OPINION

on the materials for participation in a competition for the academic position "Associate Professor" at the Department of "Surgery, X-rayology, Obstetrics and Gynecology" in the field of higher education 6. "Agrarian Sciences and Veterinary Medicine", professional direction 6.4. "Veterinary Medicine", scientific specialty "Surgery, X-rayology and physiotherapy of animals" in the discipline "Surgery, diseases in productive animals, equine diseases, diseases in companian animals", announced by the University of Forestry (UF) in the State Gazette No. 18/01/03/2024 and procedure code VM-AsP-0224-127.

Candidate for participation in the competition: Chief assistant professor Konstantin Bogdanov Aminkov, lecturer in the Department of "Surgery, X-rayology, Obstetrics and Gynecology" at the Faculty of Veterinary Medicine (FVM) of University of Forestry.

The opinion is prepared by: Prof. D.Sc. Teodora Petrova Popova, Ph.D., University of Forestry, Sofia, in the field of higher education 6. "Agrarian Sciences and Veterinary Medicine", professional direction: 6.4. "Veterinary Medicine", scientific specialty "Epizootology, infectious diseases and prevention of infectious diseases in animals", appointed as a member of the Scientific Jury by Order No. ZPS-199/15.04.2024 of the Rector of UF - Sofia.

Brief biographical information about the applicant.

Konstantin Aminkov is a master veterinarian who graduated from the Faculty of Veterinary Medicine at UF in the city of Sofia in 2015 with excellent results. He worked in his specialty as a veterinarian in the company "AMI VET 2010 Ltd" in the city of Sofia (2015-2016). From 15.01.2016 to 20.09.2020, K. Aminkov is an Assistant professor in the Faculty of Veterinary Medicine at UF, where he carries out teaching and research activities. From 20.09.2020 until now he is a Chief assistant professor in the same faculty. On 04.10. 2019, he defended a dissertation on the topic "Study of the influence of various regenerative therapies in sheep and dogs with osteoarthritis" at UF and obtained the Educational and Scientific Degree (ESD) "Doctor" in the scientific specialty: "Surgery, X-rayology and Physiotherapy of Animals" in field of higher education 6. "Agrarian Sciences and Veterinary Medicine", professional direction 6.4. "Veterinary Medicine". He speaks English, works with a computer (Microsoft Office, Outlook Express) and with specialized medical equipment.

Compliance of the candidate's submitted documents and materials with the requirements according to the Regulations for the Development of the Academic Staff (RDAS) at UF.

Ch. assistant professor Dr. K. Aminkov has submitted all the documents necessary for participation in the competition for the academic position "Associate Professor", excellently prepared according to the requirements of the professional direction and the Regulations for DAS at UF.

Assessment of the candidate's educational and teaching activities.

Dr. Aminkov's teaching experience at the university is more than eight years and three months, starting in January 2016 when he joined UF as an Assistant professor. He has been a Chief assistant professorfor more than 3 years (from 20.09.2020 to the present). He prepares and conducts clinical classes and practical exams in the following disciplines from the curriculum of the specialty "Veterinary Medicine" in the Bulgarian language course: •

Module "Surgery (diseases of productive animals, diseases of equids, diseases of company animals)"; • "Herd health management"; • "X-rayology"; • "Anesthesiology and emergency medicine"; • "Propaedeutics of surgical diseases in animals"; • "Veterinary dentistry"; • "Physiotherapy"; • "Neurology and Neurosurgery" and • "Mobile Clinic". Except in Bulgarian, Ch. assistant professor Dr. Aminkov conducts the same disciplines in the English language course. His auditory employment is above the required minimum of 360 hours. These data show that he has a sufficiently long teaching experience in conducting classes with students in the academic disciplines he leads, fulfilling the mandatory academic employment. This experience is also enriched by teaching the same disciplines in English.

Evaluation of the candidate's scientific, applied scientific and publication activity

The scientific experience of Dr. K. Aminkov is more than eight years and three months. In addition, for the period 20.09. - 01.12.2021 - he also held the position of "Junior Researcher" at the Scientific research sector at UF on a part-time four-hour working day for testing a compression anastomosis apparatus. To participate in the competition for an associate professor, he submitted a total of **16 scientific papers,** which do not repeat those for the acquisition of the Doctorate. The materials for the ESD "Doctor" include a dissertation, an abstract and four independent articles in English, published in 2019 in the journal "Tradition and Modernity in Veterinary Medicine", referenced in Web of Sciences.

