Essays on the history of herbal medicine. Ancient Rome

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History of phytotherapy. Ancient rome

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SUMMARY

This article completes the series of articles "History of herbal medicine" (ancient civilizations). Against the background of the development of medicine in Ancient Rome, the development and improvement of the phytotherapeutic method of treatment is shown. The formation and progress of this area of medical science is shown mainly through portraits of prominent ancient figures in medicine, pharmacognosy and herbal medicine, based on the study of their scientific works and contributions to medical science and practice.

Key words: herbal medicine, pharmacognosy, Ancient Rome, Dioscorides,Pliny the Elder, Galen, medicinal plants, galenic preparations.

RESUME

The article completes cycle "History of phytotherapy" devoted to ancient civilizations. Development and perfection of phytotherapeutic treatment is shown in relation to evolution of medicine in Ancient Rome. The formation and progress of this area of medical science are shown mainly through portraits of prominent ancient figures in medicine, pharmacognosy and phytotherapy basing on study of their scientific work and input to medical science and practice.

Keywords: Phytotherapy, pharmacognosy, Ancient Rome, Dioscorides, Pliny the elder, Galen, remedial plants, galenic formulations.

This time, to move to the next ancient civilization, we do not need the help of a time machine - the previous one, ancient Greek both in historical and temporal terms, found its continuation in the ancient Roman civilization. By the way, paradoxical as it may seem, the conquest (or, more correctly, the seizure) of the Greek territory by the Romans saved the enormous cultural heritage of this civilization from the destruction of a whole horde of semi-barbarian and barbarian tribes, which had already begun its merciless and senseless ruin.

The Romans willingly adopted ancient Greek philosophy, although none of the Roman philosophers (including Cicero and others) reached the level of the great Socrates, Plato and Aristotle, highly valued Homer and the galaxy of Greek authors of theatrical creations, preserved the ancient Greek gods, changing only their names and partly functions. We must not forget that the Roman Empire was one of the first countries to make Christianity the state religion (the first was Great Armenia, where Christianity became the state religion in 301). The edict of Emperor Constantine I in 313 equalized Christianity in rights with other religions, but a year before that, Constantine's army entered the decisive battle for the imperial throne at the Mulawian Bridge under the labarum with chrism.

(the state banner of the Roman Empire with the monogram of I.Kh.). According to legend, on the eve of the battle, Constantine heard a voice broadcasting: "With this sign you will win!" And although it was still far from the final recognition of Christianity as the main state religion in ancient Rome (it happened in 391 under the emperor Theophanes I, and before that Christianity had to go through the hard times of the apostate Julian), the significance of the deeds of Constantine the Great was enormous.

Ancient Roman jurisprudence is of global importance. Relying on the experience of ancient Greek predecessors, mainly on the works of Solon (640–559 BC), the Romans developed legal theory and practice so much that for many centuries they were the cornerstones of world jurisprudence (the so-called “Roman law "), and many provisions, in particular on the legal foundations of private property, have not lost their significance until now.

The Laws of the XII Tables (mid-5th century BC), which, unfortunately, have survived only partially, but largely restored thanks to references and references, are rightfully considered a remarkable monument of world lawmaking. Some of their points deserve attention today. For the first time in legal practice, it was forbidden to take a person's life without trial. At the same time, it was determined that "if the perpetrator of theft at night is killed, then let his murder be considered lawful." Noteworthy is the paragraph prescribing "to punish a judge with the death penalty for taking a bribe in the case." Reflected in this legal documents and sanitation issues. In particular, it was forbidden to bury and burn the dead within the city, and drinking from a circular bowl was canceled during the performance of religious rites.

Ancient Roman medicine developed in a very peculiar way. This originality is largely due to the fact that for a long time (the royal period, VIII-VI centuries BC and later, up to the III century BC) in the ancient Roman society, healing was considered an occupation unworthy of the title of a Roman , as a result of which visiting Greeks and slaves (mostly, also Greeks) were engaged in it. Unlike Greece, there were no Asclepion or medical schools in the Roman state during this period. The main healers were the priests, among whom the most authoritative were the so-called. haruspics, who established the cause of diseases by divination by the internal organs of animals. In treatment, along with magic spells (priests!), Of course, medicinal plants prevailed, information about which was drawn from the centuries-old folk experience and from the extensive practice of ancient Greek healing. Cabbage was especially popular. The prominent politician Marcus Porcius Cato the Elder (known for his irreconcilable attitude towards Carthage and the repeated repetition of the call: "Carthage must be destroyed!" , voicing a kind of hymn to this vegetable: “Cabbage from all vegetables is the first. Eat it boiled and raw ... It is a miracle how it helps digestion, establishes the stomach, and the urine of the one who eats it serves as a cure for everything ... Rub it, apply it to all wounds and abscesses. She will cure everything, drive the pain out of the head and from the eyes ... ". He categorically objected to the dominance Cabbage was especially popular. The prominent politician Marcus Porcius Cato the Elder (known for his irreconcilable attitude towards Carthage and the repeated repetition of the call: "Carthage must be destroyed!" , voicing a kind of hymn to this vegetable: “Cabbage from all vegetables is the first. Eat it boiled and raw ... It is a miracle how it helps digestion, establishes the stomach, and the urine of the one who eats it serves as a cure for everything ... Rub it, apply it to all wounds and abscesses. She will cure everything, drive the pain out of the head and from the eyes ... ". He categorically objected to the dominance Cabbage was especially popular. The prominent politician Marcus Porcius Cato the Elder (known for his irreconcilable attitude towards Carthage and the repeated repetition of the call: "Carthage must be destroyed!" , voicing a kind of hymn to this vegetable: “Cabbage from all vegetables is the first. Eat it boiled and raw ... It is a miracle how it helps digestion, establishes the stomach, and the urine of the one who eats it serves as a cure for everything ... Rub it, apply it to all wounds and abscesses. She will cure everything, drive the pain out of the head and from the eyes ... ". He categorically objected to the dominance The prominent politician Marcus Porcius Cato the Elder (known for his irreconcilable attitude towards Carthage and the repeated repetition of the call: "Carthage must be destroyed!" , voicing a kind of hymn to this vegetable: “Cabbage from all vegetables is the first. Eat it boiled and raw ... It is a miracle how it helps digestion, establishes the stomach, and the urine of the one who eats it serves as a cure for everything ... Rub it, apply it to all wounds and abscesses. She will cure everything, drive the pain out of the head and from the eyes ... ". He categorically objected to the dominance The prominent politician Marcus Porcius Cato the Elder (known for his irreconcilable attitude towards Carthage and the repeated repetition of the call: "Carthage must be destroyed!" , voicing a kind of hymn to this vegetable: “Cabbage from all vegetables is the first. Eat it boiled and raw ... It is a miracle how it helps digestion, establishes the stomach, and the urine of the one who eats it serves as a cure for everything ... Rub it, apply it to all wounds and abscesses. She will cure everything, drive the pain out of the head and from the eyes ... ". He categorically objected to the dominance presented a list of 162 tips and tricks for agricultural management, expressed the common opinion, voicing a kind of hymn to this vegetable: “Cabbage from all vegetables is the first. Eat it boiled and raw

