Forensic expert activity and scientific cooperation in conditions of military aggression of Russian Federation against Ukraine: unity of knowledge and professionalism

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In a country suffering from military aggression, the role of expert and scientific communities is extremely important, which contribute not only to the sustainable functioning of justice, but also to scientific progress. Even during this difficult period, forensic institutions of Ukraine continue to work in a regular mode, perform expert research and research work. Despite the difficult conditions of martial law, forensic experts perform examinations at a decent professional level, which is extremely important for ensuring compiliance with the rule of law, rights and freedoms of citizens. Ukrainian forensic experts skillfully combine dedication and high qualification with scientific curiosity, civic courage, fortitude and intensification of international cooperation.

One of the ways to interact with international scientific community is Research Paper Collection: *Theory and Practice of Forensic Science and Criminalistics* indexed in *Google Scholar* and international online databases: *Academic Scientific Journals Indexing, Bielefeld Academic Search Engine (BASE), CORE, Crossref, Directory of Open Access Journals (DOAJ), Directory of Open Access Scholarly Resources (ROAD), Directory of Research Journals Indexing (DRJI), ERIH PLUS, Eurasian Scientific Journal Index*

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(ESJI), Europub, Index Copernicus International, MIAR, Polska Bibliografia Naukowa, RefSeek, ResearchBib, Ulrich's, WorldCat, as well as in the Register of Scientific Publications of Ukraine and on the website of *DOI Foundation*. Electronic versions of the collection are posted on the Internet on the platforms of V. I. Vernadskyi National Library of Ukraine, libraries of forensic institutions of the Ministry of Justice of Ukraine, institutions of higher education of the Ministry of Internal Affairs of Ukraine etc.

The 35th issue of Research Paper Collection: *Theory and Practice of Forensic Science and Criminalistics* was published, all materials of which are traditionally combined into two groups: *Research Papers* and Case Notes.

The section with research papers opens with the *Open sources of cyberspace as objects of forensic research* article by ***Mykhailo Scherbakovskyi*** (Ukraine), Doctor of Law, professor, in which the procedural order of forming digital evidence based on open information from cyberspace in the context of evidence during a criminal case is investigated proceedings and substantiated the possibility of forensic expert research of cyberspace to obtain criminally relevant electronic (digital) information, which under certain legal procedures becomes a source of evidence in criminal proceedings in the form of an expert opinion. The author proves that computer data and electronic (digital) information are synonymous and are combined into two groups: neutral, which are not relevant for criminal proceedings, and criminally relevant, containing traces of an offense and data about persons, objects, events, facts, etc. These facts are indicative or evidential. The scientist argues that main procedural way of forming evidence based on computer data from open sources of cyberspace should be conducting a forensic examination of electronic communications, which object is raw data about the object of search, cyberspace, and the subject is facts and information about this object. The researcher offers the methodological foundations of such forensic research: intelligence tools of open *OSINT* databases and *Berkeley Protocol* recommendations (taking into account current legislation of Ukraine).

The authors of the following work are ***Pavel Giverts*** (Israel), PhD. in Criminalistics and Forensic science and ***Oleksandr Kolomiitsev*** (Ukraine), PhD in Technology, consider the role of machine learning for modern society in general and the possibility of its application in forensic research of firearms in particular. Scientists analyze the main capabilities of machine learning and outline ways to use it to perform basic expert tasks in research on firearms.

In the article: *Forensic characterization of economic crimes committed by organized groups with corruption relations,* ***Valentina Korzh*** (Ukraine), Doctor of Law, Professor, examines the trends in development of the doctrine of the forensic characterization of crimes, debatable issues regarding its concept, quantitative and qualitative composition. The researcher states that the forensic characterization of crimes is a theoretical category of criminalistics, a system of data on the most general features of the type of crimes, typical circumstances, methods and mechanisms of their commission, and other circumstances that are important for the investigation. The main purpose of forensic characterization of crimes is to implement its data in inves-

tigation methods. The scientist is sure that globalization processes, scientific and technological progress contribute to quantitative and qualitative changes in criminal activity. The author offers a new approach to defining the concept of *economic crime* and characterizes economic crimes committed by organized groups with corruption ties, singles out their components for use in methods of investigating this type of crime.

