

THE HISTORY AND IMPORTANCE OF MEDICINAL PLANTS

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Abstract. *The history of the origin and importance of medicinal plants are studied based on Resolution of the President of the Republic of Uzbekistan PR-3617 dated March 20, 2018 "On measures to establish kavrak plantations in the Republic and increase the volumes of processing and export of their raw materials", Decree PD-No.5707 dated April 10, 2019 "On measures to further develop the pharmaceutical industry of the republic in 2019-2021", Resolution PR-No.4668 of April 10, 2020 "On additional measures to develop folk medicine in the Republic of Uzbekistan", Resolution PR-No.4670 dated April 10, 2020 "On measures for the protection, cultivation, processing and rational use of available resources of medicinal plants growing in the wild".*

Keywords: *medicinal plants, pharmacology, flavanoid, coumarin, astringent and mucilaginous substance, enzymes, phytoncides, starch, protein, polysaccharide, assurbanipal, CHoyot, shirinmiya, zubturum, isiriq, sachratqi, olmasot, boymadoron, marmarak, kovul, kavrak.*

Introduction. There are about 500,000 plant species on earth, and 6,000 of them are used. The nature of Uzbekistan stands out in the world with its uniqueness, plants, clear waters, mountains, forests, mineral resources, soil, air and inexhaustible aspects. There are more than 4650 species of wild plants, of which: medicinal plants-577, medicinal flowers-103, medicinal plants with essential oil-560. It has been determined that there are 10-12 thousand species of medicinal plants on earth. The chemical and pharmacological properties of more than 1200 types of medicinal plants have been investigated. These are 40-48%. So, it can be seen that the raw materials of medicinal plants have been used for centuries to restore human health, and today more and more attention has been paid to them.

Medicinal plants are mainly dried: herbs, shoots, roots, rhizomes, buds, bulbs, bark, leaves, flowers, buds, fruits (seeds), seeds, juice, pulp, essential oils. Medicinal plants are divided into 2 types: 1. Active substances; 2. Depending on the pharmacological indicators; 1. Active substances: alkaloids, glycosides, essential oils, vitamins, various macro and micro elements, aromatherapeutic ones, etc.;

2. Pharmacological indications: Sedative, analgesic, hypnotic, cardiovascular, stimulant, central nervous system stimulant, blood pressure reducer, lowering blood pressure and other various diseases. Active substances of medicinal plants are based on the presence of flavanoids, coumarins, astringent and mucilaginous substances, essential oils, vitamins, dyes, enzymes, phytoncides, starch, proteins, polysaccharides, nitrogenous substances, fatty acid and other compounds.

It should be emphasized that no field can develop independently without relying on the achievements of other disciplines. In turn, the agrotechnology of growing medicinal plants is also an important process, and work is organized towards the goals set only by relying on the achievements of plant science, botany, agrochemistry, soil science, plant physiology, plant biochemistry, biotechnology, chemistry, physics, geology, geography, paleontology and other sciences. is being done. In Central Asia, a unique oriental folk medicine has been formed for

centuries. It is based on the experience of using medicinal plants for thousands of years. Medicinal products prepared on the basis of medicinal plants and their raw materials were considered the main weapon of folk medicine. Medicinal plants are plants used for the treatment and prevention of human and animal diseases.

Ancient inscriptions written on clay tablets in the Sumerian state of 5000 BC and read by German scientists in 1956 also contained information about the methods of preparing medicinal ointments from medicinal plants. According to H.Kholmatov, O.A.Akhmedov, 236 medicinal plants were used during the time of the ancient Greek ruler Hippocrates (460-477 BC). Hippocrates left the words about "herb" and "thorn" as the word of the physician. 22,000 tables written on clay tablets were found in the library of Ashurbanipal, ancient Syria horn (668 BC), 33 of which contain information about medicinal plants and products made from them.

Egyptian papyri (3000 BC), a sample of ancient Chinese medicine, "The Law of Herbs and Roots" (written and practiced 2800 BC). Ancient sources that have reached us describe the use of medicinal plants and methods of preparing healing ointments based on them. In ancient China in the 16th century, due to the high demand for the raw materials of medicinal plants such as ginseng, lemongrass, sedum, licorice, and rhubarb, these plants were cultivated on a large scale under cultural conditions. Mathematician Pythagoras also worked with medicinal plants. Aristotle's student Theophrastus (in the 15th century BC is considered the "Father of Botany". His scientific work "Research on Plants" has not lost its significance even now. Abu Rayhan Beruni (973-1048) is one of the world-recognized scientists of Central Asia in the field of medicinal plants. It was written in his work "Saydona" (1041-1048), in which information was given about 750 types of medicinal plants. Abu Ali Ibn Sina (Avitsina) (980-1037) was a major contributor. For example: Ibn Sinoni's scientific work "Kitab al-Qanun Fit-tib" contains information on the medicinal properties and methods of use of 476 plants. He has been working on this book for more than 20 years. The 5-volume scientific work "Al-Qanun" ("Laws of Medicine") contains information for human health about more than 500 medicinal plants and more than 40 medicinal products prepared from them. "Laws of Medicine" was printed 16 times in Latin. It has been widely used in medical practice by European peoples for centuries. The great scientist widely used ointments made from medicinal plants in the medical world. The great systematist Carl Linnaeus (1707-1778) highly appreciated the scientist's work and services for human health. The precious plant was named after him "Avicinna". Ibn Boytar, an Arab physician who lived in Spain, gave information about 1400 medicinal products and methods of treatment with them.

