

STATEMENT

by professor Rostislav Stefanov Kostadinov, MD, PhD, DSc
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on Dissertation for obtaining scientific degree "Doctor of Science"
for Higher Education in the field 7. Health and Sport,
Professional Field 7.1. Medicine, Scientific specialty: "Disaster Medicine"
on the topic "Medical Aspects of the Maritime Water Traumatism"

Candidate: Assoc. Prof. Dimitar Georgiev Stavrev, MD, PhD, Department of Disaster medicine and Maritime Medicine, Faculty of Public health, Medical University "Prof. Dr. Paraskev Stoyanov" – Varna

By a Decision of the Faculty Council of the Faculty of Medicine No. 169/ 12.08.21 and an Executive Order of the Rector of the Medical University "Prof. Dr. Paraskev Stoyanov" Varna No. P-109-346 from 19.08.2021, I have been appointed as a member of the Scientific Jury evaluating the dissertation of Assoc. Prof. Dimitar Georgiev Stavrev, MD, PhD, MD, PhD, for acquiring the scientific degree "Doctor of Science". By Protocol 1 from a meeting of the Scientific Jury I was assigned to prepare a Review of the thesis.

Brief data on the professional development and qualification of the candidate

Assoc. Prof. Dr. Dimitar Georgiev Stavrev graduated from the Higher Medical Institute Varna in 1987. Until 1990 worked as a district internal medicine therapist at the Municipal Hospital in General Toshevo, then in 1990. won a competition for an assistant in the Department of Anatomy, Histology and Cytology at the Higher Medical Institute Varna. In the period 1990-2016 he successively held the academic positions of senior and chief assistant at the Medical University "Prof. Dr. Paraskev Stoyanov" - Varna. In 1993 he acquired a specialty in Anatomy, Histology and Cytology. After successfully completing a full-time doctorate (2009-2011) he defended his doctoral dissertation in "Anatomy, Histology and Cytology" on "Remodeling of the main arteries and veins of the thigh in peripheral arterial disease of the lower limb." In 2016 he was elected on academic position associate professor in Disaster Medicine, which he currently holds. Assoc. Prof. Stavrev participated in the development of 7 projects - in 3 as a trainer, in two as a leader and in one as an expert and mentor. He leads courses with students majoring in Medicine, Dental Medicine, Rehabilitation, Health Management and Social Care, Pharmacy, Nurse, Midwife, Occupational Therapy, Kinesitherapy, Medical Cosmetician, Assistant Dentist and Health Assistant. Author and co-author of over 100 publications, of which two monographs, 1 textbook and 4 textbooks. Active participant in scientific forums with over 180 reports and scientific communications. The professional biography of Assoc. Prof. Stavrev proves his constantly expanding scientific interest in various fields of medicine and in particular in the field of Disaster medical support and medical assistance in case of emergencies in the marine environment, as well as the establishment as an experienced teacher and instructor - with over 30 years of teaching and tutorial experience.

Relevance and necessity of the scientific research on the topic:

The dissertation is dedicated to issues that are especially important for our country. Significance is determined by the geographical and economic features of the country - the 354 km. of coast and the developed sea tourism and trade. The processes shaping the contemporary world nowadays are related to the recorded increase the importance of maritime

transport and as a result of it - the importance of the volumes of goods transported and unloaded in seaports is growing every year. But the importance of maritime transport is growing and in relation to the increased maritime tourism, which increases its share in the gross product of the country - increasing the number of tourists on the Black Sea coast, as well as the number of sea travelers for recreation and entertainment. With the increase of tourists and workers in and around Black sea area, the population at risk of injuries at sea is also increasing. The topicality of the scientific work of Assoc. Prof. Stavrev is also indicated by the fact that he expands the scope of his research and covers the challenges to life and health of people who in connection with the performance of official duties or accidentally provide assistance to victims of maritime accidents. These prove the comprehensiveness of the research and the depth of knowledge of the problem by the researcher. To achieve this goal, the author includes the achievements of modern information and communication technologies in the planning and conduct of his scientific experiments.

Overview and General characteristics of the dissertation:

The dissertation contains 251 pages, includes 18 figures, 14 tables and 28 graphs. The bibliography includes 195 titles, of which 162 in Cyrillic and 33 in Latin. The earliest cited source is from 1791, 60 are from the last 10 years. The literature sources consistently follow the discussion of maritime and water incidents and related injuries in the Black Sea and the development of the rescue system in sources from the Ottoman Empire / Republic of Turkey, Russian Empire / USSR / Russian Federation and Principality of Bulgaria / Kingdom of Bulgaria / PR Bulgaria and Bulgaria from the 19th century to these days.

The structure and the presentation fully meet the requirements for the formation of a dissertation. The dissertation is structured in the following main chapters - introduction - 2 pages, literature review - 68 pages, objectives - 1 page, materials and methods - 11 pages, own research - 127 pages, general conclusions - 3 pages. ., contributions - 2 pages, bibliography - 26 pages. 56 appendices on 44 pages are formed as a separate volume.

The literature review is in-depth and reflects the consistent analyzes of the available literature, written and electronic, which address every single aspect and detail of water injury, starting with the impact of the aquatic environment on the physiological processes of the body. Assoc. Prof. Stavrev thoroughly and in detail analyzes the pathogenesis of the various injuries received in different types of incidents that may occur in the Black Sea. Each of the analyzes ends with the definition of the main challenges that must be addressed while providing assistance - first and first medical to the victims of water accidents.

