Brief communications

Ukrainian Encyclopedic and Dictionary Publications as a Means of Disseminating Knowledge

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The article deals with topical issues of medical lexicography and encyclopedic studies. In particular, based on a review of Ukrainian (Ukrainian-language) specialized medical dictionaries and encyclopedias published in different years, starting from the end of the 19th century, the authors conclude that currently, no such reference work meets the expectations of modern readers and does not provide them with proper contemporary knowledge. In other words, for some reason, printed medical reference literature may not (rapid obsoleting of information, inaccessibility of sources, often inconsistency of terminology, its incompleteness) actively fulfill its reference function in contemporary society. Noteworthy that in Ukraine, where several academic medical institutes and specialized institutions of higher education operate, many medical dictionaries have been published for more than a century, including encyclopedic dictionaries, but no academic complete (multi-volume) encyclopedia on medicine has ever been compiled. The authors justify the need to create an extensive contemporary medical dictionary and encyclopedic resource, which would serve as a corpus of medical terms in Ukrainian and contain interesting and relevant knowledge in medicine, including descriptions of diseases, means and methods of treatment, as well as information on the history of medical science, its branches; provide information on prominent representatives of the medical field, leading medical centers of the country, medical education institutions, etc., the general contribution of Ukrainian medicine to the global medicine. Such a resource would be helpful both for specialists and the public, would be actively used in the professional activities of medical professionals and the education of students, and would generally contribute to the dissemination of quality medical knowledge in Ukrainian society.

Keywords: Medical dictionary, medical encyclopedia, medical knowledge, medical terminology, healthcare reform, evidence-based medicine in encyclopedic format.
Introduction

Problem statement and relevance. Modern medicine, one of the most developed sectors of Ukrainian science, uses a “properly organized national specialized language, which includes special and commonly used vocabulary” [1], consolidated by relevant specialized dictionaries. According to observations of some researchers, medicine in Ukraine belongs to applied sciences that are most equipped with industry dictionaries in Ukrainian. At the same time, despite this fact, the situation with the availability of such publications, related in particular to their availability in university libraries, is quite disappointing [2]. In addition to dictionaries, encyclopedias play a crucial role in providing and disseminating reference knowledge. In this context, as experts note, Ukrainian medical science is in dire need of unified nationwide information about notable scientists, a list of world achievements and memorable dates of Ukrainian medicine – that is, the creation of a full-fledged industry encyclopedia [3].

The purpose of our article is to outline the Ukrainian-language dictionary and encyclopedic publications on medicine from a historical perspective. The relevance of this research is determined by the range of problems in disseminating scientific knowledge – from evidence-based treatment methods to national medical schools and achievements in this area – and their representation in a format of references, in particular, to increase the intellectual potential of Ukrainian society.

It should be noted that the proposed study continues the publications on this problem previously made by various researchers, including Y. Hanitkevych, N. Lytvynenko, Y. Markov, M. Navalna, L. Petrukh, L. Pyrhy, L. Symonenko, N. Filippova and others. The novelty of our research consists in reviewing historical insight and the current state of Ukrainian medical dictionaries and encyclopedias comprehensively, as well as through the lens of substantiating the need for the emergence of new modern reference publications in the currently reformed medical sphere of Ukraine.

Dictionary Studies

The most important value of Ukrainian dictionaries in the medical field is the development of medical terminology in Ukrainian. Scientists’ search for terminological sophistication is represented by various fields of knowledge and even more so by multiple spheres of society’s life, in particular, it concerns medicine – an ancient, historically formed branch of scientific understanding of human biological nature.

“Medical vocabulary is one of the oldest terminological systems formed over a long time of medicine establishment and development. The vast majority of medical nomens are words originally from two classical languages of the ancient world – ancient Greek and Latin” [4]. That is why the first Ukrainian dictionaries of medical terms are bilingual works, primarily Latin-Ukrainian.

