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Exploring the Therapeutic Potential and Historical Significance of Fennel

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Abstract: *Fonticulusvulgare Mill commonly called fennel has been used in traditional medicine for a wide range of ailments related to digestive, endocrine, reproductive, and respiratory systems. Additionally, it is also used as a galactagogue agent for lactating mothers. The review aims to gather the fragmented information available in the literature regarding morphology, ethnomedicinal applications, phytochemistry, pharmacology, and toxicology of Foeniculum vulgare. It has been used for more than forty types of disorders. Phytochemical studies have shown the presence of numerous valuable compounds, such as volatile compounds, flavonoids, phenolic compounds, fatty acids, and amino acids. Compiled data indicate their efficacy in several in vitro and in vivo pharmacological properties such as antimicrobial, antiviral, anti-inflammatory, antimutagenic, antinociceptive, antipyretic, antispasmodic, antithrombotic, apoptotic, cardiovascular, chemomodulatory, antitumor, hepatoprotective, hypoglycemic, hypolipidemic, and memory enhancing property. Foeniculum vulgare has emerged as a good source of traditional medicine and it provides a noteworthy basis in pharmaceutical biology for the development/formulation of new drugs and future clinical uses.Foeniculum vulgare (Apiaceae) commonly known as fennel is a well known and important medicinal and aromatic plant widely used as carminative, digestive, lactogogue and diuretic and in treating respiratory and gastrointestinal disorders. Its seeds are used as flavourings in baked goods, meat and fish dishes, ice cream, alcoholic beverages and herb mixtures. Phenols, phenolic glycosides and volatile aroma compounds such as trans-anethole, estragole and fenchone have been reported as the major phytoconstituents of this species. Different pharmacological experiments in a number of in vitro and in vivo models have convincingly demonstrated the ability of F. vulgare to exhibit antifungal, antibacterial, antioxidant, antithrombotic and hepatoprotective activities, lending support to the rationale behind several of its therapeutic uses. Phenolic compounds isolated from F. vulgare are considered to be responsible for its antioxidant activity while the volatile aroma compounds make it an excellent flavouring agent. The present review is an up-to-date and comprehensive analysis of the chemistry, pharmacology, traditional uses and safety of F. vulgare.*

Keywords: Foeniculum vulgare, Phenols, Phenolic, glycosides, Pharmacology, Antibacterial activity, Antioxidant activity

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