

STRUCTURAL AND SEMANTIC CHARACTERISTICS OF PHARMACEUTICAL TERMS AND NEOLOGISMS

Dlafruz Kabildjanovna Khudoyqulova

Researcher, Department of Uzbek language and literature, Faculty of Industrial
Pharmacy, Tashkent Pharmaceutical Institute, Tashkent, Uzbekistan.

E-mail address: Khudoyqulova-1982@mail.ru

Akhmedov Oybek Saporbayevich

Doctor of Science in Philology, Professor of the Department English Teaching
Methodology, Uzbek State World Languages University, Tashkent, Uzbekistan.

E-mail address: ahmedov.oybek@mail.ru

Abstract:

This scientific article discusses the derivational affixes borrowed from Latin into English as well as Uzbek and Russian languages recorded in lexicographic sources and the peculiarities of their functioning in pharmaceutical terminology. Discusses the causes and conditions for the emergence of new words (neologisms) in the English language, and analyzes the special role of compounding (compound words) in the formation of neologisms in terms of word formation. Therefore, the results of a number of foreign scientific researches were discussed. The study concluded that structural and semantic features of pharmaceutical terminology in three languages are an effective method of forming neologisms and that their study is a requirement of our time.

Keywords: terminological system, structural and semantic features, terminological combinations, pharmaceutical terminology, productive derivative series, word-formation elements, neologism, professional language.

Introduction. Language is a phenomenon so unique and multifaceted that it research will never be exhausted. The replenishment of the dictionary with new lexical units is one of the main and driving factors in the development of the

language. The material wealth of a particular nation is certainly reflected in the language (its vocabulary). The more developed the spheres of society, the more new words are “born” in the language.

At present, the medical branch vocabulary, like many other branches of science is developing; research on new vocabulary to help people communicate successfully should be conducted continuously. A huge influx of new words and the need to describe them led to the creation of a special branch of lexicology - neology - the science of neologisms - new words denoting new objects and concepts, but not yet included in the active vocabulary of the language. [5] However, the theory of neology in English studies has not yet taken shape as an independent area of lexicology. The medical industry of the second half of the twentieth century is especially replete with new terms. As Tatarinov notes, in order to include a word in the dictionary of neologisms, it is required that it be used for a year, however, in the lexicographic center of the University of Oxford, a period of five years is allocated for this, which contributes to the exclusion of the possibility fixing all kinds of ephemeral words and occasionalisms.

Pharmaceuticals as a science is replete with terms, i.e. words and phrases denoting scientific concepts that reflect the essential properties and characteristics of an object. A characteristic feature of the term is that it is necessarily included in a certain terminological field. As in other branches of science, terms are often formed as a result of metaphorical transference. The terms are adjoined by nomenclature words that designate specific objects and objects related to a certain area of human activity, most often professional. Meanwhile, according to R. Burchfield, the English language is replenished with 800 new words per year - this figure is much more than in any language in the world. This factor actualizes the problem of not only displaying new words in dictionaries, but also studying them. According to the statistics of scientists, less than 5% of the terminology of medicine has Anglo-Saxon roots, the vast majority of terms are of Greek, Latin, Arabic, French, German or Italian origin. For example, antibiotic (French from Greek) - антибиотик, target

(Italian) - мишень, acetilscholin (gr.+ German) - ацетилшолин, canceradeux (gr. + fr.) - рак двоих, biohazard (gr. - Arab .) - биологически риск.

In pharmaceutical terminology, the neologization of the new era was directly related to the emergence of a new bourgeois society and to the expansion of the need for new terms, which led to the need to improve the systematics of medical realities and their nominations.

A generic terminological unit appeared. The basis of such a unit was such a phrase that could connect reality with its species and genus. But the original genus and species nominations did not linguistically express their essence. Gradually, when with another lack of elements nouns and adjectives switched to the use of verbal elements, a situation arose of modeling really new terms that were already directly related to medical semantics.

