



**VALSTYBINĖ TEISMO MEDICINOS TARNYBA
PRIE LIETUVOS RESPUBLIKOS TEISINGUMO MINISTERIJOS
STATE FORENSIC MEDICINE SERVICE
UNDER THE MINISTRY OF JUSTICE OF THE REPUBLIC OF LITHUANIA**

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Duomenys kaupiami ir saugomi Juridinių asmenų registre, kodas 191351330

To:

December 8, 2014 Vilnius, Ref. No. 7.5-SB-488

Assoc. Prof. Dr. Antonina Argo
Section of Legal Medicine, University of Palermo
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To: Authorities of Section of Legal Medicine, University of Palermo
RESPONSABILE UNITA' OPERATIVA: ANTONINO SERAFINI
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Cooperazione internazionale per la formazione e la ricerca


Subject: International cooperation for training and research

Dear Professor Antonina Argo,

We confirm you that our Institution the State Forensic Medicine Service under the Ministry of Justice of the Republic of Lithuania (SFMS), address Didlaukio g. 86E, LT - 08303 Vilnius, Lithuania except exchange program on continuing professional education and appreciate welcome your seminars on the topics: perspective on cellular signaling model to forensic applications, asphyxiation: an update, death related to anesthesia with time duration 16 hours in our Institution in the year 2015. Program of Seminars of Antonina Argo will take place during 20 days period, and will interest relevant topics on medico legal fields, in perspectives of future jointly research application between institution of Section of legal Medicine, University of Palermo, and national institution of Forensic medicine in Vilnius (Lithuania) (program attached).

Sincerely,

Dr. Romas Raudys 
Director
State Forensic Medicine Service under the Ministry of Justice of the Republic of Lithuania

Full Prof. habil. dr. Marija Čaplinskienė 
Deputy Director of Research and Development
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Seminaries Program

Antonina Argo*, MD Associate prof. of Legal Medicine

School of Medicine

University of Palermo

Program of Seminars of Antonina Argo will take place during 20 days period, and will interest relevant topics on medico legal fields, in perspectives of future jointly research application between institution of Section of legal Medicine, University of Palermo, and national institute of Forensic medicine in Vilnius (Lithuania).

1^ day (4 hours)

1. IMMUNOHISTOCHEMICAL BIOMARKERS and AGONAL CHANGES IN SUFFOCATION DEATH

Introduction (2 hours)

The identification of mechanical asphyxiation in forensic practice is often very difficult, especially in cases of attempted masking of the homicide, or because of putrefactive alterations of the cadaver. In add, post-mortem dissection artefact of the neck and comparison from ante-mortem bruises leave sometimes doubt at forensic pathologist examination. The target of current research focused on severe tissue hypoxia detectable by a great battery of techniques now available. However, even this limited objective has not been yet obtained with the degree of reliability required for legal purposes.

Medicolegal autopsy cases concerning asphyxia death and performed between may 2005 and December 2012 were retrospectively selected from the archives of Legal medicine Institute of Palermo University. We use term suffocation in the general acceptance of deprivation of oxygen. We identified a total number of 46 cases: 7 cases were ruled out due to prominent putrefactive alterations, the remaining 39

cases were examined.

Interactive session with participants (1 hour)

Conclusion and discussion of future jointly perspectives of research between partner Institution. (1 hour)

2[^] day (4 hours)

2. SUDDEN UNEXPLAINED YOUTH DEATH AND ROLE OF MEDICOLEGAL INVESTIGATION: UPDATE ON MOLECULAR AUTOPSY

Introduction (2 hours)

Youth Sudden death (SD) has received increasing attention over the past decades. Heart diseases are the most common cause of an unexpected sudden death in all age groups; in a young people the main causes including cardiomyopathy, congenital heart disease, myocarditis, genetic connective tissue disorders, mitral valve prolapse or conduction disease, anomalous coronary arteries and tumors.

The recent years contribution of molecular biology assays to the investigation on sudden youth death allowed to clarify some of the pathogenetical aspects of arrhythmical syndrome related deaths, opening the way to preventive actions on relatives .

