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## Leafy drugs from Tehsil Joginder Nagar, District Mandi, Himachal Pradesh, India

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The aim of present study is to provide information of leafy drugs available at tehsil Joginder Nagar, District Mandi of Himachal Pradesh. During the course of study, 161 plant species of 73 families and 143 genera belonging to two different taxonomic groups' i.e angiosperms and gymnosperms were collected. Out of these 73 families, 72 families belong to angiosperms (62 families belong to Dicotyledons and 10 belong to Monocotyledons) and 01 gymnosperms. All plant specimens were preserved in the form of herbarium, authenticated and enumerated with their Botanical, Family and Local name. All plants were compared with the existing literature for their medicinal value.

**Keywords:** Leafy drugs, Anodyne, Diuretic, Astringent and Bronchitis.

### Introduction

Leaf is borne on the node of a stem or its branches and, site for the process of photosynthesis. During photosynthesis carbohydrates are produced and under unfavourable conditions it changes into secondary metabolites (alkaloids, Flavonoids, tannins, glycosides, terpenoids etc. These have a marked pharmacological in clinical studies. Flavonoids possess free radical scavenger activity and mostly stored in leaf. There are numerous leafy drugs have been used in traditional medicines. Himachal Pradesh is one of hilly state of India with altitude ranging from 350 to 7000 meters and located in the Western Himalaya region between 30° 22' N to 33° 12' N and 75° 45' E to 79° 04' E, extends over an area of about 55,673 Km<sup>2</sup>. About 13082 Km<sup>2</sup> areas are covered by different types of forest (Kumar, 2014a-p; Pietta, 2000).

Tehsil Joginder Nagar lies between 31° 50' N and 76° 45' E in Mandi district of Himachal Pradesh. Area of tehsil Joginder Nagar lies between lower and Mid Himalaya at 900 to 2800 meters above sea level. It is the repository of floral diversity due to variable environmental conditions. Many valuable species are under threat and some are facing extinction due to over exploitation, habitat destruction. About 1000 plant species are under threat in different geographical regions of the country. Various studies have been carried out on floristic and medicinally important diversity of Himachal Pradesh including tehsil Joginder Nagar (Atkinson (1882); Collett (1902); Hooker (1872-1897); Kumar, 2014a-p; Murugeswaran et. al, 2014), but many biodiversity rich areas are still unexplored. Keeping in view the importance of medicinal plants, area of tehsil Joginder Nagar has been explored, assessed and documented the information regarding the leafy drugs.

## Material and Methods

The field surveys were conducted in September 2012 to May 2014 in locality of Tehsil Joginder Nagar. The plant specimens collected during field visits were identified and preserved in the form of herbarium after drying in the folds of blotting sheets. The herbarium was prepared after treating the collected plant specimens with 2% mercuric chloride solution to provide protection against insects and fungal attack. The collected specimens were identified with the help of the various flora and books (Sood et. al, 2009; Collett, 1902; Ambasta, et.al, 1986; Prajapati et. al., 2003; and Kirtikar and Basu, 1935) and carefully matched with the specimens housed at the herbarium of Botanical Survey of India, Dehradun. All the plant specimens were arranged alphabetically and enumerated along with their Botanical, Family and Local name. All plants were compared with the existing literature for their medicinal value (Chatterjee & Pakrashi, 1991, 1992, 1994, 1995, 1997 & 2001; Prajapati et. al., 2003). Local name of the collected plant specimens were recorded by interview and discussion with the local people.