The new terminology becomes monosemic at the model level but gradually acquires its own polysemy, synonymy, forms its own abbreviation and eponymy, using morphemes from different languages. It follows that the term in medicine is a historical concept and phenomenon [I, 32, 38].

In pharmaceutical terminology, the neologization of the new era was directly related to the emergence of a new bourgeois society and to the expansion of the need for new terms, which led to the need to improve the systematics of medical realities and their nominations. A generic terminological unit appeared. The basis of such a unit was such a phrase that could connect reality with its species and genus. But the original genus and species nominations did not linguistically express their essence. Gradually, when with another lack of elements nouns and adjectives switched to the use of verbal elements, a situation arose of modeling really new terms that were already directly related to medical semantics. The new terminology becomes monosemic at the model level, but gradually acquires its own polysemy, synonymy, forms its own abbreviation and eponymy, using morphemes from different languages. It follows that the term in medicine is a historical concept and phenomenon.

Research methods are determined by the characteristics of the material, the set goal and objectives. During the work, the following methods were used:

ISSN 2521-3261 (Online)/ ISSN 2521-3253 (Print)

DOI 10.37057/2521-3261 <https://journalofresearch.eu/> 5

1. descriptive as the main method;
2. the method of theoretical analysis of scientific data on pharmaceutical terminology;
3. methods of classification and systematization;
4. reception of derivational analysis.

Pharmaceutical terminology conforms, the strict laws of functioning of any terminological system, the main principle of which is the creation of a term that is the result of theoretical generalization and most accurately reflects the essence of the phenomenon. The formation of the terminological apparatus is unconditionally influenced by general linguistic processes: the law of consistency, the law of linguistic tradition, which, in turn, collides with the law of linguistic analogy, the law of speech economy, the law of antinomy. Having analyzed all the subsystems of pharmaceutical and medical terminology, we came to the conclusion that different affix elements dominate in different subsystems.

In pharmaceutical terminology, Latin derivational formants are widely represented, usually final, suffix: *-in*, *-ol*, *-ur (a)*, *-or*, etc. All of them are semantically labeled and perform strictly defined functions.

Some morphoelements in different subsystems mark different semantic fields of connotation, for example, *the -ur (a)* suffix in clinical and pharmaceutical terminology with the general meaning “action result” reflect different cognitive meanings of scientific and professional vocabulary. Latinisms and neolatinisms in pharmaceutical terminology are a special characteristic feature of the language of medicine and pharmacy, which provides the terminological potential of the scientific language and a high degree of internationality of nominative units.

We can consider the following conclusions as the result of the research:

1. The derivation system of the language of pharmaceutical terminology has its own collection of derivational formants of Latin origin, which are included in a special system of terminological meanings;
2. Analysis of the derivational features of medical terminology as the basis of the language of medicine indicates that all derivational means, abstract in their

categorical meaning, when functioning in professional medical terminology become markers, representatives of the subjective-derivational attitude and acquire additional functions.

Thus, we can say that the structures of special knowledge are objectified in word-formation formants, which serve as the basis for understanding the professional linguistic space necessary for a future doctor. The need to study these cognitive ciphers for professional purposes is the reason for the interest in this area of medical terminology. It is of great interest to identify the causes of the emergence and development of sectoral neologisms in accordance with extralinguistic and linguistic factors in the terminology system of modern English medicine. As a result, it seems very relevant to study the main ways and means of their explication and lexical fixation.

In our case, we will talk about pharmaceuticals and about new words-terms, the process of their emergence in medicine continuously. It should be noted that neologisms, or words that have arisen to denote new concepts, are heterogeneous in nature, and this heterogeneity is due to the distinction between the novelty of the word form and the novelty of the denotation, which is embodied in this form. Based on this, neologisms are divided into lexical and stylistic.

Stylistic neologisms are words or new meanings of old words that denote already existing concepts and objects.

Heart failure:

Heart failure (HF) is a complex clinical syndrome that results from either functional or structural impairment of ventricles resulting in symptomatic left ventricle (LV) dysfunction [https://www.physio-pedia.com/Heart_Failure].