The formation of medical terminology in Ukraine was facilitated by the general development of scientific terminology in Ukrainian in the second half of the 19th century. I. Verkhratskyi is often called its originator. He compiled the dictionary “Beginnings of compiling natural and fold nomenclature and terminology,” although, as noted by I. Ohiienko, the birth of scientific terminology dates back to the Middle Ages [5], and according to some other linguists, even to the Old Rus period. See: [6]. The Shevchenko Scientific Society was the first Ukrainian center of medical sciences in Lviv, where the mathematical, natural and medical section was founded in 1898. “In contrast to the progressive, well-developed European medicine and its highly organized European professional medical societies, there was no Ukrainian scientific medical literature and terminology in Galicia at the time, and the Ukrainian medical community was scattered” [7]. In the same year, the aforementioned section of the Shevchenko Scientific Society published the first volume of the “Medical Collection” edited by Y. Ozarkevych, where, inter alia, “medical terminology was presented in the form of a mini dictionary (Dr. Yakiv Nevestiuk)” [7]. The second issue of the same volume contains a mini dictionary of medical terms by Y. Ozarkevych. Both works are bilingual: the first is Latin-Ukrainian, and the second is German-Ukrainian; in dictionaries, every foreign term has a Ukrainian equivalent.

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1 Vekhpatskyi I. Pochatky do ulozhennia nomenkliatury i terminolohii pryrodopysnoi, narodnei i zamitka o voloskim pavuku. Lviv: Drukarnia Stavropyskoho Instytutu; 1869. [In Ukrainian]
2 “Medical Collection” was the forerunner of the international scientific journal “Proceedings of the Shevchenko Scientific Society. Medical sciences.”
3 Nevestiuk Y. Materiial terminiolohichnyi. Likarskyi zbirnyk. 1898; 1(1):4-13. [In Ukrainian]
4 Ozarkevych Y. Terminolohichnyi vytiah z tsiloho II-ho Vypuska. Likarskyi zbirnyk. 1898; 1(2):35-40. [In Ukrainian]
For several years, Y. Ozarkevych continued publishing medical terms in the same collection, and later, he did the same in other publications, which resulted in the general register with no less than 3,000 terms. Therefore, Y. Ozarkevych is considered the founder of Ukrainian medical terminology. “The tendency to replace Latin and German terms with original Ukrainian names was clearly visible in his writings. <…> He planned to publish 15,000 to 20,000 terms in anatomy, physiology, semiotics, pharmacology, epidemiology, hygiene, social medicine, etc. [8], but the First World War events prevented him from implementing this plan. In subsequent medical dictionaries created in Ukraine, “the compilers’ reliance on national word-building patterns and the simultaneous use of Greek and Latin terms common in international terminology” [9] can also be traced.

In 1907, Kyiv intelligentsia founded the Shevchenko Scientific Society in Dnieper Ukraine, which had a separate medical (natural medicine) section organized and headed by M. Halyn. He is the author of the “Russian-Ukrainian Medical Dictionary,” which was published in 1920 under the editorship of O. Korchak-Chepurkivskiy, and “The Medical Latin-Ukrainian Dictionary,” which was published in Prague in 1926 through the efforts of doctors and social and political figures V. Nalyvaiko and B. Matyushenko (the dictionary was also re-published in Detroit in 1969).

According to L. Symonenko, “M. Halyn is one of the most active creators of Ukrainian medical terminology. Fragments of his dictionary were first published in 1918 in the Ukrainian scientific and medical journal “Ukrainski Medychnyi Visti” (Ukrainian Medical News) [10]. However, even before the work by M. Halyn, small medical dictionaries by P. Adamenko and O. Kurylo already existed, although the first turned out to be “not quite successful according to reviewers” [11], and the second was compiled by a well-known specialist in scientific terminology, a linguist, but not a doctor.

With the creation of the All-Ukrainian Academy of Sciences, the Ukrainian Scientific Society and several terminological committees became part of it. Subsequently, the Institute of the Ukrainian Scientific Language of the All-Ukrainian Academy of Sciences was established, with the medical section of the natural sciences department operating within it (headed by O. Cherniakhivskiy). Thanks to the enthusiastic activities of the All-Ukrainian Academy of Sciences and other educational institutions in the country, many medical lexicographic works were published, including “Medical Russian-Ukrainian Dictionary,” “Practical Dictionary of Medical Terminology,” the first narrow-field dictionaries “Nomina Anatomica Ukrainica,” “Anatomical Dictionary,” “Ophthalmic Terminology,” and “Nomenclature of diseases.” Researchers rightly note that the period of the late 19th century – early 30s of the XX century is the most active in terms of devising Ukrainian medical terminology, methodological principles of term development, and their diversity is caused by the rapid evolution of medical sciences. After preparing his work and mentioning M. Halyn’s dictionary in the preface to it, V. Kyslyiy noted the need for a new Russian-Ukrainian medical dictionary is time-critical again; the work of M. Halyn “cannot satisfy the doctor, first, because many new medical terms that are missing from that dictionary have come into use since its publication; and second, many terms present in Halyn’s dictionary have not entered everyday use, while others are used instead” [12].

