

AN INVESTIGATION OF THE PROPERTIES OF INDIAN HERBAL REMEDIES

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Article Received on 20/10/2022

Article Revised on 10/11/2022

Article Accepted on 30/11/2022

ABSTRACT

Traditional Indian medicine, or Ayurveda, is still one of the ancient methods still practiced today. India has been effective in marketing its remedies through increased research and a scientific approach, although more comprehensive study and evidence base are still required. More and more studies are being performed on the potential therapeutic effects of medicinal plants, particularly those that have been identified to be antioxidants, antidiabetic, anti-inflammatory, anthelmintic, antibacterial, antimycobacterial, anticholesterol-lowering, anti-wound-healing, cytotoxic, acaricidal, neuroprotective, and cardiovascular disease-preventing. In rural India, seventy percent of the population is dependent on traditional medical care. In this sense, it was necessary to document how extensively the locals use several of the natural medicinal plants included in the article. Through research of the ethno pharmacological claims made by various traditional practices, a variety of nutraceutical combinations have made their way onto the global market. As the primary US Federal Government organization for scientific study in this field of medicine, the National Center for Complementary and Alternative Medicine was recently established.

KEYWORDS: Medicinal plant, Ayurvedic, Pharmaceuticals.**INTRODUCTION**

According to the World Health Organization (WHO), a "medicinal plant" is any plant whose organs contain substances that can be used for therapeutic purposes or as constituents in the synthesis of other drugs.^[1] In India, approximately 3000 plant species are known to have medicinal values, while another report claims that a total of 2500 plants are used in traditional medicine, with 100 of them being used on a regular basis. Indigenous herbal medicine is useful not only for conservation of biodiversity, but also for health - care and drug discovery.^[2] The world's largest producer of medicinal plants is India, which is also known as the botanical garden of the globe. The Ayurvedic system now has roughly 250,000 recognized medical practitioners, compared to the 700,000 practitioners of contemporary medicine. The traditional form of medicine known as Ayurveda is used by 70% of the population in rural India.^[3] In order to produce Ayurvedic, Unani, Siddha, and tribal medicines on a regular basis, 400 plants are used. Around 75% come from tropical forests, and 25% from temperate woods. 30% of remedies derive from roots, 14% from bark, 16% from entire plants, 5% from flowers, 10% from fruits, 6% from leaves, 7% from seeds, 3% from wood, and 4% from rhizomes. 20% of

the species used are wild; only 6% of the stems are grown.^[4] Aspirin, digoxin, quinine, and opium are just a few of the medications that are regularly prescribed by medical professionals and are derived from plant sources. Numerous studies in the field have revealed that a variety of substances, including alkaloids, flavonoids, Terpenoids, polysaccharides, lactones, and glycoside derivatives, are too responsible for changes in the immunomodulatory activities.^[5] A pathogenic microbiological agent, such as pathogenic viruses, pathogenic bacteria, fungus, protozoa, multicellular parasites, or abnormal proteins known as prions, should be present for an infectious disease to manifest clinically.^[6] In order to advance research, it is necessary to isolate active compounds from plants that can be used to develop novel, effective medicines.^[7] Indian cuisine uses a variety of herbs and spices, including ajwain (ajwan), anise, amchur, bay leaf, hing (asafoetida), cardamom, cinnamon, cumin, coriander, turmeric, clove, and cardamom. All of these are utilized in Ayurveda medicine, either as dietary supplements or pharmaceuticals.^[3]

Table 1. An Indian selection of herbal medicines with a list of their Medicinal applications

