

БЪЛГАРСКА АКАДЕМИЯ НА НАУКИТЕ
И-Т ПО ЕКСПЕРИМЕНТАЛНА МОРФОЛОГИЯ,
ПАТОЛОГИЯ И АНТРОПОЛОГИЯ С МУЗЕЙ
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СОФИЯ

REVIEW

On the materials for participation in competition for academic degree "Assoc. Professor" in scientific direction 4.3. Biological Sciences, specialty "Parasitology and Helminthology" (01.06.19) for the needs of the section "Experimental Parasitology", at IEMPAM-BAS, published in the State Gazette no. 30 of 13.04.2021

Reviewer: Prof. DVM Emil Ivanov Sapundzhiev, DSc in PN 6.4. "Veterinary medicine" from the University of Forestry, according to an order of the Director of IEMPAM-BAS № RD-09-29/21.05.2021 for the composition of the Scientific Jury and protocol of its first meeting from 18.06.2021.

Candidate for participation in the competition is:

The only candidate from Chief Assistant Ivelin Angelov Vladov, PhD, from IEMPAM-BAS, from the Section "Experimental Parasitology".

1. Career development of the candidate

Ivelin Angelov Vladov completed his secondary education at 81 High School "Victor Hugo" - Sofia in 2000. After that he graduated and graduated from Sofia University "Kliment Ohridski" with a degree in Ecology in 2004. Since 2008 after an excellent performance of competitive exam was accepted as a research associate at IEMPAM in the section "Parasitology" and in 2014 was enrolled for a doctorate in self-study. Two years later, in 2016, he defended a dissertation on the topic: "Molecular and clinical studies of parasites of the genus Eimeria in an experimental model in rabbits", and was awarded ONS "Doctor" in Parasitology and Helminthology with a diploma №000808/16.11.2016. Since 2017 he has grown into a senior assistant in the Section "Experimental Parasitology" of IEMPAM-BAS, where he still works, presenting a document for 14 years of service. The facts are certified with a proper document, as well as the unproblematic health status and pure judicial status. He is a member of our and international scientific communities, such as the Bulgarian Parasitological Society, the European Federation of Parasitology, the World Federation of Parasitology. He has an independent level of proficiency in English and Russian and good communication skills acquired during his work on projects at home and abroad, in interdisciplinary teams. He has very good skills in working with computer programs, office suite and programming languages, being a system administrator for the maintenance of the institute's website. Masters parasitological, biochemical, molecular biological and mathematical methods for processing scientific data. Performs the responsible task for the operation of the vivarium at the institute and the operation of the Leica DM5000B research class

fluorescence microscope. Participates in three commissions supporting the administrative activities of the Institute.

2. Conformity of the submitted documents and materials of the candidate with the required ones according to the Regulations for RAS in IEMPAM.

During the inspection of the documentation submitted for the competition, full compliance with the required documents is established, according to the Regulations for development of the academic staff at IEMPAM-BAS. The materials of Dr. Ivelin Vladov are presented on paper and electronic media. It is noteworthy that they are precisely completed, according to the established rules for such procedures and are described in an understandable way. The attached copies of the sections correspond to the description and are numbered and arranged adequately, which also gives grounds for their correct referencing.

3. Assessment of the candidate's scientometric indicators:

3.1. Dissertation for the award of educational and scientific degree "Doctor".

It was mentioned above that Dr. Ivelin Vladov defended his dissertation more than 5 years ago and was awarded the educational and scientific degree "Doctor". The dissertation is thematically related to the issue of parasitic eimeriosis, as the causative agent itself has been studied by traditional and modern methods and an innovative invasion of an experimental rabbit model has been interpreted. Current issues and its theoretical and applied value are a significant contribution not only to the parasitological field of science, but also to clinical veterinary practice. The results provide new evidence for the species characteristics in the study of parasites of the genus *Eimeria*. The obtained oocyst isolates are stored under optimal conditions in order to perform additional studies and new studies. The implementation of this indicator brings a full point asset to the candidate in the competition. The dissertation is accompanied by 5 scientific articles and complements the scientometric indicators in the candidate's career development. According to the NMSR (National Minimum Scientific Requirements), this indicator is covered and gives a point asset of 50 points.

3.2. Scientific publications in refereed and indexed publications, equated to habilitation work.

Dr. Ivelin Vladov participated in the competition with a total of 98 publications and 3 abstracts. According to the Regulations of IEMPAM for the development of the academic staff, 4 publications from Q1 are presented, which fully cover the criteria for the point asset - 100 points. Their common theme comes down to the problem of deposition of certain trace elements and their compounds

in the body's predilection organs as a result of metabolic processes in the food chain. Demonstration of microelementosis in infested animals is a significant contribution to elucidating the pathogenetic mechanisms in the development of the invasion in the host organism.