Further development of Ukrainian medical terminology under conditions of Soviet occupation was stopped – Ukrainian terminology started undergoing Russification; previously created terminological dictionaries in various sciences were banned, removed from general usage, destroyed, and the Institute of Ukrainian Scientific Language of the All-Ukrainian Academy of Sciences ceased to operate (it was reorganized into the Institute of Linguistics).

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5 Halyn M. Rossiisko-ukrainskyi medychnyi slovnyk: Materialy do ukrainskoi medychnoi termonolohii. Kyiv; 1920. [In Ukrainian]
6 Halyn M. Medychnyi latynsko-ukrainskyi slovnyk. Prague; 1926. [in Ukrainian]
7 Halyn M. Medychnyi latynsko-ukrainskyi slovnyk. Detroit; 1969. [In Ukrainian]
8 Adamenko P. Medychnyi slovnychok. Materialy dlia ukrainskoi medychnoi terminolohii. Mohyliv-Podilskyi: Ridna Strikha; 1917. [In Ukrainian]
9 Kurylo O. Rossiisko-ukrainskyi slovnychok medychnykh terminiv. Kyiv; 1918. [In Ukrainian].
10 V. Kysilov Medychnyi rosisko-ukrainskyi slovnyk. Odesa, Kyiv: VUAN; 1928. [In Ukrainian]
11 Cherniakhivskiy Y., Iziumova O., editors. Praktynyi slovnyk medychnoi termonolohii. Kharkiv: Radianska Shkola; 1931. [In Ukrainian]
12 Teshkivskiy F., Cherniakhivskiy O., editors. Nomina anatomica ucrainica. Anatomicni nazvy, pryniati v Bazeli na 9 zborakh Anatomichnogo Tovarystva, perekладeni na ukrainsku movu. Kyiv; 1925. [In Ukrainian]
13 Lukasevych E. Anatomicni slovnyk: Materialy. Lviv; 1926. [In Ukrainian]
14 Hrushkevych Y. Okulistichnya terminolohia: Anatomicna chastyna. Likarskiy Visnyk. 1927; 3-4: 8-10. [In Ukrainian]
15 Korchak-Chepurkivskiy O. Nomenklatura Khvorob. Latynsko-ukrainski nazvy khvorob ta rosiskyi pokazhchyk do nykh. Kyiv: KMI; 1927. [In Ukrainian]
Ukrainian scientists found themselves in a continuous struggle for the rights of their native language and the terminological base of their field of knowledge. Ukrainian medical dictionaries published in the Soviet Union contained terms that were selected based on the principle of maximum approximation with the Russian language, which effectively nullified all methodological gains in terminography initiated by the Shevchenko Scientific Society, Ukrainian Scientific Society, and All-Ukrainian Academy of Sciences (such is, for example, the “Dictionary of Medical Terminology” by M. Knypovich [16]).

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Based on publication names, we may note that many modern medical dictionaries are English-Ukrainian. The spread of the English language in the contemporary world in the field of science and, accordingly, medicine is natural, which is also reflected in the field of medical vocabulary. On the one hand, medical terminology is constantly changing, adapting to the needs of the time, and on the other hand, new terms mainly originate from English: “The process of developing medical drugs, their discussion at international conferences and subsequent implementation takes place primarily in English, and the problem of adequate translation of medical terminological vocabulary in the English-language instructions for medical devices certified by Ukraine becomes relevant” [14]. So, if earlier scientists had adapted words of primarily Latin origin to the Ukrainian language, English would have been the primary source of new terms. In this context, it is appropriate to mention the translated work of Lviv Medical University specialists – Dorland’s Illustrated Dictionary, which was popular in the USA.