The section continues with the *Criminal procedural and forensic means of preliminary forensic research on living person body* article by ***Artem Kovalenko*** (Ukraine), PhD in Law, Docent, in which it is argued that as a result of the preliminary examination of the body of a living person, it is possible to obtain information about the signs of its appearance (in particular, functional), materially fixed traces on the body and clothes, as well as about the person who left them as a social being. The scientist proves that leading procedural means of examining the body of a living person is an examination aimed at identifying traces of a criminal offense and special signs on the body and clothing of a person, and special signs in the context of forensic examination should be understood as any individual (personal) anatomical signs of a person's appearance. Research methods within the limits of this investigative (search) activity are visual observation, and the procedural means of researching the functional signs of a person's appearance is an investigative experiment. It is noted that functional signs of a person's appearance can be recognized during other verbal and mixed investigative (search) actions: interrogation, search, presentation for identification. Information obtained in this way is indicative and can be used for tactical purposes. The author emphasizes that further prospects of scientific research in this area are related to development of criminal procedural and forensic means of preliminary examination of corpses.

Ivan Yatsenko (Ukraine), Doctor of Veterinary Medicine, Professor, examines peculiarities of expert interrogation, which subject is provision of testimony, clarification or clarification of the expert's conclusion as an element of its evaluation, focusing on the forensic veterinary aspect of this issue. The author states the presence of five stages in the algorithm of interrogation of a forensic veterinary expert and singles out the procedure of interrogation of forensic experts who conducted a multidisciplinary or commission examination, emphasizing peculiarities of such interrogation. The researcher cites conditions under which the interrogation of a forensic veterinary expert is inappropriate, and argues that the proposed algorithm of interrogation of a forensic veterinary expert from praxeological positions contributes to the work of the court, making possible to correctly evaluate the conclusion.

The *Case Notes* section begins with the article: *Role of entomological evidence in criminal investigations*" by Ukrainian authors: ***Serhii Rozumnyi***; ***Daria Mylostyva***, PhD in Agriculture; ***Svitlana Poliakova***, PhD in Philology; ***Anna Babchenko***, PhD Biology. The scientists emphasized the importance of necrotic fauna research for practical forensics, highlighted the influence of necrotic entomophiles on the time of death of a living object (depending on its species and environmental conditions), presented the results of a comparative analysis of the activity

of representatives of necrotic fauna and updated the need to use necrofauna in systemic work of forensic biologists. Researchers rightly consider the obtained entomological data to be a reliable source of information for finding out the objective truth in the processes of pre-trial investigation and subsequent legal proceedings. At the same time, the authors note that determining the time of death from cadaveric fauna can only be of secondary importance, since the settlement and development of necrofauna have a high degree of variability. The authors outlined prospects for further research, including improvement of entomological research methods (in particular, in different environmental conditions), proved the need for development of forensic biology as an integral component of forensic science.

In research paper by ***Yevhen Pivnov*** (Ukraine), Postgraduate Student at NSC «Hon. Prof. M. S. Bokarius FSI», it is stated that, as of today, in the expert practice of conducting forensic construction-technical and road-technical studies in Ukraine, there is a lack of specialized methods for determining the volumes and dimensions of damage caused and damages from road infrastructure damage as a result of the armed aggression of the Russian Federation: in case of the need to conduct such studies, the forensic expert is forced to adapt previously developed research methods to the realities of today. Thereby there is an urgent need to develop methods and improve existing approaches to determining the scope and size of the damage and losses, taking into account the destruction of road infrastructure of Ukraine as a result of active hostilities against our State.

In the *Subject and object of forensic electrical engineering in proceedings electricity theft* article by ***Serhii Rohalin*** (Ukraine) the place of forensic electrotechnical examination in the system of sources of evidence for the facts of theft of electricity is defined, the concept of the subject and object of such examination is formulated, list of its species, development prospects are outlined. Typical questions to the expert in the proceedings on the theft of electricity through the influence of electromagnetic radiation on the metering device are formulated. On the example of this list, the principles of forming typical lists of questions for other areas of research into the facts of theft of electricity depending on the method of committing the criminal offense are considered.

Inna Bosak (Ukraine), Postgraduate student of the National Academy of the Security Service of Ukraine, in her paper singles out the principles of specific expertise use while investigating crimes against the foundations of Ukraine's national security: independence of a person who has specific expertise; legality; rule of law; research complexity; competitiveness; objectivity; comprehensiveness and completeness of use of special knowledge; non-disclosure by a person who uses specific expertise while conducting investigative (search) actions, pre-trial investigation data and operational information; observance of constitutional rights and freedoms of citizens involved in the pre-trial investigation process; specific expertise use by expert witness exclusively within the limits of his competence. The scientist insists on the need for a more rational organization of proof procedure and draws attention to the issues of specific expertise use at pre-trial investigation stage.

On the last pages of this issue there is a traditional column of *Scientific News* introducing recent scientific events in forensic science.

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Together to the victory!

Glory to Ukraine!

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