Greek doctors and even accused them of wanting to poison the Romans with drugs. Of course, these accusations were unfounded, although it must be admitted that the Greeks considered the Romans to be barbarians.

From the deplorable state of ancient Roman medicine of that period, one should not conclude that the Romans did not care about their health. The thoughts of the ancient Greek Aesculapians about a healthy lifestyle, healthy eating, movement reached them and found a response, and in matters of sanitation, as we have already noted, they were undoubtedly pioneers. They were the first in Europe to think about supplying the population with drinking water and began to build aqueducts (remember Mayakovsky and his "water supply system, worked out by the slaves of Rome"). Although, in fairness, it should be recalled that the first aqueduct appeared in Assyria two or three centuries earlier than in Rome, and in ancient India the aqueduct was built even five centuries earlier. But this in no way diminishes the initiative and skill of the Romans in the construction of these life-supporting facilities (it should be noted that that several centuries before the creation of aqueducts in Rome, the first sewage system in Europe was built - Cloaca maxima, which is still functioning). The size of the aqueducts is also impressive. The first of them, built in 312 BC, had a length of 16.5 kilometers, and in total by the beginning of our era. in Rome there were 11 aqueducts, 436 km long. They carried water from the Sabine Mountains and provided not only the Romans' need for drinking water (per capita there were 600 to 900 liters of water daily, which is impressive by today's standards), but also allowed more than 600 fountains to function. The aqueducts were a matter of special pride for the Romans, who opposed these structures to the useless, in their opinion, the Egyptian pyramids and architectural structures of the ancient Greeks. A sufficient amount of water allowed the Romans to widely use such a sanitary and recreational direction as baths (terms). The first baths in Rome were built in the 3rd century BC. and became widespread. They were public and private, but private ones were also allowed to be visited by all segments of the population. By the end of the Roman Empire, there were about a thousand public baths in the capital. It should be borne in mind that the baths were not only of sanitary and hygienic importance, but in their activity there was a tangible therapeutic and health-improving component, in particular in the form of the use of infusions from medicinal plants. By the end of the Roman Empire, there were about a thousand public baths in the capital. It should be borne in mind that the baths were not only of sanitary and hygienic importance, but in their activity there was a tangible therapeutic and health-improving component, in particular in the form of the use of infusions from medicinal plants. By the end of the Roman Empire, there were about a thousand public baths in the capital. It should be borne in mind that the baths were not only of sanitary and hygienic importance, but in their activity there was a tangible therapeutic and health-improving component, in particular in the form of the use of infusions from medicinal plants.

It is only natural that the well-known medical nihilism that prevailed in ancient Rome for several centuries was eventually overcome, which happened by the 3rd century BC. At first, the change in attitudes towards medicine resulted in an increase in the authority of doctors in society. Gradually, respect for this profession grew, and it became prestigious among wealthy families to have their own doctor. At the same time, the Greeks still prevailed among them. History has preserved many names of Greek doctors who worked in the ancient Roman state. The most famous of them was Arhagat (late III - early II centuries BC), who moved to Rome and quickly gained authority with his knowledge and effective use of medicinal plants and other natural remedies, and even received Roman citizenship. But later he became interested in surgical manipulations,

The increased attention of the Romans to medicine in the absence of their own medical personnel contributed to a significant increase in the number of Greek doctors in the state, especially at the imperial court, where they were even divided into decuri (dozens), each of which was responsible for the health of one or another group of courtiers.

At the beginning of the first century BC. the Greek Asclepiades from Vidinia enjoyed great prestige in Rome. He was a well-educated doctor who knew philosophy and rhetoric, a supporter of the atomistic theory of Democritus. We owe the Asklepiad to the magnificent methodological triad that has come down to us through the centuries: "to heal safely, quickly and pleasantly - tuto, celeritur, jucunde sanet" (although many researchers declare Celsus to be the author of this aphorism). Medical historians consider Asklepiada a pioneer in the field of psychotherapy, physiotherapy, balneology, balneotherapy and even molecular medicine. He saw the causes of diseases in the stagnation of harmful particles in the vessels. From this he deduced the treatment: hunger, abundant drink, cold baths, active movement. Asclepiades was a supporter of sparing therapy (for which he was very popular among the Romans), in some cases, under the guise of medicine, he gave the patient clean water. As a follower of Epicurus, Asklepiad was the first of the doctors to point out that nature is not always benevolent and infallible, and often interferes with recovery. We are especially interested in him as the author of the treatise "On Medicines", where he described medicines, mainly from medicinal herbs, known since antiquity. Largely due to his activities and authority in 46 BC. Julius Caesar issued an edict according to which doctors, regardless of class, received the right of Roman citizenship, which gave them the highest social status [27]. where he described drugs, mainly from medicinal herbs, known since antiquity. Largely due to his activities and authority in 46 BC. Julius Caesar issued an edict according to which doctors, regardless of class, received the right of Roman citizenship, which gave them the highest social status [27]. where he described drugs, mainly from medicinal herbs, known since antiquity. Largely due to his activities and authority in 46 BC. Julius Caesar issued an edict according to which doctors, regardless of class, received the right of Roman citizenship, which gave them the highest social status [27].