## Results

During the course of study, 161 plant species of 143 genera and 73 families belonging to two different taxonomic groups i.e. angiosperms and gymnosperms, were collected from the locality of tehsil Joginder Nagar (**Table. 1**). Out of these 73 families, 72 families belong to angiosperms [62 families belong to Dicotyledons (147 species) [90.30 %] and 10 belong to Monocotyledons (13 species) [08.07 %]]. Among these families the predominant families are Asteraceae with 10 species; Papilionaceae and Solanaceae with 09 species each; Apocynaceae with 08 species; Caesalpiniaceae and Euphorbiaceae with 07 species each; Verbenaceae with 06 species; Acanthaceae, Cucurbitaceae, Lamiaceae, Malvaceae, Moraceae and Rutaceae with 04 species each; Apiaceae, Asclepiadaceae, Lauraceae, Mimosaceae, Oleaceae and Myrtaceae with 03 species each; Brassicaceae, Chenopodiaceae, Combretaceae, Menispermaceae, Rosaceae, Sterculiaceae, Amaryllidaceae, Araceae and Liliaceae with 02 species each; and remaining 45 families represented by single species only [Fig. 1]. All collected plant species were compared with the existing literature for their medicinal value and it is found that all plants have medicinal values (Chatterjee & Pakrashi, 1991, 1992, 1994, 1995, 1997 & 2001; Prajapati et. al., 2003).

**Table 1. List of plants available at tehsil Joginder Nagar, District Mandi (H.P.)**

S.No.	Botanical Name	Family	Local Name	Uses
1	<i>Abelmoschus moschatus</i> Medic.	Malvaceae	Kasturi Bhindi	Gonorrhoea and venereal diseases.
2	<i>Abrus precatorius</i> Linn.	Papilionaceae; Fabaceae	Rati	Cough, cold, skin diseases and painful swelling in leucoderma.
3	<i>Acacia arabica</i> Willd.	Mimosaceae	Babul, Kikar	Astringent, diarrhoea and dysentery.
4	<i>Achyranthes aspera</i> Linn.	Amaranthaceae	Puthkanda	Bites of poisonous insects.
5	<i>Acorus calamus</i> Linn.	Araceae	Bare, Bach	Analgesic, carminative, antibacterial and antispasmodic.
6	<i>Adhatoda vasica</i> Nees	Acanthaceae	Bansa, Basti, Basunti	Antiseptic, expectorant, skin complaints, uterine tonic and emmenagogue.
7	<i>Aegle marmelos</i> Correa.	Rutaceae	Bel	Expectorant, febrifuge, dropsy and bronchial asthma.
8	<i>Agave americana</i> Linn.	Agavaceae	Ramban	Antiscorbutic, diuretic, emmenagogue, laxative and resolvent.