The adoption of standardized survey protocols, not yet sufficiently implemented in forensic practice, may identify the unlucky events and carry out the appropriate morphological and genetic analysis in family members. For this reason, it is important increase the sensitivity of the scientific and clinical communities to create links between clinicians and forensic and molecular researches. The sudden death of a young person is a devastating event for both the family and community. Over the last decade, significant advances have been made in understanding both the clinical and genetic basis of sudden cardiac death in the young. Many of the causes of sudden death in the young are due to genetic heart disorders, which can lead to both structural (e.g. hypertrophic cardiomyopathy) and arrhythmogenic (e.g. familial long QT syndrome) abnormalities. Most commonly, sudden cardiac death in the young

can be the first presentation of an underlying heart problem, leaving the family at a loss as to why an otherwise healthy young person has died (fig. 1, 2). Not only is this a tragic event for those involved, but it also presents a medical challenge to the clinician involved in the management of the surviving family members. Molecular biology approach contributes to the etiopathogenetic definition of early onset idiopathic cardiac hypertrophy (mutations in MYH7 and MYBPC3), and of cardiac hypertrophy associated to young athletes sudden death (mutations in the genes codifying for tropomyosin, troponin T and I, actin, troponin C).

Evaluation of families requires a multidisciplinary approach, which should include cardiologists, a clinical geneticist, a genetic counsellor and the forensic pathologist directly involved in the sudden death case. Therefore genetic analyses (molecular autopsy) are becoming a useful tool in forensic medicine to identify and prevents the cause of sudden cardiac death and to improve the early diagnosis of asymptomatic carriers among relatives.

Interactive session with participants (1 hour)

Conclusion and discussion of future jointly perspectives of research between partner Institution. (1 hour)

3[^] day (4 hours)

1. DEATHS RELATED TO ANAESTHESIA: TOXICOLOGICAL ASPECTS AND ROLE OF MEDICOLEGAL INVESTIGATION

The anaesthesia team can often be readily and usually unjustly blamed for deaths which occur during the administration of anaesthetics. Such deaths attract intense attention from the mass media as well as the general public.

The rates of anaesthetic-associated deaths may vary depending on study design, study period, study population and particularly what is understood from anaesthesia-associated deaths (0.05–10/10,000). It has been stated that the risk is increased in children, in infants under the age of 1 and in people over 65. Anaesthetic-associated mortality and anaesthetic contributory deaths have been studied extensively.

Deaths which occur during the administration of anaesthetics require medicolegal

investigations. In their medical practices, anaesthetologists, like other specialists, are subject to legal procedures in the country where they perform their duties, to national and international principles of ethics, and to diagnostic and curative standards/procedures relevant to the scientific level of the country concerned. In anaesthetic malpractice claims, certain standards need to be followed in inquiries and approaches so as to determine the real reasons behind the disabilities and/or deaths which occur. In order that sound evaluations could be made in such cases, the experts as well as the system of expertise should be efficient and authorized.

Main Topics:

Epidemiological review

Type of anaesthetic procedures and risk management

Medico legal approach to Malpractice in anaesthetic procedures

Interactive session with participants (1 hour)

Conclusion and discussion of future jointly perspectives of research between partner Institution. (1 hour)

4[^] day (4 hours)

1. SYNTHETIC CANNABINOIDS: TOXICOLOGICAL ASPECTS AND ROLE OF MEDICOLEGAL INVESTIGATION

An increasingly popular trend in the recreational drug community is the smoking of mixtures of herbal or incense products laced with one or more synthetic cannabinoid agonists, drugs with cannabinoid-like properties. Synthetic cannabinoid agonists were synthesized in the 1990s in academic research centers and in the pharmaceutical industry as candidate investigational drugs and have in common an affinity for the cannabinoid CB1 and/or CB2 receptors. They are diverse in structure, although homologs of each distinct chemical type have been synthesized. They are diverse in structure, although homologs of each distinct chemical type have been synthesized.

Some Countries and municipal jurisdictions have moved to schedule the chemical compounds on a local level because of community concerns about their abuse, and

the absence of complete control. Synthetic cannabinoid products for sale on the Internet go by a wide variety of names. Early in their availability, the most common blended material in the United States was called "K2" and was marketed as *incense*. In order that evaluations, we show our experience in this field of toxicological interest, derived from National Research Project approved by University, in the view of sharing expertise and collaborative future research.

Main Topics:

Epidemiological review

Type of Synthetic cannabinoid

Medico legal approach in considering damage and toxicological procedures

Interactive session with participants (1 hour)

Conclusion and discussion of future jointly perspectives of research between partner Institution. (1 hour)