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# CONTENTS

### ORIGINAL ARTICLES

Igor S. Brodetskyi, Olena O. Dyadyk, Vladislav A. Malanchuk, Mykhailo S. Myroshnychenko, Mykhailo S. Krotevych IMMUNOHISTOCHEMICAL FEATURES OF THE EXPRESSION OF HUMAN PAPILLOMA VIRUS TYPE 16 IN PLEOMORPHIC ADENOMAS OF SALIVARY GLAND	7
Nadiya O. Stasiuk, Lev Yu. Plaviuk, Sergiy V. Fedorov, Vitaliy I. Gereliuk, Nataliya P. Makhlynets, Nila V. Neyko USE OF HERBAL IMMUNOTROPIC MEDICINES FOR COMPLEX TREATMENT OF GENERALIZED PERIODONTITIS IN PATIENTS WITH CONCOMITANT CORONARY ARTERY DISEASE	11
Weronika Dawid, Martyna Maciejewska, Inga Janik-Fuks, Dorota Ćwiek, Małgorzata Zimny, Olimpia Sipak-Szmigiel MEDICAL STAFF IN THE CARE OF A PREGNANT PATIENT DIAGNOSED WITH FETAL DEFECT	17
Adrian D. Kvit, Mykhaylo M. Tutka, Volodymyr V. Kunovskiy ACUTE COMPLICATED PANCREATITIS AND DIABETES MELLITUS: THE ROLE AND SIGNIFICANCE OF THE BIOCHEMICAL INDICATORS OF CARBOHYDRATE AND LIPID METABOLISM AS A PROGNOSTIC CRITERION FOR THE SEVERITY OF THE DISEASE CLINICAL COURSE	22
Nadiia V. Herevych, Olena A. Nochvina, Iryna M. Nikitina FETAL INFECTIONS OPTIMIZATION OF PREGNANCY AND DELIVERY INTRODUCTION	28
Maksym P. Melnychuk PROGNOSTIC SIGNIFICANCE OF MAGNETIC RESONANCE IMAGING IN PATIENTS WITH PROSTATE INTRAEPITHELIAL NEOPLASIA	35
Tatiana V. Polishchuk, Natalia M. Lokhmatova, Olha V. Sheshukova, Irina M. Tkachenko, Sofia S. Bauman, Alina I. Maksymenko INFLUENCE OF MICROBIOTA ON THE CLINICAL AND IMMUNO-HISTOCHEMICAL CHARACTERISTICS OF CHRONIC GENERALIZED CATARRHAL GINGIVITIS IN CHILDREN	39
Inessa I. Yakubova, Victor E. Dosenko, Lesya V. Tumanovska, Volodymyr I. Ostrianko THE EFFECT OF DIET ENRICHED WITH PYROPHOSPHATE (E450) ON EXPRESSION OF GENES ENCODING BONE MORPHOGENETIC PROTEIN AND OSTEOCALCIN IN MOUSE EMBRYONIC MANDIBLE TISSUES	43
Andriy I. Tsvyakh, Andriy Y. Hospodarskyy, Nataliia O. Marchenkova, Ihor R. Kopytchak, Volodymyr P. Kostjuk, Yevhen A. Lymar, Sergii M. Gdanskyi TELEREHABILITATION OF THE KNEE JOINTS OF PATIENTS WITH POLYTRAUMA	48
Olha O. Boiko, Viktoriia V. Rodionova THE EFFECT OF SMOKING ON NUTRITIONAL STATUS, SEVERITY OF THE DISEASE AND THE DEVELOPMENT OF SYSTEMIC EFFECTS IN PATIENTS WITH CHRONIC OBSTRUCTIVE PULMONARY DISEASE	52
Olena O. Dyadyk, Pavlo P. Snisarevskyi, Tetiana P. Snisarevska MORPHOLOGICAL FEATURES OF CELLULAR INFILTRATION IN THE MUCOSA OF LARGE INTESTINE IN ULCERATIVE COLITIS AND IRRITABLE BOWEL SYNDROME	57
Larysa M. Malanchuk, Mariia O. Riabokon, Artem S. Malanchuk, Svitlana S. Riabokon, Serhiy L. Malanchuk, Viktoriia M. Martyniuk, Tetiana A. Grabchak, Inna B. Pitsyk RELATIONSHIP BETWEEN PATHOLOGICAL MENSTRUAL SYMPTOMS AND THE DEVELOPMENT OF EXTRAGENITAL FORMS OF LOCAL INFLAMMATION	64
Olga E. Dubenko, Olha S. Chyniak, Olexander O. Potapov LEVELS OF PROINFLAMMATORY CYTOKINES IL-17 AND IL-23 IN PATIENTS WITH ALZHEIMER'S DISEASE, MILD COGNITIVE IMPAIRMENT AND VASCULAR DEMENTIA	68
Yuriy P. Vdovychenko, Oleg A. Loskutov, Oleksandr A. Halushko, Maryna A. Trishchynska, Dmytro O. Dziuba, Tetiana M. Povietkina, Alla D. Vitiuk ACUTE ISCHEMIC STROKE IN WOMEN: EFFICACY OF THE FREE RADICAL SCAVENGER EDARAVONE	72
Liudmyla K. Parkhomenko, Larysa A. Strashok, Margaryta A. Khomenko THE ROLE OF ZONULIN IN THE DEVELOPMENT OF LIVER FIBROSIS IN OBESE ADOLESCENTS	77
Aidyn G. Salmanov, Valerii O. Ushkalov, Yelizaveta Ye. Shunko, Natalie Piven, Liliia M. Vygovska, OLHA M. VERNER, STELLA KUSHNIRENKO ONE HEALTH: ANTIBIOTIC-RESISTANT BACTERIA CONTAMINATION IN FRESH VEGETABLES SOLD AT A RETAIL MARKETS IN KYIV, UKRAINE	83
Olga V. Sheshukova, Sofiya S. Bauman, David S. Avetikov, Stanislav O. Stavitskiy THE BALANCE OF IL-1B, IL-10 AND THE LEVEL OF IKBA EXPRESSION IN CHILDREN WITH CHRONIC CATARRHAL GINGIVITIS AND GASTRODUODENITIS	90
lgor D. Duzhyi, Halyna P. Oleshchenko, Ivan A. Hnatenko, Stanislav O. Holubnychyi PARTICULAR QUALITIES OF THE PROTEOLYTIC SYSTEM IN PATIENTS WITH TUBERCULOSIS DEPENDING ON THE SENSITIVITY OF THE PATHOGEN	94

