I. History of legal (forensic) medicine and forensic sciences in Latvia.

Recent history of the Latvian forensic medicine can be divided into 4 periods:
- 1st period – until 1922;
- 2nd period – 1923-1944;
- 3rd period – 1945-1990;
- 4th period – 1991- present.

Until 1918, i.e., until the proclamation of the independent statehood of the Republic of Latvia, the territory of Latvia was under the rule of different countries – the Livonian Order, Poland, Sweden, Russia. Legal order and organization of medical care corresponded to that of the respective country in the particular historical period. It was only in the middle of 18th c. that a certain system and procedure for involving medical experts in the work of judicial institutions started to form in the territory of Latvia.

In 1884 in Riga a special institution of forensic medical autopsies was opened. Persons whose death had been caused by violent actions or cases when the cause of death was unclear were brought to this institution for forensic medical autopsies.

The independent state of Latvia was proclaimed on November 18, 1918.

1922 can be regarded as the starting year for the establishment of the academic and practical forensic medicine of the European type in Latvia. In this year Institute of Forensic Medicine was opened within the Faculty of Medicine at the University of Latvia. In the beginning there were four departments at the Institute. They were: Thanatology, Criminal Biology, Forensic Psychiatry and a Laboratory
for Studying Blood Groups. In 1927 was opened one more department – the Riga City Centre against Alcoholism. The volume of practical work of the Institute of Forensic Medicine, servicing Riga and the Riga District (with the population of ~ 400 000) at that time constituted about 300 autopsies a year. After World War II, in Latvia began the period of fifty years of Soviet occupation. The procedure established in forensic medicine in the Soviet Union was introduced in the practical work of forensic examinations in Latvia, too. In Latvia at that time there was one National Office of Forensic Medical Examinations with 3 departments – Thanatology, Clinical Forensic Medicine and a Laboratory of Forensic Medicine.

The Office of Forensic Medical Examinations also served as the place for the practical training of students of Riga Medical Institute. Academic forensic medicine at that time was financially and methodologically subordinated to the Medical Institute and was, to a great extent, separated from the practical forensic medicine.

II. Current structure of medical-legal (forensic) service in the country.

At present practical forensic medical examinations in Latvia are performed by the State Centre of Forensic Medical Examination (SCFME) which is under the Ministry of Health and is financed by the state. The Centre is headed by the Director (since 1992 – Dr. med. h. c. V. Volksone) who simultaneously is also the Chief State Forensic Medical Expert. For her work and her contribution to the State of Latvia V. Volksone has been awarded the highest award of Latvia – the Order of Three Stars.
Regional and interregional forensic medicine departments are located in the territory of particular municipalities, but their operation is ensured by the Centre. The total number of the employees of the Centre is about 205, of which 62 are experts having higher medical or pharmaceutical education. Among them there are 6 experts with a doctoral degree, 3 associate professors, 2 doctoral students and 2 students from the Master’s Degree programme.

Forensic medical examinations of corpses are performed in accordance with the “Recommendations No. R(99)3 of the EU Committee of Ministers to Member States on the Harmonisation of Medico-Legal Autopsy Rules”.

In Latvia, according to the data of Mai, 2010 the number of population was 2,248 million. The number of annual forensic medical examinations of living persons varies between 7246 and 9835 in last years (2007-2009), examinations of corpses – between 2841 and 4232.
III. Teaching of legal medicine and forensic sciences.

Institute of Forensic Medicine was opened 1922 within the Faculty of Medicine at the University of Latvia. It was founded and headed for many years by Ferdinand Neureuter who represented the Vienna School of forensic medicine and was a student of professor A. Haberda. During his years of work in Riga (1923-1937), F. Neureuter, along with his organizational, pedagogical and practical work, was extensively engaged in research work, focussing his attention on various scientific issues which formed the content of more than 40 scientific articles. His versatile research work included diagnostics of poisoning, death resulting from electric traumas, falling into water from great heights, fighting alcoholism and other issues. A number of publications dealt with legislative issues, history of forensic medicine and organization of practical forensic medical work. In 1931 he published the first textbook on forensic medicine in the Latvian language “Forensic Medicine and Deontology of Doctors”.

