



## REVIEW

on the materials for participation in the competition for the academic position "Associate Professor", field of higher education 6. Agricultural sciences and veterinary medicine, professional direction 6.4. Veterinary medicine, scientific specialty "Epizootology, infectious diseases and prevention of infectious diseases in animals", in the discipline "Immunology", announced by University of Forestry in State Gazette no. 100/16.12.2022, procedure code VM-AsP-1222-95.

### **Applicant for participation in the competition:**

**Chief Assistant Professor Iliyan Manev Manev, PhD**, from the Department of "Anatomy, Physiology and Animal Breeding Sciences" in the Faculty of Veterinary Medicine at University of Forestry in Sofia.

**Reviewer: Prof. Teodora Petrova Popova, PhD, D.Sc.**, University of Forestry, Sofia, field of higher education "Agrarian Sciences and Veterinary Medicine", professional direction: 6.4. Veterinary medicine, scientific specialty "Epizootology, infectious diseases and prevention of infectious diseases in animals", designated as a member of the Scientific Jury by Order ZPS-41/27.01.2023 of the Rector of University of Forestry.

### **1. Brief biographical data about the candidate.**

Iliyan Manev Manev completed his higher education in 2008 at the University of Forestry (UF) in Sofia, Faculty of Veterinary Medicine (FVM) with excellent results and obtained the Master's degree in Veterinary Medicine. From May 2008 to December 2013, he worked in his specialty as a veterinarian at the Veterinary Center "St. Antim" LTD. In 2013, after passing a competition, he was appointed to the academic position of "Assistant professor" in the FVM at the University of Forestry, Sofia. Five years later, he defended his doctor's thesis on the topic "Studies on some factors of immunity and immunoprophylaxis in myxomatosis in rabbits" and obtained the degree "Doctor in Veterinary Medicine" (PhD - "Phylosophy Doctor") in the scientific specialty "Epizootology, infectious diseases and prevention of infectious diseases in animals" in UF, FVM, Sofia. From March 2018 until now, Dr. I. Manev is Chief assistant professor in the Faculty of Veterinary Medicine at UF.

He is fluent in English and Russian, has computer skills for working with MS Word, MS Excel, MS Power Point, etc., as well as competence for working with equipment for laboratory and clinical diagnostics.

**2. Conformity of the submitted documents and materials of the candidate with the requirements according to the Regulations for the development of the academic staff (RDAS) at UF.**

Chief assistant professor Dr. Iliyan Manev has submitted all the necessary documents and materials for participation in the present competition in paper and electronic format according to the RDAS at UF.

**3. Evaluation of the candidate's teaching-educational activities.**

Iliyan Manev is a teacher at UF, FVM, Department of "Anatomy, Physiology and Animal Breeding Sciences" since 13.12.2013. In the period 13.12.2013 - 14.03.2018 he held the academic position of "Assistant professor", and from 15.03.2018 until now - "Chief assistant professor". His teaching and research experience is more than 9 years. Ch. assistant professor Dr. Manev fulfills and overfulfills the mandatory minimum academic employment of 360 hours. For the 2021/2022 year, his total academic employment was 360.4 hours, including 332 hours auditorial and 28.4 hours extra-auditorial work. For 2020/2021, his academic employment was 380.6 hours (auditorial – 347 h and extra-auditorial – 33.6 h). In the previous 7 academic years, starting in 2015, his teacher occupancy was even higher. In addition, Ch. assistant professor Dr. Manév also conducts training with foreign students in Veterinary Medicine in English, and for the year 2021/2022 his total teaching employment in this language was 182.1 hours (auditorial - 160 h and extra-auditorial - 22.1 h), and for 2020 /2021 - 310 hours (auditorial – 276 h and extra-auditorial – 34 h). In the previous years, his academic employment in the foreign language education was even higher.

Ch. assistant professor Dr. Manev conducts exercises, seminars and lectures in the disciplines of Immunology and Pathophysiology in Bulgarian and English, carries out current study control and participates in conducting regular and remedial semester exams in the specified disciplines. From the 2019/2020 academic year Ch. assistant professor Dr. Iliyan Manev leads a part of the lecture course on the compulsory course "Immunology" for the students of the specialty Veterinary Medicine, educational and qualification degree (EQD) "Master", regular education. For three consecutive academic years (from 2018 to 2020), he has taught part of the lecture course on the elective course "Quality and Safety of Animal

Food" to the students of Veterinary Medicine. From the 2019/2020 to the 2020/2021 academic year, he conducted part of the lecture course on the compulsory subject "Biochemistry" in English for the students of the Veterinary Medicine specialty.