Yelyzaveta S. Sirchak, Vasilij Ye. Barani, Oksana I. Petrichko, Nelli V. Bedey PECULIARITIES OF CHANGES IN HOMOCYSTEINE LEVELS DEPENDING ON VITAMIN STATUS IN PATIENTS WITH CHRONIC PANCREATITIS AND TYPE 2 DIABETES	98
Olexandr V. Tsyhykalo, Iryna S. Popova, Olga Ya. Skrynchuk, Tetiana D. Dutka-Svarychevska, Larysa Ya. Fedoniuk PEQULIARITIES OF MORPHOGENESYS AND TOPOGRAPHY OF INFRAHYOID TRIANGLES IN HUMAN PREFETUSES AND FETUSES	102
Tetiana I. Miyer, Larysa S. Holodiuk, Valentyn O. Savosh PREVENTING THE PRE-SICK CONDITIONS OF THOSE WHO PRACTICE LIFELONG LEARNING	107
Tetiana M. Moiseienko, Inna I. Torianyk, Gennadiy Ye. Khrystian, Viktoria A. Rybak, Iryna A. Voronkina, Anatoliy L. Melnyk, Nina F. Merkulova, Olena I. Mohylenets, Ganna O. Solomennyk, Natalia G. Popova, Victoria Yu. Ivannik, Mykhailo S. Myroshnychenko MORPHOLOGICAL EFFICACY EVALUATION OF GEL WITH CARBON DIOXIDE EXTRACT OF HOPS IN CASE OF COMPLICATED WOUND INFECTION ACNE VULGARIS	112
Mykhaylo Delva, Iryna Delva ANALYSIS OF PRIMARY HEADACHES MANAGEMENT IN POLTAVA REGIONS	118
Serhii V. Rusanivskyi, Oleksii S. Fedchenko, Oleksandr M. Kruk, Serhii A. Oleksiychyk, Ruslan V. Lysyk, Vadim D. Shtoma, Stanislav O. Yuriev HEALTH STATUS OF INSTRUCTIONAL STAFF OF HIGHER EDUCATION INSTITUTIONS WITH SPECIAL TRAINING CONDITIONS	122
Oleh O. Vorovskiy, Yuliia Yu. Shushkovska, Oksana I. Afanasiuk STOMACH BEZOARIS, CAUSES OF DEVELOPMENT, DIAGNOSIS AND METHODS OF TREATMENT	128
REVIEW ARTICLES Yulia S. Razmetaeva, Olga O. Sydorenko ABORTION, HUMAN RIGHTS AND MEDICAL ADVANCES IN DIGITAL AGE	132
Kateryna V. Pikul, Liudmyla M. Syzova, Valentina I. Ilchenko, Irina M. Zvyagolska DIPHTHERIA: CURRENT PUBLIC HEALTH CHALLENGE IN UKRAINE AND WORLDWIDE (LITERATURE REVIEW)	137
Tetiana V. Fartushok, Halyna B. Semenyna, Oksana M. Yurchyshyn, Olha S. Komissarova WAYS TO IMPROVE NATURAL FERTILITY	144
Lidiia H. Yurkovska, Volodymyr V. Krasnov, Serhii H. Ubohov QUALITY ASSURANCE OF MEDICINES: THE STATE AND TRENDS OF THE EUROPEAN UNION AND UKRAINE LEGISLATION DEVELOPMENT	150
Serhii O. Savvi, Alla Yu. Korolevska, Serhii Yu. Bityak, Yevhen A. Novikov COMPLETE THORACIC ESOPHAGUS OBLITERATION: CLINICAL CASE REPORT	155
CASE STUDIES Pavel A. Dyachenko, Raisa A. Hramova, Anatoly G. Dyachenko A RARE BRAINSTEM INFLAMMATORY SYNDROME, CLIPPERS, MYTH OR FACT. CASE REPORT WITH CRITICAL REVIEW	161
Aniuta S. Sydorchuk, Nonna A. Bogachyk, Yadviha V. Venhlovska CLINICAL CASE OF EDWARDSIELLOSIS IN UKRAINE	165
Valeriy V. Boiko, Kyrylo Yu. Parkhomenko, Kostyantyn L. Gaft, Oleksandr E. Feskov SIMULTANEOUS HIATAL HERNIA PLASTICS WITH FUNDOPLICATION, LAPAROSCOPIC CHOLECYSTECTOMY AND UMBILICAL HERNIA REPAIR	168