However, the largest share of medical dictionaries is obviously Russian-Ukrainian. While in Soviet times, such dictionaries were a way to Russify Ukrainian medical terminology, after 1991, their extensive number can be explained by the need to eliminate Russian influence by restoring specific Ukrainian terms and eliminating inappropriate Russified terms. However, according to experts, despite “many medical dictionaries having been published over the past 30 years, the Russification of medical language continues” [15].

In summarizing the achievements in medical lexicography, it is noteworthy that Ukrainian scientists (doctors, linguist terminologists) have proposed various medical terminology dictionaries. Their extensive number is due to the continuous progress of medical sciences and the multi-vector development of linguistic terminological policy and methodology (Ukrainization vs. Russification, purism vs. internationalization). However, the statement that we placed at the beginning of the article about the complicated task of finding medical dictionaries in the libraries indicates that the results of scientific research in Ukrainian medical terminology described above remain in the shadows and do not get to the attention of practitioners, students of medical education, or patients.

Against this background, the American medical lexicography is strikingly different since the medical terminology there is represented by the already mentioned Dorland’s Illustrated Medical Dictionary, first published back in 1890. Since then, new terms have come into use through regular re-publication of this dictionary (re-published 32 times). Today, it exists as an online publication (dictionary and encyclopedia). The presence of only one respectable dictionary not only contributes to its popularization in society, its accessibility to different population groups,
satisfying all reference needs, but also prevents the problem of harmonizing terms, which necessarily arises along with the existence of many dictionaries compiled by different scientific schools and editorial boards.

So, considering the experience of one of the most developed countries in the world, it can be argued that modern development of vocabulary in the field of Ukrainian healthcare should be focused on further coordination of various editorial teams, which ensure a much greater effect and efficiency in terms of presentation of medical terms, their alignment, and popularization in the professional environment and society in general, contributing to the promotion of medical literacy. At the current stage, such work could result not only in a printed publication but also in an electronic one. So far, there are no online Ukrainian terminological dictionaries in this domain.

Most described dictionaries are general medical publications, and only some are specialized. Scientists claim that today, there is a need for professional dictionaries that explain narrow terminology inherent in one or another field of medicine because many of them are experiencing a real terminological overload. Just using the ultrasound diagnosis of traumatic lung lesions, Y. Markov provides a whole series of new vocabulary words that need a dictionary description: BLUE protocol, echo-semiotics, lung point, pulmonary pulse, lung point, FAST protocol, eFAST protocol, A-lines, B-lines, etc. [16] This example vividly argues for the need to create a single large corpus of medical vocabulary in Ukrainian. This corpus would involve specialists from all medical fields and include general and highly specialized terms.

Encyclopedistics

The need for industry encyclopedias is similar, that is, for creating an extensive, full-fledged medical encyclopedia. Such editions differ from dictionaries in that they not only define words but also describe concepts (phenomena, processes, objects) [17]. In this context, it is important to note that encyclopedistics includes not only encyclopedias but also encyclopedic dictionaries and encyclopedic reference books, which usually describe concepts more concisely. Therefore, the already mentioned publications “Ukrainian-Latin-English Medical Encyclopedic Dictionary” (two- and four-volume editions) and “Encyclopedic Explanatory Dictionary of Pharmaceutical Terms”, at least formally, can be attributed to the achievements of medical encyclopedistics.

So far, the one-volume edition “Medical Encyclopedia” (three editions: 2001, 2010, and 2012 [44]) is the compendium in the field of healthcare in Ukraine. However, in terms of content, corpus of terms and reference forms, it is very similar to the mentioned encyclopedic dictionaries. A medical encyclopedia is usually a work that presents the history, development, and current state of medical science as a reference guide. Indeed, it should contain basic medical terms.

Equally important are encyclopedic articles describing the history of medicine, prominent representatives of domestic medical science, leading national medical centers, medical education institutions, etc. The “Medical Encyclopedia,” compiled by only one person, P. Cherviak, outlines the specified material in a very lapidary form, usually characteristic of reference guides, not encyclopedias. Meanwhile, the last factor also serves as a kind of marker of the publication’s level and status – modern full-fledged, high-quality encyclopedias cannot be prepared by one person since it is the task of a team of professionals who can create a working concept and involve dozens and hundreds of the best specialists in writing encyclopedic articles in the relevant industry. In this sense, it is much easier to create a medical dictionary because it should contain short references about diseases, treatment methods, medicines, sections of medicine, etc., which usually contain only definitions and do not require a thorough propaedeutic description based on modern, reliable knowledge.

