

## TRANSLATION INTERPRETATIONS OF THE PHARMACEUTICAL TERMS: ENGLISH-UKRAINIAN EQUIVALENTS

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*This article deals with the translation interpretations of the pharmaceutical terms, translation features of this terminology, translation difficulties of the pharmaceutical terms and finding its English and Ukrainian equivalents. Nowadays, foreign technologies, equipment and approaches to medicine and in particular, pharmaceuticals, are far ahead of domestic production and a large number of drugs are produced abroad. Accordingly, the translation of pharmaceutical texts takes an important place among other types of translation. The pharmaceutical translation does not allow mistakes, the approximate wording and inaccuracies in the interpretation of terms because the distortion of the meaning of the source text can lead to various negative consequences, even can cause harm to health.*

*It is often necessary to use different kinds of translation transformations of pharmaceutical terms because of some differences in the grammatical, syntactic and morphological structures of Ukrainian and English languages.*

*However, the presence of numerous difficulties, namely the Latin and Greek borrowings, the lack of standardization of the pharmaceutical terminology continues to be the main causes of translation errors and a major impediment to sharing information. The abovementioned fact confirms the relevance of this problem. The study of pharmaceutical terminology helps to identify the semantic features that underlie the nomination of new drugs and their methods of use.*

**Key words:** *pharmaceutical terms, transcoding, descriptive translation, contextual replacement, concretization, generalization, lexical additions, loan translation.*

**Introduction:** The term is a word with a definitive function. It has a unique value within a certain terminology, which is associated with a particular area of scientific knowledge. Scientific terminology is a multi-level system organization. Every term has a place due to the corresponding concept in the conceptual system of a definite area of knowledge. Term is a kind of tool of scientific knowledge.

Pharmaceutical terminology is a complex consisting of sets of terms, a number of special disciplines, united under the common name «pharmacy» (Greek pharmakeia – the creation and use of drugs). These disciplines study production and the use of medicinal preparations of plant, mineral, animal and synthetic origin. The terminology system in this area corresponds to the level of modern development of the pharmaceutical industry. Based on this, it is important to note that terminology is changeable and can use various sources in its formation. For example, most basic pharmaceutical terms were acquired from Greek and Latin. They could later be created by borrowing terms from other scientific fields such as chemistry, biology, and medicine.

The main requirements to the translation of the pharmaceutical terms are precision and completeness. Based on the type of translation, the distortion of the meaning of the original

text can lead to various consequences, even causing harm to health, especially when it comes to the translation of medical or pharmaceutical texts.

Many scientists such as V. I. Karaban, A. N. Mironov, N. D. Bunyatyan, E. I. Sakanyans, O. N. Gubareva, A. Matyushin, P. L. Gorelik, E. A. Korzhavy, M. N. Chernyavsky have studied linguistic peculiarities of the medical texts. Scientists pay their attention to the problems of harmonization of pharmaceutical terminology, adequate translation of instructions for medications and the creation of terminological dictionaries and glossaries.

The **relevance** of the study is the necessity to analyze the structural and translation features of pharmaceutical terms. In addition, the study of pharmaceutical terminology helps to identify the semantic features that underlie the nomination of new drugs and their methods of use. The insufficient number of studies also dictates the relevance of the study considering English pharmaceutical terminology at the present stage of its development.

The **object** of this paper is a pharmaceutical term of English and Ukrainian languages and its **subject** – structural and semantic types of English pharmaceutical terms and ways of their translation into Ukrainian.

The **tasks** of this research are as follows:

- to define the role of pharmaceutical terms;
- to analyze the existing categories of the pharmaceutical terms;
- to identify the reasons of translation errors while translating pharmaceutical terminology;
- to identify the semantic features of pharmaceutical terminology and word formation processes in this field of knowledge;
- to identify the most frequent ways of translating pharmaceutical terms.

We used the following **methods**:

- the method of generalization (it is applied for determining the main features of the pharmaceutical terms);
- the method of comparison (it is used for analyzing the ways of translation of pharmaceutical terminology);
- method of semantization (in order to define the ways of terms usage).