Current concepts and management - Heart failure: modern concepts and treatment.

Lexical neologisms, most of which are terms or nomenclature words, are new or old words to denote new objects, phenomena, concepts.

Sign mutation - мутация

Pilot study – синон тажрба

Case-control study - Исследование случай-контроль – это тип наблюдательного наблюдения, в котором две исследуемые группы, различающиеся по полученному результату, сравниваются на основе предполагаемого влияющего фактора.

Red hypertension - доброкачественная (артериальная) гипертензия

Body area network - Натальная компьютерная сеть — беспроводная сеть надеваемых компьютерных устройств.

Opportunistic pneumonia – пневмония вызванная условно-патогенными микроорганизмами.

Lexical neologisms appear in the language to name new objects and concepts, to consolidate new concepts in the language; stylistic neologisms arise in the language in order to give new, sometimes more expressive names to already existing objects and concepts, or to designate already existing concepts with new words.

So, the object of this analysis is the neologism words of the sublanguage of medicine. The material for the analysis was articles from special pharmaceutical literatures.

Provided that in the target language there is no dictionary correspondence to one or another word of the original, it becomes especially important not only to convey the main meaning of new lexical units in the most adequate way, but also to clearly present the information contained in them. The translation of such terms is combined with the obligatory inclusion of the interpretation of the concept or even a reference in order to reveal a special component in the meaning of the word. To understand the meaning of a new term, a translator must first of all understand the nature of their formation, since in many cases even the most modern dictionaries do not provide a translation of neologisms. Knowing how neologisms are constructed, it is easier to guess their meaning.

1. Neologisms are formed primarily with the help of productive prefixes and suffixes. In English, as in a number of other languages, prefixes and suffixes are divided, in terms of their actual use, into two categories. The first category is the living, productive suffixes and prefixes used in modern language (for example, “less”, which can be added to almost any word). The second - unproductive affixes

and prefixes, through which new words in the English language are not formed (for example, “*ment*”, which cannot be added to any newly formed word). For us, only productive suffixes are important. When faced with an unfamiliar word that contains a productive affix, you need to turn to the dictionary. Having consulted the dictionary about the meaning of the affix and the main part of the word, you can understand the meaning of the whole combination. Neologisms have to be translated mostly descriptively. For example: “*breatharians*” - who believe in eating only thin air.

Particularly productive for the formation of neologisms are the prefixes “*over-*” and “*under-*”, indicating respectively the excess and lack of something, for example: *overaction* - hyperfunction; *overdose* - excessive dose; *overbreathin* - hyperventilation, hyperpnea; *Underweight* - weight reduction; undernourishment - exhaustion, hypotrophy.

The *-er* suffix serves to form a new word with the meaning of a person performing an action, or a device, device, device: *binder* - An excipient used to increase powder cohesiveness, which increases the bonding strength of the final product. In wet granulation, they help to form agglomerates; *sleeper* - a person who sleeps *over-sleeper* - a person who sleeps more than is required; *downer* - depressant substance, *pain-killer* - analgesic, *non-smoker and total abstainer* - one who does not smoke and completely abstain from smoking; *Biowaiver*- an exemption from the need to perform a clinical bioequivalence study under certain circumstances. Biowaivers are possible in the USA, in Europe and in Japan, but the requirements for achieving a biowaiver differ in these countries. In the USA and Europe the biowaiver is potentially available for rapidly dissolving formulations of BCS class 1 drugs.

2. Neologisms are often formed by conversion, that is, by a change in the syntactic function of a word. In this case, the noun becomes a verb or an adjective; the verb takes on the functions of a noun, etc. To make a correct translation, it is necessary to rethink the given word in relation to its new function. For example: They drug him. – They drug him. How does the organ function? - How does this body work?