Even if we imagine that the book “Medical Encyclopedia,” which was last published in 2012, would be a complete source of encyclopedic knowledge, there would still be a problem of updating and supplementing it. For example, evidence-based medicine, founded on scientific evidence and clinical research, has been developing rapidly recently. This means that several treatment methods that were previously considered effective are now recognized as ineffective. New scientific evidence has appeared on quality medical care in case of certain ailments. Therefore, some information in the available medical encyclopedia may be dubious for specified reasons, as it does not correspond to the current level of scientific knowledge. In addition, Ukraine recently introduced healthcare reform, which, among other things, involves using globally recognized medical practices and disease classifications. In particular, against this background, many researchers note that Ukrainian doctors make diagnoses that are unknown in the world – their spread resulted from Soviet medicine having no access to the database of evidence-based medicine sources. Here is

44 Cherviak P. Medychna Entsyklopedia. Vyd. 3-ie. Kyiv: Prosvita; 2012. [In Ukrainian]
what V. Popovych and H. Beketova say about this: “Mythical diagnoses in pediatrics include diathesis, recurrent obstructive bronchitis, pancreatopathy, dyspancreatism, reactive pancreatitis, cholepathy, dysbacteriosis, often and long-term sick children, and adenoiditis. However, such terms do not exist in the tenth revision of the International Classification of Diseases (ICD-10). <...> Contradictory syndromes, symptoms and diagnoses often confuse the doctor, resulting in incorrect treatment” [18]. We found some of these terms in P. Cherviak’s “Medical Encyclopedia,” where the definitions do not indicate that they may be contradictory or even absent from the international classification of diseases.

The above shows that the information in encyclopedias and reference publications on medicine can quickly become outdated and, consequently, cause harm. Therefore, publishers need to take care of such information carriers of encyclopedic knowledge in a way that would ensure a prompt response to the emergence of new data.

Another publication worth mentioning here is the one-volume “Pharmaceutical Encyclopedia” edited by V. Chernykh, Academician of the National Academy of Sciences of Ukraine, which summarizes knowledge about the Ukrainian pharmaceutical industry, featuring articles on medical drugs, the organization of their manufacturing, control and sales methods, certification and standardization, active pharmaceutical ingredients and auxiliary substances, the history of pharmacy, etc. (published in 2005 and 2011), as well as electronically at https://www.pharmencyclopedia.com.ua). This edition is complemented by another work, the electronic reference book “Compendium,” which is popular online (available at https://compendium.com.ua). The Compendium systematizes information about medicinal products, their properties, usage peculiarities, trade names, etc. The publication’s website even integrates information about the availability and cost of certain drugs in pharmacies. It was created based on the printed reference book “Compendium. Medicines,” edited by V. Kovalenko, Academician of the National Academy of Sciences of Ukraine.

In addition, there are amateur medical encyclopedias and reference publications, in particular, “Home Medical Encyclopedia,” concluded by doctors L. Karasovska and V. Karasovskyi (mother and son). This is a small reference book (although called an encyclopedia) about the most common diseases and their treatment methods at home.

Encyclopedias often appear according to the following algorithm: first, the topic is described in the form of scientific works (articles, monographs); later, these studies are summarized as reference books, encyclopedic dictionaries or other popular science publications; finally, large encyclopedias are compiled based on the previous reference literature. As already discovered, dictionaries, particularly encyclopedic ones containing medical terminology in Ukrainian, were published in print. However, the medical encyclopedia is a publication that, in addition to describing the phenomena and concepts of medicine, highlights the achievements of prominent representatives of the field and its history in figures. This is the layer of information without which encyclopedias will always be incomplete, resulting in the need for the emergence of new, more complete, encyclopedias. Like any other field, the history of medicine is a flight of creative thought, new discoveries and achievements with people behind them. Ukrainians have made a significant contribution to the development of world medicine, and this information should be promoted in encyclopedias, contributing to the emergence of new medical geniuses in Ukrainian society.