**REVIEW ARTICLE** 



# QUALITY ASSURANCE OF MEDICINES: THE STATE AND TRENDS OF THE EUROPEAN UNION AND UKRAINE LEGISLATION DEVELOPMENT

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#### **ABSTRACT**

**The aim:** Scientific substantiation of the state and tendencies of development at the present stage of the legislation of the European Union and Ukrainian legislation on quality assurance of medicines.

**Materials and methods:** Using the biblio-semantic, systematic-review, analytical, formal-legal and comparative-law methods, the individual regulatory sources of pharmaceutical legislation of the EU and Ukraine were studied.

**Conclusions:** The paper identifies that pharmaceutical legislation of the EU and Ukraine on quality assurance of medicines at the present stage of their development have common features, which include the number, disorder of existing legal acts, which creates conflicts between them and the potential for gaps in regulation. The main trend in the development of this legislation in the EU and Ukraine is the disparity of legal acts and the lack of significant legislative efforts to codify them.

KEY WORDS: quality of medicines, quality assurance, EU pharmaceutical legislation, Ukrainian pharmaceutical legislation

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#### **INTRODUCTION**

The pharmaceutical sector in the healthcare sector of Ukraine is constantly looking for the best ways to integrate into the European and international space. This requires, among other things, continuous efforts to harmonize the pharmaceutical legislation of Ukraine on quality assurance of medicines with the regulatory requirements of international and European legal acts. These processes of harmonization of domestic legislation with international or regional legal sources are not easy for any country, including Ukraine. The reasons for the difficulties are, in particular, the specific features and trends of development of both Ukrainian pharmaceutical legislation and international (regional European) legal sources.