9	<i>Ageratum conyzoides</i> Linn.	Asteraceae	Nila-phoolnu	Ague, cuts & sores, leprosy and other skin diseases.
10	<i>Ajuga bracteosa</i> Wall.ex Benth.	Lamiaceae	Nilkanthi	Diuretic, tonic and febrifuge.
11	<i>Albizia lebeck</i> Benth.	Mimosaceae	Sirin, Siris	Night-blindness
12	<i>Alocacia indica</i> (Lour.) Spach.	Araceae	Mankanda	Astringent, styptic, colic and constipation.
13	<i>Aloe barbadensis</i> Mill.	Liliaceae	Kawar, Ghi-Kawar	Antipyretic, cathartic, refrigerant, eye, liver and spleen troubles.
14	<i>Alstonia scholaris</i> R. Br.	Apocynaceae	Saptaparni	Beri-beri, congestion of liver, dropsy and ulcers.
15	<i>Ambroma augusta</i> Linn.	Sterculiaceae	Ulatkambal, Olatkambal	Menstrual disorders, sinusitis and rheumatism.
16	<i>Andrographis paniculata</i> Wall. ex Nees	Acanthaceae	Kalmegh	Dysentery, general debility, dyspepsia and neuralgia.
17	<i>Artemisia vulgaris</i> Linn.	Asteraceae	Nagdamani	Haemostatic, nervous & spasmodic and affection of asthma.
18	<i>Artocarpus heterophyllus</i> Lam.	Moraceae	Kathal	Skin diseases, boils and fever.
19	<i>Asclepias curassavica</i> Linn.	Asclepiadaceae	Ghamera, Parvini	Anthelmintic, anitdysenteric, gonorrhoea and haemorrhage.
20	<i>Asparagus racemosus</i> Willd.	Liliaceae	Satawar, Sansharpali	Boils, small pox and confluence.
21	<i>Bacopa monnieri</i> (Linn.) Penn.	Scrophulariaceae	Jal-nim, Jal-brahmi	Aperient, diuretic, improves memory and rheumatism.
22	<i>Barleria cristata</i> Linn.	Acanthaceae	Sam, Morani	Inflammation.
23	<i>Basella alba</i> Linn.	Basellaceae	Palak, Safed Bachla	Diuretic, gonorrhoea & balanitis, urticaria and constipation.
24	<i>Bauhinia vahlii</i> Wight & Arn.	Caesalpiniaceae	Tour, Tor	Demulcent and mucilaginous.
25	<i>Blumea lacera</i> DC.	Asteraceae	Kakranda, Jangli Muli	Anthelmintic, astringent, deobstuent, diuretic and febrifuge.
26	<i>Bombax ceiba</i> Linn.	Bombacaceae	Semal, Simbal	Anti-inflammatory, strangury and skin eruptions.
27	<i>Borassus flabellier</i> Linn.	Arecaceae	Tar, Tal	Gastritis and hiccup.
28	<i>Bryophyllum pinnatum</i> (Lam.) Kurz	Crassulaceae	Patharchat, Chatpata	Bruises, boils, bites of venomous insects and ulcers.
29	<i>Butea monosperma</i> (Lam.) Kuntze	Papilionaceae; Fabaceae	Palas	Aphrodisiac, febrifuge, anti-inflammatory and anodyne.
30	<i>Cajanus cajan</i> (Linn.) Millsp.	Papilionaceae; Fabaceae	Arhar	Jaundiac, diuretic, laxative, anti-inflammatory.
31	<i>Callicarpa macrophylla</i> Vahl.	Verbenaceae	Dahimal, Dussah	Gout and arthralgia.
32	<i>Calotropis procera</i> (Ait.) R. Br.	Asclepiadaceae	Ak	Eczema, skin eruptions, painful joints or swellings and toothache.
33	<i>Camellia sinensis</i> (Linn.) O. Kuntze	Theaceae	Cha, Chai	Thermogenic, appetizer, diuretic, diaphoretic and nervine tonic.
34	<i>Cannabis sativa</i> Linn.	Cannabinaceae	Bhang	Orchitis, worms and vermin.
35	<i>Carica papaya</i> Linn.	Caricaceae	Papita, Papeeta	Febrifuge and cardiac diseases.
36	<i>Carissa carandas</i> Linn.	Apocynaceae	Garna, Garnae	Remittent fevers.
37	<i>Cassia angustifolia</i> Vahl.	Caesalpiniaceae	Sana	Skin diseases.
38	<i>Cassia fistula</i> Linn.	Caesalpiniaceae	Aahali, Amaltas	Skin diseases, leprosy, laxative and antiperiodic.
39	<i>Cassia occidentalis</i> Linn.	Caesalpiniaceae	Chakramard, Chakunda	Purgative, skin diseases, aphrodisiac and alexeteric.
40	<i>Cassia tora</i> Linn.	Caesalpiniaceae	Aelu,	Itches, skin diseases, laxative and

