

## STATEMENT

By Associated Professor Alexander Miladinov Apostolov, PhD, Department of Forensic Medicine and Deontology, Faculty of Medicine, Medical University - Sofia

according to a competition for the occupation of the academic position "Associated Professor", in the field of higher education 7. Health care and sports, professional field 7.1. Medicine, specialty "Forensic medicine" - for the needs of the Faculty of Medicine, Department of General and Clinical Pathology, Forensic Medicine and Deontology, MU "Prof. Dr. Paraskev Stoyanov" - Varna and Clinic of Forensic Medicine at the Medical Academy " St. Marina" EAD-Varna announced in State Gazette no. 102 of 23.12.2022.

I present this statement in my capacity as a member of the Scientific Jury, determined by Order No. R-109-154/23.02.2023. of the Rector of the Medical University "Prof. Dr. Paraskev Stoyanov" - Varna.

Participation in the competition was announced by a single candidate chief assistant Dr. Emilia Mihailova Kaisheva, Phd.

Dr. Emilia Mihailova Kaisheva, PhD submitted her documents within the established legal deadline, announced in SG no. 102 of 23.12.2022. They meet the requirements of the "Law on the Development of the Academic Staff" (LAD) and the "Regulations for the Development of the Academic Staff at MU-Varna" (PRAS), evident from Protocol No. 1 of 06.03.2023 . from a meeting of the scientific jury for the competition announced in the State Gazette, no. 102 of 23.12.2022.

### **I. BRIEF BIOGRAPHICAL DATA:**

Dr. Emilia Mihailova Kaisheva, PhD was born on 31.10.1975. in Varna, Republic of Bulgaria. Unmarried. She graduated from Higher Education in Medicine at the Medical University of Varna (1994-2000).

Since 2002 was enrolled as a specialist in Forensic Medicine at the Medical University of Varna and acquired the specialty "Forensic Medicine" in 2006.

In 2011, Dr. Emilia Kaisheva was appointed and worked until 2019 as an "assistant" at "Sveta Marina" UMBAL, Varna. Since 2019, she is currently "chief assistant", specialty Forensic medicine and deontology. Department of General and Clinical Pathology, Forensic Medicine and Deontology, MU - Varna.

In the period 2007 - 2011, Dr. Emilia Kaisheva worked as a medical examiner in the DCC "Sveta Marina" in Varna.

For the period 2014-2018 Dr. Emilia Kaisheva is a doctoral student at the Department of "General and Clinical Pathology, Forensic Medicine and Deontology", specialty "Forensic Medicine" at the University of Varna.

In 2018 Dr. Emilia Kaisheva successfully defended her Dissertation on the topic "Criteria for determining thermal trauma as bodily injury", and in the same year she was awarded the ONS "Doctor" in the Scientific specialty "Forensic Medicine".

From 2021 to the present, she is the head of the forensic medicine clinic at the "Sveta Marina" UMBAL, Varna, and the same is an expert in forensic medicine at the District Court

of Varna, at the District and District Prosecutor's Office and the Office of the Ministry of Internal Affairs - Varna.

Dr. Emilia Mihailova Kaisheva, PhD is a member of the Bulgarian Society of Forensic Medicine (BSMS), Bulgarian Medical Union (BDS) and The Balkan Academy of Forensic Sciences (BAFS).

## **II. DESCRIPTION AND ANALYSIS OF THE SCIENTIFIC PRODUCTION OF DR. EMILIA MIKHAILOVA KAISHEVA, PhD:**

Dr. Emilia Mihailova Kaisheva, PhD participated in the competition with 17 scientific papers, of which:

- 1 monography with a total volume of 329 pages and a bibliographic list containing 410 literary sources, with the title: "Forensic significance of human hairs";

- 16 scientific publications, of which: - 5 published in scientific publications, referenced and indexed in world-renowned scientific information databases and 11 in non-refereed journals with scientific review;

16 participations in scientific forums / conferences, symposia and congresses / with reports presented in the Republic of Bulgaria and abroad (7 abroad and 9 in the Republic of Bulgaria).