In Ukraine, various aspects of pharmaceutical law have been investigated by pharmacists [1-4], legal scholars [5-8] and representatives of other scientific fields [9] in different years. However, the current peculiarities and tendencies of the development of legislation on quality assurance of medicines at the regional European and national Ukrainian level require additional scientific attention. Scientific interest in these issues is also substantiated by the fact that Ukraine at the level of its Constitution has determined the irreversibility of the European and Euro-Atlantic course, the strategic course of the country for the acquisition of full membership of Ukraine in the European Union and in the Organization of the North Atlantic Treaty [10]. The course set out in the Consti-

tution of Ukraine together with the provisions of the Association Agreement between Ukraine, of the one part, and the European Union, the European Atomic Energy Community and their Member States, of the other part (hereinafter - the Association Agreement) [11] secondly, the task of harmonizing Ukrainian and EU legislation. This creates the legal basis for modern processes of harmonization of the pharmaceutical legislation of Ukraine with the relevant EU regulatory sources, including the quality assurance of medicines.

#### THE AIM

The aim of the work is to substantiate the current state and trends of development at the current stage of European Union legislation and Ukrainian legislation on quality assurance of medicines in the context of harmonization of European Union and Ukrainian legislation on quality assurance of medicines.

#### **MATERIALS AND METHODS**

Using biblio-semantic, systematic-review, analytical, formal-legal and comparative-legal methods, scientific elaboration of separate regulatory sources of pharmaceutical legislation of the EU and Ukraine, which determine the legal basis for quality assurance of medicines at the main stages of their life cycle, was carried out.

#### **REVIEW**

The evolution of EU pharmaceutical law is driven by the integration tendencies of creating a common internal market in European countries, including the market for medicines with corresponding positive economic effects for medicines developers and manufacturers, their distributors and end-users. In addition, a significant impact on the development of EU pharmaceutical legislation was made by the ongoing search for the best ways to address the fundamental challenges of increasing the level of social protection, raising the standard of living and quality of life of the countries that initially joined the European Economic Community and later the EU.

Since the 1960s, as a result of regional European and global harmonization of pharmaceutical law, the rules for preclinical study and clinical testing of new medicines, their procedure for registration, ICH and RIS / S recommendations, GLP, GCP, GMP, GDP, GPP, GVP, industry inspection system, etc. In recent years, harmonization has spread to the wholesale and retail of medicines, advertising, quality control organizations. The program of medicinal substance international names choice, methods of efficacy and safety evaluation of medicines, harmonized approaches to quality assurance, principles of marketing promotion have been successfully used [9].

One of the central legal sources of modern EU pharmaceutical legislation is Directive 2001/83 / EC of the European Parliament and of the Council of 6 November 2001 on the Community code relating to medicinal products for human use [12]. However, this source applies along with many other directives, regulations, decisions of EU governing bodies, such as: Directive No 2001/20/EC of the European Parliament and of the Council of 4 April 2001 on the approximation of the laws, regulations and administrative provisions of the Member States relating to the implementation of good clinical practice in the conduct of clinical trials on medicinal products for human use; Commission Directive No 2003/94/ EC of 8 October 2003 laying down the principles and guidelines of good manufacturing practice in respect of medicinal products for human use and investigational medicinal products for human use; Regulation (EC) No 1394/2007 of the European Parliament and of the Council of 13 November 2007 on advanced therapy medicinal products and amending Directive 2001/83/EC and Regulation (EC) No 726/2004; Regulation (EC) No 141/2000 of the European Parliament and of the Council of 16 December 1999 on orphan medicinal products; Regulation (EC) No 1901/2006 of the European Parliament and of the Council of 12 December 2006 on medicinal products for paediatric use and amending Regulation (EEC) No 1768/92, Directive 2001/20/EC, Directive 2001/83/EC and Regulation (EC) No 726/2004; Regulation (EC) No 726/2004 of the European Parliament and of the Council of 31 March 2004 laying down Community procedures for the authorisation and supervision of medicinal products for human and veterinary use and establishing a European Medicines Agency etc. [5].

