

## Opinion

**from Prof. Dr. Pepa Koseva Atanasova-Hrischeva, MD, PhD**  
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Concerning the competition for the academic position of "Professor" in the field of higher education 7. „Health and sport“ in the professional direction 7.1 "Medicine" and scientific specialty "Anatomy, Histology and Cytology" for the need of the Medical Faculty to the University of Burgas „Asen Zlatarov“, announced in the State Newspaper, Issue 59/16.07.2021, with one candidate Associate Professor Ivaylo Stefanov Stefanov, PhD.

The deadlines for the competition have been met and the documents are in line with the requirements.

### **I. Candidate`s career:**

Assoc. Prof. Ivaylo Stefanov graduated Veterinary medicine in 1997 at Thrakia University, Faculty of Veterinary Medicine, Stara Zagora.. He is a Master of Veterinary Medicine. Since 2012 he is a PhD of Anatomy, Histology and Cytology. He has worked as an assistant, senior assistant, chief assistant at the Faculty of Veterinary Medicine. Since 2016 he is an associate professor in the scientific specialty "Anatomy, Histology and Cytology" at the Faculty of Medicine, Thrakia University, Stara Zagora. Membership and position in scientific organizations and associations: He is a member of:

1. Bulgarian Anatomical Society (BAD): since 2008
2. European Association of Veterinary Anatomists (EAVA): since 2012
3. Union of Scientists - Stara Zagora.

### **II. Scientific activity**

Evaluation of scientific papers:

Assoc. Prof. Stefanov presents:

1. A total of 18 scientific publications.
  - 6 in journals referenced in Scopus and Web of Science, with total IF = 2.358,
  - 8 in journals referenced in Scopus and Web of Science, with SJR.
  - 4 scientific publications in journals without IF and SJR

He is a leading author in 7 scientific publications (42.8%), in 1 of which - single author.



2. 12 citations are presented. 8 citations in journals referenced in Scopus and Web of Science.

3. 1 monograph titled "Morphometric, histochemical and immunohistochemical characteristics of mast cells in the gallbladder and extrahepatic bile ducts in domestic pigs" by Ivaylo Stefanov Stefanov is presented, Publishing house KOTA - Stara Zagora, 2021.

4. Participation in 6 textbooks on anatomy, histology and cytology in Bulgarian. and in English.

5. 16 participations in Bulgarian and International Scientific Forums (congresses, conferences, symposia) for the period 2016. – 2020. 3 of them are in Hanover, Germany.

All publications, citations and participation in Scientific Forums are after the acquisition of the academic position of "Associate Professor". He has been awarded three times for active participation in the publishing activities of the Thrakia University in connection with the publication of 3 articles in journals with Impact Factor.

Assoc. Prof. Stefanov is registered to the National Center for Information and Documentation. He participates in the Scientific Jury of competitions for associate professor, chief assistant and assistant.

He has participated in 3 Research Projects at the Faculty of Veterinary Medicine of the Thrakia University. He was the head of a research project at the Medical Faculty of the Thrakia University.

He participated in organizing the XXIV National Congress of Bulgarian Anatomical Society with international participation, Stara Zagora Mineral Baths, 31.05. - 2.06. 2019 – as a member of the Organizing Committee and Chairman of the Scientific Section.

### **Scientific contributions.**

The scientific contributions of the research activity are mainly in the field of anatomy, histology and cytology, and can be related to the following main areas: macro- and microscopic anatomy, vascularization, histochemistry, enzymohistochemistry and immunohistochemistry of the gallbladder and extrahepatic bile ducts, spinal ganglia; histochemical and immunohistochemical studies on mast cells in various organs of rat, pig and human. They are grouped thematically into five sections.

New information has been provided on the macrovascularisation of the gallbladder in pigs using the corrosion method concerning variations in the origin of *A. cystica*. This information, together with the importance of the pig as an increasingly used experimental model, may be useful in developing new surgical techniques to facilitate cholecystectomy. The data obtained



would also contribute to the understanding of the etiology of postoperative complications as a result of surgical interventions at this site and their prevention. Histochemical examination using alcian blue staining at different pH and the alcian blue-PAS technique, for the first time allows the differentiation of the expression of neutral from acidic mucins, as well as sulfated from unsulfated glycosaminoglycans in the superficial and glandular epithelium at the bottom, body and neck of the porcine gallbladder, where the author established age-localisation specific mucin content. An enzyme-linked histochemical study with NADPH-d presented for the first time a pattern of distribution of structures with a metabolic pathway for nitric oxide production, such as neurons, nerve fibers, vascular endothelium, and mast cells in porcine spinal ganglia.

Assoc. Prof. Stefanov conducted an immunohistochemical study by colocalization of tryptase and ghrelin positive mast cells and for the first time established the expression of ghrelin in mast cells. This immunohistochemical study of ghrelin for the first time provides information on the presence of endocrine cells in the extrahepatic bile ducts and gallbladder. Ghrelin positive endocrine cells and nerve fibers were described for the first time in the ductus cysticus, ductus choledochus and gallbladder in pigs.

For the first time, the candidate provides data concerning the involvement of mast cells and ghrelin synthesized by them in the development of respiratory distress syndrome (RDS), also known as hyaline membrane disease (HMD) in newborns.

### **III. Teaching activities.**

According to the attached reference, Assoc. Prof. Ivaylo Stefanov has teaching activities in excess of the required. He participates in lecture courses, as well as in conducting exercises and exams.

In October 2018, he participated as a lecturer in a workshop organized by the Institute of Fishery Resources in Varna on "Diaphonized biological sites" for theoretical and practical training related to the various stages of the method "Diaphonization" of fish, which is used in the development of museum exhibits and for the training of students studying fish anatomy. He is a research supervisor of a doctoral student from the Department of Anatomy at the Medical Faculty, Thrakia University, with a successfully defended dissertation for the acquisition of PhD.

Specializations and scientific experience abroad  
Assoc. Prof. Stefanov conducted



1. Quarterly training (Short Term Scientific Missions - STSMs) on COST Action BM 1007 "Mast Cells and Basophils - Targets for Innovative Therapies", Prague, Czech Republic - Institute of Molecular Genetics - Czech Academy of Sciences, for the period from 18. 02. to May 18, 2013
2. Participation in a workshop on "Application of confocal microscopy", organized by YGVA (Young Generation of Veterinary Anatomists), Ljubljana, Slovenia, July 8-10, 2007.
3. Visit to the Department of Anatomy in 2012 in Bursa, Republic of Turkey, for training purposes (Erasmus Program).
4. Lecture and practical course on "Application of silicone elastomers in anatomy education" at the Department of Anatomy, Faculty of Veterinary Medicine, Ankara, Republic of Turkey (Erasmus Plus Program for teaching, 18-22.05.2015).

#### **IV. Conclusion**

The materials and documents presented by the candidate are in compliance with the requirements of the Law of the Republic of Bulgaria regarding the Academic staff development, the Regulations on the terms and conditions for obtaining scientific degrees and academic positions in MF-Burgas. My complex assessment after getting acquainted with the presented scientific papers and teaching activities, as well as qualification indicators clearly show that Assoc. Prof. Ivaylo Stefanov, PhD meets all quantitative and qualitative indicators for holding the academic position of "Professor" in the professional field of Medicine ", Scientific specialty " Anatomy, Histology and Cytology ".

I convincingly recommend to the Scientific Jury to award the scientific position "Professor" to Ivaylo Stefanov.

8.12.2021

Prepared the opinion:

Prof. Dr. Pepa Atanasova-Hrišcheva, MD, PhD