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## **HISTORY OF POLISH PHARMACOPOEIAS**

The history of Polish pharmacopoeias is quite interesting. The fact that important trade routes, which were also the directions of military expansion of European superpowers, crossed in Poland played a key role here. On one hand, foreigners, including educated physicians and apothecaries, would willingly settle in Poland, on the other hand, the development of the country was impeded due to wars and over one hundred years of servitude. Political turmoil made its imprint in the history of pharmacy.

### **1. The oldest inventory lists of herbal ingredients and medicines**

The authors of the first Polish inventory list of herbs and preparations made thereof were the physicians educated at Italian and German universities. Despite the fact that, as maintains the field specific literature focused on the history of pharmacy, the medical profession was totally separated from the pharmaceutical profession on the basis of the Sicilian laws in the 13th century, almost four centuries later some of the Royal Court and chapter physicians in Poland would still run the renowned court and chapter apothecary stores or profitable apothecary shops in town. The fact that the physicians owned apothecary shops were to guarantee the quality of medicines and would prevent the poisoning of noble patients.

The oldest Polish manuscript on apothecary practice was entitled “De synonymis apotecariorum” and prepared in 1362 by Jan from Poznań. However, the manuscript entitled „Antidotarium seu Vocabularium medicum, passim cum nominibus herbarum Germanis et Polonis rubro adscriptis”, which dates back to 1419 and which at present is kept in the Jagiellonian Library in Cracow, is deemed to be the first Polish pharmacopoeia (Dispensatorium). We do not know the author of the manuscript. It was probably written by a physician, perhaps a monk, of German origin, or educated in Germany, who however, worked in Poland and was knowledgeable in local plants. Among other, old handwritten pharmacopoeias, we should name „Antibolomenum” completed in 1472 by Jan Stanko (1430-1493), also known as Johannes Stancas, a graduate of Italian universities, who worked as a physician at the Cracow Chapter, next as a professor at the Cracow Academy and later as a royal physician. This work, reflecting an in-depth and extensive knowledge in the field of natural sciences of the author, is deemed an important scientific achievement of Stanko. „Antibolomenum” was a certain type of the medical and pharmaceutical index, in which the

author presented 433 domestic and 90 foreign plants, 219 domestic species of animals and the minerals used as the ingredients of the pharmaceutical products. It is one of the richest descriptions of natural plants and species made in the epoch in the period between those made by Albert Magnus and Conrad Gesnerus. The manuscript comprised around 20,000 synonyms in Latin, German, Greek, Arabic and Polish, for that reason it was very useful for quick identification of medicinal ingredients and their equivalents. Stanko also described the fit-out of the apothecary shop in Cracow.

Another important pharmacopoeia in the history of Polish pharmacy is the manuscript, published in 1560 in Antwerp, entitled „Pharmacopoea in compendium” by Johann Breitschneider (1514-1574), writing under the name Placotomus, a physician of German origin, who completed his medical studies in Wittenberg and for several years held the position of a professor at the university in Königsberg and who then, in 1553, moved to Gdansk. It's worth noting that in the 14th century this Polish city became the target of the military expansion of the Teutonic Knights. After Gdansk became Polish again in 1456, the city attracted a number of Germans with entrepreneurial spirit, who soon became the mercantile elite of the city and who, to a lesser or bigger extent, assimilated to the Polish community. One of them was Dr. Breitschneider, who owned the municipal council apothecary shop in Gdansk. Due to a scandal after his satire (pasquillo) ironically attacking a bishop, he was forced to leave Gdansk for a certain time period. He left for Vilnius, where he became the physician of the provincial governor (voivode) ( in the period from 1569-1793 Poland and Lithuania formed one country called Polish-Lithuanian Commonwealth) - Mikołaj "the Black" Radziwiłł. This influential nobleman helped Breitschneider come back to Gdansk. Then Breitschneider could run his apothecary again, moreover, he took up the position of the municipal physicist. On the basis of „Dispensatorium”, the work of Valerius Cordus, Breitschneider compiled a dictionary of medicinal ingredients, which turned out to be so useful in working out the formulations of medicines and in the education of apothecary apprentices that in 1561 it was published in Leida under a different title, namely: „Compendium pharmacopoea Joannis Placotomi eiusdem Dispensatorium usitatissimorum hoc tempore medicamentorum descriptiones continens”.