S. No.	Common name	Botanical name	Family	Part of plant	Medicinal uses in disease	Reference
1)	Bell Weed	<i>Dipteracanthus prostratus</i>	Acanthaceae	leaves	anti-cancer, hypoglycemic, anti-inflammatory, anti-ulcer and anti-oxidant activities	[29]
2)	Soriul	<i>Dicliptera bupleuroides</i>	Acanthaceae	Seed, Leaf	Decoction of seeds and leaves with water very useful in dysentery, respiratory and urinary tract infections, digestive disorders, sexual problems, skin diseases, liver ailments, wound healing, blood vomiting, malaria, piles, epilepsy, jaundice, gummosis, round worms, hepatitis	[2]
3)	Talmakhana	<i>Hygrophila auriculata</i>	Acanthaceae	Seed	Root is used for rheumatism, inflammation, jaundice, hepatic obstruction, pain, whole plant extract used in treatment of urinary infection, gout, hepatic obstruction and as a diuretic.	[2]
4)	Bhasma	<i>Justicia adhatoda</i>	Acanthaceae	Leaf, Flower	Juice of leaves and flowers used in cough, fever, coryza, respiratory problems	[2]
5)	Baj	<i>Acorus calamus L</i>	Acoraceae	Root	Headache, Anti-bacterial, anti-helminthic, Fever, asthma, bronchitis, cough, digestive problems (gas, bloating, colic)	[2]
6)	Pyaj	<i>Allium cepa L.</i>	Amaryllidaceae	Bulb	Roasted warm bulb is eaten in abdominal pain and skin diseases, and also used in malaria, diarrhea and wounds with antimicrobial, antioxidant properties.	[2]
7)	Achar	<i>Buchanania cochinchinensis</i>	Anacardiaceae	Leaf	Very effective in dental pain when gargle the juice twice daily, asthma, cancer.	[2]
8)	Gunjhanganj	<i>Lansea coromandelica</i>	Anacardiaceae	Bark	Paste of bark is applied on cuts to stop bleeding and wound healing while juice use in jaundice and liver pain.	[2]
9)	Sada Bahar	<i>Vincea rosea/ catharanthus Roseus</i>	Apocyanaceae	Whole Plant	Leukemia, Hypotensive, Antispasmodic, Atidotes.	[3]
10)	Sarpgandha	<i>Rauvolfia Serpentina</i>	Apocynaceae	Root	Hyper tension, insomnia.	[3]
11)	Aak	<i>Calotropis gigantea</i>	Apocynaceae	Leaf	Warmed fresh leaves used in wound, toothache, earache, epilepsy, diarrhea and mental disorders	[2]
12)	Karunda	<i>Carissa spinarum L</i>	Apocynaceae	Root	Used in rheumatism, having strong purgative property so used as one of the ingredients in some purgative preparations	[2]
13)	Dhodhi	<i>Holarrhena pubescens</i>	Apocynaceae	Latex	Useful in ring worm when latex applied on affected part also useful in constipation, colic, and diarrhea.	[2]
14)	Bach	<i>Acorus Calamus</i>	Araceae	Rhizome	Sedative, analgesic, epilepsy, hypertensive	[3]
15)	Brahmni	<i>Hydrocotyle sibthorpioides</i>	Araliaceae	Leaf	Leaf juice is administered orally in Manasdaurbalya (mental disorder)	[2]