After 1937, when F. Neureuter left Riga, his colleague Mikelis Veidemanis, an assistant professor, subsequently, professor, became Head of the Institute of Forensic Medicine. He headed the Institute from 1938 until 1944, except for the study year of 1940/1941. Scientific interests of M.Veidemanis were focussed on issues of serology and skull traumas. In 1928 he successfully presented a doctoral thesis on distribution of blood groups in the population of Latvia.

At the beginning of the post-war period the number-one person in the academic forensic medicine in Latvia is a Latvian-born professor Elizabete Yakovleva who had started her scientific and pedagogical activities in Tomsk (Russia) where in 1939 she had presented her doctoral thesis “Exhumation of Corpses”.

From 1959 to 1966 the Department of Forensic Medicine was headed by associate professor A. Adrianof who had arrived in Latvia from Leningrad (now St. Petersburg). His scientific interests were focussed on diagnostics of drowning, on criminal abortion, issues of the history of forensic medicine etc.
From 1967 to 1993 academic forensic medicine was headed by associate professor U. Berzinsh. Since then and until present this function has been performed by associate professor O. Teteris.

IV. Key personalities in Latvia as part of forensic medicine and forensic sciences

**Velta Volksone, Dr.med.h.c.**  
Director of the Latvian State Centre of Forensic Medical Examination  
Hipokrat St 2, Riga, LV – 1038, Latvia  
Telephone: +371-67536136  
E-mail: info@forensic.apollo.lv

**Ojars Teteris, Dr.med. Assoc.Professor**  
Head of the Department of Forensic Medicine  
Riga Stradin’s University  
Hipokrat St 2, Riga, LV – 1038, Latvia  
Telephone: +371-67539509  
E-mail: ojars.teteris@inbox.lv

**Grigorijs Vabels**  
Head the Association of the Latvian Forensic Medicine Experts  
Hipokrat St 2, Riga, LV – 1038, Latvia  
Mobile: +371 29231017  
E-mail: labn@apollo.lv
Uldis Berzinsh, Dr.med.
Forensic Medicine Expert in Cases of Medical Personnel Malpractice
Hipokrat St 2, Riga, LV – 1038, Latvia
Telephone: +371-67536136
E-mail: ulbers@navigator.lv

Martins Silinsh, Dr.med
Chief of Regional Forensic Medicine Department in Plavinas
Daugavas St 54, Plavinas LV-5120, Latvia
Telephone: +371-65133071
V. Major national books and scientific journals in forensic medicine and forensic sciences


In 1992 the Association of the Baltic Forensic Medicine began to publish a journal “Medicina Legalis Baltica”.

Forensic medicine experts of Latvia publish their articles in the local legal journals issued by the University of Latvia, Police Academy and the Ministry of Justice. Part of scientific publications can be found in published materials of different conferences, congresses and symposia, including those of other countries.

VI. National scientific society in the context of legal (forensic) medicine and forensic sciences.

Forensic medicine experts of Latvia at different historical periods have cooperated through participation in national professional associations. In the time period from 1954 to 1993 it was the Scientific Society of Forensic Medicine. Presidents of Society were E.Yakovleva (1954 - 1955), A.Shpiganovich (1956 - 1959) A.Adrianof (1960 - 1964), U.Bersinsh (1965 - 1986), V.Shmidt (1987 - 1993).

In 1993 a new model of cooperation was formed – the Association of Forensic Medicine Experts of Latvia the members of which are all forensic medicine Experts practising in Latvia. Presidents of the Association for the respective periods were: V. Volksone (1993-2001), I. Martinova (2002-2007), G.Vabels (2007 - until present).

VII. Periodic national scientific meetings within the forensic medicine and forensic sciences.

The Association of Forensic Medicine Experts of Latvia organizes annually local thematic conferences 3 – 4 times a year. In 1990 the Baltic Medico-Legal Association (BMLA) was founded. Its members are national societies of forensic medicine of Latvia, Lithuania, Estonia and the Society of Forensic Medicine of St. Petersburg. The BMLA organizes a congress in one of the member states every 3 years. The first congress took place in 1992 in Vilnius; the second – in 1995 in Helsinki; the third – in 1998 in Riga /Jurmala/,; the fourth – in 2001
in Tartu; the fifth – in 2004 in St. Petersburg; the sixth – in 2007 in Vilnius; the seventh in 2010 in Helsinki.

Since 1992 the BMLA has been publishing an international journal “Medicina Legalis Baltica”.

