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MEDICINE PLANTS HAVING ANALGESIC ACTIVITY: A DETAIL REVIEW

Lokendra Singh[1*], Gaurav Sharma[2], Pooja Sharma[3], Dr. Deepak Godara[4]

[1]Research Officer, Bilwal Medchem and Research Laboratory Pvt. Ltd, Rajasthan.

[2]Pharmacologist, National Institute of Ayurveda, Rajasthan.

[3]Director, Bilwal Medchem and Research Laboratory Pvt. Ltd, Rajasthan.

[4]Director Analytical Division, Bilwal Medchem and Research Laboratory Pvt. Ltd, Rajasthan.

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***Corresponding Author**
Lokendra Singh
Research Officer, Bilwal Medchem and Research Laboratory Pvt. Ltd, Rajasthan.

ABSTRACTS

In the review the various plants drugs help in analgesic activity show them. It is most important plant used to analgesic medicine. The Analgesia (pain) is increasing now day by day due to present living condition. For this reason in this review articles reported the advantageously effective of medicinal plant.

KEYWORDS: Medicine plants.

INTRODUCTION

Curcuma longa **Scientific classification**

Kingdom: Plantae

Clade: Angiosperms

Clade: Monocots

Clade: Commelinids

Order: Zingiberales

Family: Zingiberaceae

Genus: Curcuma

Species: C. longa

(Botanical view on *Curcuma longa*)

It is native to the Indian subcontinent and Southeast Asia, and requires temperatures between 20 and 30 °C (68–86 °F) and a considerable amount of annual rainfall to thrive. Turmeric powder has a warm, bitter, and pepper-like flavor and earthy, mustard like aroma.[1-2] Turmeric is a perennial herbaceous plant that reaches up to 1 m (3 ft. 3 in) tall. Highly branched, yellow to orange, cylindrical, aromatic rhizomes are found. The leaves are alternate and arranged in two rows. They are divided into leaf sheath, petiole, and leaf blade. The simple leaf blades are usually 76 to 115 cm (30–45 in) long and rarely up to 230 cm (91 in). They have a width of 38 to 45 cm (15–18 in) and are oblong to elliptic, narrowing at the tip.

Inflorescence, flower, and fruit: The hermaphrodite flowers are zygomorphic and threefold. The three 0.8 to 1.2 cm (0.3–0.5 in) long sepals are fused, white, have fluffy hairs and the three calyx teeth are unequal. The three bright-yellow petals are fused into a corolla tube up to 3 cm (1.2 in) long. The three corolla lobes have a length of 1.0 to 1.5 cm (0.39–0.59 in) and are triangular with soft-spiny upper ends.

Uses

Medical research: Turmeric or its principal constituent, curcumin, has been studied in numerous clinical trials for various human diseases and conditions, but the conclusions have either been uncertain or negative.

Traditional uses: In Ayurvedic and Siddha practices, turmeric has been used as an attempted treatment for a variety of internal disorders, such as indigestion, throat infections, common colds, or liver ailments, as well as topically, to cleanse wounds or treat skin sores.[3-4]

2. Colchicum autumnale*(Colchicaceae)*

Scientific classification

Kingdom: Plantae

Clade: Angiosperms

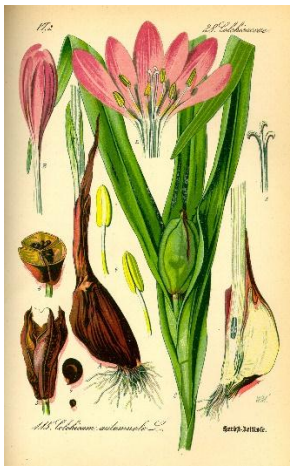
Clade: Monocots

Order: Liliales

Family: Colchicaceae

Genus: Colchicum

Species: C. autumnale



(Botanical view on *Colchicum autumnale)*

Colchicum autumnale, commonly known as autumn crocus, meadow saffron[5] or naked ladies. Colchicum autumnale is the only species of its family native to the Great Britain and Ireland.[6] With notable populations under the stewardship of the County Wildlife Trusts. It also occurs across mainland Europe from Portugal to Ukraine, and is reportedly naturalized in Denmark, Sweden, European Russia, the Baltic states and New Zealand.[7] The bulb-like corms of Colchicum autumnale contain colchicine, a useful drug with a narrow therapeutic index. Colchicine is approved by the US FDA for the treatment of gout and familial Mediterranean fever. Colchicine is also used in plant breeding to produce polyploid strains. *Colchicum* plants are deadly poisonous due to their colchicine content, and have been mistaken by foragers for ramsons, which they vaguely resemble.[8] The symptoms of colchicine poisoning resemble those of arsenic, and no antidote is known.