From this perspective, the Ukrainian scientific community has offered many sources necessary for creating the real medical encyclopedia, particularly its biographical segment – articles about personalities. For example, according to O. Filippova, over 150 personal biographies of prominent medical figures have been published in Ukraine, most dedicated to M. Pyrohov, O. Bohomoltsev, and O. Palladin [19]. The study “Scientists of Ukraine of the 20–21st Centuries” contains extensive information about such reference books.

The work “Ukrainian Doctors,” prepared by representatives of the Shevchenko Scientific Society (compiler P. Pundii, editor-in-chief Y. Hanitkeyvych), contains articles about last century’s doctors from the Ukrainian diaspora, participants in the national liberation struggle, activists of the Ukrainian national revival, and Ukraine’s repressed and rehabilitated doctors (published in print in three books in 1994, 1996 and 2008, respectively). Medical biography is
also set forth in the reference publications “Medicine in Ukraine,”50 “Notable Names in the History of Ukrainian Medicine,”51 “Biographical Dictionary of Department Chairs and Professors of O.O. Bohomolets National Medical University,”52 “Professors of Danylo Halytsky Lviv National Medical University: 1784–2009,”54 and similar works outlining the medical schools of various educational institutions.

The “Ukrainian Soviet Encyclopedia” is known to have been created by analogy with the “Great Soviet Encyclopedia.” As for the encyclopedic publication in the field of healthcare, no Ukrainian-language version of the then-known “Large Medical Encyclopedia” (M., Vol. 1–35, 1928–1936; second edition: M., Vol. 1–36, 1956–1964; third edition: M., Vol. 1–30, 1974–1989) was offered. This fact is another evidence that during Soviet times, medical terminology did not develop properly in Ukrainian.

The national “Encyclopedia of Modern Ukraine”55 is a multi-volume academic publication created by the National Academy of Sciences of Ukraine and the Shevchenko Scientific Society (chief editors – A. Zhukovskyi, I. Dziuba, O. Romaniv), which holds a prominent place in the representation of Ukrainian medical science. At this stage, this work somewhat fulfills the role of the Ukrainian medical encyclopedia, as it covers the most important medical terms, medical centers and the most famous representatives of Ukrainian medicine. Medical articles are high-quality because their authors are recognized opinion leaders and experts in their respective fields. Editors of the “Encyclopedia of Modern Ukraine” try to update the information based on the needs of the time. For example, with the spread of COVID-19, the article by M. Andreichyna immediately appeared about this coronavirus infection. Under the conditions of the Russo-Ukrainian war, articles on paramedicine and military medicine are needed badly, which is what the editorial office of the “Encyclopedia of Modern Ukraine” is currently working on. Noteworthy, almost all (except the last) volumes of this encyclopedia are printed in many copies (10,000), and an electronic version is available at https://esu.com.ua. Therefore, the publication is prominent in the state’s information space and plays a significant role in spreading medical knowledge in Ukrainian.

It is worth emphasizing the detailed representation of Ukrainian medicine’s achievements in the encyclopedia of the Shevchenko Scientific Society. As researchers note, this encyclopedia is a unique publication about outstanding personalities of Ukrainian and world science. Information about doctors who are active members of the Shevchenko Scientific Society is particularly interesting [20].

In summary, there is still no real specialized encyclopedia of Ukrainian medicine, although attempts have already been made to create one. In the era of information technology development, a medical encyclopedia should be an online resource that can contain unlimited necessary encyclopedic information, not only text but also graphics (photo and video series), and quickly update outdated information. Such a resource would be extremely popular both among specialists and ordinary Ukrainians. Creating an appropriate source of medical knowledge is the prerogative of the largest centers of medical science. Currently, we have not been able to find any information that such an encyclopedia is planned, although researchers repeatedly emphasized the need for its appearance.

50 Medytsyna v Ukrayini. Vydatni likari: bibliohrafichni slovnyk. Kyiv: Derzhavna naukova medychna biblioteka; 1997. [In Ukrainian]
52 Hrado O. Vyznachni imena v istorii ukrainskoi medytsyny. Kyiv: 1997. [In Ukrainian]
53 Moskalenko V., Poliakova I. Biohrafichni slovnyk zaviduvachiv kafedr ta profesoriv Natsionalnoho medychnoho universytetu imeni O. Bohomolsia (1841–2006). Kyiv: Knyha plius; 2016. [In Ukrainian]
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