Printing scientific works in renowned foreign printing houses was still popular in Poland, even as late as in the 17th century. In 1683, the royal physician and at the same time, an apothecary in Cracow, Jan Woyna had his work „Pharmacopoea Cracoviensis” printed in Frankfurt am Main. His work was the first Polish municipal pharmacopoeia. Referring to different foreign medical and botanical works, in this to different pharmacopoeias, he presented 1.5 thousand of simple and complex drugs then in use.

A new chapter in the history of Polish pharmacopoeias commenced in the last quarter of the 18th century, when a renowned Cracow physician, the owner of the apothecary shop called "Pod Słońcem" and the first pharmacy professor at Cracow University, Jan Szaster started to compile a pharmacopoeia. He did not finish his work, though because in the years 1772-1795, Poland was partitioned and annexed to Austria-Hungary, Prussia and Russia. These dramatic political times left their imprint on the history of pharmacy. In 1794, the first Polish military pharmacopoeia was printed in Warsaw. It was entitled „Pharmacopoea

Castrensis et Noscomialis Exercitus Nationalis” and was the work of Hiacynt Dziarkowski (later known as the Polish pioneer of the smallpox vaccinations). Dziarkowski, the chief military physician of the army rebelling against the Russians, dedicated this small booklet to the leader of the Polish Uprising - Tadeusz Kościuszko. Dziarkowski's pharmacopoeia was adapted to the times of war. Warsaw was then under Russian siege so no exotic medicinal products could have been obtained. Thus, Dziarkowski worked out a short list of the most indispensable pharmaceutical ingredients in the in-field first aid kit and the list of easy to make complex medicinal products and chemical formulations. In his pharmacopoeia he stressed the need of economical use of the pharmaceutical ingredients e.g. he suggested the replacement of olive oil with lard, almonds, used for the production of emulsions, with cheap cucumber or hemp seeds, he advocated the use of domestic dried apples and plums in replacement of exotic tamarinds.

### 3. Pharmacopoeias in the period of Poland's annexation

#### Area under the Austrian rule

During the more than 120 years of servitude, the legal provisions binding in Poland were the provisions set up by the countries ruling over respective annexed areas of Poland. Comparing the three systems, the province under the Austrian rule seemed to have the most favourable situation. In 1770 the concept of modern pharmacopoeia (sanitary bill), in the form as co-worked by Gerhard van Swieten (1700-1772) himself, came into force and effect. Even though the reform made the modernisation of apothecary shops obligatory in the area under Austrian annexation, the local apothecaries could read the first pharmacopoeia in their native, Polish language only at the end of the 19th century. The seventh edition of „Dispensatorium Pharmaceuticum Austriaco-Vienense” was translated and supplemented with a commentary by Wilhelma Zajączkowski, an apothecary, who, printed the entire work in 1895.

The Polish translation of the eighth edition of the Austrian Pharmacopoeia was published in 1907. The work included a commentary explaining the chemical and pharmacognostic studies carried out by the two Cracow University scientists - Ignacy Lemberger, associate professor of pharmacognostics and research of foodstuffs and Stanisław Droba, associate professor of bacteriology. The work was composed of two parts. The second, detailed part comprised 141 drawings and 17 tables. The two aforementioned pharmacopoeias were translated and published upon the initiative of the Galician Association of Pharmacists "Unitas" in Carcow.