3. Citrullus colocynthis

Scientific classification

Kingdom: Plantae

(Unranked): Angiosperms

(Unranked): Eudicots

(Unranked): Rosids

Order: Cucurbitales

Family: Cucurbitaceae

Genus: Citrullus

Species: C. colocynthis

(Botanical view on Citrullus colocynthis)

Origin, distribution, and ecology: C. colocynthis is a desert viny plant that grows in sandy, arid soils. It is native to the Mediterranean Basin and Asia, and is distributed among the west coast of northern Africa, eastward through the Sahara, Egypt until India, and reaches also the north coast of the Mediterranean and the Caspian Seas. It grows also in southern European countries as in Spain and on the islands of the Grecian archipelago.

Characteristics and morphology: The roots are large, fleshy, and perennial, leading to a high survival rate due to the long tap root. The vine-like stems spread in all directions for a few meters looking for something over which to climb. If present, shrubs and herbs are preferred and climbed by means of axiliary branching tendrils.[9] Very similar to watermelon, the leaves are palmate and angular with three to seven divided lobes. The flowers are yellow and solitary in the axes of leaves and are borne by yellow-greenish peduncles. Each has a subcampanulated five-lobed corolla and a five-parted calyx. They are monoecious, so the

male (stamens) and the female reproductive parts (pistils and ovary) are borne in different flowers on the same plant. The male flowers' calyx is shorter than the corolla. The fruit is smooth, spheric with a 5– to 10-cm-diameter and extremely bitter taste. The calyx englobe the yellow-green fruit which becomes marble (yellow stripes) at maturity. The mesocarp is filled with a soft, dry, and spongy white pulp, in which the seeds are embedded. Each of the three carpels bears six seeds. Each plant produces 15 to 30 fruits.[10]

The seeds are grey and 5 mm long by 3 mm wide. They are edible but similarly bitter, nutty-flavored, and rich in fat and protein. They are eaten whole or used as an oilseed. The oil content of the seeds is 17–19% (w/w), consisting of 67–73% linoleic acid, 10–16% oleic acid, 5–8% stearic acid, and 9–12% palmitic acid. The oil yield is about 400 l/hectare.[11]

Uses: C. colocynthis can be eaten or elaborated for further uses in medicine and as energy source, e.g. oilseed and biofuel.

4. Withania somnifera

Scientific classification

Kingdom: Plantae

Clade: Angiosperms

Clade: Eudicots

Clade: Asterids

Order: Solanales

Family: Solanaceae

Genus: Withania

Species: W. somnifera

(Botanical view on Withania somnifera)

This species is a short, tender perennial shrub growing 35–75 cm (14–30 in) tall. Tomentose branches extend radially from a central stem. Leaves are dull green, elliptic, usually up to 10–12 cm (4 to 5 in) long. The flowers are small, green and bell-shaped. The ripe fruit is orange-red.

Cultivation: Withania somnifera is cultivated in many of the drier regions of India, such as Mandsaur District of Madhya Pradesh, Punjab, Sindh, Gujarat, Kerala and Rajasthan.[12] It is also found in Nepal, China.[13]

Uses: The plant's long, brown, tuberous roots have been used for centuries in traditional Indian medicine.[14-15] the dried leaves are ground to a powder from which a paste is made and used for burns and wounds.[16]

5. Achyranthes aspera

Scientific classification

Kingdom: Plantae

(Unranked): Angiosperms

(Unranked): Eudicots

(Unranked): Core eudicots

Order: Caryophyllales

Family: Amaranthaceae

Genus: Achyranthes

Species: A. aspera

(Botanical view on Achyranthes aspera)

Various species of Achyranthes are used medicinally in India, China and Bangladesh whereas Achyranthes aspera [synonym- apamarga, chirchira, chaff flower. Family- Amaranthaceae] is naturalized throughout the hot and moist parts of India.[17] The leaves used for Gonorrhoea,

Bowel complaint, stomachic, piles, skin eruptions.[18] Chemically, Achyranthes aspera contains. Triterpenoid saponins possess oleanolic acid (0.54%), aglycone A, B, C and D, ecdysterone, long. Chain alcohol, 17-penta triacontanol, water soluble base betaine and enzyme level are isolated.

