



## О P I N I O N

by

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of the materials submitted for participation in a competition for the academic position of **"associate professor"** in the professional direction "Veterinary Medicine", specialty "Animal Pathology"

In the competition for "docent", announced in the State Gazette, no. 24/25.03.2022 and on the website of the Forestry University for the needs of the "Plant Pathology and Chemistry" department at the "Ecology and Landscape Architecture" faculty, as a candidate ch. assistant Dr. Metodi Hristov Petrichev, PhD from LTU.

### 1. Brief biographical data

Ch. assistant Dr. Metodi Hristov Petrichev was born on January 30, 1974, in Ruse. He completed his higher education at the Forestry University of Sofia - Faculty of Veterinary Medicine in 2001 with the Master of Veterinary Medicine degree. In 2002, he began his professional career at the Professional High School of Veterinary Medicine and Agriculture "St. Georgi Pobedonosets" - Kostinbrod, as a teacher of microbiology and anatomy of domestic and productive animals. In the period 2003-2006, he was a full-time doctoral student at the Faculty of Veterinary Medicine, at the Forestry University - Sofia. On the basis of a successfully defended dissertation on the topic "Bioavailability, clinical efficacy and toxicity of iron methionate in laboratory animals and pigs", in 2007 he was awarded the educational and scientific degree "doctor" in the scientific specialty "Animal Pathology" by the VAK. From 2006 to June 2015, he worked at the Bulgarian Food Safety Agency - NDNIVMI - Sofia, as Head of the National Reference Laboratory of Mycotoxicology and Ecotoxicology - 4 years and Chief Assistant in the National Reference Laboratory of Mycotoxicology and Ecotoxicology - 5 years. From January 2016 to June 2017, he was the Head of the Laboratory at RVS Ruse EOOD - Ruse, with the main activity - conducting analyzes of food, feed and biological materials and implementing new methods for analyses. In September 2017, Dr. M. Petrichev participated in a competition for the academic position of Chief Assistant in Biochemistry in the Department of "Plant Pathology and Chemistry", at the Faculty of Ecology and Landscape Architecture - FELA at the Forestry University, where he currently works.

### 2. General description of the presented materials.

In the announced competition for the academic position "Docent" in "Animal Pathology", the candidate ch. assistant Dr. Metodi Petrichev has presented a list of significant scientific production. He has presented a list of significant production – total of 30 scientific papers, distributed by indicators as follows:

Monograph - 1 pc.

Publications - 29 nos. scientific articles and reports published in refereed and non-refereed Bulgarian and foreign journals.

### **3. Reflection of the candidate's scientific publications in the literature (known citations).**

The annexed by ch. Associate Professor Petrichev Reference for citations of scientific works includes citations of 15 of his scientific publications in journals with SJR, as well as in refereed and indexed scientific publications, monographs and collective volumes, as follows:

- Citations or reviews in scientific publications, referenced and indexed in world-famous databases with scientific information or in monographs and collective volumes - 5 citations.
- Citations in monographs and collective volumes with scientific review – 1 citation.
- Citations or reviews in non-refereed peer-reviewed journals – 9 citations.

### **4. General characteristics of the applicant's activity.**

#### **4.1. Educational and pedagogical activity (work with students and doctoral students).**

Dr. Metodi Petrichev holds the academic position of Head. assistant professor at the Forestry University - Faculty of Veterinary Medicine from 09.2017. The teaching experience of the candidate for associate professor, chap. assistant Dr. Petrichev as chief assistant at LTU so far is 4 years and 9 months, and the total work experience in the specialty - 21 years. As Ch. assistant, he prepares teaching materials and conducts practical classes, seminars and semester exams in the discipline of Biochemistry - specialty veterinary medicine and Ecology in Bulgarian and English.; conducts teaching practices, completes course assignments and student projects. Participates in the control of students during the performance of classroom and extra-auditory activities, updates and organization of the material base for training in the Biochemistry discipline in Bulgarian and English. He is the author of the Curriculum for the discipline of Biochemistry from the specialty "Veterinary Medicine" OCS "master". The annual individual academic employment of ch. assistant Dr. Petrichev amounts to 636 hours.