					also used in various problems as dysentery, diarrhea, piles, rheumatism, digestive, diuretic, vermifuge, menstrual problem.	
16)	Bird's Head Birthwort	<i>Aristolochia ornithocephala</i>	Aristolochiaceae	leaves	Iatrogenic disease, renal disease.	[34]
17)	Gudmar	<i>Gymnema sylvestre</i>	Asclepiadaceae/Apocynaceae	Leaf	Hydrocil, Asthma, Boiled leaves with til-oil when applied externally 3-4 drops twice per day used for eyes to reduce pain. Direct use of milky juice from crushed fresh leaves when applied once daily for 3 day also helpful in eye problems along with antidiabetic properties.	[3,2]
18)	Anantamool/sariva	<i>Hemibis smus Indicus</i>	Asclepiadaceae	Root/ Leaf	Appetizer, Carminative, aphrodisiac, Astringent.	[3]
19)	Shatavari /katerwali vel	<i>Asparagus racemosus</i>	Asparagaceae	Tuber Root, Rhizome	Enhance lactation , general weakness , Fatigue, Cough & Root powder administered orally as aphrodisiac , also used in stomachache, urinary disorders, Nervous disorders, inflammation, liver diseases, infectious disease	[3,2]
20)	Safed Musli	<i>Asparagus curillus</i>	Asparagaceae	Root	Root powder is administered as sexual tonic, along with dysuria, diabetes and dysentery.	[2]
21)	Banpyaja	<i>Drimia indica</i>	Asparagaceae	Bulb	Juice of bulb is used in cough, bronchitis, nematode infection, pyrexia ,dropsy, respiratory ailment, bone and joint complications, skin disorders, epilepsy and cancer	[2]
22)	Mahameda	<i>Polygonatum cirrhifolium</i>	Asparagaceae	Root	Tonic and root powder is administered orally as anti-inflammatory, analgesic, antidiarrheal, antimicrobial, antioxidant and antimalarial	[2]
23)	Meda	<i>Polygonatum verticillatum</i>	Asparagaceae	Rhizome	Tonic and powder of rhizomes is administered orally as aphrodisiac, emollient, cardio tonic, carminative, sialagogue, stimulant	[2]
24)	Bhringaraj	<i>Eclipta prostrata/erecta/alba</i>	Asteraceae	leaves	Antimicrobial, anticancer, hepatoprotective, neuroprotective and hair growth promoting activities.	[32]
25)	Goatweed	<i>Ageratum conyzoides</i>	Asteraceae	Leaf	Leaves paste is very useful in wound healing, treatment of leprosy, diarrhea, dysentery, intestinal colic, rheumatism, fever.	[2]
26)	Nil kanthi, Ratpatia	<i>Jacobaea nudicaulis</i>	Asteraceae	Whole plant	Plant juice applied in eye diseases, wound, fever and some skin diseases	[2]
27)	Bakal	<i>Anaphalis triplinervis</i>	Asteraceae	Leaf	Used in wounds and skin diseases, important in flu, fever, nausea and eye infections.	[2]
28)	Kambal	<i>Berberis aristata</i>	Berberidaceae	Root	Root extract used in eye diseases, diarrhea, jaundice, skin diseases, syphilis, chronic rheumatism, urinary disorders, diabetes, and jaundice and Gastro intestinal problem.	[2]
29)	Kilmorha	<i>Berberis chitria</i>	Berberidaceae	Root	Root extract is very useful in higher fever, jaundice, diabetes, stomach disorders, rheumatism, eye, ear and	[2]