Two long chain compound isolated from shoots have been characterized as 27-Cyclohexylheptacosan-7-ol and 16-hydroxy-26-methylheptacosan-2-on by chemical a spectral Investigations.[19]

6. Dracaena cinnabari balf

Scientific classification

Kingdom: Plantae

Clade: Angiosperms

Clade: Monocots

Order: Asparagales

Family: Asparagaceae

Subfamily: Nolinoideae

Genus: Dracaena

Species: D. cinnabari

(Botanical view on *Dracaena cinnabari balf*)

It is considered a remnant of the Mio-Pliocene Laurasian subtropical forests that are now almost extinct due to the extensive desertification of North Africa.[20]

The dragon blood tree has a unique and strange appearance, with an "upturned, densely packed crown having the shape of an uprightly held umbrella". This evergreen species is named after its dark red resin, which is known as "dragon's blood". Unlike most monocot plants, *Dracaena* displays secondary growth, *D. cinnabari* even has growth zones resembling tree rings found in dicot tree species. Along with other

arborescent *Dracaena* species it has a distinctive growth habit called "dracoid habitus".[21] Its leaves are found only at the end of its youngest branches; its leaves are all shed every 3 or 4 years before new leaves simultaneously mature. Branching tends to occur when the growth of the terminal bud is stopped, due to either flowering or traumatic events (e.g. herbivory).[22] The berries are eaten by birds (e.g. *Onychognatus* species) and thereby dispersed. The seeds are 4–5 mm in diameter and weigh on average 68 mg.[23]

7. Solanum trilobatum

Scientific classification

Kingdom: Plantae
(Unranked): Angiosperms
(Unranked): Eudicots
(Unranked): Asterids
Order: Solanales
Family: Solanaceae
Genus: Solanum
Species: S. trilobatum

(Botanical view on *Solanum trilobatum*)

Solanum trilobatum L. is a flowering shrub of the family Solanaeace and originates in some of the warmer parts of the tropical and the subtropical areas.[24] It is an erect branching herb Widely distributed throughout the Indo-Malaysian regions and southern India, although it has a traditional medicinal Use in the areas where it is cultivated for treating various ailments.[25] It is a thorny creeper with bluish white flower and grows as climbing under a shrub. It is touchy diffuse, bright green recurrent aromatic plant, wooded at the base,2-3 m height, found all over Asian continent, mostly in dry places as a wild plant along waysides and harsh

environment.[2] The plant having much branched sharp scandent bushes. The leaves are deltoid, trilateral or wedge-shaped by means of irregularly lobed, Flowers are purplish-blue, in cymes. Berry is globose, pink or crimson.[26]

8. Abutilon indicum

Scientific classification

Kingdom: Plantae
Clade: Angiosperms
Clade: Eudicots
Clade: Rosids
Order: Malvales
Family: Malvaceae
Genus: Abutilon
Species: A. indicum

(Botanical view on *Abutilon indicum*)

Distribution: The species occurs in a number of tropical and subtropical zones. An example occurrence is within parts of the Great Barrier Reef islands of the Coral Sea.[27] A. indicum various parts of the plant are used as a demulcent, aphrodisiac,laxative, diuretic, sedative, astringent, expectorant, tonic, anti-inflammatory, anthelmintic, and analgesic and to treat leprosy, ulcers, headaches, gonorrhea, and bladder infection.[28]

Botanical Description: The leaves are ovate, acuminate, toothed, rarely subtrilobate and 1.9-2.5 cm long. The flowers are yellow in color, peduncle jointed above the middle. The petioles 3.8-7.5 cm long; stipules 9 mm long; pedicels often 2.5-5 mm long, axillary solitary, jointed

very near the top; calyx 12.8 mm long, divided in to middle, lobes ovate, apiculate and corolla 2.5 cm diameter, yellow, opening in the evening. The fruits are capsule, densely pubescent, with conspicuous and horizontally spreading beaks. The stems are stout, branched, 1-2 m tall, pubescent. The seeds are 3-5 mm, reniform, tubercled or minutely stellate-hairy, black or dark brown.[29-30]