3.3. Scientific publications which do not belong to indicator 3.2.

Following these publications, it is established that they are in journals, referenced and indexed in the international databases of Web of Science and SCOPUS: Q1-6, Q2-6, Q3-3, Q4-1, and other 73 articles in journals and proceedings of working groups and conferences. Of these, several topics stand out, one of which is related to toxicology, proving that chelating agents (monensin, salinomycin and deferiprone) can be used as antidotes in heavy metal intoxications. The side effects of the application of hypoxia-inducing food supplements, which contribute to the improvement of the physical endurance of humans and animals, are also monitored. The effects on the body from the application of cobalt compounds have been monitored and the main side effects of chronic intake of cobalt as a dietary supplement have been clarified, which is important for use in the pharmaceutical and food industries. In another group of articles, molecular diagnostic methods are used, which are an opportunity for fast and accurate diagnosis and complement the applied classical methods, providing better expert assessment. Also, the publications prove that hemocyanins can successfully perform the function of non-specific and active stimulators of the immune system, improving the body's defenses. Oxidative stress was studied by changes in the activity of three major antioxidant enzymes (CAT, Cu-Zn SOD, and Se-GPx) and the level of the lipid peroxidation marker MDA. These studies are innovative for proving significant biochemical markers of oxidative stress in various parasitosis. Some physicochemical parameters related to the biological compatibility and biological activity of bone implants for bone reconstruction and remodeling in experimental models with rabbits and rats were observed, which proved the importance of osteoinduction in bone transplantation for veterinary and human medicine. The connection between the chemical form of some substances and their bioaccumulation in industrially polluted areas in Bulgaria has been studied, which is a suitable and timely bioindicator for the pollution of the environment with heavy metals. These data contribute to elucidating the anthropogenic impact in ecological terms and are important for parasitology, biogeochemistry and ecology. Most of the scientific contributions in the individual areas of scientific publications are of an original nature, which I accept and share in essence and only because of the limited opportunity for reflection in this review I do not describe. There are no less significant contributions of a confirmatory nature, which are in the specific research areas of research and

accompanying scientific publications. As a result of this publishing activity, Dr. Ivelin Vladov has accumulated a total impact factor of 52,331 and an individual impact factor of 6,724. Analytically, this result proves the thesis that valuable and internationally recognized results are achieved by a team of researchers and generalists who have the opportunity for basic and diverse studies of current issues of general medical and biological importance. In this case it is related to the application of experimental models and parasitological, biochemical, molecular biological and mathematical methods, in which the participation of Dr. Ivelin Vladov stands out. This indicator according to NMSR is G7 with a required minimum of 200 points, Dr. Ivelin Vladov received 402 points.

3.4. Citations in referenced and indexed scientific journals by Web of Science and Scopus.

A list of citations for the last 10 years is presented, and out of 18 articles, 81 citations have been established, which cover the requirements of indicator D13. This is proof that the topic on which the team of specialists and Dr. Ivelin Vladov works is relevant and accessible internationally and is collected from scientific journals, referenced and indexed in world-famous databases with scientific information or in monographs and collective volumes. These data speak of purposeful research work, which has realization and recognition in the scientific community. I accept the report as reliable and therefore I believe that they bring him a real scientometric point asset. This outlines his professional direction and the scientific specialty in which he has the competencies of a specialist - parasitologist. According to this indicator, according to the NMSR, at the requirement of 60 points, a point asset of 70 points is obtained.

3.5. Participation in scientific projects and scientific events.

Dr. Ivelin Vladov presented a list of participations in 22 research projects for the last 10 years, which is statistically more than two projects per year and is an indicator of his activity and opportunities for teamwork. Most of the projects are funded by the NSF at the Ministry of Education and Science, directly and indirectly, while others are under operational programs and inter-academic contracts. Although he is in the category of young researchers, he is sought after with the competencies of a colleague, and with a capacity in the parasitological specialty.

A report on 60 participations in scientific forums at home and abroad for the last 11 years was presented, at which a total of 119 scientific communications were presented, 67 reports were presented and 52 posters were demonstrated. This activity also contributes to the accumulation of experience in the direction of teaching and teaching activities, which is not a demanding criterion for the growth

of candidates for academic titles in IEMPAM-BAS, and for which in practice no other direct or indirect evidence is presented.

CONCLUSION:

The attached documents for the competition fully testify to compliance with the Unified State Requirements, the Regulations on the terms and conditions for obtaining scientific degrees and holding academic positions at BAS and the Law on the Development of Academic Staff in the Republic of Bulgaria.

Based on the general description of the submitted materials, and the data on publication activity, citations and participation in scientific projects and scientific forums, as well as the covered high scientometric data for NMSR for each individual group of indicators (A + B + V + G), and a total of 622 points received for the professional scientific direction of the competition, and on the basis of the shown scientific contributions and scientific results, I give high marks, and I think that the candidate meets the requirements for the academic position "ASSOCIATE PROFESSOR", and therefore with full confidence I call on the respected members of the Scientific Jury to support the positive vote, proposing that Assistant Professor Dr. Ivelin Angelov Vladov be elected "ASSOCIATE PROFESSOR" in the field of higher education 4. "Natural Sciences, Mathematics and Informatics", in professional field 4.3. "Biological Sciences", in the specialty "Parasitology and Helminthology" (01.06.19.) For the needs of the section "Experimental Parasitology", at IEMPAM-BAS, and to be proposed to the Scientific Council of IEMPAM-BAS for approval.

Reviewer's signature: 
(Prof. DVM E. Sapundzhiev, PhD, DSc)

The review was prepared on: 19. 07. 2021.