Ancient Rome was a warlike and aggressive state. The army played a huge role in his life. While the defense of the state was the responsibility of individual low-power detachments, poorly connected with each other, care for the health and life of the military depended on their commanders, on their views on these issues, but when the army was centralized and became a single powerful organism, the problems of economic, including medical provision became a state task. The Romans brilliantly solved this difficult task, first of all by creating a clear structure for the organization of the army's medical service. In this structure, we see doctors of cohorts, doctors of legions, garrisons, doctors of the fleet, etc. In the fortified camps, there were hospitals for the wounded and sick - valetudinaria. There were also doctors providing first aid directly on the battlefield - the so-called. capsaria. The organizational experience of military medicine was also used in civil medicine, which in ancient Rome, unlike in ancient Greece, from the very beginning was of a state and not a private nature, although private practice was not prohibited in combination. Doctors were clearly divided, in modern terms, according to the contingent served - gladiator doctors, court doctors, workers collegium doctors, doctors of private slaves, etc.

Roman doctors also had their own medical authorities - archiatrists, chief doctors of cities or provinces [25]. By the way, the Russian reformer emperor Peter the Great, who was putting things in order in the state, introduced the post of archiatrist to guide medicine and appointed the Scotsman Robert Erskine, who was included in

history as Robert Karlovich Areskin. His motto was: "I think more than I speak," which was very wise not only in the era in which he lived, but also in other times.

The strengthening of state attention to medicine, the granting of Roman citizenship to doctors, the creation of medical schools, the revitalization of the magnificent Alexandrian school, inherited by the Romans from Ancient Greece, did not hesitate to affect the quality of medical care and contributed to the emergence of a whole galaxy of talented doctors and researchers.

One of the first places among them is occupied by Aulus Cornelius Celsus, (25 BC - 50 AD), a Roman. His immediate medical activities are still a mystery. The lack of information about her gave rise to his ill-wishers even to assert that he was not a doctor. However, the content of his works, as well as the fact that he considered Hippocrates and Asclepiades to be the models of his activity [10], quite convincingly dispels this myth. The Russian doctor Alexander Bernard, in his doctoral dissertation on the medical work of Celsus, devotes many lines to this topic, completely taking the side of the Celsus doctor.

His glorified work was the "Arts" in 20 books, which deal with the issues of agriculture, rhetoric, philosophy, jurisprudence, and military affairs. Fate was pleased to have these chapters not preserved. But 8 medical books (from 6th to 13th), written in Latin, have come down to us and for several centuries have been the reference book of European doctors.

He prefaced books on medicine with a rather long introduction, in which he paid tribute to the previous generations of healers, noting, by the way, their ability to use medicinal plants with benefit. He writes in the introduction: "Even the most uneducated peoples have studied herbs and other medicinal products that help with illness and injury." At the same time, Celsus notes that previous generations were healthier, above all, morally, which reduced their need for medical care. Of the outstanding doctors, the author mentions Pythagoras, Empedocles, Democritus, but he considers Hippocrates to be the most famous, who separated medicine from philosophy [10]. In his work, Celsus pays much attention to the use of various drugs, but insists on the combined use of drug therapy with a healthy lifestyle and diet therapy. However, he notes that ancient doctors considered herbal treatment to be the main one [29]. In several chapters, the author conducts a kind of distribution of drugs according to their mechanism of action: hemostatic, gluing, cleansing, separating the edges of the wound, cauterizing, softening, forming crusts that cause granulation, warming, stopping or reducing heat, removing harmful substances, etc. The dosage forms described by him: potions, poultices, plasters, lozenges, pessaries, antidotes, pills (all medicines from plant and animal material) in many ways anticipated the brilliant works of Galen. softening, crusting, causing granulation, warming, stopping or reducing heat, removing harmful substances, etc. The dosage forms described by him: potions, poultices, plasters, lozenges, pessaries, antidotes, pills (all medicines from plant and animal material) in many ways anticipated the brilliant works of Galen. softening, crusting, causing granulation, warming, stopping or reducing heat, removing harmful substances, etc. The dosage forms described by him: potions, poultices, plasters, lozenges, pessaries, antidotes, pills (all medicines from plant and animal material) in many ways anticipated the brilliant works of Galen.

For phytotherapists, specific information about the use of drugs for the most common manifestations of diseases is of undoubted interest (I will allow myself to single out for an excerpt from the work of Celsus

great place in the article):

- stopping blood (few plants);
- healing wounds: myrrh, gum, cardamom, onion, flaxseed, watercress, white grapes;
- promoting the maturation and release of pus: backgammon, myrrh, bee glue, bitumen, tar, olive oil;
- cleaning agents: iris, balsam, incense, pine resin, wormwood, dried fig, horseradish, honey, saffron, black walnut, rue;

Irritants: cinnamon, daffodil seed, bitter nuts, hellebore

- corrosive to the body: acacia juice, cicuta, black walnut, lentils, vinegar;
- cauterizing agents: incense, pepper, hellebore;
- relieving ulcers from scabs: rue, onion, lentils with honey;
- absorb what has accumulated in any part of the body: wormwood, elecampane, marjoram, white violet, lily, thyme, cypress, cedar, iris, daffodil, rose, saffron, backgammon, cinnamon, wax, thyme, flax seed, bitter nuts;
- stimulating (digestion) and excreting: flax seed, unripe grapes, wine palm, bee glue, fig tree, laurel berries;
- softening irritation: gum, egg white, milk;
- Means that build up meat and contribute to the execution of the wound: base resin, wax, oil;
- softeners: poppy juice, ammonia, fat, lard, fig, sesame, yellow sweet clover, narcissus root, rose leaves, bitter nuts, hemlock seed, cardamom, iris, rue;

- cleansing kidneys: lentils, lungwort, iris, rue [29].

