



STATEMENT

By Prof. Dr. Atanas Dimov Arnaudov, MVD

Head of the Department "Preclinical and Therapeutic Disciplines", Faculty of Public Health and Healthcare, University "Prof. Dr. Asen Zlatarov"-Burgas

Regarding the PhD tthesis in the field of higher education 7. Health care and sports, professional field 7.1 Medicine, scientific specialty "Human physiology"

Author: Veselin Atanasov Vassilev, PhD student of independent training in the doctoral program "Human Physiology" at the department of "Physiology", Faculty of Medicine of Medical University-Plovdiv

Topic: "Effect of selective androgen receptor modulators (SARM) on physical work capacity and some side effects in an experimental model"

Scientific supervisor: Prof. Dr. Nikolay Boyadzhiev, MD, head of the department of "Physiology", MF of MU-Plovdiv

General presentation of the procedure

By Order № P-131 of 11.01. 2024 of the Rector of MU-Plovdiv, I was appointed as a member of the Scientific jury to ensure the defense of the submitted dissertation work. At the first meeting of the Scientific Jury, held on January 22, 2024, I was appointed to prepare an opinion. I declare that I have no conflict of interest with the author of the PhD tthesis.

The set of paper and electronic materials presented by Veselin Atanasov Vassilev includes all the necessary documents that meet the requirements for the implementation of the dissertation defense procedure. I have no comments regarding the documentation presented by the PhD student.

Actuality of the topic

Nonsteroidal selective androgen receptor modulators are of particular interest to medicine because of both their strong anabolic and weak androgenic effects. They are

under investigation, and yet the scientific literature lacks information on their effects during exercise. There is also a lack of data on their side effects with long-term use. These facts also determine the relevance of the developed problem.

Characterization and evaluation of the dissertation work and contributions

The dissertation is set out on 174 standard pages and is structured according to generally accepted formatting requirements.

The literature review has a sufficient volume (28 pages), is up-to-date and very informative. It was made on the basis of 256 pcs. literary sources. It details the chemical structure, mechanism of action and various effects (including adverse effects) of selective androgen receptor modulators (SARMs), as well as their use as doping in professional sports.

Based on the review of the literature, a precise and clear goal of the study was set - tracking the effect of non-steroidal SARMs during systemic physical loads and their combination on functional, hematological, morphological and clinical-chemical indicators, as well as the manifestation of some adverse effects. To achieve the set goal, the doctoral student has declared the fulfillment of six tasks, which fully meet the scientific problem and clearly mark the perimeter of the planned research.

The section "Materials and methods" (9 pages) includes a detailed description of the materials used, the methodology and the reagents and consumables used. The experimental model - sexually mature male Wistar rats was properly selected, and the number of experimental animals (n=100) and their distribution into experimental and control groups (n=50 in each) was sufficient to obtain statistically reliable results. All European and national requirements for the humane treatment of animals in the experiment were also observed.

The experimental trials were correctly formed and distributed in a pre-experimental period and two subsequent experiments, respectively. In the course of these experiments, a large number of physiological, morphological, hematological, clinical-chemical and hormonal indicators were recorded, which makes it possible to fulfill the assigned tasks and achieve the set goal of the study. Their statistical processing through parametric and graphic analysis guarantees the reliability of the reported intragroup differences, and Tukey and Games-Howell post hoc tests were used to assess intergroup differences. The clear description of the methods used proves the good experimental competence of the doctoral student.

As a result of the research, results were obtained proving the main working hypotheses. They are set out on 92 pages and present the complex action of the two tested SARMs - ostarine and ligandrol. The discussion of the results is detailed and

allows the doctoral student to draw 11 conclusions regarding the influence of ostarine and ligandron on the morpho-functional state of the experimental animals, gene expression namostatин and VEGF-A in m. gastrocnemius, hematological, metabolic and hormonal indicators.

A part of the results of the conducted experiments, related to the development of the dissertation work, were published in 5 referenced scientific journals, and in three of them Veselin Vasilev was the first author. Another part of them were reported at international scientific forums (5 reports), with the PhD student being the first author in 3 of them. Also, the PhD student was also the head of a scientific project financed by MU-Plovdiv.

The abstract corresponds to the content of the dissertation and fully meets the accepted requirements.

Conclusion

The dissertation contains scientific and scientific-applied results, which represent an original contribution to science and meets all the requirements of the Law on the Development of the Academic Staff in the Republic of Bulgaria, the Regulations for its implementation and the relevant Regulations of MU-Plovdiv.

The dissertation shows that the PhD student Veselin Atanasov Vassilev possesses in-depth theoretical and practical skills in the scientific specialty "Human Physiology", demonstrating qualities and skills for independent conduct of scientific research.

Given the above, I confidently give my positive assessment of the conducted research and propose to the honorable jury to award the educational and scientific degree "Doctor" to Veselin Atanasov Vassilev in the field of higher education 7. Health care and sports, professional field 7.1 Medicine, scientific specialty "Human physiology".

12.03. 2024

Burgas



Заличено на основание
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