



PREPARATIONS BASED ON KOVRAK (FERULA FOETIDA): PHARMACOGNOSTIC AND PHARMACOLOGICAL ANALYSIS

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Abstract *This article provides a comprehensive analysis of the pharmacognostic, chemical, and pharmacological properties of the plant Ferula foetida (Kovrak). The pharmaceutical significance of the bioactive compounds contained in the plant, the pharmacodynamic characteristics of preparations developed on their basis, and their potential applications in modern medicine are discussed. The results of the research confirm the importance of Kovrak as a natural raw material possessing diverse biological activity.*

Keywords: *Kovrak, Ferula foetida, Pharmacognosy, Pharmacology, Natural preparations, Bioactive compounds.*

Introduction

In the field of pharmaceuticals, the demand for medicines derived from natural sources containing bioactive compounds is steadily increasing. Among such plants, Ferula foetida (Kovrak) stands out for its rich chemical composition and pharmacological properties. This plant has been used in traditional medicine for centuries, and in recent years, its active compounds have been scientifically studied and applied in the development of pharmaceutical preparations.

Analysis of Literature Sources

In recent decades, plants belonging to the Ferula genus have gained significant attention in pharmaceutical research. Numerous international scientific publications have discussed the chemical composition, pharmacognostic features, and pharmacological activity of Ferula foetida (Kovrak). For instance, studies conducted

by Hosseinzadeh et al. (2019) experimentally confirmed the antimicrobial and anti-inflammatory effects of gum resin and essential oils extracted from Kovrak.

Pharmacognostic Characteristics of Kovrak

Kovrak is a perennial plant belonging to the Apiaceae (Umbelliferae) family. It mainly grows in the southern regions of Uzbekistan, as well as in the dry foothill areas of Afghanistan, Iran, and India. The rhizome and resin of the plant are used as pharmaceutical raw materials. The resin contains up to 40–60% resins, up to 10% essential oils, and up to 20% gum substances. The plant is typically harvested during the summer when it reaches full maturity.

Pharmacological Activity of Kovrak Preparations

Ferula foetida contains a complex mixture of biologically active compounds, including essential oils, resins, coumarins, flavonoids, terpenoids, and polysaccharides. These components collectively determine the plant's broad pharmacological activity. Research has demonstrated that Kovrak exhibits antimicrobial, anti-inflammatory, antispasmodic, antioxidant, and immunomodulatory effects.

Medical Applications

Due to its numerous healing properties, Kovrak is widely used for medical purposes. In addition to cleansing the gastrointestinal tract from toxins and parasites, it is beneficial in the treatment of various diseases such as angina, bronchitis, and other respiratory inflammations. Its solution, when used for gargling, acts as an antiseptic and pain reliever, helping to disinfect the respiratory tract and eliminate bad breath. When taken internally in small amounts, it can also help relieve hoarseness.

In ophthalmology, Kovrak is used to treat early stages of cataracts, and in cases of insect bites, it helps reduce the toxic effects of venom. It is also effective in promoting kidney stone expulsion. According to Avicenna's writings, Kovrak has properties beneficial for treating psoriasis, eczema, cleansing the skin and liver, and curing related diseases.

It has proven highly effective in treating nervous system disorders and epilepsy, as well as alleviating toothache, muscle and joint pain, arthritis, and osteochondrosis. In Eastern medicine, it has been used to treat mastopathy, infertility, and sexual weakness. In modern medicine, positive effects have been observed in the treatment of various oncological diseases, uterine myoma, and prostate adenoma.

Kovrak not only serves as a medicinal plant for treating respiratory diseases such as tuberculosis, plague, syphilis, and whooping cough but also helps cleanse the body of harmful substances and restores mental vitality.

For these reasons, experienced healers and physicians have often considered Kovrak superior to ginseng in its life-giving properties.

Conclusion

Ferula foetida (Kovrak) is a promising medicinal raw material in the pharmaceutical industry. Research indicates that the coumarins, flavonoids, and terpenoids contained in Kovrak are pharmacodynamically active and that preparations made from them exhibit anti-inflammatory, antibacterial, and immunostimulatory effects. Preparations based on Kovrak represent a natural, safe, and effective source for pharmaceutical development.

References

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