The total number of points that the candidate has indicated in the groups of indicators for academician position "Associate professor" is **728.15** with minimum national requirements of 400 points, as follows:

• According to indicator 1 (**group A**), Dr. Aminkov has **50** points out of 50 required - for a **dissertation** work to acquire the ESD "Doctor" on the topic "Study the impact of various regenerative therapies in sheep and dogs with osteoarthritis", defended at UF in 2019 (Diploma No. LTU-ONS-2019-119).

• According to indicator 2 (group **B**) – **0** points out of 0 required.

• According to the indicators from group **C** - **100** points out of 100 required, obtained from habilitation work - **monograph** on the topic "Regenerative therapies". Intel Entrans Publishing House, ISBN 978-619-7703-53-5, Sofia, 2024, pp. 1-112.

• According to the indicators from group **D** – **213.15** points out of 200 required, of which:

♦ Published **book** based on a defended thesis for the award of ESD "Doctor" entitled "Study of the impact of different regenerative therapies in sheep and dogs with osteoarthritis". Intel Entrans Publishing House, ISBN 978-619-7554-78-6, Sofia, 2021, pp. 1-146 – **40** points.

♦ Articles and reports published in scientific issues, referenced and indexed in world-famous databases with scientific information - **9** nos. – **156.50** points.

♦ Articles and reports published in non-refereed peer-reviewed journals or in edited collective volumes - **5** nos. – **16.65** points.

• According to indicators from group **E**, the candidate received **320** points out of 50 required, of which **225** points from **15** citations of 8 publications in scientific issues, referenced and indexed in world-famous databases with scientific information or in monographs and collective volumes (15 points for each); 90 points from 9 citations in monographs and collective volumes with scientific review (1 - in a monograph abroad, 3 - in dissertations abroad, 5 - in a dissertation in Bulgaria) and **5** points from 1 citation of a publication in a non-refereed scientific journal with reviewing. Of these, **80 points** presented for citations in dissertations must be **dropped,** as they do not have an ISBN

and are not registered as monographs or publications. Thus, the total number of points becomes **648.15.**

• According to the indicators from group F – **45** points out of 0 required, obtained for participation in three scientific projects.

The total number of points obtained by Dr. Aminkovv for all indicators **(648.15)** significantly **exceeds the minimum** required to fulfill the minimum national and additional requirements for professional fields, determined by the Regulations for the Implementation of the Law on the Development of the Academic Staff in the Republic of Bulgaria and RDAS of UF for occupying an academic position "Associate professor" in the field of higher education 6. Agricultural Sciences and Veterinary Medicine.

Participation in scientific, scientific-applied and educational projects

Ch. assistant professor Dr. Aminkov participated in three scientific projects financed through SES - UF, namely:

♦ "Application of bone marrow and platelet-enriched plasma in osteoarthritis of the knee joint in sheep" - 2 years Contract No. 151/08.03 .2017.

♦ "Prevalence, diagnosis, prognosis, therapy and prevention of cardiac dirofilariasis in cats in Bulgaria" - 2 years Contract No. NIS-B 27/03/2018.

♦ "Comparative study of platelet-rich plasma, sodium hyaluronate and dexpanthenol in the treatment of experimentally induced chemical and mechanical corneal ulcers in rabbits" - 2 years. Contract No. NIS-B 1148/07.04.2021.

In addition, Ch. assistant professor Dr. Aminkov participated in the development of the curricula for the disciplines "Propaedeutics of surgical diseases in animals" (compulsory) and "Veterinary dentistry" (optional) in Bulgarian and English.

He is a member of the "Commission for consideration of proposals and complaints from students and doctoral students" (2018-2020), and from 2020 - of the "Commission on Ethics, proposals and complaints from students and doctoral students" and of the "Commission on Organization and conducting practices and internships" of the FVM at UF, as well as in six temporary committees for checking, evaluating and defending the reports from the student internships. From 2017 until now, he is a member of the program committee of the annually held International Scientific Conference of FVM - UF "Tradition and Modernity in Veterinary Medicine", having also participated in the management of the scientific forum. He has participated in one National and 11 International scientific conferences, as well as in seminars and workshops to increase his qualification in his specialty.