The second separate by its rationality section of the literature review is an analysis of the established system for providing assistance in case of maritime and water injuries. The structure, composition, coordination and training of the personnel involved in the rescue activities are discussed in details.

The literature review concludes with 12 conclusions, which logically determine the need for scientific research in order to analyze the related to maritime water incidents injuries and the negative impact on the health of the affected casualties and on the basis of the conclusions to identify measures to reduce and overcome impact of and the maritime traumatism.

In itself, the literary review has the value and characteristics of a fully completed scientific work. To achieve the set goal, Assoc. Prof. Stavrev defines the following 5 tasks:

1. To study, describe and analyze the situations of extreme impact of the marine environment on the human body and their possible manifestation in Bulgaria.
2. To analyze and summarize the accumulated medical experience from marine experiments for extreme human residence in a marine environment. To plan and carry out new experiments.

3. To propose a model for studying the effect of living in an aquatic environment under normal and extreme loads. To determine the relevant equipment, perform research and analyze their results.
4. To analyze the medical training of all categories of participants in rescue operations and to identify courses for action to increase its effectiveness.
5. To propose new forms for development of the systems for reaction and protection of the health of those involved in an accident with marine trauma.

The set tasks for achieving the objective of the research comprehensively cover the various aspects of water injury, its negative impact on human life and health, physiological and organizational challenges to the system of first and first medical aid to victims of maritime accidents.

The materials and methods selected and used by the author are in sufficient volume to solve the set tasks. It should be noted the huge number of participants in the experiments and surveys, as well as the use the achievements of other applied sciences in planning, organizing and conducting them as a method of mathematical modeling or the use of individual devices for remote sensing of changes in different systems of the human body, as well as the reproduction in experimental conditions of an environment as close as possible to the extreme, observed in marine injuries, but at the same time not endangering the life and health of the participants.

The conducted experiments, researches and analyzes and the obtained results completely solve the set tasks. Of particular importance for the theory and practice of disaster medicine are the model created by the author to study the effect of living in the aquatic environment in normal and extreme loads, which includes new approaches and research that have not been conducted so far, as well as the determination of the appropriate methods and equipment necessary for scientific experiments. The scientific substantiation of the importance and the need to prepare the population for assistance in case of water incidents is also of a significant contribution nature. In my opinion, the most significant is the contribution of the proposed model for inter-institutional cooperation in the event of incidents, accidents and catastrophes along the coast related to maritime and water injuries in territorial waters and areas of responsibility in the Black Sea.

Contribution and significance for science and practice development

The presented scientific research is characterized by a clear practical orientation of the set goal. The conducted researches are of special value and offer easily applicable in practice solutions to a topical, fundamental for the theory and practice of maritime disaster medical support - determination of the main medical aspects of maritime water traumatism and the models created by the author and proposed for implementation. to optimize the response to the challenges associated with them. I fully accept the summarized outcome and conclusions presented in the dissertation. I fully accept the 3 scientific-theoretical and 5 scientific-applied contributions of this scientific work with a pronounced practical orientation and I support the recommendations made, which aim is to improve the system of response to maritime incidents.

Assoc. Prof. Stavrev presents 37 real publications, 33 in Cyrillic and 4 in Latin, 4 of which in English and 2 in Russian. 2 of the publications are chapters in monographs. The presented publications are in accordance with the requirements of the Regulations for development of the academic staff at MU Varna. In 12 of the publications the applicant is the first author, in another 17 the second and in eight the third and subsequent co-author. Prepared and web-based 3 videos related to the topic of the dissertation are presented. All publications are related to the topics discussed in the dissertation and present the results achieved in the various stages of the scientific work development.

Personal participation of the candidate

Based on the documents and publications presented to me, I am convinced that the dissertation work and the results and contributions obtained in it are the result of the independent, in-depth research activity of the Assoc. Prof. Stavrev.

Abstract

The structure and content of the abstract presented to me for review are in full compliance with the legal requirements. The purpose, tasks, materials and methods used for their solution are presented in a concise form, as well as the obtained results, the summaries and conclusions and the resulting recommendations and scientific contributions and publications on the topic of the author.

Critical remarks and recommendations

Regarding the dissertation, I have no remarks on the merits.

CONCLUSION:

The dissertation of Assoc. Prof. Dr. Dimitar Georgiev Stavrev contains scientific and scientific-applied results, which represent an original contribution to the Disaster medicine. The work meets all the requirements of the Law for Development of the Academic Staff in the Republic of Bulgaria (LDASRP), the Regulations for the implementation of the LDASRB and the Rules for the development of the academic staff at the Medical University - Varna for acquiring Scientific degree "Doctor of Sciences". The presented materials and dissertation results fully comply with the specific scientometric requirements of MU - Varna.

Due to the above, I confidently give my positive assessment of the research presented in my dissertation, abstract, results and contributions and I propose to the esteemed Scientific Jury to award the scientific degree of "Doctor of Science" to Assoc. Prof. Dr. Dimitar Georgiev Stavrev in doctoral program "Disaster Medicine".

07.10.2021
Plovdiv

Reviewer:
Prof. Dr. R. Kostadinov, MD, PhD, DSc

