Nigella sativa is a genus of about 14 species of annual plants in the family Ranunculaceae, native to Central Asia and the Mediterranean region. It is small prostrate annual herb about 45 cm high with 2-3 slender leaves pinnatisect, 2-4 cm long cut and black in colour. The plant has a rather stiff, erect, branching stem, bears deeply-cut greyish-green leaves and terminal greyishblue flowers, followed by odd, toothed seed vessels, filled with small black seeds. N. sativa has bitterness to them like mustard-seeds. It can be used as a “pepper” in recipes with pod fruit, savoury dishes, bread, meat and in desserts, including biscuits, curries and tarts. Nigella sativa leaves and flowers have a strong, pleasant aroma. The flowers are white or pink in colour and are used in herbal tea. The plant is known as Kalonji, Kalajira, Kalajaji, Mugrela, Upakuncika in India, and as Habbatussauda, Husseini, Bibla in Yemen, and Kalonj, Redu in Nigeria. It is also known as Onion Grass, Onion Weed, Black Cumin, Black Caraway, English Cumin, Caraway, Nigella. N. sativa is native to the Arabian Peninsula, India, Pakistan, Iran, Afghanistan and desert areas of the Mediterranean region. Nigella sativa has a long history of use for food and medicinal purposes. No adverse or side dosages. Great research has been done on mammary cells in laboratory animals. Conclusion

Indications and Usage

Nigella sativa is traditionally used in Ayurveda medicine as a treatment for digestion problems, heart disease, high blood pressure, diabetes, asthma, bronchitis, rheumatism and related inflammatory diseases, to increase milk production in nursing mothers, to promote digestion and to reduce flatulence, and induce sweating. Nigella sativa is also used in Southeast Asian countries to treat ailments including asthma, bronchitis, rheumatism and related inflammatory diseases, to increase milk production in nursing mothers, to promote digestion and to reduce flatulence, and induce sweating.

Traditional Uses

N. sativa is a symbolic medicine for the Islamic faith. The seeds are ground and mixed with honey to be taken as a cure for worms. The seeds are also used for external applications to treat skin eruptions. To arrest vomiting, the seeds are mixed with honey and given to the patient. The crushed seeds are also used to improve digestion and produce warmth, especially in cold climates. They are sometimes given as a tonic to restore energy and help with recovery from illness. Nigella sativa is believed to have a number of medicinal properties, including anti-inflammatory, antiviral, and antimicrobial activity. N. sativa has been used for medicinal purposes for centuries, both as a herb and pressed into oil for external use. The seeds are commonly used as a flavoring, to improve digestion and produce warmth, especially in cold climates. They are sometimes given as a tonic to restore energy and help with recovery from illness.

Chemical Composition

The seeds give on steam-distillation a yellowish brown volatile oil with an unpleasant odor. The oil also contains a fatty oil rich in unsaturated fatty acids, mainly linoleic acid (50-60%), oleic acid (20%), and palmitic acid (8-12%). The seeds also contain nigellidin and nigellicin, which are isochinoline alkaloids. Furthermore, the seeds are known to contain thymoquinone, a pyrazol alkaloid. Thymoquinone is an important constituent of N. sativa and is responsible for many of its medicinal properties. Thymoquinone has been shown to have a variety of biological activities, including antioxidant, anti-inflammatory, and antimicrobial effects.

Hepatoprotective activity:

Thymoquinone, one of the active constituents of N. sativa, has been shown to have hepatoprotective activity. An in-vitro study showed the protective effect of thymoquinone from the seeds were found to inhibit eicosanoid generation in leucocytes and membrane lipid peroxidation and a significant reduction in rat paw oedema and a reduction in thermal noxious stimuli methods such as acetic acid-induced writhing, hot plate and tail flick tests.

Antimicrobial activity:

N. sativa and its constituent thymoquinone have been found to possess antimicrobial activity. The volatile oil also extended to drug-resistant strains of Escherichia coli, Pseudomonas aeruginosa and Staphylococcus aureus. The oil also possess antimicrobial activity against Gram-positive and Gram-negative bacteria. However, sensitivity against Gram-negative bacteria was higher than Gram-positive bacteria. The oil was also reported to have hepatoprotective activity.

Anthelmintic activity:

N. sativa has been found to possess anthelmintic activity. Extracts of the seeds have been shown to be effective against various parasitic worms, including roundworms and whipworms. The anthelmintic activity of N. sativa has been attributed to the presence of thymoquinone in the seeds.

Antioxidant activity:

Thymoquinone has been shown to possess antioxidant activity. It has been found to scaveng e free radicals and protect against oxidative damage. The oil also possesses antioxidant activity.

Preliminary reports suggest antioxytocic properties, in that a reversible contraction induced by oxytocin stimulation have been observed.

Conclusion

Nigella sativa has a long history of use for food and medicinal purposes. No adverse or side dosages. Great research has been done on mammary cells in laboratory animals.