Characteristics of the published scientific results

The presented by Ch. assistant professor Dr. K. Aminkov scientific publications for participation in the competition for Associate professor are **16** in total. These include a habilitation thesis - **a monograph, a book** based on a defended dissertation for the award of the ESD "Doctor", **one** scientific publication with an impact factor **(IF: 0.9)** and **13** scientific articles without an impact factor. Of these, the publications in scientific issues, referenced and indexed in world-famous databases with scientific information (Scopus, Web of Science) without impact factor or impact rank are **8,** in English, and the remaining **5** articles are in non-refereed peer-reviewed journals or in edited collective volumes, 2 of which are in English and 3 in Bulgarian. The overall impact factor of the publications is 0.9. **The large number of articles in refereed scientific**

journals is an indicator of the importance of his research and publication activity.

Reflection of the candidate's scientific activity in the literature (citability)

Data are presented for **11** scientific papers cited in **25** publications. Eight articles with the participation of Dr. Aminkov have been cited in **15** publications in scientific issues, referenced and indexed in world-famous databases with scientific information (Web of Science or Scopus). Six of them are in journals with IF or SJR, with the overall IF of the issues in which they are cited being 8.84. One article with his participation has been cited in a publication in non-refereed peer-reviewed journal. One publication is cited in a monograph abroad, three - in a Ph.D. dissertation abroad, and five - in a "Doctor" dissertation in our country. These results are a good indicator of the impact of his research production among specialists in our country and abroad.

Contributions in the candidate's works (scientific, scientific-applied, applied)

The scientific interests of Ch. assistant professor Dr. Aminkov are oriented towards regenerative medicine, anesthesiology and imaging diagnostics in animals and are related to solving theoretical and practical problems. His scientific and scientific-applied contributions are **in four main directions:**

1. Original contributions to the field of veterinary anesthesiology. A relatively safe anesthetic protocol is proposed for the balanced anesthesia during dental procedures in brown bears (Ursus arctos). It does not cause significant changes in basic physiological parameters, except for a significant decrease in core body temperature (in publication 1). By assessing cardiorespiratory function during balanced anesthesia, the effects of anesthetic agents on the cardiovascular and respiratory systems of brown bears have been studied (1). The analgesic effects of the proposed anesthetic plan during dental procedures in brown bears are evaluated, and no pain response is detected during the manipulation (1). The effects of total intravenous anesthesia on hematological and biochemical parameters in brown bears during an annual clinical examination are studied. No statistically significant changes are observed between the final and baseline levels of the studied parameters, with the exception of PLT, GLU and CREAT. The proposed anesthetic protocol is applicable to various medical procedures of considerable duration with minimal anesthetic risk to the bears (4). The effectiveness of balanced anesthesia with premedication with dexmedetomidine HCl, ketamine HCl and butorphanol tartrate and induction with propofol and maintenance with ketamine HCl and propofol in experimental compression anastomosis in pigs is studied. A statistically significant decrease in heart and respiratory rates and SpO_2 during the operative intervention is found. When examining hematological indicators, a reliable decrease is observed only in the concentration of erythrocytes, hemoglobin and hematocrit. The proposed balanced anesthetic protocol allows stable and safe anesthesia that is effective for experimental procedures in pigs undergoing abdominal surgery (9).

2. Original contributions related to the development and application of platelet-rich plasma for the treatment of surgical diseases in company animals. The administration of platelet-rich plasma has been shown to be an effective therapeutic approach in the treatment of complicated post-operative wounds in cats (publication 2). Triple administration of this plasma has been found to be an effective regenerative method, shortening the healing period and reducing the risk of complications in a traumatic laceration in dogs and a reliable method of treating skin defects in these animals (publ. 7). Platelet-rich plasma has osteoinductive potential and supports bone regeneration of a bone defect in the dog (3). The combination of such plasma and hyaluronic acid has been shown to be an effective and reliable method of treating

osteoarthritis in dogs (15).

3. Original contributions in the field of imaging diagnostic. By means of a X-ray study in brown bears with varying degrees of lameness, the main types of joint abnormalities in these animals are established, including joint effusion, subchondral sclerosis, development of periosteal reaction, formation of osteophytes and enthesiophytes. Radiographic images and descriptions can help in their diagnosis (5). By means of computed tomography angiography, the most important blood vessels supplying blood to the knee joint in sheep are identified. This method provides detailed visualization of the vascular anatomy of the knee region in sheep, including arteries, veins and collateral vessels, and the results improve the understanding of the vascular supply of the knee joint and surrounding tissues, which is essential for the diagnosis and treatment of joint diseases in animals (10).