The author devotes one of the chapters to the treatment of skin diseases, while highlighting turpentine, wine, clean water, salt, catnip. At the same time, he does not represent himself as a big lover of medicines. So, in case of fever, he considers food given on time to be the best medicine. Speaking about the treatment of dropsy, Celsus recommends pills made from two parts of wormwood and one part of myrtle, but at the same time notes that the diuretic effect is best achieved with food. Among the medicinal plants recommended by the author for various diseases, we find iris, backgammon, saffron, cinnamon, myrrh, balsam, resin, incense, wild grape oil, cardamom, cypress seeds, calamus, bitter almonds, goat thyme. The author recommends starting herbal medicine with light plants (infusion of rose leaves, from backgammon heads), while monitoring the pulse and urine output [29].

In the recovery period after an injury (blow), Celsus prefers rubbing with lard with henbane and nettle seeds. An interesting recipe for coughing is two glasses of wine with a crushed clove of garlic. This is how he speaks of sparing therapy: "Asclepiadus, not without reason, withdrew most of the drugs from use, and since almost all drugs harm the stomach and have a bad taste, he shifted all his attention to the patient's lifestyle" [29].

If we analyze the contribution of Celsus to medicine, then it turns out that he at least systematized the knowledge of ancient medicine, described a number of surgical operations and manipulations, created the basics of medical terminology, gave a definition of signs of inflammation (remember from student

benches - rubor, tumor, calor, dolor), described the structure of the eye, gave a classification of mental disorders. This incomplete list makes Celsus one of the outstanding figures in world medicine.

About the unconditional affiliation of Celsus to the medical community evidenced by the fact that he was the first to describe the operation to remove cataracts, methods of stopping bleeding from the vessels.

The undoubted achievements of Celsus include the fact that he decisively replaced the Greek scientific terms legalized for centuries by Latin ones, which later became widespread [10].

We can only guess about the direct medical activity of Celsus, but from his writings it is clear that he gravitated towards surgery. This is how he assesses the activities of a surgeon (we are talking about the treatment of wounds and all kinds of ulcers): "... although he does not neglect medications and a hygienic lifestyle, he prefers to use his hand: its result is the most obvious among all departments of medicine." Noteworthy are the requirements of the scientist to the surgeon: “... he must have sharp and perceptive eyesight; soul fearless and compassionate enough that he wanted to cure the one he undertook to heal. "

A great merit of Celsus to world medicine is the preservation of information about the Alexandrian medical school, in particular about the activities of its largest representatives - Herophilus and Erasistratus [10].

Celsus was a versatile personality with a huge range of areas of interest. In addition to the works mentioned by us, he left works on philosophy, rhetoric, law, agriculture and even military affairs. His oratorical skills admired his contemporaries; the famous orator Marcus Fabius Quintilian believed that Celsus undoubtedly followed Cicero. He, as well as Pliny the Elder, noted that Celsus was a brilliant penman.

For at least one and a half thousand years, the works of Celsus were desktop for many generations of European doctors, and only during the 16-18 centuries his work "On Medicine" was republished about 70 times (for the first time in the Middle Ages it was published in 1478). It is noteworthy that the great medical dissident Paracelsus made his name part of his pseudonym.

The activity of one of the most significant characters in the history of herbal medicine dates back to approximately the same period of time (mid - end of the 1st century AD). He was, as usual, a Greek, but with his labors he glorified the Roman Empire. His name was Pedanius Dioscorides, and he was from Cilicia (Asia Minor). Little is known about his childhood, youth, studies; most reports about him begin with his service in the Roman army, participation in the campaigns of the emperors Claudius and Nero. His medical activities are also extremely poorly covered, but it can be concluded that military service was accompanied by intensive research work, which resulted in the outstanding creation "De materia medica" ("On medicinal substances").

Dioscorides' work consists of five books: 1. Spices, oils, ointments and trees, and

also juices, resins and fruits; 2. Animals, honey, milk, fats, grains and vegetables; 3. Roots, grass juices and seeds; 4. Other herbs and roots; 5. Wines and metals.

Of course, the author did not create his work from scratch. He used the experience of the medical Sumerian, Assyrian, Babylonian, Egyptian, not to mention the Greek. He created a body of botanical truths known to his predecessors.

Dioscorides also wrote that “herbs should be collected only in clear weather, for it does not matter at all whether it was dry or rainy when they were collected. The healing power of medicines is higher if herbs are collected in mountainous and high places, well blown by the wind, in cool and dry weather. And medicinal herbs, collected on the plains, in damp, shady and not blown by the wind, for the most part have less healing power. " I am sure that all modern pharmacognosts and herbalists will subscribe to these words.

Very interesting are his remarks about our old friend and very popular at that time mandrake, which, in his opinion, helps conception and facilitates childbirth [25].

By comparing creation of Dioscorides with other similar works, researchers note the realism of the data presented by the author, free from mysticism and prejudice. It should also be noted his achievements in the field of terminology. Suffice it to say that many of the names used in modern practice, including those used by the great Karl Linnaeus, are taken from Dioscorides.

This outstanding work was copied several times in later centuries, and many of these manuscripts have survived to this day. The most famous of these is the so-called. Dioscorides of Vienna, made in the VI century in Constantinople by order of Anikia Juliana - daughter of the Roman emperor Olybrius, patroness of temples and arts. The manuscript is decorated with 435 drawings of plants and animals, as well as 5 figured miniatures, four of which - images of famous Greek and Roman doctors, and the fifth - a portrait of Anikia Juliana, surrounded by allegorical figures of Generosity and Wisdom. This outstanding work is kept in Vienna, in the Austrian National Library. In 1997, UNESCO entered it into the international register "Memory of the World".

European medicine praised the role of Dioscorides in the development of herbal medicine, giving him the name of the "father of pharmacognosy" (the science of medicinal plants) and naming several plants after him. Nevertheless, evaluating the materials about Dioscorides in the medical literature, one gets the impression that medical science has paid insufficient attention to this apparently outstanding personality. But it turns out that this impression is only partly true. It is enough to rummage through the chemical encyclopedia and reference books on chemistry to fully experience the role of Dioscorides in the development of this science. This is especially true for the study of the properties of mercury. They discovered the ability of mercury to form amalgams with metals. By the way, his ideas about the modifications of mercury were in many ways laid the basis of alchemy, which arose at the turn of the 2nd-4th centuries and excited the minds of many generations of scientists. Dioscorides wrote the first encyclopedia in the history of this science, in which he set out such questions as the preparation of lime water, copper sulfate, white and some others

substances. He described a method for producing turpentine by distilling resin [21, 24].