3. Neologisms are often formed by abbreviating words.

CGMP: Current Good Manufacturing Practices - Текущая надлежащая производственная практика; *GAMP: Good Automated Manufacturing Practice* - Надлежащая практика автоматизированного производства. *Anonymous screening* - анонимный скрининг, *hygienic monitoring* - гигиенический мониторинг, *nonspecific symptomatic complex* - неспецифический комплекс симптомов, *genetic modification (GM)* - генетическая модификация, *genetically modified organisms (GMOS)* – генетически модифицированные организмы, *transgenic products* – трансгенные продукты, *detox* – детокс, *laser* – лазер, *electronic stethoscope* – электронный стетоскоп, *teleconsultation* – телеконсультация, *online consultation* – онлайн-консультация, *cognitive therapy* - когнитивная терапия, *pharmaceutical technology industry* - индустрия фармацевтических технологий and many others.

4. Sometimes neologisms are formed by analogy with existing words.

Normotensives - normotonic, by analogy with the nouns *hypertensives* and *hypotensives* [<https://www.medicinenet.com/normotensive/definition.htm>].

5. Composition at the present stage of development of the English vocabulary is the most active way to replenish it. In addition, compound words are very difficult to translate, since, unlike suffix derivatives, they are characterized by an infinite variety of expressed relations. When translating complex neologisms, there is a way of rearranging the components. *immunoreconstitution* - восстановление иммунной реактивности организма; *immunosuppression* - подавление иммунитета.

6. Sometimes neologisms are formed by adding a participle or adjective to a particular noun. An attributive group is formed, which needs to be rethought and an adequate translation formulated to designate a new concept.

Histologically documented reference group - наблюдаемая группа с проведенной гистологией, *Day-case laparoscopy* – лапароскопия (операция), выполненная амбулаторно, *Drug-related adverse events* – побочные реакции, связанные с приемом лекарств.

More recently, the term “*validation*” has appeared in pharmaceutical chemistry.

And only specialists in this field will explain that validation is reproducibility, formulation is a dosage form in non-dosed drugs, as opposed to dosage form is a dosage form of a drug.

The development of a drug product is a lengthy process involving drug discovery, laboratory testing, animal studies, clinical trials and regulatory registration. To further enhance the effectiveness and safety of the drug product after approval, many regulatory agencies such as the United States Food and Drug Administration (FDA) also require that the drug product be tested for its identity, strength, quality, purity and stability before it can be released for use [https://www.researchgate.net/publication/26576861_Validation_An_Essentiality_In_The_Pharmacy].

The most common possibilities in transferring the meaning of a word in translation are: 1) in the target language there is no dictionary correspondence to one or another word of the original; 2) the match is incomplete; 3) different words in the target language correspond to different meanings of the original word. The phenomenon of non-equivalence does not occur in its pure form. Adequate translation of neologistic words is achieved in various ways, the most common of which are descriptive translation, translation by analogy, rearrangement of components, etc. Transliteration is predominant in the English medical language as a way to adequately convey the meaning of a new word.

The most widely used term in the world for the last 2 years is related to coronavirus infection; it is not surprising that the word coronavirus has taken root, in which we recognize the understandable words corona and the virus, and not the more scientific, but completely incomprehensible name of *COVID-19*. The word *coronavirus*, in turn, has extended many words starting with "crown", *corona manifestation, corona fake, corona panic, corona skeptics* and etc.

Due to the fact that now everyone is trying to buy masks and disinfecting liquids in pharmacies, the word *sanitizer* has come into use, and since at the entrance to public places you can measure the temperature with a special device - *a thermal imager*, this word has also ceased to be a little-known term.

The word *self-isolation* is completely new. Until recently, it seemed that only someone vested with power decides when and for how long to isolate patients with a contagious disease from other people.

