" at the Faculty of Medicine of the University "Prof. Dr. Asen Zlatarov" - Burgas.

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**Prepared the review**

**Prof. Yvetta Koeva, MD, PhD**