Dioscorides lived a short life - 50 years, the cause of his death, like many details of his biography, is unknown. But much more is known about the life and death of his famous contemporary Pliny the Elder. Gaius Pliny Secundus, who went down in history as Pliny the Elder (so he was called so as not to be confused with his nephew, adopted by him, Pliny the Younger, who also achieved considerable fame in Roman society), was born into a noble Roman family that belonged to the highest class - horsemen ... The young man received an excellent all-round education (it is interesting for us that among the teachers of Pliny the Elder there was Antony Castor, a famous botanist, founder of the first botanical garden in Rome. This largely explains the interest in plants that his student subsequently showed). Pliny the Elder spent most of his youth in the army, first commanding a foot cohort, then a cavalry detachment. Then he returned to Rome, where he worked as a lawyer. Subsequently, according to the testimony of many researchers, he quit all service and completely focused on writing. Although such an authoritative writer as Suetonius reports that Pliny the Elder served as a procurator in several provinces (without specifying which ones). It is known that he was the commander of the fleet. In this position, he was caught by the eruption of Vesuvius in 79. On a ship, he swam to the coast in the immediate vicinity of the volcano (according to the testimony of a number of authors - to observe the eruption, and according to the testimony of his nephew - to provide assistance and save people; purely humanly, the second is more to my heart), breathed in poisonous fumes and died.

Pliny the Elder was undoubtedly an outstanding personality. He was distinguished by an extraordinary capacity for work. The researchers note that he was characterized by three activities: he either read, or listened to someone reading, or wrote. I sincerely considered lost every hour not devoted to mental pursuits. At the same time he was "omnivorous", read everything that came to hand, claiming that from any book, even the most insignificant, you can always extract useful information.

I will allow myself to distract the reader and tell you about my perception of the works of Pliny the Elder. Having got acquainted with his "Natural History" for the first time, at first I perceived what was written as a version of the songs of the Kazakh akyn - what I see, I sing about that. The impression was reinforced by the abundance of the presented material, sometimes without any visible connection between one and the other. Moreover, the author's faith in the tales of the existence of "people with dogs' heads." In short, the impression was so-so. But later I drastically changed my assessment. The very number of facts cited in the work (about 20 thousand, calculated by Pliny himself) cannot but arouse respect. As the researchers found out, Pliny the Elder relied on the works of his predecessors in everything. In particular, in his works on botany, he uses the works of Theophrastus, Celsus, Dioscorides. In total, in this enormous work, he refers to more than 2000 books by almost 400 authors. For example, the list of sources for Book XXVI includes 7 Roman and 56 Greek authors (Homer, Sophocles, Democritus, Apollodorus, Pythagoras, Theophrastus, etc., with 41 Greek sources included in the section

doctors).

The data on botany, pharmacognosy and, to a certain extent, phytotherapy, contained in the Natural History, make this work an excellent encyclopedia containing comprehensive data on these subjects for that period, which allowed it for more than 1500 years to be the reference book of European doctors, botanists, biologists.

Many researchers believe that the Roman civilization sometimes roughly and awkwardly perceived the successes of many branches of the Hellenic civilization, including in attempts to comprehend nature. This does not in the least apply to the work of Pliny the Elder, who consistently and impartially relied on the experience of his predecessors. It is interesting that the author wrote his work for the military leaders. The focus of the work is on the issues of feeding and the life of the troops. But the problems are considered so broadly that they are of general interest. This makes "Natural History" unique among the preserved monuments of culture and science.

Natural History consists of 36 (according to modern researchers, 37) books. For us, books from XX to XXXII, inclusive, are of professional interest.

Book XX is devoted to medicines from garden plants. A large part of the book is devoted to leeks. In addition to the fact that the plant itself is able to stop nosebleeds, it helps with coughs (even old ones), its juice, mixed with human milk, stops uterine bleeding after a miscarriage. Leek rubbed with honey helps with ulcers (external). Mixed with goat bile or honey wine, it is used for ear diseases. To relieve headaches, juice is injected into the nostrils or into the ear (at night). Notes that leek juice weakens the effects of intoxication, but causes bloating and impairs vision. Pays tribute to the snakes that made dill famous for the fact that its juice sharpens vision.

Between the reports on the action of medicinal plants, we find information that Pythagoras was the first to write a book about the medicinal action of herbs, compiled a systematic collection about them (unfortunately, which has not come down to us).

The books contain a lot of interesting reasoning and conclusions. For example, the thought of the deepest respect for previous generations passes through a red line: “The famous herbs, which we will now talk about, produced by the earth exclusively for medicinal purposes, plunge the spirit into amazement before the care and diligence of the ancients. They do not leave anything untried, then they did not hide anything and wished that everything could benefit the descendants. " And then he condemns the actions of his contemporaries (which is even more relevant to our time): “We, on the contrary, want to hide and destroy these results of labor and deprive life even of those benefits that do not belong to us. Indeed, those who have some knowledge jealously withhold it from others; Teaching no one is what serves the greatest authority of knowledge.

the exclusive possession of everyone. " As a positive example, Pliny the Elder cites the Pontic king Mithridates VI Eupator, known for his penchant for medicinal plants: "Mithridates left behind him in a secret room a cabinet with documents and samples of drugs describing their action."

Book XXIV, devoted mainly to the drugs from wild plants, describes 28 (!) Types of reed. In the same place, Pliny the Elder mentions a rare plant, Gellothophyllida, known at that time as "the herb of laughter." According to modern scientists, this is Indian hemp or hashish.

In Book XXVI, the author reports on medicines from other plants. Talking about the root of scammonia, he draws attention to the fact that it should be dug up before the rising of the constellation Canis, the harvested root must be dried in the sun and made from it lozenges. At the same time, he warns that in Judea they make fake scammon from lentil flour and sea milk juice. Mentioned in this book and "Scythian grass", which was previously present in the works of Theophrastus. According to scientists, here we are talking about licorice, which is very popular in modern phytotherapeutic practice.