A study of the texts of these and other sources of EU

pharmaceutical law has shown that the legal rules governing the quality assurance of medicinal products in the EU are not, at present, merged into one single systematic source, but scattered across different legal acts that form the totality of EU pharmaceutical legislation . For example, the terminological analysis of the text of Directive 2001/83 / EC of 6 November 2001 showed that the expression «quality of medicines» in different variants of terms is used 13 times in different parts of this legal act.

The analysis of not only this European source, but also of other acts, including international acts, indicates a similar approach of the drafters of legal sources to the definition of the legal bases for quality assurance of medicines. Relevant legal provisions are set out in international and regional legal acts, whose call is, first of all, to regulate the legal relations and the legal regime of medicines in general or of certain types of medicines at a certain stage of their life cycle.

This is typical of the GxP guidance system. For example, Good Pharmacy Practice (GPP), which defines the requirements for the retail medicines phase, contains only one mention of the term «medicines quality». However, this provision is crucial because it requires states at national or, where appropriate (for example, at state or provincial level) to establish a legal structure that, among other things, ensures the integrity of the supply chain and the quality of medicines [13].

Thus, at present, a considerable number of legal provisions defining the requirements for quality assurance of medicines at all stages of their life cycle have been accumulated in sources of EU law and pharmaceutical law, which belong to different types of legal sources and have been approved in different years. The main tendency of the legal ordering of the quality of medicines is to preserve the dispersion of the relevant norms by different legal sources and the absence of significant law-making efforts to systematize them in any way in one or more legal acts.

Iven that Ukraine is not yet a member of the EU, Union rules do not apply automatically in Ukraine. Typical decisions in the EU and Ukraine so far, such as the approval of medicines for their introduction into production, their admission to the market and the prevention of risks to patient and public health, are made in different regulatory environments and under different procedures. The competent authority of Ukraine may not participate in a decentralized or mutual recognition procedure for medicines introduced in the EU. To address these and other issues, national legislation should be harmonized with EU law in accordance with the Association Agreement and its annexes [5].

The one of the central terminological constructions in Ukraine that characterizes pharmaceutical relationships at all stages of the medicines life cycle and, accordingly, is reflected in a number of regulatory acts (RAs) is "quality assurance of medicines". On January 23, 2020, we searched the official web portal of the Verkhovna Rada of Ukraine for a search for "quality assurance of medicines", which obtained a list of 694 documents. The request was formed with definitions of the status of the document as "valid"

**Table 1.** Number of approved and valid RAs in Ukraine by time periods

Time period, years	Number of approved RAs that have remained in force as of 23/01/2020	The average annual number of approved RAs that has remained in force as of 23/01/2020
2010 – 2019	478	48
2000 – 2009	182	18
1991 – 1999	29	3
1991 – 2019	689	24
Before 1991	5	<del>-</del>
Before 1991 – 2019	694	_

Table II. Number of approved and valid NPAs in Ukraine by their publishers as of 23/01/2020

Nº	Document publisher	Number of published documents
1.	Verkhovna Rada of Ukraine (Supreme Council)	140
1.1.	Verkhovna rada of USSR (before 24.08.1991)	5
2.	President of Ukraine	12
3.	National Security and Defense Council of Ukraine	2
4.	Cabinet of Ministers of Ukraine	209
5.	Ministry of Health of Ukraine	157
6.	Other Ministries	147
7.	Other Authorities	22
	TOTAL:	694

and with search of the given terminological construction both in the title and in the text of the documents.

Important features that were able to be established by analyzing the received list of documents is a significant increase in the attention of the regulatory authorities of Ukraine over the last decade to the legal regulation of pharmaceutical relationships. As the Association Agreement between Ukraine and the EU requires the harmonization of the pharmaceutical legislation of Ukraine and the legislation of the EU, this has become one of the key factors in the intensification of law-making processes by both the Parliament of Ukraine and the regulatory bodies of the executive power.

According to Table I, over the past 10 years (2010 - 2019), 478 RAs have been adopted, and in the previous 19 years (1991 - 2009), 211 RAs have been addressed to the quality of medicines. Currently, only 5 RAs that have been approved until 1991 and contain references to quality assurance have remained in force.

