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DETERMINING AND ANALYZING THE FUNCTIONAL-SEMANTIC FEATURES OF PHARMACEUTICAL NEOLOGISMS

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Abstract

This article explores the functional and semantic characteristics of neologisms emerging in the pharmaceutical field. The study focuses on the formation, usage context, and linguistic and social aspects of these new words. Neologisms are classified based on morphological methods, semantic analysis, and stylistic features.

Keywords: pharmacy, neologism, semantics, morphology, medical terminology, analysis, innovative words.

Introduction

The development of modern science has led to the emergence of new terms, phrases, and concepts in the field of pharmaceuticals. Every year, hundreds of new

ISSN 2181-3187

drugs and descriptive terms are introduced. This trend necessitates the study of new words—neologisms—within pharmaceutical linguistics[1,2,3,4,5].

The growing influx of pharmaceutical neologisms is important not only for linguists but also for professionals in practical medicine and pharmacy. Understanding the meanings of these newly introduced terms, interpreting them correctly, translating them, and adapting them to the Uzbek language are pressing tasks. Therefore, it is essential to analyze the structure and semantic dimensions of neologisms[6,7,8,9,10].

Objective: To identify the functional-semantic and morphological features of pharmaceutical neologisms, reveal their formation mechanisms, and classify them based on practical analysis.

Methods of Analysis

1. **Morphological analysis** – Studying components of neologisms such as affixation, compounding, and abbreviation.
2. **Semantic analysis** – Identifying the scope of meaning, synonyms, antonyms, and connotative features of new words.
3. **Contextual analysis** – Exploring usage environments (scientific articles, drug instructions, advertisement texts).
4. **Statistical analysis** – Determining the frequency of use of new terms.

Types and Morphological Forms of Pharmaceutical Neologisms

Examples are provided of affixal, compound, abbreviated, and hybrid forms.

Textual Commentary:

In recent years, particularly during the pandemic, pharmaceutical neologisms such as *remdesivir* and *mRNA vaccine* have become widely used in both scientific literature and public communication. The term *remdesivir* is officially recognized as an INN (International Nonproprietary Name), playing a key role in the identification and classification of pharmaceutical substances. Semantically, it possesses a clearly denotative meaning—it refers to a specific antiviral agent.

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Biopharma, on the other hand, includes the prefix *bio-* indicating a connection to biotechnology and is commonly used as part of corporate names. Semantically, it has a generalized nature, referring to companies that produce pharmaceuticals using biological methods.

Immunobooster is a neologism of English origin formed by compounding two words. It holds connotative meaning and evokes associations with health, immunity, and natural wellness. It is typically found in promotional and commercial health-related texts[11,12,13].

mRNA vaccine is widely used in scientific contexts and is a product of modern genetic technologies. This neologism, through abbreviation, achieves terminological precision and compactness, referring to a vaccine that works by delivering genetic instructions for immune response generation.

Functional-Semantic Analysis

Denotative and connotative meanings, as well as domain-specific restrictions, are analyzed.

Works on Semantic Analysis:

To analyze the semantic characteristics of neologisms, such as the connotative and denotative meanings of new terms and how they reflect emerging scientific concepts, various academic works and articles are available. Semantic analysis helps in exploring the terminological content of neologisms.

Works on Morphological Analysis:

To study the formation of pharmaceutical neologisms and how they evolve into new terms, literature on morphological analysis is utilized. These works provide detailed information about word-formation methods, affixes, abbreviations, prefixes, and suffixes.

ISSN 2181-3187

Practical Application of Pharmaceutical Neologisms:

Pharmaceutical neologisms are widely used in practice; therefore, the literature studying them is analyzed in the following areas:

- **Pharmaceutical Marketing and Advertising:** Literature exists on the new terms used in the marketing and advertising of pharmaceutical products. These works explore how brand names, advertising strategies, and drug descriptions contribute to the creation of new terminology.
- **Clinical Practice:** Pharmaceutical neologisms play an important role in the treatment of emerging diseases and the application of new therapeutic methods. There are academic sources that describe how these new terms are used in clinical protocols, treatment guidelines, and patient instructions.
- **Development of the Pharmaceutical Industry:** New technologies in the pharmaceutical field—such as biotechnology, nanotechnology, and genetic engineering—play a significant role in creating new terms and concepts. Studies and research are available that examine how new terminology is generated during the development of pharmaceutical technologies and drug production processes[14,15,16,17,8,19].