In the XXVII book, the reader's attention is drawn to the grass named by the author Bezymenka. Pliny writes that it is brought from Scythia, it has an excellent effect on the healing of wounds, and helps with hemoptysis. Researchers believe that in this case the author is talking about digitalis. Describing wormwood, Pliny the Elder is amazed at the variety of its species, recognizing the best - the most bitter, Pontic. Aloe plays a significant role here. It has been used to relax the intestines, against hair loss, and mixed with vinegar to relieve headaches. In total, Pliny the Elder described about 1000 plants in his books. The researchers note that, in contrast to the ancient Greek botanists, who, as a rule, were engaged in theoretical botany, the Romans (Pliny the Elder, Dioscorides) paid more attention to applied botany [8]. Subsequent generations of scholars highly rated Natural History. It is called the main monument of the pre-Christian era, a grandiose creation, the starting point of many branches of world science, a collection of all knowledge about nature and its relationship to man. Pliny the Elder was a passionate collector of everything known at that time and encouraged others to do so, although "... sitting in schools and listening to lectures is more pleasant than wandering through the deserts and collecting new plants every day" [8].

What was the Roman Empire like during the time of Dioscorides and Pliny the Elder and in the next two centuries? Comparing the last decades of Ancient Hellas and the coming extinction of Ancient Rome, a researcher of that era writes: “Hellas gradually turned into a cemetery with wonderful works of art. Her cities collapsed, her fields ran wild. But Rome in the II-III centuries. AD was not the former strong Rome: in its time an incurable disease developed, the name of which is the slave economy. Its economic resources still seemed inexhaustible, its border fortifications were still strong, and the aura of its culture and art was still great. The "porphyry harlot" still seduced many of the "young" barbarian peoples with her deceptive beauty, but she herself

was sterile. The creative power has dried up - only the collecting of the surviving beautiful past, the senile admiration for it, remains ”[20].

Fortunately, extinction is a lengthy process. And it is not at all necessary that everything fades away at once. So, medicine in Ancient Rome in these centuries developed quite successfully, the role and authority of doctors in society increased. During the investigation of the murder of Emperor Julius Caesar, for the first time in practice, the doctor Antistius was involved, in fact, the first forensic expert in the history of medicine. The oldest extensive work on obstetrics, gynecology and pediatrics was written by Soranus of Ephesus, a Greek by birth (98–138). Until the 18th century, his works prevailed in the educational process in the preparation of specialists of the corresponding profile.

The successes of ancient Roman medicine were largely associated with the opening of a large number of medical schools. Many of them bore the reflection of the oldest and most glorious Alexandrian school. But there were innovations. In particular, some schools began to teach clinical disciplines at the patient's bedside. This practice did not take root right away. The famous Roman poet Martial responded to this innovation with an epigram:

> “I did not feel well, but here to me, without hesitation, You
> appeared, Symmachus, with a hundred of your schoolboys,
> A hundred hands began to feel me, icy from the frost; I was
> without fever, Symmachus, and here she is ”[16].

In general, the emergence of medical schools, the state nature of health care (in contrast to the ancient Greek, which was of a purely private nature), imperial attention (for the most part) to doctors played a role, and medicine in the Roman Empire rose to a very high social level. The only thing missing was an articulated unquestioning leader, such as the Greek Hippocrates.

And so he appeared. His name was Galen. In the Middle Ages, he was called Claudis, Claudius on the basis of the fact that in his manuscripts there were two letters Cl before the surname. Since the researchers were distant from Galen for more than a thousand years, they probably did not know that the prefix Cl. did not mean a name, but testified to the high authority of this person and was deciphered as clarissimus - famous, worthy. This prefix in Rome was awarded not only to Galen.

Galen was born in Pergamum in 129, Greek by birth. His father, Nikon, a wealthy architect and builder, was very interested in philosophy, often visited the library (it was the second largest after Alexandria). He dreamed of seeing his son as a philosopher, from a young age he introduced him to knowledge, to communication with scientists. When Galen was about 16 years old, his father had a dream in which he dreamed of Asclepius, who ordered Nikon to teach his son medicine [11]. So the young man ended up in the Asclepion, in which he studied for four years, communicating with people famous in the medical world.

After the death of his father and graduation, Galen, who received a substantial inheritance, continued his studies. He learned medicine in Smyrna (here his teacher was the famous anatomist Pelops, by the way, the author of the term "aura"), in Corinth, on Crete, in

Cilicia, Alexandria. Returning to Pergamum, he began to work as a doctor of gladiators, showing great healing talent, especially in the treatment of wounds. They paid attention to Galen, and he, confident in himself, decided to move to Rome. But it didn't work out there. Being a man with a complex character, proud, constantly looking for an opportunity to attract attention, suspecting others of intending to intrigue him (however, it is difficult for us to judge how it was in reality), he left the city.

For objectivity's sake, it must be said that to a certain extent his colleagues can be understood - here, for example, how he spoke about them: “The attention of most doctors is directed not to science, but only to the necessary recipes, low greed makes them capable of any shameful action. There is no other difference between robbers and doctors, as soon as the first one is in the mountains, and the second one in Rome performs their shameful actions ”[17]. Well, who would like this characteristic? It cannot be ruled out that Galen's flight was quite understandable (to the honor of our hero, it must be said that in subsequent years, which were more prosperous for him, he did not change his views on the duty and duties of a doctor: to which the art of healing corresponds. as medicine ”[5]. However, his absence was short-lived, as an epidemic broke out in Rome, and he was called to return. After that, Galen accompanied the emperor Marcus Aurelius on his military campaign to Germany, and then became the doctor of the heir to the emperor Komod. This appointment, which brought him a lot of free time, Galen used to write works. In total, he created more than 400 scientific works on medicine, pharmacology, philosophy. These works were in scrolls, which were long strips of parchment rolled into a tube. Unfortunately, most of them died in a fire in the Temple of Peace [4], in which the rich kept their jewelry, and Galen - their works. In 189, a monstrous epidemic broke out in Rome (from 3.3 to 5 million people died), most likely caused by the smallpox virus. Galen took an active part in the elimination of the epidemic (later this disease was called the plague of Galen). By his activities, the scientist-doctor won such a high prestige in Rome that a coin with his image was minted in his honor.

