

OPINION

on the competition for the academic position of "associate professor" in the field of higher education: 7. "Health and sport", professional direction: 7.6. Sport, specialty Biomechanics, promulgated in the State Gazette, no. 93, p. 63, 22 November 2022.

With a single candidate: Ch. assistant professor Ivan Mirchev Ivanov, PhD

Prepared the opinion: Prof. Dr. Nadia Mladenova Antonova – Miteva - Institute of Mechanics at the BAS

1. General notes

By Order No. 3II-1308/14.12.2022 of the Rector of the Vasil Levski National Sports Academy and in accordance with the decision of the Faculty Council of the Faculty of Pedagogy under protocol No. 6/07.12.2022, I was designated as a member of the Scientific jury according to the procedure for the selection of an "associate professor" in the scientific specialty "Biomechanics" in the field of higher education: 7. "Health and sport", professional direction: 7.6. Sports. At the first meeting of the Scientific Jury, I was chosen to review the submitted materials for the competition and prepare an opinion.

1. General and biographical data

Chief Assistant Dr. Ivan Mirchev Ivanov completed his higher education in the period 1996-2002 - majoring in "Engineering Physics", master's program in "Medical Physics" at the Faculty of Physics of the Sofia University "St. Kliment Ohridski". Since March 2003, M.Sc. Eng. Ivan Ivanov is enrolled as a full-time doctoral student in the "Biodynamics and Biorheology" section at the Institute of Mechanics at the Bulgarian Academy of Sciences. Successfully defended a dissertation in the scientific specialty 01.02.07. "Biomechanics" on the topic: "Rheological and electrical properties of the blood in normal and pathological conditions and their modeling" and acquired the ONS "Doctor" on 18.11.2008. From 2006 to 2010, he worked at the Institute of Mechanics as a physicist. Since 2010, he has been elected as a research assistant, and since 2010, he has been elected as the main assistant in the "Biomechanics" department at the IMech - BAS until now. As of 05.03.2023, chief assistant Ivan Ivanov has 20 years of general work research experience at the Institute of Mechanics at the BAS. He speaks English and Russian. He was a member of program and organizational committees of 6 international scientific conferences. He also participated in more than 20 scientific events at home and abroad. The total number of noticed citations of 8 works of the candidate is 83. General Assistant Ivan Ivanov has been elected as the secretary of the "Mechanics" section of the SBU from this year. He has been a member of the Bulgarian Society of Biorheology for 20 years, as well as the Bulgarian Society of Biomechanics. He has a teaching and learning activity at the National Academy of Sciences "Vasil Levski".

2. General description of the submitted materials for the competition

General Assistant Ivan Mirchev Ivanov presented a list of a total of 26 scientific publications on the competition, of which 11 were published in prestigious national and international journals with an impact factor (7) and with SJR (4 articles). 15 articles have been published in scientific journals without impact factor or SJR and in collections of reports and abstracts of various national and international scientific forums, symposia and conferences. He is the first author in 9 of the scientific publications, and 4 are independent. The report on the scientometric indicators of the chief assistant Dr. Ivan Mirchev Ivanov for participation in the competition also includes a defended dissertation work for the ONS "Doctor" (50 points); habilitation thesis - monograph "Sport and hemorheology" (100 points); 62 citations (H index 9 in Scopus) of 7 publications were noted, mostly by foreign authors. General Assistant Dr. Ivan Ivanov has participated in six projects, five of which have been completed. Four of the completed projects are nationally funded, and two of them are funded by the National Research Institute. One of the projects in which the candidate participated was externally funded. The current project, funded by the National Institute of Scientific Research - from 2021, is on the topic: "Theoretical and experimental study of intra-articular movements during isometric stretching", in which the head assistant. Dr. I. Ivanov is the supervisor.

3. General characteristics of the research and scientific the applied activity of the candidate ch. assistant professor Ivan Mirchev Ivanov, PhD

The candidate has attached a statement of his contributions divided into two groups:

I. Applied contributions: based on 12 publications

II. Scientific and applied contributions: based on 2 publications, 1 monograph, 1 project with FNI and related 3 publications

I. Applied contributions are divided into the following subgroups: - Experimental study of the rheological and electrical properties of blood and the kinetics of thrombus formation. These properties have been shown to be highly dependent on strain rates, temperature, and hematocrit. - Experimental studies of nitrite intoxication on experimental animals on hemorheological parameters (blood and plasma viscosity) and hematometric indices in the investigated groups of treated experimental animals. - An algorithm was created for the calibration of an experimental system for determining the specific electrical conductivity of blood, based on a Low Shear Contraves rotary viscometer. - Investigation of the influence of two types of nanoparticles used as drug carriers on the rheological and electrical properties of erythrocyte suspensions.

II. Scientific and applied contributions are related to: - Experimental proof of the direct relationship between the balance stability of the shooter and the achieved results in air pistol shooting and the introduction of a new quantitative criterion for sight stability in air pistol shooting based on the electronic shooting training system "SCATT", Russia. - Analysis of the effect of physical exertion with different frequency, intensity and duration on hemorheological parameters of blood and blood cells in athletes. - Development of an experimental model to study the influence of isometric stretching on intra-articular spatial characteristics of the knee joint.

4. Timeliness of the developed problems.

Possibilities for practical use of the results. The problems developed and the tasks set in the publications submitted by the candidate for the competition are current and have an important importance in sports, rehabilitation, etc. The analysis of the results obtained in the research in view of the potential opportunities for their practical application makes a good impression.

CONCLUSION

The candidate Ch. assistant professor Ivan Mirchev Ivanov, PhD, in this competition presents himself with scientific production of the necessary quality and with contributions to the development of biomechanics in sports and hemorheology. From the presented summarized scientometric reference, it can be seen that the minimum requirements of the National Academy of Sciences "Vasil Levski" for the academic position of "associate professor" are met for two of the indicators and exceeded for the other three indicators (G,D and E) From the above, it is clear that he also meets the requirements of the Law on the Development of Academic Staff (ZRASRB) and the Regulations for its application for the occupation of the academic position of "associate professor" at the "Vasil Levski" NSA. Bearing in mind the above, I consider that the candidate for this competition is built and a promising researcher and teacher, therefore I suggest to the honorable members of the Scientific Jury to vote ch. assistant professor Ivan Mirchev Ivanov to take the position of "associate professor" in the field of higher education: 7. "Health and sport", professional direction: 7.6. Sport, Biomechanics specialty, for the needs of the Anatomy and Biomechanics Department at the Faculty of Pedagogy at Vasil Levski National Academy of Sciences.

16.03.2023

Sofia

Prepared the opinion:.....

/prof. Dr. Nadia Antonova-Miteva/