#### **4.2 Scientific and applied scientific activity.**

In the announced competition for the academic position "Associate Professor" in "Animal Pathology" chap. assistant professor Dr. Metodi Petrichev has presented a list of significant scientific production - a total of 30 scientific works, distributed by indicators as follows: 14 pcs. articles and reports published in scientific publications, referenced and indexed in world-famous databases with scientific information - (indicator "D", item 7); 15 pcs. articles and reports published in non-refereed peer-reviewed journals or published in edited collective volumes (indicator "D", item 8); citations in scientific publications - 5 items (indicator "D -11"); citations in monographs - 1 no. (index "D-12"); citations in non-refereed journals with scientific review - 9 nos. (indicator "D-13"). All presented scientific publications are outside the topic of his dissertation for the acquisition of the ONS "Doctor". In addition to these materials, Dr. M. Petrichev participated in the competition as the author of an independent electronic edition of a



research-themed monograph entitled "Mycotoxicoses in productive animals and basic methods for the analysis of mycotoxins" (2021), which is both theoretical, as well as applied orientation. In it, the author has included his own scientific research on the contamination of cereals and other feeds with mycotoxins, as well as the etiology, clinic and pathological symptoms caused by mycotoxins in animals, the economic losses due to the toxic effect on the body, including prevention and control measures with mycotoxicosis in animals. Of the presented scientific publications in 10 nos. Dr. Petrichev is the lead author, and in 20 he is in second or subsequent place. Of the scientific works, 14 are printed in publications referenced and indexed in world-famous databases with scientific information, of which 2 nos. are printed in magazines with SJR. The other 15 issues were printed in non-refereed journals. Of the total number of scientific publications, 14 are in English, and 15 are in Cyrillic. Thus, the scientific works presented by the candidate for associate professor, Dr. M. Petrichev, and the rest of the publication material fully meet the requirements of ZRASRB and the minimum requirements for scientific and teaching activities in the FVM of the Forestry University, Sofia.

Dr. M. Petrichev also carried out an active scientific and applied activity. He also actively participates in the research activities of the National Diagnostic Research Veterinary Medical Institute, Sofia, in the development of the following scientific projects of current importance for veterinary science and practice:

- Code 5.2 / 2005 "Possibilities of using copper methionate for the prevention of micronutrient deficiencies in laboratory animals, pigs and lambs".

- Code 5.16 / 2005 "Investigation of feed contamination with xenobiotics and possibilities of toxicological risks in animals".

- Code 5.17 / 2006 "Investigation of FOS and CS intoxications in wild mammals and birds." Contract projects with external departments and companies.

1. Research of the veterinary medicinal products Feridil - 200 and Fervetrin - 200 in laboratory animals and pigs.

- 2.. Preclinical and clinical studies of two iron dextran complexes (Ferrodextran - 100 and Feridil - 100)

Along with his scientific and teaching activities, chap. assistant Dr. M. Petrichev, works hard to increase his professional qualification and personal competence. He presents evidence of increasing his language qualifications - written and spoken English, German and Russian. Has a good command of Microsoft Office products - Windows, MS Office (Word, Excel, PowerPoint), Internet Explorer; Operation with liquid chromatography system DIONEX ULTIMATE 3000; Operation with gas chromatography system VARIAN 431GC / 220MS; Operation of an automatic hematology analyzer BC 3000 plus; Operation with automatic hematology analyzer MS 4 VET; Work with semi-automatic biochemical analyzer CLIMA plus; Operation of the VARIAN LIBERTY 110 Atomic Absorption Spectrophotometer.

Dr. Petrichev is a member of the editorial board of the Global Journal of Agriculture and Soil Science, [agri@springfieldpublishers.com](mailto:agri@springfieldpublishers.com) (Springfield Publishers); Member of the Editorial Board of the Open Access Journal of Biogeneric Science and Research; Member of the Editorial Board of the Journal of Pharmaceutical Research and Development (Uniscience Publishers LLC, USA)

and Member of the Editorial Board of the International Journal of Zoology and Animal Biology. Dr. Petrichev also has good communication and organizational skills, ability to work independently and in a team, communicative, quick adaptation to new environments, excellent self-discipline, skills for prioritizing tasks, competencies for coordinating activities and dealing with problem situations, responsible and loyal, as well as theoretical and practical skills and knowledge of laboratory projects and equipment.

He presents written evidence of active participation in many national and international events - seminars, symposia, conferences, etc., where he presents his scientific achievements to the relevant scientific audience. He is the independent author of the monograph "Mycotoxicooses in productive animals and basic methods for the analysis of mycotoxins" (2021), which is both theoretical and applied. In 2006, Dr. M. Petrichev defended his PhD in the scientific specialty "Animal Pathology" with the topic of his dissertation "Bioavailability, clinical efficacy and toxicity of iron methionate in laboratory animals and pigs".