The last years of Galen's life are covered with a mysterious veil: one cannot even name the year of his death with certainty, some researchers attribute this event to 199, others argue that some of his works are dated 204, and on this and other grounds they believe that he lived to 217 of the year.

Galen's contribution to world medicine is colossal. On the one hand, in his writings, he presented a body of knowledge of all ancient medicine, on the other, his teaching became the dominant feature of the development of the theory and practice of medicine for many centuries to come [2, 4]. Some researchers, overthrowing Hippocrates from the pedestal of the "father of medicine" (we have already written about this), would not mind putting Galen in his place. The weakness of their position is that Galen himself worshiped Hippocrates and quoted him more than 2500 times in his writings. By the way, isn't this the answer to an interesting question: why were the supporters of Hippocrates

in the minority, and under Galen and after him their number increased significantly. Moreover, Galen himself tried to send them in the right direction: “Doctors, glorifying Hippocrates as the first in the art of healing, do everything except what would have to be done to become like him” [4]. Noting the noble role of Galen in assessing the activities of Hippocrates, the French researcher Charles Darambert writes: “Galen glorified himself with his admiration for Hippocrates no less than the enormous contribution he made to the development of medical sciences” [9].

Galen's works had a huge systemic influence on European medicine. Many researchers admire the extent of this influence: “For the generations of later physicians, Galen appears to be something like a pool that absorbed the knowledge and experience of all physicians of antiquity; all the age-old mud settled in it to the bottom, and from above we see a transparent mirror of crystal clear water, from which we can draw without any difficulty ”[18].

You can be sure approve, what "Created them the anatomical and physiological system was a revolution in science ”[4]. Moreover, we have every reason to assert that Galen is the creator of medical science [4].

At the end of the 5th century, the "Canon of Galen" appeared in Alexandria, consisting of 16 books on the main issues of medicine. In the 6th century, on the basis of the surviving works of Galen, a manual on medicine was created, called "Sixteen Books" and consisting of 24 treatises. This creation of Galen for a thousand years was the main textbook of medicine throughout Europe [4]. The most common medical expression of the Middle Ages was the phrase: "Thus spoke Galen."

This admiration, of course, had a second - negative side. It hindered independent thinking, the search for ideas, conserved consciousness, resisted initiative, belittled the doctor's responsibility to society, and to himself, had an irresistible consequence of stagnation and sluggishness in the actions of doctors. The followers of Galen often reduced the study only to theoretical philosophizing, and this had sad consequences for the development of medicine [17]. It is no coincidence that the great dissident from medicine Paracelsus, in one of the classes with students, burned a wooden statue of Galen, expressing a protest against the dominance of his ideas and methodological approaches. The rebel Paracelsus was, of course, wrong. Galen himself, of course, was a genius, his system was innovative and advanced for the time when he worked. And it is not his fault (as, indeed, of a number of geniuses), that for more than a thousand years his students and adepts lacked the ability to creatively develop the teaching, to breathe life into it. They (perhaps, with the exception of Avicenna and the same Paracelsus) turned the doctrine into an uncritical dogma, a set of principles and guidelines, the slightest deviation from which was unacceptable. It was called Galenism, and, as usual, overcoming its consequences, absolutely necessary for moving forward, turned out to be very painful for the memory of Galen. As strong admiration for him was, so powerful was his overthrow. Only in the last century (and even later in our country) the personality and living merits of Galen began to be separated from the "carrion" of Galenism. They (perhaps, with the exception of Avicenna and the same Paracelsus) turned the doctrine into an uncritical dogma, a set of principles and guidelines, the slightest deviation from which was unacceptable. It was called Galenism, and, as usual, overcoming its consequences, absolutely necessary for moving forward, turned out to be very painful for the memory of Galen. As strong admiration for him was, so powerful was his overthrow. Only in the last century (and even later in our country) the personality and living merits of Galen began to be separated from the "carrion" of Galenism. They (perhaps, with the exception of Avicenna and the same Paracelsus) turned the doctrine into an uncritical dogma, a set of principles and guidelines, the slightest deviation from which was unacceptable. It was called Galenism, and, as usual, overcoming its consequences, absolutely necessary for moving forward, turned out to be very painful for the memory of Galen. As strong admiration for him was, so powerful was his overthrow. Only in the last century (and even later in our country) the personality and living merits of Galen began to be separated from the "carrion" of Galenism. absolutely necessary for moving forward, proved to be very painful for the memory of Galen. As strong admiration for him was, so powerful was his overthrow. Only in the last century (and even later in our country) the personality and living merits of Galen began to be separated from the "carrion" of Galenism. absolutely necessary for moving forward, proved to be very painful for the memory of Galen. As strong admiration for him was, so powerful was his overthrow. Only in the last century (and even later in our country) the personality and living merits of Galen began to be separated from the "carrion" of Galenism.

A listing of all of Galen's discoveries in the field of medicine is not included in the program of our research, so let's try it out briefly. Apparently, one should start with the fact that the great Georges Cuvier appreciated Galen as the first true anatomist of antiquity. According to S. Kovner, Galen, being an eclectic, nevertheless became the head of the experimental school, in fact, the creator of human anatomy, experimental physiology, and local diagnostics [13, 28]. The historian especially highlights the merits of Galen in the field of neurology, calling them "brilliant". L.Z. Morokhovets also admires his research in this area, especially the description of the vagus nerve [19, 28]. Galen was the first to figure out the connection between the work of nerves and muscles. Speaking about his role in the development of anatomy and physiology, the main thing should be noted: he created a complete system of medical knowledge about the structure and functions of the body. Galen empirically came to a clear understanding of the meaning of the therapeutic effect on the process of the course of the disease. He created the theory of blood circulation, in which the arteries became the most important transporter of blood from the heart (before that it was believed that only the veins carry blood, and the arteries contain air) [6]. Galen's theory dominated medicine almost until Harvey. He was the first to describe the inferior vena cava, which later received his name. He gave the name to a number of muscles, ligaments, bones. Galen is the author of a number of names familiar to our ear: thalamus, azygous vein, cremaster musculus, peristalsis, etc. Galen supplemented the doctrine of Hippocrates with a fifth element - pneuma (soul). The main provisions of Galen's theory were as follows: to maintain health, it is necessary to use the principle of similarity (to the delight of future homeopaths),
- treat the opposite with the opposite (despondency among homeopaths), in diseases the doctor should only help nature, for often nature itself heals. Summing up the reasoning about Galen the doctor, one should undoubtedly agree with the point of view that he strove for the ideal of grounded and evidence-based treatment [5].