For the last 5 academic years, Dr. Iliyan Manev has led exercises and seminars in the following three disciplines with students from the Veterinary Medicine specialty (EQD "Master", regular education): Immunology (in Bulgarian and English), Pathophysiology (in Bulgarian and English language) and Biochemistry (in English - during the academic years 2019/2020 and 2020/2021).

In addition, Ch. assistant professor Dr. Iliyan Manev is the co-author of the curriculum for the compulsory discipline "Immunology" in Bulgarian and in English according to the current curriculum from 2021-22 year for the students of the specialty "Veterinary Medicine" (EQD "Master", regular education), course code VM223, IIIth year, 6th semester, with a total hours of 45 h (30 h of lectures and 15 h of exercises).

#### **4. Evaluation of the candidate's scientific, applied scientific and publication activities.**

##### **4.1. Participation in scientific, scientific-applied and educational projects.**

Ch. assistant professor Dr. Iliyan Manev participated as a member of the working team in a research project funded by the Research sektor of UF on the topic "Bioaccumulation of heavy metals in hydrobionts (2020-2021)", contract No. NIS-B 1076/2020, with Head: Associate Professor Veselin Kirov, Ph.D.

In addition, he has completed two courses to increase his qualifications within the framework of the educational project "Building a unified system for the qualification and career development of teachers at the University of Forestry - Sofia", which are as follows: "Basics of information technologies. Word processing systems, spreadsheets, presentations and business graphics" and "Using modern teaching methods through ICT".

##### **4.2. Characteristics of the published scientific results.**

The total number of the submitted scientific works for participation in the current competition is 24, including one monograph, one book based on a defended dissertation work for the award of an educational and scientific degree "Doctor" (PhD) and 22 scientific publications. Of this number, 16 articles are published in refereed journals, two of which - with an impact factor, and the remaining 6 - in non-refereed journals, two of which - in proceedings of international scientific forums. The publications are in various directions of

medical science (infectious and non-infectious pathology, epidemiology, immunology, internal diseases, toxicology, ecotoxicology, etc.) and have both a theoretical and an applied nature.

In the table, I have presented in a comparative aspect the minimum points required by the groups of indicators for occupying the academic position "Associate Professor" in the field of higher education 6. Agricultural sciences and veterinary medicine and the ones obtained by the candidate in the current contest:

A group of indicators	Content	Associate Professor	
		Minimum points required	Presented by the candidate
<b>A</b>	Indicator 1	50	<b>50</b>
<b>Б</b>	Indicator 2	-	-
<b>В</b>	Indicator 3 or 4	100	<b>100</b>
<b>Г</b>	Sum of indicators from 5 to 12	200	<b>347.84</b>
<b>Д</b>	Sum of indicators from 13 to 15	50	<b>200</b>
<b>Е</b>	Sum of indicators from 16 to the end	-	-
Total points		<b>400</b>	<b>697.84</b>

According to indicator **A** Ch. assistant professor Dr. Manev has presented a Dissertation for the award of the educational and scientific degree (ESD) PhD - "Doctor in Veterinary Medicine" on the topic "Studies on some factors of immunity and immunoprophylaxis in myxomatosis in rabbits", Diploma No. UF - ESD - 2017-93, for which he is obtained the required **50** points. Attached to it are a summary and three publications in English in refereed specialized issues, in which Dr. Manev is the lead author. The works submitted correspond to the minimum national requirements for the ESD PhD ("Doctor").

Indicator **Б** points are not required for this academic position.

According to the next indicator **В**, a Habilitation work - monograph (Manev I. 2022. Electrocardiography of dogs with infectious and non-infectious pathology. Avangard Prima, ISBN 978-619-239-792-0) is presented, with which the participant in the competition received the necessary **100** points. It is written on 156 pages, illustrated with 19 figures and 26 tables and meets the requirements for such work.

According to group of indicators  $\Gamma$  Ch. assistant professor Dr. Manev has a total of **347.84** points, which significantly exceeds the required 200 points, for the following materials: Published book based on a defended dissertation work for awarding the educational and scientific degree PhD ("Doctor in Veterinary Medicine") - 40 points (Manev I. 2022 . Immunity and immunoprophylaxis in myxomatosis in rabbits. Avangard Prima, ISBN 978-619-239-791-3), written on 131 pages, well illustrated with 56 figures and 6 tables, that meets the requirements for such a work; Articles and reports published in scientific issues, referenced and indexed in world-famous databases with scientific information - 16 items, 2 of which - with an impact factor - 277.25 points and Articles and reports published in non-refereed journals with scientific review or in edited collective volumes – 6 items - 30.59 points. Classification of publications: Total number - 24, including: Habilitation thesis (monograph); Published book on the basis of a defended dissertation for the acquisition of the ESD PhD; Publications in scientific journals - a total of 22 (two of which - with an impact factor), of which - in foreign refereed issues - 2; in Bulgarian refereed – 14; in non-refereed – 6 (two of which - in proceedings of international scientific forums). Only 4 of the publications submitted for participation in the competition are in Bulgarian.