**Results of the research.** Term is a special word (phrase), taken in professional activities and is used in special conditions. The term is a verbal definition of the concept included in the conceptual system of a certain field of professional knowledge. The term is the main conceptual element of the language for special purposes [1, p. 14]. Traditionally, a function of the term refers to the role played by the term as a means of designating a general special concept. There are three main points of view on the function of the term: nominative, defining, nominative and defining [2, p. 89]. Nominative function in relation to the term is realized in the function of fixing a special knowledge. The term names the objects of this knowledge, and without it the activities in special fields are impossible [3, p. 216]. Defining function, that is, the presence of a strict and precise definition of the term [4, p. 186]. V. V. Vynogradov notes: «A word performs a nominative or defining function, or it is a mean of a precise notation, then it is a simple sign, or a mean of logical definition, and then it is a scientific term» [4, p. 186].

Pharmaceutical text contains pharmaceutical terminology, which is a collection of such complex lexical systems, as pharmacognosy, pharmacology, pharmaceutical chemistry, and botany. Central place in this complex is the nomenclature of drugs. A separate location translates various regulations, guidelines, recommendations for the production of medicinal drug and quality control.

It is important to note that such features characterize pharmaceutical terminology as: the existence of a definition, monosemistry, stylistic neutrality, maximum abstractness, lack of expression and emotional coloring, correlation with special concepts and strict logic.

The categories of pharmaceutical terms are:

- trade names of medicinal products: *Loperamidium-Akri* – *Лоперамід-Акрі*, *Atetonolum-Akri* – *Атенолол-Акрі*;

- international non-proprietary names of medicinal substances: *pinadolin* – пінадолін, *diclofinac* – диклофенак;
- trivial names of medicinal substances: *tropicamide* – тропікамід, *ketconazole* – кетоназол;
- types of drugs and tablets: *anticonvulsant* – протисудомний (антиконвульсивний) засіб, *anesthetic* – анестезуючий засіб;
- methods and analyzes of the study: *Selye triad* – триада Сельє, *BALF samples* – проба бронхоальвеолярної лаважної рідини;
- the names of diseases and human pathological conditions: *Hering Breuer inflation reflex* – дихальний рефлекс Герінга Брейєра, *hypoxic insensitivity* – нечутливість до стимулів, що виходять від периферичних хеморецепторів;
- biomaterial: *vasiole* – вакуоль, *cytokine* – цитокін, *monocyte* – моноцит;
- names of organizations: *Research Institute of Pharmacology and Regenerative Medicine* – Науково-дослідний інститут фармакології та регенеративної медицини (НІФіРМ), *World Health Organization (WHO)* – Всесвітня Організація Охорони Здоров'я (ВООЗ).

The problems of translation of pharmaceutical terminology from English into Ukrainian language derive from such features of this field as:

- highly specialized nature of the term;
- the presence of Latin borrowings [5, p. 448];
- the unresolved issue of harmonization of pharmaceutical terms of different countries;
- the lack of an unambiguous terminological system for the designation of a series of key concepts in the field of standardization and quality control of drugs in Ukrainian language.

All the difficulties associated with the use of special terms we arranged into three groups:

- parallel use of several terms in Ukrainian which refer to the same special concept in English;
- the lack of a terminological unit, denoting a particular special concept in the Ukrainian language;
- the use of incorrect translation of an English term into Ukrainian. The use of several designations of the same concept in Ukrainian is contrary to the basic purpose of the term.

As an example might serve the situation around the English term *reference standard*, which has a number of equivalents: *стандартний зразок*, *еталонний стандарт*, *еталонний матеріал*, *референтний стандарт*. Another English term for standardization and control drug quality – *reference material*, also has several correspondences in Ukrainian language: *стандартний зразок*, *стандартний матеріал*, *еталонний матеріал*, *референтний матеріал*, *зразок порівняння* [6, p. 33–35].

In order to have a correct translation you need to have the knowledge of derivational and morphological structure of the medical term. The basic classification of terms by structure are as follows:

- simple terms consisting of one word: *ulcer* – виразка;
- two complicated words that are written together or hyphenated: *immunofluorescence method* – метод імунофлюоресценції;
- multicomponent terms, having in its composition three or more words: *saccularaneurysmofaorta* – саккулярна аневризма аорти;
- terms-phrases consisting of several components: *cerebellopontodorsaltract* – мозжечково-понтодорсальний шлях.

Taking into account above-mentioned information, we can identify the main ways of translation of pharmaceutical terms. They are transcoding (transcription, transliteration), descriptive translation, loan translation, contextual replacement, specification, generalization, lexical additions.