#### **4.4. Contributions (scientific, scientific, applied).**

I positively evaluate the self-assessment of the contributions of the candidate for "Associate Professor" of all scientific publications. They show a clearly defined scientific profile and are well grouped as contributions in 5 independent thematic areas, which I consider to be correctly and logically separated, namely:

I. Contributions related to the study of the pharmacokinetics and clinical effectiveness of antibiotics and inorganic and organic zinc and copper compounds in broiler chickens and pigs - 9 publications. Dr. Petrichev's research conducted in this direction clarified to a significant extent the questions regarding the mechanisms of pharmacokinetics and clinical effectiveness of certain antibiotics and inorganic and organic zinc and copper compounds in birds and pigs.

II. Contributions related to conducting preclinical studies to study the toxicity and utilization of antiparasitic, chemotherapeutic and pesticide products in white mice, rats and rabbits - 6 publications. In response to one of the EU's main strategies to increase the health, welfare and economic efficiency of farmed animals, studies of significant scientific value have been carried out, focusing on the paraclinical importance of lifelong diagnosis in poisonings related to inappropriate adaptation and nutrition.

III. Contributions in the field of ecotoxicology related to conducting chemical-technological analyzes of samples of dead bees, wild animals and birds for the presence of anticholinesterase pesticides - 4 publications. In a specialized laboratory of the BABH, extensive studies were conducted on the intoxication effect of anticholinesterase pesticides on the animal organism. The results show that anticholinesterase pesticides (FOCs and CSs) pose a major toxicological risk to insects and animals.

IV. Contributions related to the study of the oral toxicity of aflatoxins, ochratoxins and fusariotoxins on the animal organism - 1 Monograph and 1 publication. Monogastric and young animals were found to be more sensitive to aflatoxins than ruminants and adults. In diets with high levels of proteins, lipids and carotenoids, their toxicity is reduced. Biochemical tests that can be



used as indicators of aflatoxicosis are: increased activity of serum enzymes ALP, AST, ALT, SDG, LDH, GGT; decreased content of total serum protein, protein fractions (alpha-, beta- and gamma-globulins), fibrinogen; increasing the concentration of glycocholic and glycodeoxycholic acids. It was also established that the main grain fodder in Bulgaria - wheat and corn - simultaneously contain significant amounts of several toxins - DON, zearalenone, ochratoxin, and only in rare cases T-2 toxin. (Monograph)

V. Contributions related to risk assessment of feed materials and feed - 1 publication. 21% of compound feed and 35% of grain feed were found to be contaminated with anticholinesterase pesticides and pose a serious toxicological risk to large and small ruminants, pigs, birds and rabbits.

### **5. Evaluation of the candidate's personal contribution.**

All publications of ch. assistant M. Petrichev are current, purposeful and perspective developments that present him as a very well-prepared theoretical and practical scientist, with very good opportunities for independent and collective research activities in the field of pathology, toxicology and biochemistry. In all scientific developments, the personal contribution of Dr. Petrichev undoubtedly stands out, which is why I consider that the mentioned contributions are largely his personal work. All contributions are competently justified and formulated, highly informative and fully consistent with the obtained experimental results. From the table presented for the minimum requirements for the academic position "Associate Professor", it can be seen that the candidate fully meets and even exceeds the mandatory requirements for "Associate Professor". For some of the mandatory minimum requirements, the candidate ch. Associate Professor Metodi Petrichev not only meets but also exceeds the same requirements of the FVM at LTU - Sofia. This is also confirmed by the total number of points referred to the minimum requirements for "Associate Professor" in FVM at LTU, which he presents - 503.44.

**Bearing in mind the scientific output of the candidate for the academic position "Associate Professor" submitted for evaluation, I am convinced that it definitely defines his established professional appearance as a researcher and scientist in the field of pathology, toxicology and biochemistry.**

### **6. Critical Notes.**

Certain technical inaccuracies have been admitted in the table for the fulfillment of the national minimum requirements, which does not detract from the value of the professional-academic output of ch. Assistant Professor Metodi Petrichev.

### **7. Conclusion.**

Based on the presented evidence of teaching and research activity, the relevance of the problems on which he works and scientific contributions, publication activity, teaching knowledge and experience, scientific and teaching experience and personal qualities of the candidate in the Competition for the academic position "Associate Professor"; Ch. assistant Dr. Metodi Hristov Petrichev, PhD from the Department of "Plant Pathology and Chemistry" at the Forestry University - Sofia, **I highly appreciate his scientific and professional-academic output and I**

firmly believe that it definitely defines his established professional appearance as a researcher and scientist in the field of pathology, toxicology and biochemistry.

In connection with the above, I propose Ch. Associate Professor Metodi Hristov Petrichev, PhD, to be elected to the academic position of "ASSOCIATE PROFESSOR", in the professional field of "Veterinary Medicine", specialty "Animal Pathology".

30.06.2022

Prepared the opinion:

Sofia

(Prof. Dr. Ya. Iliev, PhD)