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## Pharmacy in medieval Bulgaria

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A survey of the state of pharmacy in medieval Bulgaria is done, analyzing written records of various origin and content. Written documents are reviewed separately in chronological order. They all seem to lend support to the conclusion that realism is a characteristic feature of pharmacy in medieval Bulgaria. Mysticism and superstition are relatively rarely resorted to, precedence is given to real treatment with suitable and not so suitable medical plants, minerals and animal products. Relatively weak is the impact of West-European medicine and pharmacy because of the different influence of the Eastern and the Western Orthodox religion, and partly because of the territorial remoteness. During the High Middle Ages Bulgarian pharmacy developed under the influence of Hellenic ancient culture. Later, after the 15 century, the influence of the Arabian culture and medicine is also felt as a result of the complex compilation between the Bulgarian and Ottoman culture during the 500-year Turkish yoke.

### 1. Introduction

The state of pharmacy in medieval Bulgaria is surveyed, analyzing written records of various origin and content. The preserved written documents are few in number. They are mainly excerpts from treatises with medical content, saints' passionals, archival church manuscripts and medicinal collections. The surveyed documents reveal the level of progress in pharmacy as a part of the general advance in the area of natural science and medicine.

### 2. Investigations, results and discussion

The research method employed is historical analysis of preserved written records from the Middle Ages or its later translation. Each document, containing information about the state of the pharmacy during the period under study, is reviewed separately and in chronological order, and the present report is divided into three parts – early, developed and late Middle Ages.

#### 2.1. State of the pharmacy during the early Middle Ages – V–IX century

The first and only historical record which contains any information about the state of pharmacy during that period is the King Boris I's questionnaire addressed to Pope Nicholas in 866 (Dechev 1939). Among the questions relating to sanitation and personal hygiene in question 62 prince Boris I asks the Pope: "What shall be done with the red stone, with which the Bulgarians cure some illnesses?". Red stone here stands for the red clay *Argilla rubra*, which diluted in water or wine was given to anemic or weak people to drink. Its usage has its scientific rationale – its healing effect is due to the iron, which even nowadays is a major anti-anemic medicine; on the other hand, the alum is known for its anti-inflammatory effect.

#### 2.2. State of the pharmacy during the developed Middle Ages – X–XIV century

Most of the preserved historical records and studies, which contain information about the state of the pharmacy date from this period.

The earliest medical treatise (IX–X century) of secular character belongs to this period. It is an excerpt from Yoan Ekzarh's work called "Шестоднев"/Shestodnev (Kocev 1981). This work is considered to be the first Bulgarian textbook on natural science. It is scientific in character and goes beyond the constraints of the conventional religious format. It is even written in Old Bulgarian, which is untypical of clerical literature (usually written in one of the classical languages). The work is a clear indicator of the educated medieval man's interest in ancient medical treatises and theoretical knowledge. Chapter VII contains interesting descriptions of the human body and in the book there is a direct reference to the fact that in the capital, Preslav, there are physicians with professional knowledge of anatomy enviable for the time. The first more comprehensive review of questions relating to botany can also be found in Shestodnev. There also appears the idea that weeds and plants without food value can play a role in the treatment of various illnesses. Propounding the idea that "in nature nothing has been created in vain", Yoan Ekzarh explains why "together with wheat and the other edible plants there are poisonous ones as well – like hemlock, hellebore, sweet-william, mandrake and poppy." These plants are intended for use in the "art of healing". *Helleborus odoratus* is meant for the treatment of "lingering ailments" as it is known to "be capable of causing severe morbid infirmity, but at the same time it can also eradicate some illnesses, if it is mixed with other plants."

At the beginning of the X century Saint Ivan Rilski, the Bulgarian monk and healer from the Rila Monastery who heals traumas and mental disorders, became very famous (Rilec 1942). He is believed to have created and used the so-called “благ мехлем” (special ointment), made of wood oil, incense, wax and mastic. His food consisted of wild fruits and herbs, his monastery gave shelter to invalids and people with mental disorders (Ivanov 1917).

There are specific data on the infirmary founded at the beginning of the X century by St. Kliment of Ohrid in his monastery St. Panteleimon in the town of Ohrid (which at that time was within the realm of Bulgaria). This is probably the first hospital in medieval Bulgaria. It is believed that Kliment of Ohrid did not use irrational methods of medical treatment such as incantations or magical spells since in treatises he declares them sinful (Milev 1966a, 1966b). Later, in this same infirmary Vasilii Vrach, a prominent medieval physician and Bogomil leader, obtained his medical education (Popov 1979). One of the most famous Bogomil books “Зелейник”/Zeleinik, dating from X–XI century, contains a medicinal collection of numerous recipes predominantly for the treatment of diseases of the eye and the skin, nose-bleeding, poisoning and inflamed wounds. It widely prescribes the use of bee honey, various medical plants and animal products, dieting, etc. The Bogomils strongly denounced the healing power of icons, religious fetishes and sacred relics of the saints (Popov 1979).