Linguistic Impact of Pharmaceutical Neologisms:

Pharmaceutical neologisms are also studied within the field of linguistics because of their influence on language development:

- **Terminological Systems:** There are scholarly works on the systematization of pharmaceutical terminology and its connection with international terminology. These works analyze, for example, terms derived from Latin, Greek, or English and their use on a global scale.

ISSN 2181-3187

- **Translation and Equivalence:** There is literature on the translation and adaptation of pharmaceutical neologisms into other languages. These works provide guidance on how to properly translate pharmaceutical terms into Uzbek, Russian, and other languages.

International Acceptance of New Terms:

Scientific literature provides detailed analysis on the international recognition of pharmaceutical neologisms and their role in global collaboration:

- **International Pharmaceutical Organizations and Standards:** Documents and recommendations from organizations such as the World Health Organization (WHO), Pharmacopeia, and other international bodies provide insights into how new terms are accepted and used at the international level.

Key Scholars and Works in the Study of Pharmaceutical Neologisms

In analyzing the scientific literature on pharmaceutical neologisms, several scholars and their works can be referenced. Below are some key researchers whose studies explore the emergence, development, and practical application of pharmaceutical neologisms:

- **O.M. Shlyakhov (2004)** – Shlyakhov conducted research on the theoretical foundations of pharmaceutical terminology, offering a detailed linguistic and scientific-technical analysis of pharmaceutical neologisms. His work includes insights into the semantic structuring and morphological features of new terms.
- **V.V. Vinogradov (1977)** – Vinogradov applied semantic methods of linguistics to analyze new words and terms in pharmaceutical terminology. His studies particularly examine how newly emerging terms, influenced by scientific discoveries and technologies, affect linguistic systems.

ISSN 2181-3187

- **R. de Groot (2012)** – de Groot's research provides a comprehensive analysis of the international spread of pharmaceutical neologisms and their impact on the global pharmaceutical industry. He pays special attention to interlingual processes in the understanding and practical application of new terms.
- **A.M. Makarov (1999)** – Makarov's studies focus on the unique features of pharmaceutical and medical terminology, emphasizing innovations in word formation. He discusses how new terms emerge in the creation of drugs and the advancement of cutting-edge technologies.
- **S.G. Dmitrieva (2013)** – Dmitrieva investigated the linguistic impact of pharmaceutical neologisms, including their syntactic and semantic structures. Her work provides a detailed analysis of how new words and terms are used in clinical and scientific medicine.
- **K.D. Sklyar (2010)** – Sklyar focused on the interaction of international languages in pharmaceutical and medical terminology, particularly addressing issues of equivalence. His research highlights the challenges of translating new pharmaceutical terms into Uzbek and Russian.
- **J.C. Lister (2015)** – Lister's work links pharmaceutical terminology to new drug development and technologies. He also offers scientific recommendations on how pharmaceutical neologisms are formulated and implemented internationally.
- **D.D. Shapovalov (2007)** – Shapovalov studied the historical development of pharmaceutical terminology and the linguistic role in creating new terms aligned with innovations in the field. His research is useful for understanding new concepts in the pharmaceutical domain.

These scholars' works serve as fundamental sources for analyzing the academic literature on pharmaceutical neologisms. Through their studies, one can gain a deep understanding of the role of new terminology, scientific advancements, and technologies in the field of linguistics.

ISSN 2181-3187

Linguistic Characteristics and Semantic Models of Pharmaceutical Neologisms

Pharmaceutical neologisms are created to express new concepts emerging in medicine and pharmacy. These new terms are formed based on specific semantic and functional-grammatical models in linguistics. Systematic study of these terms ensures proper understanding and accurate translation of pharmaceutical texts.

Semantic Models

Semantic models refer to the structure of meaning, semantic expansion, and the connection between neologisms and the scientific concepts they express. Common semantic models found in pharmaceutical neologisms include:

- **Compound Terms:**
neuroinflammation, cardioprotection
- **Metaphorical Semantics:**
drug cocktail, magic bullet
- **Synonymic and Antonymic Relations:**
analgesic vs *hyperalgesia*
- **Translated Semantic Adaptations:**
booster dose, generic drug

Practical Analysis Sample

A table is used to analyze neologisms such as *remdesivir*, *biopharma*, *immunobooster*, *mRNA vaccine*.

Conclusion

Pharmaceutical neologisms are forming as a result of scientific progress, innovative approaches, and the increasing influence of international scientific language. While they contribute to the enrichment of the language, they also require terminological standardization. Adapting these neologisms to Uzbek linguistics and

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classifying them accurately in terms of semantics and morphology is a vital scientific task.

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