

STATEMENT

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Subject: dissertation for the award of the scientific degree "Doctor of
Science" Scientific specialty " Disaster Medicine"

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Department of Emergency Medicine and Marine Medicine

Topic: Medical aspects of water trauma at sea

The thesis written by Assoc. Prof. Stavrev is based on a contemporary subject area of interest, related to a wide-ranging problem – marine trauma and the necessity for medical care and prevention of incidents and accidents with wounded, unwell/ill and injured people at sea.

The thesis has passed all defences before the Department Council of the Department "Emergency Medicine and Marine Medicine"

The above mentioned piece of work is comprised of 254 pages, including 28 graphs, 9 tables, 14 figures and 3 photos. The bibliography consists of 363 titles of which 162 are written in Bulgarian and 201 in Latin.

The extensive literature review provided by Assoc. Prof. Stavrev allows for the complete and adequate evaluation and degree of the current situation discussed by him, both in Bulgaria and globally. The thesis is written in a highly professional and intelligible language.

The analysis regarding the current state of the problem consists of 72 pages and allows to objectively derive to the main purpose of this work - analysis of health damages associated with marine incidents and

accidents caused by the marine environment and overcoming water trauma at sea.

In order to accomplish this goal, Assoc. Prof. Stavrev set himself 5 tasks that are consistent with the outlook of achieving the idea embedded in it through literary sources and based on his own research.

Assoc. Prof. Stavrev's developments and scientific research conducted both independently and in a team in the past thirty years, forms the basis of the scientific research and the conclusions made when reviewing and analyzing the obtained results.

It is important to take into consideration the issue from the point of view of the primary source of the impact the marine environment has on an individual, namely nature's impact and the human activities. The similarities and differences related to the factors and consequences of these two areas are indicated, including the different ways of prevention and provision of medical care for people in critical situations at sea.

A big part of the thesis is devoted to prevention and training on provision of medical care to professional sailors, cadets at Naval Academy "N. Vaptsarov", professional rescuers and other personnel working in the fleet. In addition, the author addresses the issues in training the society with regards to prevention of the impact of sea water on people both in water and land, as well as the preparedness for an adequate response until professionals intervene to provide medical care.

The conducted survey about the population's level of preparation related to the issues of marine injuries is illustrated with numerous graphs and tables, demonstrating the trends related to preparation and attitudes for response in case of incidents or accidents at sea.

A significant conclusion has been made: The existing system for preparing the population for prevention and counteraction of water injuries at sea is diverse, comprehensive and effective. An evidence for this finding is the decrease in the number of deaths related to water injuries in sea waters along the Bulgarian coast - reaching a level of 1.2 ‰ per 100,000 according to WHO measurements.

The presented research in the area of inter-institutional interaction in accidents causing water trauma, occurring along the seacoast of territorial waters and areas of responsibility in the Black sea, is unique and provides important references for future actions and improvements of the search and rescue system as an element of the national disaster and accident management system.

The abstract consists of 90 pages with all requirements of the Law for development of the academic staff of the Republic of Bulgaria and the Regulations for its implementation are observed.

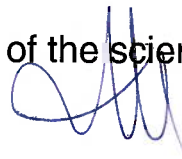
As a recommendation for future developments, I could recommend expanding the interaction with institutions and innovative technologies at the national level for improving water rescue activities, such as the air emergency medical services (Air EMS), search and rescue, use of unmanned aerial systems (UAS) for medical intelligence and the transport of medical supplies to those in distress at sea.

In conclusion, I believe that the thesis written by Assoc. Prof. Stavrev "Medical aspects of water trauma at sea" is relevant, with extensive and original scientific contribution, and provides basis for future applied scientific research. The work meets the requirements for awarding the scientific degree "Doctor of Science", therefore I give a positive assessment.

By giving a positive assessment, I would like to recommend to the esteemed members of the Scientific Jury to award the scientific degree "Doctor of Sciences" to Assoc. Prof. Dr. Dimitar Georgiev Stavrev PhD for his work.

10.09.2021
Sofia, Bulgaria

Member of the scientific jury:



Prof. Aleksiev