Table II provides information on the number of RAs approved by various Ukrainian authorities. The given number of legal sources includes not only acts developed by state bodies of Ukraine, but also ratified by Ukraine interstate agreements and documents of international organizations. The latter include the United Nations, the World Health Organization, the International Labor Organization, the International Bank for Reconstruction and Development, the European Community and the European Union, the Council of Europe, the European Free Trade Association, etc.

One of the key legal sources for determining the principles of medicines circulation in Ukraine is the Law on

Medicines of Ukraine [14]. Along with this it is noteworthy that among the studied RAs there are 122 Laws of Ukraine and 297 orders of the central executive bodies of Ukraine. The aforementioned testifies to the significant dispersion, disorder of the current RAs of Ukraine, which mentions the quality assurance of medicines. They are approved in different years, by different bodies and, of course, are based on different conceptual bases, contain different approaches to the use of terminology, legal constructs, sequence of presentation of legal material, etc. It is quite natural that among such a significant but still not systematic array of legislation there are conflicts of both hierarchical and temporal nature, as well as gaps in the ordering of those legal phenomena and processes that evolve through the practice of ensuring the quality of medicines at different stages, their life cycle.

#### **DISCUSSION**

In writing this work, we are aware that along with the terminological constructs "quality of medicines" or "quality assurance of medicines", related and relevant terms are used in the texts of international, European and Ukrainian pharmaceutical legislation, including "safety of medicines", "efficacy of medicines", "suitability of medicines» and the like.

In our opinion, these terms indicate particular aspects of medicines quality and are integral parts of it. The quality of medicines is a generic (integrated) concept that covers the safety of medicines for all interested parties, and the ability of medicines to satisfy the immediate interests of end users, and compliance of medicines with the requirements set out in the legislation and technical documentation [2]. Therefore, the use

of the generic and key constructions "quality of medicines" and "quality assurance of medicines" for the terminological analysis of the legislative arrays of EU and Ukrainian pharmaceutical law is considered quite reasonable.

According to the results of the research, a significant number of disordered, but current RAs always poses a risk to stakeholders who implement their legal requirements in practice. The risk is not only in the inconvenience of using such a large array of RAs created by international and European institutions, as well as by state bodies of Ukraine, but, above all, in the possibility of interested parties violating the contradictory requirements of current legislation. However, such violations are not committed in the form of deliberate actions with predetermined unlawful intentions, but because of an unintentional, erroneous omission of the requirements of a particular RA. As a general rule, such violations provide for more lenient sanctions than for intentional offenses, but the infringing entity is still subject to negative legal liability. As you know, ignorance of the law does not release from responsibility for its violation.

Over the last almost 20 years, Ukrainian scientists have repeatedly put forward initiatives to codify the medical and pharmaceutical legislation of Ukraine [3, 5, 15], but the level of doctrinal projects and proposals has not gone well. Unfortunately, at present there is no work on codification or other systematization of medical or pharmaceutical legislation in the focus of attention of the Verkhovna Rada of Ukraine (the only legislative body of Ukraine [10]).

At the present stage, Ukraine is facing quite difficult tasks that are currently underway to harmonize its own non-consolidated, non-codified array of pharmaceutical legislation with EU law, which is also far enough from being systematically in the classical sense of the concept, due to the regularity of formation and development of continents legal family.

#### **CONCLUSIONS**

Thus, pharmaceutical legislation of the EU and Ukraine on quality assurance of medicines at the present stage of their development, despite the considerable number of substantive and formal differences, is characterized by the following common features: the number and disorder of existing RAs of different legal force, approved in different years and by different regulatory authorities, which gives rise to temporal and hierarchical conflicts of data in the RA, as well as gaps in the regulation of certain aspects of pharmaceutical relationships. The main tendency for the development of this legislation in the EU and Ukraine is to maintain the fragmentation of the RAs and the absence of significant legislative efforts to codify them. These legislative features and the tendency to preserve them significantly complicate and delay in time the processes of harmonization of domestic pharmaceutical legislation with EU legislation, create obstacles to the proper legal regulation of the pharmaceutical sector, and also require overcoming, which is the main way we see in the efforts of the systematic or systematic legal framework both in the EU and in Ukraine. This will be the subject of our further research.

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#### **Conflict of interest:**

The Authors declare no conflict of interest.

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