4. Other contributions. A case of a dog with a bladder tumor detected by contrast-enhanced computed tomography is described. Bilateral hydronephrosis and hydroureter are observed. It has been confirmed to be a reliable imaging method in identifying masses larger than 0.5 cm and can visualize mucosal abnormalities up to 2 mm. It is minimally invasive and has a greater diagnostic value than conventional excretory urography (6) - a **confirmatory** contribution. A case of neuroendocrine tumor in a dancing Eurasian brown bear is investigated by means of ultrasound examination of the liver (multiple inhomogeneous hyperechoic masses are found) and computed tomography (multiple hypoechoic foci are visualized). Pathologically, numerous prominent, nodular lesions are found in the liver, and pathohistologically, epithelial cells with signs of malignancy, characteristic of neuroendocrine tumors, are observed. By means of immunohistochemical examination, a neuroendocrine tumor is proven, as well as the epithelial nature of neoplasias and their belonging to neuroendocrine tumors (13) - an **original** contribution. By using imaging methods - conventional radiography, ultrasound and computed tomography, a clinical case of splenic torsion in a dog is investigated and a diagnosis of torsio lieni is put . The use of diagnostic imaging methods is a condition for making a timely and adequate diagnosis (14) - a **confirmatory** contribution.

Evaluation of the candidate's personal contribution

The personal contribution of Ch. assistant professor K. Aminkov, PhD, in the presented scientific research production can be seen from the significant number of publications in which **he is the lead author**, and they are **eight** in number. Dr. Aminkov is **in second place in 2** articles and in third and subsequent places – in the remaining 4 publications. This active participation in leading positions in scientific collectives presents him as an established scientist with significant personal involvement in the research developments. In this aspect, it is important to point out that he is also the author of **2 independent** publications (a monograph and a book). **These data illustrate his experience and opportunities for independent research and publication activity.**

Critical notes and recommendations

I would recommend Dr. Aminkov to continue his active research activity on current problems, striving to publish the results in journals, referenced and indexed in world-renowned databases.

Personal impressions

I have known Konstantin Aminkov since his student years, as I was his teacher. He was always responsible, focused, humble and disciplined. He is also like that as a teacher, and he is already an established scientist with original contributions, who fully deserves the academic position of "Associate Professor".

Conclusion

From the submitted materials for participation in the competition for the academic position of "Associate Professor" it is clear that Ch. assistant professor Dr. K. Aminkov is an established researcher with more than 8 years of teaching and research experience. His scientific publications for participation in the competition are **16** in number, with half of them printed in editions, referenced and indexed in world-renowned scientific information databases, and one with an impact factor **(total IF: 0.9).** The contributions of his works are relevant and valuable. They are in four different directions, which is an indicator of a versatile and rich research experience. Citations are sufficient in number and also testify to the significance of the candidate's scientific output. The total number of points obtained by him according to the groups of indicators for the academic position of "Associate Professor" is **648.15** and significantly exceeds the minimum national requirements of 400 points. By all the necessary indicators, it meets, and by some exceeds, these requirements. Also, Ch. assistant professor Dr. Aminkov has a sufficiently long teaching experience in conducting classes in the disciplines of Surgical Diseases, X-rayology, Anesthesiology, Neurosurgery, etc., he conducts Mobile Clinics, fulfilling and re-fulfilling the mandatory academic employment. Teaching the same subjects in English further enriches this experience. According to Art. 2a, (1) of the RDAS in UF, **the candidate not only meets the minimum national requirements for scientific and teaching activities, defined in the Regulations for the Implementation of the Law on the Development of the Academic Staff in the Republic of Bulgaria for the professional direction of the competition**, but also significantly exceeds them. All this gives me reason to **confidently propose Ch. Assistant Professor Konstantin Bogdanov Aminkov to take the academic position "Associate Professor"** in the field of higher education 6. "Agrarian Sciences and Veterinary Medicine", professional direction 6.4. "Veterinary Medicine", scientific specialty "Surgery, X-rayology and physiotherapy of animals" in the discipline "Surgery, diseases in productive animals, equine diseases, diseases in companian animals" at the department of "Surgery, X-rayology, Obstetrics and Gynecology" at FVM, UF, Sofia.

20.05.2024

Sofia

Prepared the opinion:

(Prof. D.Sc. T. Popova, PhD)