Some information about folk medicines is included in the small medicinal glossary dating from 1263 appended to Yoan Ekzarh's Shestodnev (Yatsimirsky 1902). In this glossary are listed some illnesses and their respective medicines. One of the included illnesses is Pleuritis and the given medicines for its treatment are: *Salix alba*, *Helleborus odoratus* and *Populus alba*. Their use can be considered logical in view of the healing properties of these plants. *Salix alba* contains acidum salicylicum. The poplar (*Populus alba*) also contains salicylic compounds and diuretics, and *Helleborus odoratus* contains cardiac glucosides. The combination of these substances is in this case was assessed as useful and successful by a famous Bulgarian pharmacologist (Nikolov 1935).

### 2.3. State of the pharmacy during the late Middle Ages – XV–XVII century

A later work is the Hilendarian medical collection (preserved under number 517 in the manuscript collection of the Hilendar monastery (Milincevic 1980). Part of it represents pharmaceutical tracts, but work on the establishment of their origin is still in progress. There are some translations, comments and reasoning of texts from Hippocrates, Galen and Dioscorides. The part of the collection called “Pharmacopea” – “Explanation of the healing properties of every medicine, be it hot or cold, dry or wet, and which substance for what is good”. 197 medical plants are described there along with some their directions for their application and use. The document “About the single-component medicines” also falls under the category of pharmaceutical tracts, but it is scattered throughout the collection. Of considerable bulk is the toxicological tract “Hence begins the great collection of poisonous substances”, which abounds in untranslated Latin terms. Researchers believe that some parts of the collection are based on Old-Bulgarian manuscripts from the XIV century (Cholova 1988). Considering the fact that after the XV century the Hilendar monastery became completely Bulgarian in es-

sence, it could be assumed that the collection was mainly used by Bulgarian monk-doctors. Therefore, the Hilendar medical collection can be classified one of the most impressive in range important historical documents throwing light on the Bulgarian medieval pharmacy.

The manuscript materials on folk medicine, gathered and recorded by Ali Mehmedov and kept in Osman Pazvantoglu's library, also date from the end of the XV and the beginning of the XVI century (Maleev 1890). Medical recipes for the cure of headache, toothache and other illnesses are also to be found in some prayers for health in church inscriptions dating from the XVI century (Sprostranov 1907).

The Damaskin handwritten medicinal collections also belong to the period of the late Middle Ages (XVI–XVII century, Tzonev 1910a, 1910b). They contain recipes for the cure of some illnesses which combine medical plants with prayers, incantations and magical spells. There are speaks in praise of St. Kozma and Damian also (Tzonev 1923a). A number of minerals are also included – sea salt, rock salt, *Argilla rubra*, amber, etc. and message for sorceress “fisherman does not go fishing without bait, he put bait and after that can catch fish” (Tzonev 1923b).

The late medieval period overlaps with the Bulgarian Renaissance. Trained physicians and pharmacists of various nationalities came to the country: Greek, Turkish, German, Austrian, Armenian, Russian, Italian people. As a result of that as well as following the rapid cultural progress, pharmacy advanced quickly. The medicinal nomenclature was enriched, drugstores or stores similar in function were gradually established, pharmaceutical education was introduced for the first time, and the state made its first step towards legal regulation.

### 3. Conclusions

In spite of the few preserved written records, containing direct or indirect information about the state of pharmacy in medieval Bulgaria, it is possible to draw some conclusions and to give an objective evaluation. The development of natural science and pharmacy in particular are not marked with any significant breakthroughs of global importance, but it is quite reasonable for the time and is driven by the combination of Bulgarian traditions and experience with the acquired mundane knowledge of the ancient and the feudal world.

An intrinsic feature of pharmacy in medieval Bulgaria is its realism. Mysticism and superstition are relatively rarely resorted to, while precedence is given to real treatment with medical plants, minerals and animal products more or less suitable. Relatively weak is the impact of Western European medicine and pharmacy because of the different influence of the Eastern and the Western orthodox religion, and partly because of the territorial remoteness. During the High Middle Ages Bulgarian pharmacy developed under the influence of Hellenic ancient culture. Later, after the XV century, the influence of the Arabian culture and medicine is also added as a result of the complex compilation between the Bulgarian and the Ottoman culture during the 500-year Turkish yoke.

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