In the 17 scientific publications presented and subject to consideration, Dr. Kaisheva is the first author in 7 of the publications and sole author in 1 of them. According to these scientometric indicators, Dr. Kaisheva meets the requirements laid down in the PRAS of the MU "Prof. Dr. Paraskev Stoyanov" - city of Varna.

Dr. Emilia Mihailova Kaisheva, PhD is the independent author of the monography "Forensic Significance of Human Hairs".

From the presented reference documentation, it is clear that the scientific works of Dr. Kaisheva have 9 citations, according to the presented academic reference from the library of the MU "Prof. Dr. Paraskev Stoyanov" - Varna.

The candidate, Dr. Emilia Mihailova Kaisheva, PhD., has submitted a service note for her registration in active scientific profiles in Google Scholar.

## **III. SCIENTIFIC RESEARCH ACTIVITY /CONTRIBUTIONS/**

The scientific and research activity of Dr. Emilia Mihailova Kaisheva, PhD and the achieved results are presented by her in the following main areas:

**1. Forensic identification of the person** (1.1. Monography; 1.2. Publications Γ 7.3; Γ 7.4; Γ 7.5; Γ 8.8.)

1.1 Monography

- A specific and important topic for forensic medicine was examined - the study of human hairs, appearing as material evidence, as a means of individual human identification and detection of crimes against the person;

- An in-depth and comprehensive overview of the scientific research that formed the knowledge of the anatomy, physiology, as well as the forensic significance of human hairs was made;

- The comprehensive forensic examination of human hair as physical evidence is presented, including both identification of hair samples found at the scene and comparison of these samples with hair from a known source (victim, alleged perpetrator);

- A variety of basic and modern methods and techniques for the study of the characteristics of human hair are presented, both older (since the beginning of the study of these objects) and developed in recent years, to cover all the more significant scientific and practical requirements in carrying out this type of research;

- The possibilities of micro- and macroscopic examinations of human hairs during their forensic examination were analyzed and justified differential-diagnostic determinations and discussions were made;

- The possible damage to the hair - mechanical, chemical, thermal - is presented in detail and their importance in the forensic examination of the hair physical evidence is analyzed;

- The possible pathological changes of human hairs, their changes as a result of the action of environmental factors and cosmetic influence, as well as the possible deposits of biological and non-biological traces on the hairs, the assessment of which is an integral part of the process of forensic medical examination of these substances, are considered. ;

- All the steps of the morphological examination, as well as the possible chemical and genetic examination underlying the identification determination of the hair physical evidence, were examined in sequence;

- The possibilities for comparing the hairs taken from the scene with the so-called "known" hairs, i.e. received by the victim and the alleged perpetrator or perpetrators were analysed;

- The relatively complete and systematized information, combining general knowledge in the field with professional expertise and practice shared in the second part of the work, makes the monography useful both for the training of students and medical interns, as well as for the daily practical work of forensic medical specialists and experts from the structures of the Ministry of the Interior.

## **1.2. Publications (D.7.3; D.7.4; D.7.5; D.8.8.)**

- The possibility of applying some anthropological methods in determining medico-biological signs such as gender, age and height, part of the individual identification of the person, was investigated. The accuracy of these methods and the possibility of their being used in difficult identification cases, in cases with an advanced stage of decomposition of the corpse or in cases where parts of it are missing, have been proven;

- An additional method is proposed - measurement of the diameter of the thoracic aorta in dismembered and decomposed corpses, where classical identification methods are inapplicable. A statistically significant correlation was demonstrated between age and the internal circumference of the thoracic aorta measured at the level of the diaphragm;

-Different bone identification software programs (FORDJSC, 3D-1D, CranID, ThreeSkull, Anthropolog, ADBOU) were reviewed and their accuracy in determining the permanent features of an individual, such as race, sex, age, height, etc., which is required in the forensic examination of decomposed and skeletonized corpses, was proven.