			Chhoti-reli	cure ringworm.
41	<i>Catharanthus roseus</i> G. Don	Apocynaceae	Sadabahar	Menorrhagia, haematuria, diabetes and oliguria.
42	<i>Cedrus deodara</i> (Roxb.) Loud.	Pinaceae	Devdar	Thermogenic, useful in inflammations and tubercular glands.
43	<i>Celastrus paniculatus</i> Willd.	Celastraceae	Malkangani	Emmenagogue.
44	<i>Centella asiatica</i> (Linn.) Urban	Apiaceae	Mindkali, Brahmi	Antidiarrhoeal, antidysenteric, promote memory and diuretic.
45	<i>Centipeda minima</i> (Linn.) A. Br. & Aschers.	Asteraceae	Nak-Chiknu, Nagdowana	Bitter, carminative, emetic and expectorant.
46	<i>Chenopodium album</i> Linn.	Chenopodiaceae	Bathu	Laxative and anthelmintic.
47	<i>Cicer arietinum</i> Linn.	Papilionaceae; Fabaceae	Chana	Sprains & dislocated limbs, stomachic and laxative.
48	<i>Cinnamomum camphora</i> (Linn.) Nees & Eberm.	Lauraceae	Kapur	Antiseptic, expectorant, cold and affection of chest.
49	<i>Cinnamomum tamala</i> Nees & Eberm	Lauraceae	Gudpatraj, Tejpatra	Stimulant, carminative, rheumatism and colic diarrhoea.
50	<i>Cinnamomum zeylanicum</i> Breyn.	Lauraceae	Dalchini	Rheumatism, toothache, diarrhoea and dyspepsia.
51	<i>Cissampelos pareira</i> Linn.	Menispermaceae	Bhatindu	Externally in scabies and septic ulcers.
52	<i>Citrus maxima</i> (Burm.) Merrill	Rutaceae	Chakotra	Spasmodic cough.
53	<i>Cleome viscosa</i> Linn.	Capparidaceae	Hulhul	Rubifacient, vesicant, sudorific and oedema.
54	<i>Clerodendrum inerme</i> (Linn.) Gaertn.	Verbenaceae	Kundali	Mucilaginous, bitter & fragrant, scrofula and venereal diseases.
55	<i>Cordia dichotoma</i> Forst	Boraginaceae	Lasora	Applied to ulcer & in headache and aphrodisiac.
56	<i>Coriandrum sativum</i> Linn.	Apiaceae	Dhaniya	Antibilious, carminative, analgesic, anti-inflammatory and styptic.
57	<i>Crinum asiaticum</i> Linn.	Amaryllidaceae	Sukhdarshan	Diaphoretic, emetic, purgative, skin diseases and backache.
58	<i>Cucumis sativus</i> Linn.	Cucurbitaceae	Khira, Kheera	Diuretic.
59	<i>Curculigo orchioides</i> Gaertn.	Amaryllidaceae	Kali musli	Whitlows.
60	<i>Curcuma longa</i> Linn.	Zingiberaceae	Haldi	Stimachic.
61	<i>Dalbergia sissoo</i> Roxb.	Papilionaceae; Fabaceae	Sisham	Stimulant, gonorrhoea, anthelmintic, diuretic, ophthalmic, diarrhoea and burning sensation.
62	<i>Datura metel</i> Linn.	Solanaceae	Kala Dhatura, Dhatura	Anodyne, antispasmodic, narcotic, rheumatism and sedative.
63	<i>Datura stramonium</i> Linn.	Solanaceae	Safed Dhatura, Dhatura	Boils and sores.
64	<i>Dillenia indica</i> Linn.	Dilleniaceae	Chalta, Ramphal	Astringent.
65	<i>Dolichos lablab</i> Linn.	Papilionaceae; Fabaceae	Sim	Sore throat.
66	<i>Eclipta alba</i> (Linn.) Hassk.	Asteraceae	Bhringraj	Uterine haemorrhage, scorpion sting, anti-inflammatory and in hair oil.
67	<i>Embelia ribes</i> Burm.f.	Myrsinaceae	Viavidang, Vidang	Astringent, demulcent, skin diseases and leprosy.
68	<i>Emblica officinalis</i> Gaertn.	Euphorbiaceae	Amla	Conjunctivitis, inflammations, dyspepsia, diarrhoea and dysentery.
69	<i>Eriobotrya japonica</i> Lindl.	Rosaceae	Loquat, Lokat	Antitussive and antispasmodic.
70	<i>Eugenia jambolana</i> Lam.	Myrtaceae	Jamun	Antidysenteric, antibacterial and vomiting.
71	<i>Eugenia jambos</i> Linn.	Myrtaceae	Gulabjaman	Astringent.