Moreover, a unique hospital pharmacopoeia entitled "Project of Pharmacopoeias for the Free City of Cracow" by Fryderyk Skobel (1806-1876), a professor of pathology, general therapy and pharmacology, was printed in the Austrian Province in 1842. Except for the introduction and the conclusion, which were written in Polish, the entire work was written in Latin. The pharmacopoeia was the source of useful information on cheap medications for the persons under care of hospitals and charitable institutions.

#### Area under the Prussian rule

The area annexed by Prussia adhered to the same pharmaceutical law as binding in Prussia (e.g. „Pharmacopoea Borussica”) almost until the end of the 19th century. The apothecary shops were mostly owned by wealthy Germans. Only at the turn of the 19th and 20th century the number of Polish pharmacists increased in the area under Prussian rule.

#### Area under the Russian rule

At the time of the annexation of Poland, in Russia there were no rules concerning the supervision over apothecary shops nor was there any pharmacopoeia. In 1810 the Polish General Medical Council in Warsaw, with the aforementioned Hiacynt Dziarkowski being its member, commenced their work on the pharmacopoeia, yet it was interrupted and prevented as a result of the movements of the French troops across Poland in 1812 within the Napoleon's campaign against Russia. Only in 1817, two years after the Congress in Vienna set up a small Congress Poland, Poland's substitute country subordinated to Russia, „Pharmacopoea Regni Poloniae” was eventually published. It is deemed to be the first Polish pharmacopoeia. It comprised three parts. The first one, entitled „Materia medica” listed descriptions of 305 medicinal ingredients and chemical compounds. The second part, entitled „Praeparata et composita” described 357 complex compounds. The third, called „Ex temporis paranda”, presented 16 recipes of medications to be prepared on the spot. All the apothecary shops in the Congress Poland were obliged to have this pharmacopoeia. In 1827 the Medical Council prepared a supplement thereto, yet it was never printed.

Progress made in the field of chemistry stimulated the Council to commence work on the new edition of the pharmacopoeia in 1844. Special committee was appointed thereto, among the committee members were: Frick, a hospital apothecary and Koope, a pharmacy consultant. Most probably the committee failed to meet its purpose because in 1852 a new committee was appointed. The committee was composed of the Warsaw apothecaries dealing with the verification of prescriptions. The main editing role was entrusted with Teofil Lesiński (1821-1860), a pharmacognostics and pharmacy professor at the Warsaw Pharmaceutical School, who three years later finished the chemical part of the pharmacopoeia. Premature death of Lesiński stopped the works. The pharmacopoeia was eventually completed in 1866, yet the Russians refused to grant the printing permission, not did they allow to print any other pharmacopoeia.

In the area under the Russian rule, special pharmacopoeias were also compiled. They were to serve as the source of knowledge on cheap medications. Thus, in 1831, during the November Uprising against the Russians, another military pharmacopoeia entitled „Pharmacopoea Castrensis Polonica” was printed in Warsaw. It was simply a specification of cheap and simple medications. The Poles were defeated in the Uprising and the pharmacopoeia was totally forgotten.

In 1838 the first Polish hospital pharmacopoeia was published in Warsaw under the title: „Pharmacopoea nosocomialis”. It contained short descriptions of cheap medications useful for the hospitals serving at the time the role of social care institutions. The edition was soon sold out, therefore the Medical Council moved to elaborate its updated version. The appointed team composed of Warsaw physicians and apothecaries was to work on the task

under the supervision of Aleksander Le Brun (1803-1868), a professor in medicine and surgery. As a result, in 1860 the "Hospital Pharmacopoeia" was published in the Polish language. The most important principle of the said pharmacopoeia was to prescribe only the cheapest medications to patients treated at the expense of the government, in hospitals, charitable institutions, in prisons or to the poor people. The medications for them were to be prepared in hospital dispensaries or, in very limited assortment and in limited quantities, in privately owned apothecary shops.

