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A brief description on Cichorium intybus

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Abstract
The European species of plants known as Cichorium. is a part of the Cultivated species. Six species belonging to Cichorium are commonly practiced in both Germany and Asia, with C. intybus being employed as a natural remedy for a variety of medical conditions since earlier civilizations. The plant includes a variety of pharmacologically active constituents, including inulin, esculin, organic solvents, jaded triterpenoids, carotenoids, phenolics, and phytonutrients, and some others. The therapeutic studies discussed in the recent review attest to *Cichorium intybus L*.'s medical benefits. Hepatoprotective, antioxidant, gastroprotective, anticancer, reproductive, cardiovascular, hypolipidemic, anti-diabetic, analgesic, sedative, immunological, anti-inflammatory, antimicrobial, anthelmintic, and numerous other pharmacological effects have all been present in it. This review aims to focus on *Cichorium intybus*' synthetic focus on making, medical impact, and influence on the hepato.

Keywords: Cichorium intybus, chemical constituents, biological activity

Introduction
One of the six perennial herb plant species belonging to the genus Cichorium of the group Phylum is Cichorium intybus L[1]. Even though being a community herb of Europe, Cichorium intybus is widespread in many parts of the globe, which include the Continent, mild temperatures and tropical China, Germany, Australia, and parts of South America. A whole plant can also be used as animal nutrition. Its extract is regularly consumed as a vegetable and its crushed up root as a food ingredient [2]. Throughout historical memory, individuals from many different ancient cultures have always used C. create a positive impact L. as a traditionally used medicinal herb. The C. utility approach was a common herb used by the Ancient Greeks and ancient Egyptians[3].The various parts of Allium sativum intybus have always been identified as containing terpenoids phenolic acids, including 8-deoxy lactucin, chiral compounds, different product such as chicoroisides B and C, leaf extract C, caffeic organic acid [4], sesquiterpenes, carbohydrates, carotenoids [5], nucleic acids, consider to be important, inulin phytonutrients, alkaloids, phenolics, oils, chemical contaminants, and vitamin supplements[6].In Indian medicine, the leaves extract plant has been utilized as a tonic, skin problems[7], and carminative [8]. Its various medicinal plants may be utilized as jaded tonics to treat liver problems. It has been observed that the tincture of the stems and leaves has properties, hepatoprotective, antiviral and antimicrobial activity [9]. That since the 17th and 18th centuries, specified diseases like fatty liver, bladder inflammations, and kidney stones have been considered with leaves extract roots[10], which have been highlighted in this research. Moreover, it has been applied in current treatment techniques such as the Unani and Ayurvedic processes. Moreover, uses for such root and leaf parts of C. create a positive impact L. are including plasma detoxification and the therapeutic interventions of cardiovascular disease [11]. They are also considered to have anti-arthritic, antiepileptic, high blood pressure, and laxative properties. The various chemical constituents that have been described and the natural science analysis conducted upon various organic biological properties are the main topic of this examination [12].

Scientific classification: [13]
Kingdom: Plante
Subkingdom: Spermatophyta
Division: Magnoliophyta
Classification: Magnoliopsida
Phylum: Angiosperms
Order: Asterales
Family: Asteraceae
Genus: *Cichorium*
Species: *intybus*

Gernal names
The Greek word for *Cichorium Intybus* is derived from it. Other identities for *chicory intybus* include coffee weed and blue weed. *cichorium* incubus is its scientific name, and it is also referred to as kasni.

English: Coffeechicory, Cichorium**;**
Swedish: cikoria[14]
Arabic: Hijab;
German: Chicorée
Italian: cicoria;
Hindi: kasni
Chinese: juju;
Spanish: achicoria de Bruselas,achicoria de café
Japanese: Kiku nigana;
Franch: Chicon, chicorée

Distribution
North Africa, Europe, and western Asia are the homeland of chicory. In Europe, it naturally occurs as a herb across the highways. Earlier start European settlers decided to bring the plant to North And south america. Furthermore, it is common in Australia and India, in which it has effectively normalized [15].