Muhammad Husayni, who lived in the 18th century, wrote a work called "Treasure of Medicines", which also contains information about treatment methods using about 2000 medicinal plants. Folk medicine developed in the Middle Ages, its representatives were called healers. Physicians were the educated and experienced people of their time in the practice of medicine. Educated doctors were called hakims.

During this period, well-known hakims such as Abbas al-Zahrawi, Abu Bakir al-Razi, Najibuddin Samarkandi, Avaz tabib, Ilaqi, Qumri, Khurasani, Khorazmi, Mahmud Hakim Yaipani, engaged in the practice of medicine, studied medicinal plants and recognized their importance, began to study fields such as medical botany, pharmacology. So, their students O.S. Sodikov, S.Yu. Yunusov, N.K. Abubakirov created the school of biochemical study of medicinal plants in our republic. The scientists, who conducted many scientific researches in the search for medicinal plants rich in various glycosides, alkaloids, flavonoids, saponins, coumarins and other biologically

active substances growing in different climates and soil conditions, studying their composition, and determining the possibilities of their use in medicine: A.A. Akhmedov, Kh.Kholmatov, V.A. Karimov, A.Sh. Shomakhmudov, M.N. Nabiev, V.G. Shalnev, A. Ya. Ibragimov, Z.P. Pakudina, A.S. Sodikov, K.Kh. Khodjimotov, O.K. Khodjimotov, Kh.Kh. Kholmatov, I.A. Khaorlamov worked tirelessly in the cultivation of medicinal plants and treatment of human health.

In 1956, the Institute of Chemistry of Plant Substances was established. They began to study the biochemistry of medicinal plants. In 1968, 512 alkaloids were scientifically recommended, and by 1981, 1096 alkaloids had been studied. 466 of them were isolated from plants scattered in the former Soviet Union. The scientists of the "Alkaloid Chemistry" laboratory of the Institute of "Chemistry of Plant Substances" of the academy of Sciences of Uzbekistan isolated a total of 688 alkaloids from medicinal plants and determined the chemical structure of 338 of them. Therefore, medicinal plants have served as the only source of preparation of medicines for people for 1000 years and have played an important role in maintaining their health. We must never forget this. It is necessary to instill in the minds of young people.

Since the 50s of the 20th century, the field of synthetic synthesis chemistry has developed strongly. Interest in synthetic medicinal plants has increased worldwide. Currently, 700 species of 182,000 flowering plants that grow wild in the world are cultivated. Humans use more than 3,000 cultivated and wild plants for food purposes.

Today, based on the resolutions and decrees of our President, scientists are working diligently to grow good uncomplicated, effective, medicinal plants, which are one of the main factors, and use all the possibilities to supply the population with medicinal preparations and other natural healing agents.

The effect of medicinal plants on the body depends on the amount of chemical compounds in its composition. These compounds accumulate in different parts of the plant at different times. The period of high effectiveness and quality of the drug coincides with the beginning of their flowering and seeding period. Medicinal substances are stored in the bud, leaf or stem of some plants, in the flower or fruit of the other plants, in the root or bark of the other ones. Therefore, mainly biologically active substances of plants are harvested. Roots, rhizomes, bulbs and tubers are usually prepared in late fall when the plant is dormant or in early spring before the plant wakes up. The fruits and seeds of the plant are collected when they are ripe, because they are rich in active substances at this time. Freshly harvested medicinal plant products contain moisture (up to 85% in the above-ground organs, up to 45% in the roots). If this moisture is not removed (by drying), the plant will rot and the medicinal substances will break down and become useless.

Medicinal plants, for example: Choyot, shirinmiya (also called Chuchukmiya, qizilmiya, buyan), shuvoq, yantok, mint, kiyikoti, medicinal gulkhairi, walnut, jag-jag, zubtutum, isiriq, sachratqi, tograykhan, qizilcha, qoqiot, olmasot, boymadoron, marmarak, kovul, kavrak and various other types are widespread. From them: Paxicarpine, psoralen, carmine, anabazin, galantamine, spherophysin and many other alkaloids are obtained. At Tashkent Pharmaceutical Institute named after S.D.Islombekov, various medicines are being prepared from medicinal plants set in and grown in Uzbekistan. The services of the Institute of Chemistry of Plant Substances of the Academy of Sciences of Uzbekistan are great in finding medicinal plants and extracting alkaloids from them. In the institute, more than 4000 different organs of plants have been studied in order to obtain alkaloids, and scientists have isolated about 1000 natural compounds from them.

Based on this, more than 20 valuable drugs such as stizin and galantamine have been created and introduced in medicine. Scientific staff of the Botanical Institute of the Academy of Sciences of Uzbekistan and the Laboratory of Essential Oils of Medicinal and Dyeing Plants in cooperation with experts have prepared "Safro driver Hozhimatov collection" made from raw materials of medicinal plants, which are ecologically clean and highly effective in the treatment of jaundice (hepatitis), one of the most common infectious diseases in Central Asia, and has a great importance in improving people's health. Allowed for use and production in scientific medicine. Technologies of planting and growing medicinal plants are studied at the Department of Botany of Samarkand State University, Tashkent State Pharmaceutical Institute. In Tashkent, Namangan, Jizzakh, Samarkand, Kashkadarya, Surkhandarya regions, in Khorezm Ma'mun Academy special farms for growing medicinal plants have been established, and they are working tirelessly to fulfill the resolutions and decrees in the field of medicinal plants of our state. The raw materials of medicinal plants growing in the wild are processed mainly by the "Uzfarmsoat" Republican state-joint-stock concern, press companies and the farms of the "Shifobakhsh" production association of the Ministry of Agriculture of Uzbekistan, and great work is being done to protect human health.

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