**VIII, Legal (forensic) medicine cooperation at national and international level.**

International cooperation and establishing contacts among scientists and researchers plays a significant role in the development of the sector. These contacts have varied in different historical periods of forensic medicine in Latvia.

During the first period when the territory of Latvia was part of the Russian Empire such contacts existed almost exclusively with the Russian forensic medicine. The fact that part of forensic medicine doctors had obtained their education in higher educational establishments of Western Europe can be regarded as indirect international contacts of that time.

During the first independent statehood of Latvia (1918-1940) international contacts were almost fully focussed on the West, primarily, towards the German-speaking territories – Germany and Austria. These contacts were specifically fostered, as the first organizer and head of the Latvian forensic medicine was F. Neureuter. At that time many Latvian forensic medicine doctors specialized and improved their professional qualifications in Germany and Austria, for instance, M. Veidemanis obtained his professional in forensic hematology in Berlin with the well-known hematologist Schiff. Latvian forensic medicine experts, with F. Neureuter at the head, published more than 70 articles in such journals as “Deutsche Zeitschrift für die gesamte gerichtliche Medizin”, “Beiträge zur gerichtlichen Medizin” and in other periodical and non-periodical publications.

With other European countries scientific and practical contacts were not so close. Within the framework of mutual cooperation, there were some contacts with experts from Poland, Finland, Estonia, Lithuania and even from such far-away countries as Japan.
During the third, the so-called Soviet period, contacts were practically possible only with forensic experts of the Soviet Union. It must be noted that forensic medicine of the Soviet Union in some spheres was internationally recognized. Forensic medicine experts of Latvia raised their professional qualifications in relevant institutions of higher learning of Moscow, Leningrad, Kiev, Kharkov and other places. Since 1990, after Latvia had regained its independence, vast opportunities opened for cooperation with colleagues from Western Europe and other parts of the world. During the last 15 years forensic medicine experts of Latvia have participated in international conferences, symposiums, congresses and different forums in more than 20 countries of the world, –in such countries of Europe as Germany, Sweden, France, the United Kingdom, Switzerland, the Netherlands, Austria and others among them. Since 1991 Latvian forensic medicine experts have regularly participated in the annual conferences of the Scientific Society of Forensic Medicine of Germany. As regards countries of other continents, in the scientific forums of which Latvian forensic medicine experts have taken part, one can mention Japan, Argentina, Australia, Israel, Turkey, USA and some others. On the other hand, more than 50 colleagues from Europe and other continents have visited Latvia during these years.

IX. Addresses and contact details of medical-legal and forensic public services in the country.

The address of the State Centre of Forensic Medical Examination is:
Riga, Hipokrat St 2, LV-1038; Latvia
e-mail  info@forensic.apollo.lv
Phone:  0371- 67536136
Internet home page of the Centre:  www. vtmec.gov.lv/.
X. Development of legal (forensic) medicine service in the country.

Currently modern examination methods are introduced and used in the practice of the Latvian forensic medicine experts, primarily, in laboratories.

Thus, the Laboratory of Chemical Toxicology uses in its daily practice: gas chromatography – mass spectrometry to identify toxic substances in biological material; enzymatic immunological method to identify narcotic substances in biological material; gas chromatographic screening (with nitrogen-phosphorus and electroncapture detectors) of narcotic and psychotropic substances; screening of volatile toxic substances by using gas chromatography with flame ionization detector.

At the DNA Laboratory within the framework of HID (Human Identification System) ABI PRISM 310 genetic analyzer is used to determine paternity and to identify stains.

In the Laboratory of Biological Serology recently they have introduced: a diagnostic test to identify sperm by using immunochromatographic semiquantitative method examination of PSA; chromatographic determination of the presence of blood, perspiration, urine on sylphol plates and paper.

In the Laboratory of Medical Criminalistics modern digital technologies are used to determine the mechanisms of caused injuries, to identify unidentified corpses and body parts, to determine the mechanisms of caused blood traces. X-ray fluorescent spectroscopy by using “Spectroscan G-max” is applied for the quantitative analysis of chemical elements.

The Laboratory of Histology uses computer software programmes for making histological preparations and modern computerized methods for staining. Making use of the SKYPE internet possibilities on-line consultations with experts from neighbouring countries are held in dealing with particularly complex cases.

The local computer network of the Centre ensures effective transmission of data among its structural units.