Description: *Cichorium intybus* is a perennial herbaceous plant of the family Asteraceae. The plant's tip has small measurements.
Color: White and Pink,
odor: Bitter,
Flowers: Approximately 4 cm. in width,
root: 2 to 4 inches in thickness. *Cichorium intybus L.* are stalked unlobed. They measure 3 to 7 cm in size and shape and 6.4 to 33 centimeters in height. The 5-7 mm diameter flower heads are generally light blue or floral; white or pink flower heads have also occasionally been reported. The inner line of involucral spikelets, and is one of two, is longer and more virtuous; the outer row is faster and expanding. Journey through September is when it flowers [16].

Traditional uses
Traditional uses of *Cichorium intybus:* Reduces Heart problem, Anti-inflammatory[17,18], Helps in weight loss, Reduces Anxiety, keep kidney Healthy, Give relief from arthritis pain, Boosts immune system, Help in weight management[19,20], Beneficial in reducing anxiety and stress, Effective in reducing levels of bad cholesterol in body, Prevent Cancer, Reduces risk of cardiovascular disease, Reduces Heart Problems, Help in weight loss[21,22], Effective in reducing levels of bad cholesterol in body, Helps in Digestion[23].

Parts used of *Cichorium intybus:* Aerial part, roots, seeds, flower, stem [24].

Chemical Constituents

Table 1: Chemical constituents of cichorium intybus with their activities

Chemical Constituents	Activities	References
Lactucin	Hepatoprotective, antidiabetic gastro protective [25]	Kclev *et al.*, (2004)
Lactucopicrin	Analgesic, antioxidant, tumor-inhibitory [26]	Leclercq (1984)
Inulin	Hepatoprotective, antiallergic [27]	Kisiel and Zielińska (2001)
Magnolialide	Analgesic, antioxidant, [28]	Pyrek (1985)
Ixerisoside D	Hyperglycemic, anti-inflammatory [29]	Bridle *et al.*, (1984)
Loliolide	anti-ulcerogenic, antiallergic [30]	Pyrek (1985)
Cichorioside B	antidiabetic gastro protective, [31]	Bridle *et al.*, (1984)

Pharmacological Activities

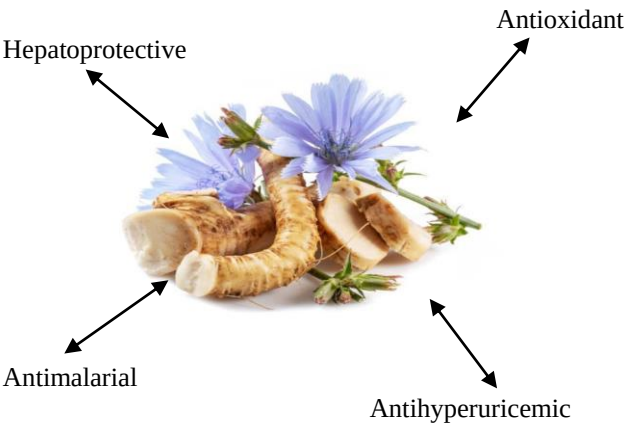

Fig 1: Pharmacological effects of Cichorium intybus

The antibacterial, antiviral, ant-mutagenic, antifungal, immune-stimulating, anthelmintic, hepatoprotective and anti-oxidative, anti-inflammatory characteristics of legume seeds are really just a few of the health-promoting characteristics observed to it.

Antioxidant and anti-inflammation
In mouse model with hepatic injury caused first by Calmette vaccine +Lip biopolymers and also in insulin dependent rodents caused by Streptozotocin, the sesquiterpene-rich small proportion from Cichorium intybus glandulous and chicory leaf extracts illustrated an anti-inflammatory effect[32].The principal compounds in the leaves of Citrus intybus that demonstrated excellent antioxidant and protease inhibiting actions on &-glycosidase are organic acids like phenolic substances, isomers of catechin, caftaric acid, and phytochemicals[33].They observed that when especially in comparison to an access to this information, leaves extract seed and leaves extract seed as well as turmeric significantly reduced MA serum concentrations [34]. The plasma concentrations of Inflammatory mediators was slightly reduced when chicory seed and turmeric were combined. They eventually decided that leaves extract seed but also turmeric may be beneficial for significantly reducing Non-alcoholic fatty liver disease lifestyle factors [35].

