

# The Biological Activities, Health Benefits and Medicinal Properties of of Asafoetida (*Ferula asafoetida* L.)

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**Abstract:** Asafoetida (*Ferula asafoetida* L.) is a monoecious, herbaceous, perennial plant of the Umbelliferae family, native to eastern Iran, central Asia, China. The roots of the asafoetida plant used as a food source, and it has a prominent role in traditional medicine because of its anti-bacterial, anti-viral, carminative, sedative, anti-inflammatory and diuretic characteristics. The goal of this article is to survey on natural benefits and medicinal values of Asafoetida. A literature search was done in Google Scholar, PubMed, Science Direct, Springer, Medline, and Wiley Online Library from 1990 to October 2023. The keywords used were asafoetida, medicinal plants, anticancer, polysulfides, flavonol, natural products, and coumarins. The study confirms asafoetida as an important source of components with remarkable bioactive and nutritional characteristics suitable for incorporation into foods with functional foods. Asafoetida is an oleo-gum-resin achieved from the exudates of the roots. Its major and vital health advantages are decrease bloating and other stomach problems aids to alleviate asthma, relieve menstrual pain, lower blood pressure levels, reduce acne, reduce headaches, anticancer impact, appropriate hair conditioner, improve brain health, antibacterial and antimicrobial activities. Analysis of asafoetida reveals its composition, including moisture, carbohydrates, minerals, protein and fiber. Its vitamin components include substantial calcium as well as iron, carotene, phosphorus, niacin, and riboflavin. Asafoetida contains mainly resin, gum, and volatile oil. The odor of asafoetida is imparted to the breath, flatus, gastric eructations, and secretions. It is difficult to eat it raw because of its bitter taste and strong smell. It occurs in three forms in commercial trade: paste, mass, and tears. Asafoetida has great medicinal importance, more studies of asafoetida is needed. The active component of asafoetida can be progressed in combination as potent drugs, which may exert better impacts in comparison with other components.

**Keywords:** asafoetida; anticancer; medicinal plants; polysulfides; natural products; flavonol; coumarins.