According to group  $\Delta$  indicators, Dr. Manev received a total of **200** points, which also significantly exceeds the required 50 points, as follows: from citations or reviews in scientific publications, referenced and indexed in world-famous databases of scientific information or in monographs and collective volumes (9 citations of 4 of his publications) – 135 points; from citations in monographs and collective volumes with scientific review (4 citations of 3 of his publications) – 40 points and from citations or reviews in non-refereed journals with scientific review (5 citations of 3 of his publications) – 25 points. Of the latter, I accept only 4 , because the second citation is an indirect self-quotation, with which the points become 5 less, but this does not affect the positive score.

No points are required for this academic position under the last indicator **E**.

From the presented data it is clear that **according to Art. 2a, (1) of the Regulations for the Development of the Academic Staff at UF, the candidate not only meets the minimum national requirements for scientific and teaching activities, defined in the Regulations for the Application of the Law for the Development of the Academic Staff in the Republic of Bulgaria in the professional field of the competition, but also significantly exceeds them. He has a total of 697.84 points, accompanied by the relevant evidentiary materials, with a minimum requirement of 400 points for the field of higher**

education 6. Agricultural Sciences and Veterinary Medicine, professional direction 6.4 Veterinary Medicine.

#### **4.3. Reflection of the candidate's scientific activity in the literature (citability).**

The large number (total 17) established citations of 10 scientific publications of Ch. assistant professor Manev testifies to the importance of his works and their wide reflection in the literature in our country and abroad. Citations of his publications in scientific issues, referenced and indexed in world-renowned databases with scientific information or in monographs and collective volumes are 9, those in monographs and collective volumes with scientific review are 4, and in non-refereed journals with scientific review - 4 pcs.

#### **4.4. Contributions in the candidate's works (scientific, scientific-applied, applied).**

The scientific contributions in the presented works of Ch. assistant prof. Dr. Manev are in the following areas: ♦ Infectious pathology – epidemiology of infectious and vector-borne diseases in domestic animals. ♦ Immune-mediated diseases. ♦ Post-vaccination immune response. ♦ Electrocardiographic changes in infectious and non-infectious diseases. ♦ Accumulation of lead in domestic and wild birds, the object of hunting, as well as heavy metals in the Black Sea ecosystems and their impact on human health. ♦ Biochemical indicators of blood in wild rabbits in Bulgaria. The following main contributions derive from the publications submitted for participation in the competition:

- The role of feline infectious peritonitis in the development of chronic kidney diseases is analyzed. The available data are reviewed and the author's clinical experience is presented.
- An overview study is made on the control measures for mycoplasma infections in pigs, considering the main aspects of immunoprophylaxis, therapy and metaphylaxis in enzootic pneumonia in pigs.
- The epidemiology of the main vector-borne diseases among stray dogs in the Sofia area is studied. A seroprevalence is established against *Anaplasma phagocytophilum*/*A. platys*, *Ehrlichia canis*, *Borrelia burgdorferi* and *Dirofilaria immitis*. A significant spread of anaplasmosis, as well as the dangerous nematode *D. immitis*, has been demonstrated, and the various predisposing and supporting factors for the disease are commented on.
- Factors of immunity and immunoprophylaxis in myxomatosis in rabbits are studied (in the book based on a defended dissertation for ESD PhD). The main aspects of the impact of myxoma virus on the immune system during illness, as well as different schemes of administration of monovalent and bivalent vaccines for the prevention of the disease, are

examined and discussed. A historical aspect of the spread of the disease is also presented.

