

PHARMACOGNOSY

Sayfiyeva Dilnoza Shokirovna

1st year student of the Faculty of Pharmacy of Samarkand State Medical University

Asatullayev Rustam Baxtiyorovich

Scientific supervisor: Assistant at Samarkand State Medical University

Annotation: *This article contains detailed information on the history of the development of the science of pharmacognosy, its essence, biologically active substances derived from medicinal herbs and natural sources. The article also covers the role of pharmacognosy in modern medicine, the classification of medicinal plants, methods of their collection, drying and storage, and their role in folk medicine. The article analyzes the scientific basis of the role of natural medicines in promoting human health.*

Key words: *Pharmacognosy, medicinal herbs, essential oils, folk remedies, biologically active substances, alkaloids, flavonoids, glycosides, phytotherapy, extract, tincture.*

Pharmacognosy is a science that studies natural remedies of medicinal plant, animal, and mineral origin. This discipline is one of the important areas of pharmacy and medicine that studies the definition of biologically active substances obtained from natural sources, their composition, properties and effect on the human body.

Currently, a large proportion of medicines worldwide are obtained from natural sources. This further increases the importance of pharmacognosy. In particular, science occupies an important place in the development of drugs that are environmentally friendly and have little side effects.

History of the development of pharmacognosy science

Pharmacognosy has been formed since ancient times. Initially, people experimentally learned to use plants found in nature for medicinal purposes. Medicinal plants were widely used in ancient Egypt, India, China and Central Asia.

Abu Ali ibn Sina in his work "The Laws of Medicine" gave information about many medicinal plants. He is considered a great thinker who scientifically explained the healing properties of plants.

Later, in Europe, pharmacognosy developed as an independent science, and by the 19th century had gained a scientific basis.

Medicinal plants and their importance

Medicinal plants are herbs that contain biologically active substances and used in medicine. They have the following advantages:

It is distinguished by naturalness

Has a gentle effect on the body

Can be used for a long term

Medicinal herbs are used in the following forms:

Drips

Boils

Extracts

Tinkturas

Oils

Biologically active substances

In pharmacognosy, biologically active substances contained in the plant are studied separately. They are divided into:

Alkaloids

Nitrogen sparing compounds are complex compounds and have a strong pharmacological effect. For example, morphine, caffeine.

Flavonoids

It has antioxidant properties, thereby strengthens blood vessels.

Glycosides

Substances that improve heart function and have other therapeutic effects.

Essential Oils

It has antiseptic and anti-inflammatory properties.

The collection and processing of medicinal plants

Proper harvesting of medicinal plants greatly affects their quality. The timing of picking each plant is different:

Leaves – during flowering

Flowers – when fully opened

Roots – in autumn or early spring

The drying process is also important, subject to the following conditions:

Not direct exposure of sunlight

Good air circulation

Humidity be low

Storage is carried out in a dry and cool place.

The role of pharmacognosy in medicine

Pharmacognosy is used in modern medicine in the following areas:

Creation of new drugs

Phytotherapy (treatment with herbs)

Preventive treatment

Strengthening immunity

Many synthetic drugs were also originally created on the basis of substances extracted from plants.

Pharmacognosy in folk medicine

In folk medicine, medicinal plants are widely used. For example:

Chamomile – anti-inflammatory

Mint – a sedative

Ginger – an immunity booster

These methods have been tried and tested over the centuries and have not lost their relevance even in the present day.

Modern pharmacognosy and innovation

Today, pharmacognosy is enriched with modern technologies:

Separation of Active Substances with Use of Biotechnology

Improving Crops via Genetic Engineering

Drug development based on nano technologies

And this increases the effectiveness of medicines.

Conclusion

Pharmacognosy is an integral part of medicine and pharmacy and plays an important role in maintaining human health. Medicines of natural origin are considered environmentally friendly, effective and safe. Therefore, this subject will retain its relevance in the future.

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