- The morphological characteristics of human hairs and the possibility of determining them based on the characteristics of the individual from whom they originate, namely his species, ethnicity, gender, blood group affiliation etc., are presented.

**2. Objectification of forensic medical expertise** (Publications Г 8.1.; Г 8.3.; Г 8.4.; Г 8.5.; Г 8.7.; Г 8.9.; Г 8.10.)

- It is proposed to be used objective criteria in the preparation of forensic medical examinations, in order to achieve maximum objectivity of the same. Minimizing expertise based on subjective perceptions of experts. Various point systems are applied (AIS, ISS, ABSI, etc.) allowing an objective determination of the severity of the disability and the probability of death from it, based on the point total obtained by the relevant system.

**3. Traumatism** (Publications Г 8.2; Г 8.6.)

- Cases with fatal thermal trauma have been studied. It has been proven that the burn is more difficult to bear and the recovery is more difficult, with more complications and higher mortality, in the victims of an older age (over 60 years), necessitating more intensive monitoring and care for them.

**4. Pathology** (Publications Г 7.1.; Г 7.2.; №. 1)

-The nature of forensic medical practice, including autopsies of people who died under unclear circumstances and without a diagnosis, determines the wide scope of this practice and the possibility that the medical examiner will encounter various rare and specific diseases that are not the first choice in the differential-diagnostic plan of clinicians. In such cases, the medical examiner, by publishing the relevant case study, reminds of the existence of these, albeit rare, diseases and thus helps to establish the clinical diagnosis.

## **EDUCATIONAL AND TEACHING ACTIVITY**

From the official certificate presented, issued by MU, "Prof. Dr. Paraskev Stoyanov" city of Varna, it is evident that Dr. Emilia Mihailova Kaisheva, PhD has 15 years, 8 months and 15 days teaching experience in the specialty "Forensic medicine" and a total work experience of 18 years, 1 month and 17 days.

Dr. Kaisheva conducts practical exercises and lecture courses on the subject "Forensic Medicine" for Bulgarian-speaking and English-speaking students majoring in "Medicine" at the MU "Prof. Dr. Paraskev Stoyanov" - city of Varna.

The summarized data on the educational and teaching activity of the candidate Dr. Emilia Kaisheva, PhD at the University of Varna, during the last five academic years, indicate that her teaching workload was a total of 1,669 hours. The summarized data for the last five years are respectively: 2017/2018 - 332 study hours; 2018/2019 - 356 study hours; 2019/2020 - 279 study hours; 2020/2021 - 314 study hours; 2021/2022 - 388 study hours. In conclusion, the

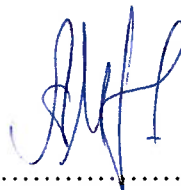
average annual study load of Dr. Emilia Kaisheva, PhD is above the required PRAS in MU-Varna 220 study hours per year.

Dr. Emilia Mihailova Kaisheva, PhD, stated that she speaks Russian and English language.

## CONCLUSION

The scientific works presented by Dr. Emilia Mihailova Kaisheva, Ph.D., published in Bulgarian and international scientific publications and the other quantitative scientometric indicators, meet the requirements for occupying the academic position "Associated Professor", confirmed in the "Regulations for the Development of the Academic Staff" at the MU "Prof. Dr. Paraskev Stoyanov" - Varna. The fulfillment of the criteria for occupying the academic position "Associated Professor", confirmed in the "Regulations for the development of the academic staff" in the MU "Prof. Dr. Paraskev Stoyanov"- Varna, are grounds for **giving my positive assessment and recommending to the honorable scientific jury to award Dr. Emilia Mihailova Kaisheva, PhD, the academic position of "Associated Professor" in the scientific specialty "Forensic Medicine" at the Medical University "Prof . Dr. Paraskev Stoyanov" - Varna.**

12<sup>th</sup> April 2023



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Assoc. Prof. Dr. A. Apostolov, PhD