- Studies have been conducted on immune-mediated anemia in the dog. The main immune mechanisms for erythrocyte destruction (antibody-mediated and complement-dependent lysis) are reviewed, as well as the main therapeutic approaches in this autoimmune process.
- The serological response after vaccination of young dogs against parvovirus-2 has been investigated. A high rate of seroconversion has been established after two vaccinations of young, uninfected dogs.
- Studies have been carried out on the main changes in the electrocardiography of dogs. The average values of the electrocardiographic elements in the three standard leads in common infectious diseases of a viral, bacterial and parasitic nature in the dog, as well as some common in clinical practice non-infectious pathological processes and diseases, are analyzed. An analysis is made and recommendations were given for the application of electrocardiography in the diagnostic algorithm for these diseases.
- Research has been done on the frequency and nature of cardiac arrhythmias in renal failure and gastric dilatation-volvulus in dogs.
- Residual amounts of lead in ducks (*Anas platyrhynchos*, L.) tissues after experimental exposure to lead pellets have been investigated, as well as epidemiological data on lead concentration in birds subject to hunting. An analysis has been made of the potential risk to human health when consuming meat from such birds.
- An overview is made on the accumulation of heavy metals in the ecosystems of the Black Sea: sea water, sediment, algae and various types of fish. Research on Bulgarian and European legislation related to heavy metal pollution of marine aquaculture is presented. The legislation concerns maximum permissible doses for three heavy elements - lead, cadmium and mercury, and the potential risk to human health has been commented on. Comparative studies have been carried out on the content of heavy metals in seawater, different types of algae and economically important fish species from the Bulgarian Black Sea in the period 2020-2021, and a low content of heavy metals was found in most of the examined samples.
- The average values and intervals of variation of basic biochemical parameters of the blood of wild rabbits (*Lepus europaeus*, L.) from different regions of Bulgaria are determined. The study enriches the scarce data on the physiological limits of some

biochemical blood indicators in this biological species.

#### **4. 5. Other scientific and publication activities of the candidate.**

From 2021 Ch. assistant professor Dr. Iliyan Manev is a member of the Organizing committee of the International scientific conference of the FVM "Traditions and Modernity in Veterinary Medicine". He has participated in 10 scientific conferences with international participation, 8 of which - at FVM, UF, one - at Thrakia University in the city of Stara Zagora and one - in Greece (XXVIII International conference "The Power of Knowledge" - October 2020, Kavala). In addition, Dr. Manev is a co-author in two popular science articles published in the journal "Livestock BG" in 2022.

The total number of the articles in scientific journals peer-reviewed from Ch. assistant professor Dr. Iliyan Manev for the period 2019-2022 is 10, including for specialized issues such as "Issues in Biological Sciences and Pharmaceutical Research", "Veterinary Clinical Pathology", "Global Journal of Animal Scientific Research", "Trends in Medicine Journal", "Trends in Research Journal", "Journal of Nephrological Science", "International Journal of Research in Health Sciences", "Microbial Pathogenesis" and "Tradition and modernity in veterinary medicine".

Chief assistant professor Iliyan Manev Manev has and other professional activities. He is a member of the Academic Council of UF, of the General Assembly of FVM, of the Committee on Scientific Research Activity - UF, of the Commission on Scientific Research Activity - FVM and of the Commission for Animal Welfare - FVM.

Dr. Manev's activities are highly appreciated by the awards he received:

- Certificate from the Academic Management of UF for excellent success in studies;
- Certificate for First Place in the "Infectious Pathology" section of the International Scientific Conference "Traditions and Modernity in Veterinary Medicine", held on April 20-22, 2018.

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

The personal contribution of Dr. Manev in his scientific production is indisputable. This is also evident from the authorship of the publications submitted for participation in the present competition. He is the only author of 10 of the publications. In nine of the others, he is the lead author. Two of them have one co-author, 7 have two co-authors and only 5 have three or more co-authors.

## **6. Critical notes and recommendations.**

I have no critical remarks to Ch. assistant professor Dr. Manev. I would recommend him to continue to actively and dedicatedly work as a teacher and scientist, to participate in and lead scientific projects, as well as to publish his results in scientific journals, referenced and indexed in world-renowned databases.

## **7. Personal impressions.**

I know and remember Iliyan Manev since his student years in our faculty, as I was his teacher. Both as a student and now, he is distinguished by high intelligence, discipline, organization and diligence, which is evidenced by both his excellent success and his high scientific achievements presented in the current concours. He is one of the best, talented, competent, well-prepared and dedicated teachers and young scientists in our faculty.

## **8. Conclusion.**

Based on the information presented above, **I propose that the candidate Ch. assistant professor Iliyan Manev Manev, PhD, to take an academic position "Associate professor" in the field of higher education 6. Agricultural sciences and veterinary medicine, professional direction 6.4. Veterinary medicine, scientific specialty "Epizootology, infectious diseases and prevention of infectious diseases in animals", in the discipline "Immunology" at the Faculty of Veterinary Medicine at University of Forestry in Sofia.**

23.03.2023

Reviewer's Signature:

(Prof. Teodora Popova, Ph.D., D.Sc.)