Pharmaceutical terms may contain one equivalent unit, for example: *disease* – хвороба, *a renal* – нирковий, and many equivalents: *contraction* – скорочення, укладання контракту, придбання, одержання, обмеження; *treat* – лікувати, проводити курс

лікування; розглядати, обговорювати; пригощати; піддавати якогось реагенту; *multipurpose application* – багатостороннє застосування.

Transcriptions are the cases when the letters of the Ukrainian language transmit the sound form of the English word: *dentrit* – дендрит; *antimetabolites* – антіметаболіти; *mercaptopurine* – меркаптопурин; *methotrexate* – метотрексат.

Due to the significant differences in the phonetic and grammatical structures of the English and Ukrainian languages, the transcription of the whole word is rare. Transliteration is the transmission of the original language word by means of letters according to the letter composition, not the sound. For example, *organ* – орган; *gastroenterology* – гастроентерологія; *toxicology* – токсикологія.

Loan translation (calque) is a translation of the original lexical unit by means of replacing its components – morphemes or words (if it is a stable phrase) with their lexical counterparts in the target translation. Loan translation helps to create a new unit that copies the structure of the source lexical unit to the details [7, p. 117]. It is used in the translation of derivatives, complex or difficult derivative words, when the translated correspondence having been thus formed does not violate the norms of use and compatibility of words in the Ukrainian language. For example, *molecular level* – молекулярний рівень, *lymphatic system* – лімфатична система.

Descriptive translation is the reception of the translation of new terminological units of the source language, when a word, phrase or phraseology is replaced in the target language by a phrase that adequately conveys the meaning of the term. A descriptive translation is appropriate when one of the other techniques cannot be used. For example, *protein vesicles release structures* can be translated as білкові структури, що беруть участь у звільненні везикул.

In Ukrainian translation, there are more words than in the original English version. They are necessary in order to reflect accurately the main content of the term.

Contextual substitution corresponds to the cases where a translated counterpart becomes a word or phrase that is not a vocabulary match. Sometimes the translation deviation from the original is necessary to achieve the adequacy of the translation, as different language standards can operate in the languages of the original and the translation, and there are different broadcasting traditions. For example, a word *anatomical* (анатомічний) translates as *структурний*. Because of the traditional norms of the Ukrainian language, there is a complex term-phrase structurally functional relation.

While translating pharmaceutical texts it is often necessary for a translator to use lexical transformations such as specification, generalization, lexical additions.

Specification is the replacement of the lexical unit (a word or phrase) with a broader lexical meaning in the source text on the narrower one in the target text. Because of this technique applying, the logical hypernym-hypothetical relation of inclusion is used: the unit of the source text expresses the generic concept, or hyperon, and the commensurate correspondence is translated – the corresponding concept or subclass belongs to it, that is, again, there is an alternation when filling a certain paradigmatic position. The differentiation of concepts/values in relation to the neutral genus always accompanies the specification.

*Preparing slides using venous blood collected from venipuncture. Підготовка мазків, використовуючи венозну кров, отриману під час венепункції.*

In this example, the Ukrainian term with a narrower semantics «мазок» replaces the term with a broad semantics *slide* – «предметне скло». Such a change is due to the contextual environment and the semantic load bearing the unit of the source language [8, p. 60–63].

Generalization consists in the fact that something specific, concrete is translated in general, that is, by generic or common concept; concrete, specific at the same time goes down, that is, the narrow concept of reality is replaced by a broader [9, p. 562].

*Compare both sides! Are there any retractions or protrusions of the skin? Порівняйте обидві сторони! Бачите будь-які западання або випухлості?*

Lexical additions is a transformation, resulting in an increase in the number of words, word forms or sentence members in order to convey correctly the contents of the original [10, p. 187]. For example:

*For these reasons, descriptive texts are provided for specific elements when deviations are clinically significant. – З цих причин, якщо відхилення від нормального рівня мають клінічну значущість, до результатів аналізу для певних елементів додається описова частина.*

In this example, the use of lexical additions is used, because the English version “*when deviations are clinically significant*” already means that the deviation is not a norm. For the Ukrainian translation, it is necessary to add a few additional words to reveal and show the contents of the sentence «*відхилення від нормального рівня*».

There is a tendency in English to shorten the terms and transform them into abbreviations. However, abbreviations are not always clear. For example, the same abbreviation CCID can be translated as «*заражувальна доза для клітинної культури*» from English «Cell culture infectious dose» in pharmaceutical texts, as well as «*формульний (сигналів) зображення на ПЗС*» from English «Charge-coupled imaging device» in engineering texts. At the same time, the full name of the term is used in the Ukrainian language, and in English, it is only a shortened form.