Galen's undoubted merits include the fact that he was the first scientist who contributed to the separation of pharmacy into an independent scientific field, "who breathed life and strong moral emotion into it" [11].

We have come to a very important area of Galen's activity - pharmacology and herbal medicine. It must be said right away that Galen himself clearly underestimated his role in these activities. Suffice it to say that the catalog "My books" includes 13 sections, but they do not contain a single one specially devoted to herbal medicine (they go under the general heading - "therapeutic compositions"). True, he published two herbalists [23], in which a little more than 300 medicinal plants are described (in no way can be compared with the works of Dioscorides). It seems that Galen himself considered the theoretical foundations of herbal treatment not very convincing, and the technological foundations of their preparation described by him were not very important. By conducting research and constantly reinforcing them with practice in his pharmacy on the Via sacra in Rome [14], where he allocated a place for a special laboratory (officina - workshop) [12], Galen, being a very ambitious person, hardly thought that this field of activity would become an important component of the world recognition that immortalized his name. He hardly

dreamed that he would be called the "father of herbal medicine", and he, together with the worthy Theophrastus and Dioscorides, would make up the magnificent three founders of the doctrine of the treatment of diseases with medicinal plants.

Galen argued that medicines of plant and animal origin contain useful and harmful substances [14] (later, neutral, ballast substances were added to them). The former should be used, while extracting them, the latter should be discarded. Many of the methods and means for extracting the necessary substances from plants were known even before Galen, but he was the first to systematize this knowledge, adding much value to them. He noted that raw plant materials are often difficult for the patient to tolerate, even cause complications, and have a lot of side effects. To avoid this, the raw materials should be pre-prepared for use, a method should be chosen for the most complete extraction of active substances. He himself used water, wine, vinegar to extract active substances. Galen introduced regulations in the preparation of medicines from plants,

He described and used such dosage forms as pills, boluses, lozenges, soaps, ointments, decoctions, solutions, plasters, mustard plasters, fees, infusions, potions, juices, oils, wines, medicinal vinegars, vinegar honey, compresses, lotions, poultices, tizans, antidotes, teriaki, etc. [1, 14]. These preparations were made by cutting, crushing, grinding, infusing, boiling with water, vinegar, wine, by squeezing, melting over low heat, etc. [14]. Subsequently (on the initiative of Paracelsus), the forms prepared according to the technologies described by Galen were called "galenic preparations", which perpetuated the name of the ancient scientist and are widely used today [14]. By the way, in the time of Paracelsus, tinctures and elixirs were added to this group of medicines, and before that, syrups were included in this list by the Arabs.

The main purpose of creating these preparations was not only to extract biologically active substances from plants, but also to get rid of ballast substances. Based on this, galenic preparations can be defined (there are many definitions, and they all differ from each other) as medicines manufactured by processing plant or animal raw materials and extracting active principles from it.

Of course, as a researcher-pharmacologist and a practicing physician, Galen could not pass by the hobby of the broad masses (doctors, pharmacists, politicians, alchemists, statesmen) of the so-called. teriakami - universal antidotes. Macedonia is considered to be the homeland of the Theriaks. Its king Mithridates VI Eupator went down in history as an active seeker, one of the creators and guardian of Teriak, which later received his name. In ancient Rome, the first version of theriac was compiled by the doctor of the emperor Nero Andromachus. Galen was very interested in creating theriac and succeeded in it. He made changes to the composition of teriak, introducing poppy tincture into it. The teriak preparation technology was very peculiar. The finished teriak was a soft blackish paste (the color was given by licorice), similar in consistency to honey. Over time, the mass hardened, it could be easily cut into pieces and applied in the form of lozenges [7]. Teriaki were very

expensive drugs (apparently, given their protective purpose). Therefore, they invented special teriaki for the poor, the most common is a mixture of myrrh, laurel berries, kirkazon and gentian. Galen, on the other hand, considered garlic to be a folk teriak (Avicenna later repeated this).

Ironically, it was for the creation of theriac, and not for the great achievements in medicine, that Galen was awarded by Emperor Marcus Aurelius with a gold chain with the inscription “Antoninus is the emperor of the Romans, Galen is the emperor of doctors”.

Another paradox: hundreds of phytotherapeutic recipes used by Galen have sunk into oblivion, and the formulation of the “cold cream” cosmetic product (essential oil, wax, rose water) developed by him is still used in cosmetology.

Galen encouraged doctors to study the actions and possibilities of medicinal plants. Today we have the right to say that phytotherapists follow Galen's advice, and, unfortunately, doctors of other specialties, who completely rely only on synthetic drugs, do not follow at all. For such neglect, the human body takes revenge on us with an inevitable resistance to drugs, complications in drug treatment, up to a drug disease, which has burst into the number of leading causes of death in some countries, with a negative effect on offspring. If we believe that humanity develops in a spiral, acquiring new qualities at every turn, we can expect the onset of the era of herbal medicine with a new generation of doctors who have preserved the brilliant achievements of science and medical practice of recent centuries. combining them with the wonderful centuries-old traditions of treating people with natural medicines. It will be a wonderful time, the time of integrative medicine, when a person will have the opportunity to use the centuries-old experience of hundreds of generations of people who have made it their life goal to preserve the health of mankind to preserve their health.

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