It seems that right now, after the coronavirus pandemic announced by the World Health Organization, another new word has appeared in the language - *infodemic*: an increase in the flow of information about the epidemic, often false and exaggerated. It is interesting that the words *infodemia* are formed from two words - *information and epidemic* - a new way of word formation for the language. We have to call it the English word blending, which is the same root with the name of the electrical appliance blender, which is used to prepare a homogeneous mixture (mashed potatoes, mashed soups, mousses) from different ingredients. Blending is not a compounding, when two roots are added or the initial parts of words, but a fancy mixture of two words, in which part of the first word is replaced by part of another, while one or two letters can be taken from the first word, but from the second - the last part. Blending is extremely common in the English language, in this way such widely used borrowed words from the English language as motel (*from motel = motor + hotel*), smog (*from smog = smoke + fog*), brunch (*from brunch = breakfast + lunch*) and the relatively new word is brexit (see above). The coronavirus has led to the emergence of new blender words in the English language, the most popular of which is *covidiot* (COVID + idiot) - already included in the Urban Dictionary online dictionary of words and phrases in English slang and picked up by Russian Internet users, so that in Russian you can meet the word *covidiot*. *Covidiot* is a person who responds inadequately to the coronavirus epidemic, worries too much, or, conversely, ignores the danger of an epidemic.

Covidiot can also be called someone who recklessly neglects the means of collective and individual protection during the spread of the coronavirus infection COVID-19, or, conversely, is overly afraid of the consequences of the epidemic [<https://ru.wiktionary.org/wiki/%D0%BA%D0%BE%D0%B2%D0%B8%D0%B4%D0%B8%D0%BE%D1%82>].

Also, using the blending method, the word *quaranteam* (from *quarantine* (*quarantine*) + *team* (*team*)), which has not yet taken root in the Uzbek and Russian languages, is formed - people with whom you are in quarantine together, and a number of others. But this does not mean that we did not have our own words-blenders in connection with the quarantine. The people have already dubbed the days off declared by the president quarantines - both quarantines and vacations, pictures of quarantines sent to each other - quarantines, and tinder - a popular dating app on the Internet - began to be called a quarantine during self-isolation.

Conclusion: In conclusion, it can be said that the study of compound words not only as a word, but also the formation of a new word is important in terms of having a specific place. A compound word is a method of word formation that helps to make a new concept or idea memorable and appealing, in addition to being helpful in making it brief and concise from a modern point of view. It is very important to study the news in English in order to have an idea about the development of languages. Their use is closely related to the change and development of the neologism.

Pharmaceutical terminology is a historically developing phenomenon associated with the history of the evolution of science and technology. It concentrates and in a special way the material of various languages.

1. The use of a synchronic and diachronic approach makes it possible to consider the process of forming the terminology of modern pharmaceuticals in a broad historical framework, to reveal the sources of enrichment and the legitimacy of the use of existing linguistic means in the formation of terms. Thus, while studying modern pharmaceutical terminology, we took into account the mutual influence of linguistic and extralinguistic factors in the formation and subsequent development of this vocabulary.

2. Being a social phenomenon, pharmaceutical terminology functions according to internal laws, on the one hand, common to the language, and on the other hand, having a close relationship with society, where the personal and personal principle plays a significant role in the formation of a new modern English medical

and pharmaceutical terminology. Formed first by an individual native speaker, the term is subsequently adopted or rejected by other members of society.

3. The study of national and international principles in medical terminology made it possible to reveal that the prevailing part of the modern medical vocabulary of the English language is international due to the involvement of elements and components of the Greek and Latin languages to create new terms and terminological phrases, and along with this, it acts as source of enrichment of pharmaceutical terminologies of other languages. Internationality is characteristic not only of individual terms, but also of whole terminological phrases and abbreviations, especially since the latter function in combination with native English lexemes.

4. Research and analysis of the centuries-old history of the formation, evolution and improvement of pharmaceutical terminology, as well as relationships and various connections between etymology, semantics and structure of terminology makes it possible to understand and deeply comprehend the situation in modern pharmaceutical terminology and Uzbek terminological science, as well as pressing problems of systematization and regulation terms. The theoretical and clinical features, the essence of their occurrence, etiology, pathogeny, pathomorphology are veiled behind a huge number of signs and symbols, which is not always amenable to accurate identification. This factor gives rise to great difficulties in achieving the unity of perception and use of explicating terms. Depending on what conceptual meaning a particular term has, it is difficult to understand its integrity.