72	<i>Euphorbia nerifolia</i> Linn.	Euphorbiaceae	Thohar	Anodyne.
73	<i>Euphorbia thymifolia</i> Linn.	Euphorbiaceae	Choti-Dudhi	Astringet, laxative and stimulant.
74	<i>Ficus benghalensis</i> Linn.	Moraceae	Vat, Bor	Ulcer, leprosy, burning sensation and abscesses.
75	<i>Ficus racemosa</i> Linn.	Moraceae	Gular, Umare	In bilious affections.
76	<i>Ficus religiosa</i> Linn.	Moraceae	Pipal, Peepal	Ulcer, earache, wounds and skin diseases.
77	<i>Flacourita indica</i> (Burm. f.) Merr.	Flacourtiaceae	Kangu	Pruritus and scabies.
78	<i>Foeniculum vulgare</i> Mill.	Apiaceae	Saunf	Diuretic and increases perspiration.
79	<i>Gloriosa arborea</i> Roxb.	Liliaceae	Kalhari	Antispasmodic.
80	<i>Gmelina arborea</i> Roxb.	Verbenaceae	Gumbhari Gambhari	Demulcent, cough, gonorrhoea, ulcers and headache.
81	<i>Hemidesmus indicus</i> (L.) R. Br.	Asclepiadaceae; Periplocaceae	Anantamool	Vomiting, wounds and leucoderma.
82	<i>Holarrhena antidysenterica</i> (Linn.) Wall.	Apocynaceae	Keor, Kurchi	Chronic bronchitis, boils and ulcers.
83	<i>Ipomoea quamoclit</i> Linn.	Convolvulaceae	Nagar-bel	Carbuncles, bleeding piles and haemorrhoids.
84	<i>Jasminum grandiflorum</i> Linn.	Oleaceae	Malti, Chameli, Jati	Apathae & ulceration in the mouth and otorrhea.
85	<i>Jasminum multiflorum</i> (Burm.f.) Andr.	Oleaceae	Chameli	Indolent ulcers.
86	<i>Jasminum sambac</i> (Linn.) Ait.	Oleaceae	Banmallika	Lactifuge, ulcers, ear, nose and mount affections.
87	<i>Jatropha curcas</i> Linn.	Euphorbiaceae	Pahari errand, Jangliarandi	Lactagogue, suppurative, rubefacient, ulcers, tumors and scabies.
88	<i>Juglans regia</i> Linn.	Juglandaceae	Akhrot, Khoar	Anthelmintic, stromous sores and tonic.
89	<i>Justicia procumbens</i> var. <i>simplex</i> (D. Don) Yamazaki	Acanthaceae	Ghati-Pitpapa	Ophthalmia.
90	<i>Lagenaria siceraria</i> (Mol.) Standley	Cucurbitaceae	Laucki	Jaundice, emetic, purgative, anodyne, febrifuge and diuretic.
91	<i>Lagerstroemia indica</i> Linn.	Lythraceae	Har-Shingar	Purgative.
92	<i>Lantana camara</i> L.	Verbenaceae	Chudail Buti, Phul Lakdi	Wounds, ulcers, swelling and bilious fever.
93	<i>Leea aspera</i> Wall ex. Roxb.	Leeaceae	Gan-Gola	Wounds.
94	<i>Lepidium sativum</i> Linn.	Brassicaceae	Halae	Diuretic, scorbutic diseases and antibacterial.
95	<i>Linum usitatissimum</i> Linn.	Linaceae	Alasi	Gonorrhoea.
96	<i>Luffa acutangula</i> (Linn.) Roxb.	Cucurbitaceae	Kali Tori, Jhinga Tori	Haemorrhoids, leprosy and splenitis.
97	<i>Malva sylvestris</i> Linn.	Malvaceae	Gulkhair	Emollient and for sensitive areas of skin.
98	<i>Mangifera indica</i> Linn.	Anacardiaceae	Aam, Amb	Aphasia, dysentery, scorpion sting, diarrhoea and dysentery.
99	<i>Melia azedarach</i> Linn.	Meliaceae	Drek	Anthelmintic, antilithic, diuretic, emmenagogue, astringent and stomachic.
100	<i>Mimosa pudica</i> Linn.	Mimosaceae	Lajwanti, Chui- mui	Sinus, sores, piles, fistula, glandular swellings and hydrocele.
101	<i>Mirabilis jalapa</i> Linn.	Nyctaginaceae	Gulabansh	Demulcent, urticaria, inflammation and bruises.
102	<i>Momordica charantia</i> Linn.	Cucurbitaceae	Karela	Galactagogue, emetic, purgative and night blindness.
103	<i>Moringa oleifera</i> Lam.	Moringaceae	Sunaney	Hiccup, emetic, eye diseases and