9. Berberis aristata

Scientific classification

Kingdom: Plantae

Clade: Angiosperms

Clade: Eudicots

Order: Ranunculales

Family: Berberidaceae

Genus: Berberis

Species: B. aristata

(Botanical view on *Berberis aristata*)

Morphology: Berberis aristata is characterized by an erect spiny shrub, ranging between 2 to 3 m (6.6 to 9.8 ft) in height. It is a woody plant, with bark that appears yellow to brown from the outside and deep yellow from the inside. The bark is covered with three-branched thorns, which are modified leaves, and can be removed by hand in longitudinal strips. The leaves are arranged in tufts of five to eight and are approximately 4.9 cm (1.9 in) long and 1.8 cm (0.71 in) broad. The leaves are deep green on the dorsal surface and light green on the ventral surface. The leaves are simple with pinnate venation. The leaves are leathery in texture and are toothed, with several to many small indentations along the margin of the leaf.[31]

Medicinal uses: In India, B. aristata is used in traditional herbal medicine. Its stem, roots, and fruits are used in Ayurveda.[32] The root bark contains the bitter alkaloid berberine, which has been studied for its potential pharmacological properties.[33]

10. Allium cepa

Scientific classification

Kingdom: Plantae

Clade: Angiosperms

Clade: Monocots

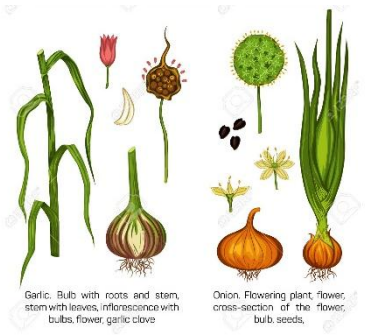
Order: Asparagales

Family: Amaryllidaceae

Subfamily: Allioideae

Genus: Allium

Species: A. cepa



(Botanical view on *Allium cepa*)

The wild onion is extinct and ancient records of using onions span western and eastern Asia, the geographic origin of the onion is uncertain,[34-35] with likely domestication worldwide.[36] The onion plant has been grown and selectively bred in cultivation for at least 7,000 years. It is a biennial plant, but is usually grown as an annual. Modern varieties typically grow to a height of 15 to 45 cm (6 to 18 in). The leaves are yellowish- to bluish green and grow alternately in a flattened, fan-shaped swathe. They are fleshy, hollow, and cylindrical, with one flattened side. As the onion matures, food reserves begin to accumulate in the leaf bases and the bulb of the onion swells.[37]

Table 2: Medicine plants Plants having Analgesic activity.

Sr. No	Plant Name	Family	Plant part used	Screening method	Ref. No.
1.	*Dracaena cinnabari balf*	*Agavaceae*	Balf resin (ethanolic extract)	Tail flick test	[38]
2.	*Solanum trilobatum*	*Solanaceae*	Root (methanolic extract)	Hot plate method	[39]
3.	*Curcuma longa*	*Zingiberaceae*	Rhizome	Tail clip method	[40]
4.	*Colchicum autumnale*	*Colchicaceae*	bulbs, seeds, and flowers	Tail clip method	[41]
5.	*Abutilon indicum*	*Malvaceae*	Leaves (extra ct of methanolic, ethanolic, aq. chloroform and petroleum ether	Tail flick method	[42]
6.	*Citrullus colocynthis*	*Cucurbitaceae*	Roots	Tail clip method	[43]
7.	*Withania somnifera*	*Solanaceae*	Roots	Tail clip method	[44]
8.	*Achyranthes aspera*	*Amaranthaceae*	Root, seed, leaf, whole plant.	Tail clip method	[45]
9.	*Berberis aristata*	*Berberidaceae*	Root (aqueous & alcoholic extract)	Hot plate method	[46]
10.	*Allium cepa*	*Alliaceae*	Fresh onion juice	Hot plate method	[47]

CONCLUSION

Medicinal plants are largest parts of pharmaceuticals medicinal and natural substance. In this review article the various extracts of plants are found in analgesic activity unconcerned types of study models. The Analgesia (pain) is increasing now day by day due to present living condition. For this reason in this review articles reported the advantageously effective of medicinal plant.

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None of these studies have yet led to the approval of curcumin, curcuminoids, or turmeric as a therapeutic for any disease.

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