

Pharmacognostic profile & pharmacological activities of ferula asafoetida

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Abstract:

Ferula asafoetida, commonly known as asafoetida or “hing,” is an oleo-gum resin obtained from the roots of *Ferula* species belonging to the family Apiaceae. Traditionally valued for its culinary, aromatic, and therapeutic significance, asafoetida contains an array of phytochemicals including carbohydrates, resins, coumarins, essential oils, saponins, flavonoids, and lignans. These constituents contribute to its wide spectrum of pharmacological properties. This chapter provides a comprehensive overview of the botanical description, chemical composition, taxonomic classification, and various pharmacological activities of asafoetida. Research evidence demonstrates its relaxant, neuroprotective, memory-enhancing, digestive, antispasmodic, hypotensive, hepatoprotective, antimicrobial, anticancer, anticarcinogenic, antihyperglycemic, anxiolytic, and anthelmintic activities. Various in-vitro and in-vivo studies validate the medicinal potential of asafoetida, highlighting mechanisms involving antioxidant action, enzyme modulation, neurotransmitter regulation, and cellular protection. The chapter also includes the use of Imipramine as a standard reference drug for evaluating antidepressant activity of *Ferula asafoetida* aqueous extract. Overall, the literature suggests that asafoetida is a promising natural therapeutic agent with significant pharmacological relevance for future herbal drug development.

Keywords:

Ferula asafoetida; Asafoetida, Hing, Oleo-gum resin, Phytochemicals, Ferulic acid, Coumarins, Essential oils, Neuroprotective activity, Relaxant effect, Memory-enhancing activity, Digestive enzymes, Antispasmodic.