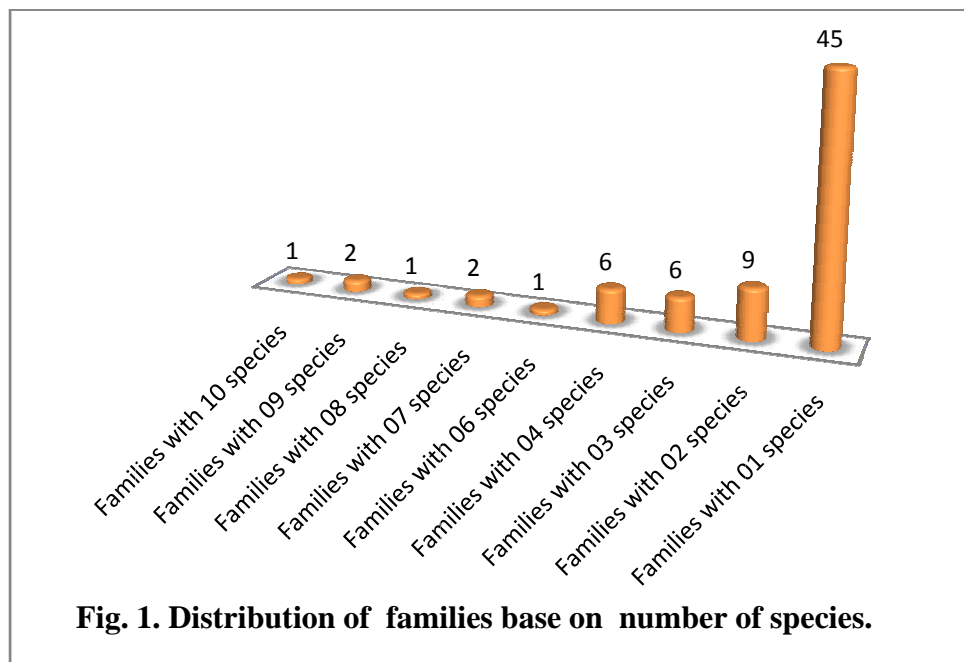
				glandular swellings.
104	<i>Mucuna prurita</i> Hook.	Papilionaceae; Fabaceae	Gazal Bel	Aphrodisiac, anthelmintic and tonic.
105	<i>Murraya koenigii</i> (Linn.) Spreng.	Rutaceae	Gandla, Kadi-Patta	Antidiarrhoeal, antidysenteric, antiemetic and poisonous bites.
106	<i>Murraya paniculata</i> (Linn.) Jack	Rutaceae	Kamini, Marchula	Antidiarrhoeal, antidysenteric, Astringent, stimulant and dropsy.
107	<i>Musa paradisiaca</i> Linn.	Musaceae	Kela	Scabies, inflammations, blisters and burns.
108	<i>Mussaenda frondosa</i> Linn.	Rubiaceae	Bedina	Anthelmintic.
109	<i>Nerium indicum</i> Mill.	Apocynaceae	Kaner	Syphilitic ulcers, ophthalmia, ringworm and other skin diseases.
110	<i>Nicotiana tabacum</i> Linn.	Solanaceae	Tambaku, Tamaku	Antiseptic, antispasmodic, anthelmintic, emetic, narcotic and sedative.
111	<i>Ocimum americanum</i> Linn.	Lamiaceae	Kali-tulsi	Cardiotonic, febrifuge, expectorant, thermogenic and appetizer.
112	<i>Ocimum basilicum</i> Linn.	Lamiaceae	Bhabri	Aromatic, whooping cough and nasal douche.
113	<i>Ocimum sanctum</i> Linn.	Lamiaceae	Tulsi	Expectorant, anti-dysenteric, dyspepsia, chronic fever and haemorrhage.
114	<i>Opuntia dillenii</i> (Ker-Gawl.) Haw.	Cactaceae	Chu-Chuar, Thor	Inflammation & suppuration of boils and ophthalmia.
115	<i>Oroxylum indicum</i> Vent.	Bignoniaceae	Arlu, Tataein	Emollient, digestive disorders and rheumatism.
116	<i>Oxalis corniculata</i> Linn.	Oxalidaceae	Malori	Antidiarrhoeal, antidysenteric, antipyretic, antiscorbutic and appetizing.
117	<i>Phyllanthus urinaria</i> Linn.	Euphorbiaceae	Bhumi-amla, Bumi-amla	Appetizer.
118	<i>Physalis minima</i> Linn.	Solanaceae	Sun berry	Earache
119	<i>Plantago major</i> Linn.	Plantaginaceae	Isafghol	Bruises, diarrhoea, piles and skin diseases.
120	<i>Plumbago zeylanica</i> Linn.	Plumbaginaceae	Chitrak	Digestive and skin problems.
121	<i>Pongamia pinnata</i> Pierre	Papilionaceae; Fabaceae	Karanja	Cough, flatulence, dyspepsia and diarrhoea.
122	<i>Portulaca oleracea</i> Linn.	Portulacaceae	Kulfa, Chlai	Burns, scalds, swellings and erysipelas.
123	<i>Prunus persica</i> Betsch	Rosaceae	Aru, Adu	Whooping cough.
124	<i>Psidium guajava</i> Linn.	Myrtaceae	Amrood, Amaruud	Astringent, bowel complaints and antiemetic.
125	<i>Pterospermum acerifolium</i> Willd.	Sterculiaceae	Kanak-Champa	Haemostatic.
126	<i>Punica granatum</i> Linn.	Punicaceae	Daadu, Anar	Conjunctivitis and dysentery.
127	<i>Putranjiva roxburghii</i> Wall.	Euphorbiaceae; Putranjivaceae	Putranjiva, Jiaputa	Cold, fever and filarial.
128	<i>Quisqualis indica</i> Linn.	Combretaceae	Madhu-Malti	Abdominal pain.
129	<i>Ranunculus sceleratus</i> Linn.	Ranunculaceae	Jaldhania	Sores.
130	<i>Raphanus sativus</i> Linn.	Brassicaceae	Muli	Diuretic, constipation and flatulence.
131	<i>Rauwolfia serpentina</i> Benth. ex Kurz	Apocynaceae	Sarpagandha	Corneal opacities.
132	<i>Ricinus communis</i> Linn.	Euphorbiaceae	Arand, Erna	Anodyne, galactagogue boils and sores.
133	<i>Sapium sebiferum</i> Roxb.	Euphorbiaceae	Makhan, Pahadi-taali	Powerful vesicant.