In 1916, when as a result of the hostilities of the 1st World War, Warsaw was occupied by the Germans, the municipal authorities came with the initiative to work out and publish „Pharmacopoea Oeconomica”, which presented simple and cheap medications, available in the times of war. The Germans permitted the establishment of the Temporary Council of State, which in turn, in 1917 appointed the team to work out the new pharmacopoeia. The team was supervised by prof. Władysław Mazurkiewicz (1871-1933), a physician and pharmacognostical specialist, soon a dean at the first Polish Pharmaceutical Department at the Warsaw University.

#### 4. Pharmacopoeias in the inter-war Poland

In November 1918, Poland regained independence. This meant that the legal regulations binding in the territory of Poland, in this provisions regarding the pharmacy, required unification. By virtue of the regulation of the Council of Ministers of 1922, Polish Pharmacopoeia Commission was set up to work on regular basis. The Commission consisted of the following sub-commissions: the chemical and pharmaceutical sub-commission, the botanical-zoological and pharmacognostical sub-commission, the medical and pharmacological sub-commission and the bacteriological and veterinary sub-commission. Moreover, the board of language experts was set up (the unification of the Latin, Polish, Russian and German terms was not an easy task). Polish Pharmacopoeia Commission was chaired by W. Mazurkiewicz. The structure of the Commission was subject to changes, however, its members, at all times, were the renowned Polish scientists, both the physicians and pharmacists. Thanks to their diligent work „Polish Pharmacopoeia II”, based on the example of the "American Pharmacopoeia", deemed by the Polish scientists and researchers to be the leading one in the world, was finally published in 1937. Its publication was financed by the organisation supporting the development of the pharmaceutical studies in Poland (Society of Friends of Pharmaceutical Faculties and Departments at Polish Universities) The Pharmacopoeia included the monographs of 219 crude drugs, 225 chemical compounds, 351 galenic preparations and 9 serums and vaccinations. It was officially approved by the Ministry of Health and became binding in the entire territory of Poland as of 1 January 1938.

The economic crisis at the end of the 1920s in Poland was the reason behind the need for another pharmacopoeia comprising cheap and available medicines for the poorest. It was, however, not published in the form of a book but in the form of a circular entitled „Pharmacopea pro paupere” and sent via official mail to the health care administration bodies. It was a short specification of basic medicines, applied in the treatment of contagious diseases

(e.g. tuberculosis, scabies) and financed from public funds, thus free of charge for the holders of the poverty certificates.

## 5. Pharmacopoeias after the 2nd World War

The 1937 pharmacopoeia was reprinted in 1946 in Poznan, and two years later Polish Pharmacopoeia Commission III was set up. Its task was to adapt the provisions on drugs and medicines to the scientific knowledge at the times. As a result, „Polish Pharmacopoeia IV” was published in 1954 and the supplements thereto in the years: 1956, 1959 and 1962. Continuous development of pharmacy required respective updates, in 1957 the Ministry of Health set up Polish Pharmacopoeia Commission IV, comprising eight sub-commissions, operating at the National Medicines Institute in Warsaw. Their works resulted in „Polish Pharmacopoeia IV” being published in 1965. The publication included 315 monographs of chemical compounds and the methods of their testing. The second volume was published in 1971, it contained the monographs of crude drugs, recipes of formulations, serums and vaccinations and the methods of their testing, in this the biological testing methods. The new items were the monographs of the reagents and standard solutions as well as the lists of dosages included in the closing part of the volume. In 1973 a supplement to this edition was published. Each publicly accessible pharmacy and each hospital dispensary, in its daily operations, was obliged to have and to refer to the new and updated editions of the pharmacopoeia.