References

1. Татаринов, В.А. Теория терминоведения./В.А. Татаринов -Московский лицей, 1996. с. 239.
2. Гусятинская, В. С. - Проблемы эволюции спонтанного терминогенеза (формирование греко-латинской и русской медицинской терминологии в сопоставительно-историческом аспекте): автореферат диссертации на соискание ученой степени д-ра филол. наук: 10.02.20/ В.С. Гусятинская; Моск. пед. ун-т. - Москва, 1998. - 38 с.
3. O.S. Akhmedov. “Diachronic and Simultaneous Study of Banking and Financial Terms” International journal of scientific & technology research Pages 1193-1194. Volume 9, issue 02, 2020.
4. O.S. Akhmedov., Sh. Bobojonova. Semantic Analysis of Medical Terms in English and Uzbek Languages. Eastern European Scientific Journal. DOI 10.12851/EESJ202002. (ISSN 2199-7977) № 2. 2020. P.59-61.
5. Khakimova V.M., Lermontova I.B. The role of the introductory lecture in the classroom in the Latin language. - Ufa: RIO Bash GU, 2004.- p.p. 180-181.
6. Жаббарова Ф.У. Роль терминов в создании связности научно популярного текста // Российский гуманитарный журнал. – 2013. – Т. 2, № 2. – С. 195–201
7. Титиевская Т.В. и др. Латинский язык и основы фармацевтической терминологии: учебное пособие / сост.: Т.В. Титиевская, Г.К. Волкова, А.К. Куличенко. – Запорожье: ЗГМУ, 2015. – 106 с.
8. Алимуратов О.А., Чурсин О.В. Когнитивно-фреймовый подход к функционально-семантической характеристике современной английской музыкальной лексики // В мире научных открытий. – 2009. – № 3–1. – С. 21–28.
9. Алимуратов О.А., Шлепкина М.А. Инновационные лексические процессы в системе стереотипных конструкций современного англоязычного делового дискурса: аббревиация и сокращение, // Филологические науки. Вопросы теории и практики. – 2010. – № 1–1 (5). – С. 20–29.

10. D.K. Khudoyqulova., O.S.Akhmedov “Diachronic study of pharmaceutical terms” Journal of Critical reviews. Volume 7, Issue 2, may. 2020. P 117-119
11. Khakimova V.M. The role of the Latin language in medicine and in the modern world // Medical Bulletin of Bashkortostan. - 2011. - V. 6, No. 3. p.p. 139-141.
12. Podosinov A.V., Shchaveleva H. Lingua Latina. Introduction to the Latin language and ancient culture. - M.: Flint, 1998. p.p. 3-4.
13. Khakimova V.M. The role of the Latin language in medicine and in the modern world // Medical Bulletin of Bashkortostan. - 2011. - V. 6, No. 3. p.p. 139-141.
14. D.K. Khudoyqulova. “Lexicographic interpretation of pharmaceutical terms and their meaning”. Ilm sarchashmalari, p.p. 91-95. No. 5.2017.
15. R. Rasulov. Common linguistics. 2 part. p.p. 47-54. Tashkent 2010.
16. Methods of preparation of complex drugs. Najibuddin as-Samarkandi. Tashkent – 2013.
17. D.K. Khudoyqulova, O.S.Akhmedov “Functional and semantic aspects of pharmaceutical terms” EPRA International Journal of research and Development Volume 5, Issue 2, February 2020. P 139-141
18. Patrick M. Malone, PharmD, FASHP, Karen L. Kier, PhD, MSc, RPh, John E. Stanovich, RPh “Drug information” guide for pharmacists, third edition, McGraw-Hill, Medical Publishing Division. 2006
19. Yuliia V. Shnip, Types of English Neologisms of 2016-2017 Representing The Universal Concept of Time, Philological Sciences. p. 1. 2. Newmark, P. A Textbook of Translation. New York: Prentice-Hall International. 1988. p. 140.