134	<i>Saraca asoca</i> (Roxb.) De Wilde	Caesalpiniaceae	Asoka	Depurative and stomachalgia.
135	<i>Sesamum orientale</i> Linn.	Pedaliaceae	Til	Affections of bladder & kidney, cutaneous & ophthalmic complaints, demulcent and emollient.
136	<i>Sida cordifolia</i> Linn.	Malvaceae	Dredain	Febrifuge.
137	<i>Sida veronicaefolia</i> Lam.	Malvaceae	Bala	Diarrhoea during pregnancy, cuts and bruises.
138	<i>Solanum melongena</i> Linn.	Solanaceae	Baingan	Asthma, bronchitis, dysuria, narcotic and sialagogue.
139	<i>Solanum nigrum</i> Linn.	Solanaceae	Makoya, Makoi	Painful and swollen testicles, gout & rheumatic joints and skin diseases.
140	<i>Solanum tuberosum</i> Linn.	Solanaceae	Alu	Antispasmodic in chronic cough.
141	<i>Solanum surattense</i> Burm. f.	Solanaceae	Kant-Kari, Kateli	Anodyne and rheumatism.
142	<i>Sonchus arvensis</i> Linn.	Asteraceae	Sahadevi-bari Sadhi	Swellings.
143	<i>Spilanthes acmella</i> Murr.	Asteraceae	Akarkara	Toothache, affections of throat and gum.
144	<i>Spinacia oleracea</i> Linn.	Chenopodiaceae	Palak	Nutritious, cooling, febrile affection, inflammations of lungs and bowels.
145	<i>Tabernaemontana coronaria</i> (Jacq.) Willd.	Apocynaceae	Chandni	Inflammation and ophthalmia.
146	<i>Tagetes erecta</i> Linn.	Asteraceae	Genda	Styptic, muscular pain, renal troubles and earache.
147	<i>Tamarindus indica</i> Linn.	Caesalpiniaceae	Imli	Bleeding piles and dysuria.
148	<i>Tectona grandis</i> Linn.	Verbenaceae	Sagwan	Leprosy, pruritus, stomatitis and indolent ulcers.
149	<i>Terminalia arjuna</i> (Roxb.) Wight & Arn.	Combretaceae	Arjun	Earache, sores and ulcers.
150	<i>Thevetia nerifolia</i> Juss. ex Steud.	Apocynaceae	Kaner	Emetic and purgative.
151	<i>Tinospora cordifolia</i> (Wild.) Miers. ex Hook. f. & Thoms	Menispermaceae	Giloy, Gulja	Febrifuge.
152	<i>Tridax procumbens</i> Linn.	Asteraceae	Ghamra	Antidiarrhoeal, antidyenteric and bronchial catarrh.
153	<i>Trigonella foenum-graecum</i> Linn.	Papilionaceae; Fabaceae	Methi	Cooling & mild aperiant, swellings and burns.
154	<i>Triumfetta rhomboidea</i> Jacq.	Tiliaceae	Beedli	Diarrhoea and dysentery.
155	<i>Tylophora indica</i> (Burm. f.) Merrill.	Asclepiadaceae	Antamul, Jungli Pikvam	Diaphoretic, emetic, expectorant, diarrhoea and dysentery.
156	<i>Vanda roxburghii</i> R. Br.	Orchidaceae	Rasna	Otitis.
157	<i>Vitex negundo</i> Linn.	Verbenaceae	Banaha, Bana, Suro	Alterative, gonorrhoeal epididymitis, vermifuge and antiparasitic.
158	<i>Vitis vinifera</i> Linn.	Vitaceae	Angur	Antidiarrhoeal and astringent.
159	<i>Withania somnifera</i> Dunal	Solanaceae	Asgandh	Carbuncles, scabies, painful swelling and ulcers.
160	<i>Xanthium strumarium</i> Linn.	Asteraceae	Chota-gokhru, Jhanjheed	Antisyphilitic, astringent and diuretic.
161	<i>Zizyphus jujuba</i> Mill.	Rhamnaceae	Ber	Abscesses, boils and carbuncles.