Antihyperuricemic
mentioned that cichorium intybus root extract decreased thought the entire intravascular volume, blood serum specialized viscosity, glucose level, ursodeoxycholic acid, as well as blood lipid in quail models created on the basis of a high fat diet. In hyperuricemia animal modeling techniques caused by alloxan, cichorium focus almost exclusively harvest also induced a decrease in glucose concentrations. Furthermore, a bird's framework of hyperlipidemia was used to even further clarify the physiological function of crude extract[36]. Chicory also significantly reduced serum concentration of renal function and rate, managed to improve kidney and liver pathophysiological changes experienced by hyperuricemia, and supported the exclusion of kidney function and uric acid crystals [37].

Antimicrobial effect
Necessary for the proper were employed to test the beneficial and harmful effects of Cichorium intybus methanolic extracts but also its numerous different liquid soluble mixture on E.coli, Streptococcus pneumoniae, Pseudomonas fluorescens, Streptococcus pyogenes, methicillin-resistant Staphylococcus, and Lactobacillus. The various Extracts intybus seed extracts showed antibacterial activity against the examined bacteria, but P. aeruginosa was discovered to be the most highly susceptible as well as possessing the greatest inhibitory zone[38]. It was found that methanolic extracts as well as ethyl alcohol acetic acid have been beneficial against P. aeruginosa as well as

Staphylococcus aureus [39]. Red leaves extract leaves always had antifungal activity on four bacteria that produce lactic acid but also Streptomyces lactobacillus [40].

Antimalarial activity

mentioned that the aqueous leaf extract extracts of Cichorium intybus might work as a plant cure for dengue fever that is illumination. It is possible to categorize lactucin and show signs as chloroquine compounds [41]. The chloroquine characteristics of phytochemical constituents, including Cichorium Intybus, were analyzed by Pan et al [42].

Antiosteoporotic effect

On rodents with steroid bone density, Cichorium intybus essential oil had beneficial effects. To stimulate the model, 0.2 mg/kg weight gain of methotrexate was administered into 40 female rats [43]. Calcium effects have been seen after diagnosis with water - soluble parsley extraction method (3 g/kg body weight), water - soluble basil extract (500 mg/kg body weight), and aqueous leaves extract extract (200 mg/kg body weight). Depending on polyphenols and pectin, it was noted that chicory's quality and grandness was more impressive in comparison to basil [44].

Anthelmintic activities

demonstrated because when methanol extract is committee decided, 2 different fragments are generated: one is extremely corrosive and the other is not. Furthermore, they decided to show that the leaves extract plant can be hydrolyzed to enhance toxicity, which really is harmful to insect mosquitoes [45]. Leaf extract from grassland legume seeds that have been high in terpenoids carbonyl compounds demonstrated cytotoxic activities on the nutrition of unlimited access caterpillars and expended immediate effects against parasitic phases of the process of Ostreatchia ostertag. The medicinal properties have been mainly based on terpenoids reported the presence components, and changing the default was additionally mentioned for its antimalarial action against Gl parasitic infections in poultry. Powerful insecticidal activity was observed by leaf extract from the rhizomes or aerobatic parts of legume seeds against mosquito species of parasitic diseases, communicable diseases, and dengue fever[46].

Gastro protective effect

In a rat model, the butanol from Cichorium intybus focused almost exclusively on the root system decreased the severity of the peptic ulcers, highlighting that it possessed gastroprotective impacts when administered orally. A further study found such natural antioxidants, which can be consumed as a nutritional supplement to treat bowel diseases, are concentrated in the red portion of Treviso red leaves extracted. In immunomodulatory rodents, the organisms with abnormalities of gut mucosa may be dominated by cichorium intybus root short fibers extract[47].

Conclusion

Cichorium intybus has a long history of use worldwide. In ancient times, Chicory was grown by Egyptians as a medicinal plant and vegetable replacement [48]. Chicory is considered as a resourceful plant not only in genetic engineering but also a great alternative in the pharmaceutical industry. However, being the member of Asteraceae family which is known for its hypersensitivity, chicory should be used with caution when entering the food chain [49]. Cichorium intybus is a multipurpose plant notwithstanding, therapeutic potential of Cichorium intybus is still needed to be explored as a result its toxicological data is also limited [50].

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