After the political and economic transformations in Poland, the Polish Pharmacopoeia editing works resumed under the auspices of the Polish Pharmaceutical Society in 1989. In the years 1990-1999 five volumes of "Polish Pharmacopoeia V" were published and in 2002 - "Polish Pharmacopoeia VI". In 2004, due to the accession of Poland to the European Union, Polish pharmacy faced new challenges. The Office for Registration of Medicinal Products, Medical Devices and Biocidal Products was established. The role of the Office was to adjust the domestic requirements concerning the manufacturing of the medicinal products to the subsequent editions of the „European Pharmacopoeia”. Thereon not all the recipes and formulations complied with the methods prescribed by the „European Pharmacopoeia”. Some of these recipes and preparations are included in the monographs to the "Polish Pharmacopoeia" editions published before 2004 and are permitted to be marketed on the basis of a special certificate. The latest edition, the ninth "Polish Pharmacopoeia" was published in 2011 and supplemented in subsequent years.

## **Bibliography:**

1. Bednarski Andrzej, Materiały do dziejów medycyny polskiej w XIV i XV stuleciu. Prace Komisji Historii Medycyny PAU, Kraków 1939, Vol. I.
2. Bukowiecki Henryk, Polski unikat farmakopei krakowskiej z roku 1683. „Farmacja Polska” 5: 1949, 84-89.

3. Bukowiecki Henryk, Furmanowa Mirosławaa, Leki proste i złożone w lazaretach armii kociuszkowskiej i rewolucyjnej armii amerykańskiej. *Studia i Materiały z Dziejów Nauki Polskiej* 1966, seria B, 12, 3-40.
4. Bukowiecki Henryk, Furmanowa Mirosława, W 150 rocznicę śmierci Kościuszki o farmakopei jego armii z r. 1794. „*Farmacja Polska*” 23: 1967, 289-294.
5. Farmakopea obozowa i lazaretowa Wojska Koronnego. Wydanie faksymilowe, Kraków 2004.
6. Farmakopea Polska, „*Wiadomości Farmaceutyczne*” 1917, 69.
7. Farmakopea Polska II, Warszawa 1937.
8. Farmakopeja szpitalna. „*Pamiętnik Towarzystwa Lekarskiego Warszawskiego*” t. II, 1860, 129-143.
9. Gąsiorowski Ludwik, Zbiór wiadomości do historii sztuki lekarskiej w Polsce. Vol. II, Poznań 1853.
10. Głowacki Witold, Odnalezienie najstarszej farmakopei polskiej „*Dispensatorium Gedanense*” 1665. „*Farmacja Polska*” 5: 1949, 272-274.
11. Głowacki Witold, Pierwszy polski słownik farmaceutyczny i jego autor – Paweł Guldeniusz. „*Roczniki Towarzystwa Naukowego w Toruniu*”, 57: 1953, No 1.
12. Głowacki Witold, Problem uznania Farmakopei Kościuszkowskiej za pierwszą farmakopeę polską. „*Acta Poloniae Pharmaceutica*” 4: 1957, 127-132.
13. *Pharmacopoeia Regni Poloniae*. Varsovia 1817.

# FARMAKOPEA POLSKA

WYDANIE DRUGIE

Pharmacopoea Polonica II



W A R S Z A W A

NAKŁADEM TOWARZYSTWA PRZYJACIÓŁ  
WYDZIAŁÓW I ODDZIAŁÓW FARMACEUTYCZNYCH  
PRZY UNIWERSYTETACH W POLSCE

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POLSKA RZECZPOSPOLITA LUDOWA  
MINISTERSTWO ZDROWIA  
I OPIEKI SPOŁECZNEJ



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1965  
WARSZAWA  
PAŃSTWOWY ZAKŁAD WYDAWNICTW LECARSKICH

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# PHARMACOPOEIA

## REGNI POLONIAE

A U C T O R I T A T E

MINISTERII ADMINISTRATIONIS RERUM IN-  
TERNARUM ET DISCIPLINAE PUBLICAE.

E D I T A

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*Consilio Supremo Sanitatis.*

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V A R S O V I A E

IN TYPOGRAPHIA JUXTA NOVOLIPIUM N<sup>ro</sup> 646.

Anno MDCCCXVII.