## Discussion

Himachal Pradesh is one of hilly state of India with altitude ranging from 350 to 7000 meters and located in the Western Himalaya region. It is rich in floral diversity due to variable climatic conditions. Most population of Himachal Pradesh depends on forest products to fulfill the basic needs. Plants have been used since long to heal and cure diseases (Kumar, 2014a-p).

Leafy drugs have been used in herbal medicines due to accumulation of secondary metabolites. Due to anti-oxidant potential, demand of leafy drugs is increasing dramatically since long. Consequently, many plant species are under threat and some are at the verge of extinction. Keeping in view of importance and increased demand of herbal medicine especially leafy drugs, the study has been undertaken in order to collect the information regarding their distribution at tehsil Joginder Nagar. This study will be beneficial for the researchers who directly involved in the chemical analysis and pharmacological studies.



### Conclusion

The aim of present study is to provide information about the leafy drugs of Tehsil Joginder Nagar. During the course of study period, 161 plant species of 143 genera and 73 families belonging to two different taxonomic groups i.e. angiosperms and gymnosperms, were recorded from the locality of tehsil Joginder Nagar. Due to increased demand for pharmaceutical industries and various other factors, many important plant species are under threat and even some are at the edge of extinction (Kumar, 2014a-p). The selected study areas show great medicinally important floral diversity especially leafy drugs. So, there is need to explore and collect the information of medicinally important floristic diversity of unexplored areas to conserve.

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