In addition, comparing with the Ukrainian language, a large number of abbreviations are used in English, since the English language tends to simplify the forms of lexical units. In the English language there are abbreviations *ALC* (*absolute lymphocyte count*), *BRP* (*biological reference preparation*), *mp* (*melting point*), *MLD* (*minimum lethal dose*), *CRS* (*chemical reference substance*) without explanation. In the Ukrainian language, these abbreviations are translated as phrases *зміст лімфоцитів*, *біологічний еталонний препарат*, *температура плавлення*, *мінімальна летальна доза*, *еталонна хімічна речовина*.

**Conclusions.** The translation of pharmaceutical terms is fulfilled in different ways. The most common way of translation is the search of vocabulary equivalents of the term in the target language. It is used in all, or almost in all, cases of their occurrence in the source text. However, due to some differences in the grammatical, syntactic and morphological structures of Ukrainian and English languages, it is often necessary to use a different kind of transformation while translating. Such as transcoding, descriptive translation, contextual replacement, specification, generalization, lexical additions, and loan translation in order to convey the meaning as precisely as possible. Loan translation and transliteration occur most often to preserve the internationality of pharmaceutical texts.

In English, there is a tendency to shorten terms, and terms are transformed into abbreviations. However, abbreviations may be ambiguous. In this connection, the translation should be carried out only with special dictionaries and additional sources.

The reasons of the translation difficulties dealing with pharmaceutical terms can be various. The main difficulties occur because of the Latin and Greek borrowings, the unresolved issue of harmonization of pharmaceuticals in different countries, and the lack of an unambiguous terminological system for the designation of key concepts in the field of standardization and quality control of drugs in the Ukrainian language.

It should be noted that the pharmaceutical sub term system reflects a certain scientific classification of concepts, which is adopted in this field of science. Moreover, the language of medicine is international, and many terms are adopted from Greek or Latin sources, so their consonance may be identical. It was also found that the translation of pharmaceutical terminology requires a sufficient level of translator's knowledge and accuracy of formulations.

#### **ПЕРЕКЛАДАЦЬКІ ІНТЕРПРЕТАЦІЇ ФАРМАЦЕВТИЧНИХ ТЕРМІНІВ: АНГЛО-УКРАЇНСЬКІ ВІДПОВІДНИКИ**

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*Стаття присвячена перекладацьким інтерпретаціям фармацевтичної термінології, особливостям перекладу цієї термінології, труднощам перекладу фармацевтичних термінів та пошуку англо-українських еквівалентів.*

*Нині закордонні технології, обладнання та підходи в медицині, і зокрема, фармацевтиці, випереджають вітчизняні на багато років, велика кількість лікарських препаратів виробляється за кордоном. Відповідно, переклад фармацевтичних текстів займає важливе місце серед інших видів перекладу. Переклад текстів фармацевтичного спрямування можна вважати одним з найскладніших, адже фармацевтика є наукою, у якій точність та повнота викладу відіграють ключову роль. Фармацевтичний переклад не допускає помилок, неточностей в інтерпретації термінів або приблизності формулювань, адже спотворення сенсу вихідного тексту здатне привести до різних наслідків, навіть до нанесення шкоди здоров'ю.*

*Проблеми перекладу фармацевтичної термінології з англійської мови на українську впливають з таких особливостей цієї сфери, як її вузькоспеціалізований характер, наявність латинських запозичень, невирішене питання гармонізації фармакопей різних країн, відсутності в українській мові однозначної термінологічної системи для позначення низки ключових понять в галузі стандартизації та контролю якості лікарських засобів.*

*Перекладач, який працює в цій сфері має добре знати професійні терміни, що вживаються у мові оригіналу та мові перекладу, розбиратися в абрєвіатурах і вміти перекладати з латинської мови, володіти високим рівнем компетенції у фармацевтиці, мати значний досвід перекладацької діяльності та чітко дотримуватися норм мови, на яку перекладається термін. Все це допоможе подолати проблеми комунікації між фахівцями в міжнародній практиці. Вищеописаний факт підтверджує актуальність запропонованої проблеми.*

***Ключові слова:** фармацевтичні терміни, транскодування, описовий переклад, контекстуальна заміна, конкретизація, узагальнення, лексичні додавання, калькування.*

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