					skin disease	
30)	Bhotia badam	<i>Corylus colurna L.</i>	Betulaceae	Nut	Direct use of nut or its tonic use as diuretic, aphrodisiac	[2]
31)	Calabash Tree	<i>Crescentia cujete</i>	Bignoniaceae	leaves	antioxidant , antidiabetic, anti-inflammatory, anthelmintic, antibacterial, antimycobacterial, anticholesterol, antivenom, wound healing, safety potentials, cytotoxic, acaricidal, neuroprotection , and antiangiogenic,	[36]
32)	Lasura	<i>Cordia myxa L</i>	Boraginaceae	Fruit	Fruit are very useful in common cold and cough	[2]
33)	Guggal	<i>Commiphora wightii</i>	Burseraceae	Extract	Rheuma tised, arthritis, paralysis, laxative.	[3]
34)	Sallai	<i>Boswellia serrata</i>	Burseraceae	Bark	Hot decoction of bark used in wound, chronic inflammatory diseases, diarrhea.	[2]
35)	Ashok	<i>Saraca asoca</i>	Caesalpinaceae	Bark	Menstrual Pain, uterine, disorder, Diabetes.	[3]
36)	Asian Spider Flower	<i>Cleome viscosa/icosandra</i>	Capparidaceae	leaves, roots, and seeds	antipyretic and antidiarrheal, scabies, inflammation, rheumatic pains, blood problems, uterine complaints, malaria, counteract diabetic hyperglycemia, treat paralysis, anthelmintic problems, epilepsy, convulsions, spasm, pain, and skin disease.	[23]
37)	Vishkanya	<i>Morina longifolia</i>	Caprifoliaceae	Whole plant	Oral administration of plant use for wound healing along with various activities as antimicrobial, cytotoxic, antiulcer, hypoglycemic.	[2]
38)	Malkangani	<i>Celastrus paniculatus</i>	Celastraceae	Fruit, Seed	Boiled solution of fruits and seeds with oil use in piles, gout, rheumatism, cold, dysentery, diarrhoea, leprosy, snake bite, wound, anti-spasmodic, carminative and antihelmintic properties and also used for treatment of epilepsy, mental ailments, chronic diarrhea, dysentery, bronchial catarrh, intermittent fevers and tumors, pneumonia , leucorrhoea	[2]
39)	Kusum	<i>Euonymus tingens</i>	Celastraceae	Whole plant	The powder mixture of 10gm with opium seeds (10gm), almond (5gm), kali mirch (5gm) and bansh mishri (10gm) used orally in kidney stone and eye diseases.	[2]
40)	Vaikal	<i>Gymnosporia spinosa</i>	Celastraceae	Leaf	Paste of leaves useful in Bala-shosha (a condition in which child is emaciated) when applied and rubbed on back.	[2]
41)	Kumkum	<i>Cleome viscosa</i>	Cleomaceae	Leaf	Leave's juice very useful to ear diseases , anthelmintic, antiseptic, carminative, antiscorbutic, sudorific, febrifuge, and cardiac problems	[2]
42)	Kokum	<i>Garcinia indica</i>	Clusiaceae	Fruit	treat inflammation, dermatitis, and diarrhea, and to promote digestion	[11]
43)	Harida	<i>Terminalia Chebula</i>	Combretaceae	Seed	Trifala, wound ulcer, leprosy, inflammation, Cough.	[3]
44)	Arjun	<i>Terminalia arjuna</i>	Combretaceae	Bark	Bark is very useful to treatment of	[2]

					pneumonia, fractures, ulcers, hepatic and shows hypocholesterolemic, antibacterial, antimicrobial, antitumoral, antioxidant, antiallergic and antifeedant, antifertility and anti-HIV activities.	
45)	Arjun Tree	<i>Terminalia arjuna</i>	Combretaceae	Stem bark	Antibacterial, antimicrobial, antitumoral, antioxidant, antiallergic and antifeedant, antifertility and anti-HIV activities.	[20]
46)	Kanchara	<i>Commelina benghalensis</i>	Commelinaceae	Leaf	paste of leaves used for curing swelling as honeybee biting	[2]
47)	Kankowa	<i>Commelina paludosa</i>	Commelinaceae	Whole plant	Decoction of plants with water used in treatment of sexual impotency	[2]
48)	Vringraj	<i>Eclipta alba</i>	Compositae	Seed/whole	Anti-inflammatory, Digestive, hairtonic.	[3]
49)	Bahada	<i>Terminalia Bellerica</i>	Comretaceae	Seed, Bark	Cough, Insomnia, Dropsy, Vomiting, Ulcer, Trifala.	[3]
50)	Sanjwanboata	<i>Kalanchoe pinnata</i>	Crassulaceae	Leaf	Paste of leaves is used over wounds for healing.	[2]
51)	Gulakhari	<i>Solena heterophylla</i>	Cucurbitaceae	Tuber	Tubers are eaten as vegetables to control hiccough, asthma, nausea and incisions; useful to control malaria, diabetes, toothache and various disorders as gastrointestinal, respiratory and vascular disorders.	[2]
52)	Hapusha	<i>Juniperus communis</i>	Cupressaceae	Green wood	Excessive appetite and smoke of green wood is used in tuberculosis and respiratory disease , along with antioxidant and antimicrobial activities	[2]
53)	Bhumi amlaki	<i>Phyllanthus amarus</i>	Euphorbiaceae	Whole Plant	Aenimic, jaundice, Dropsy	[3]
54)	Amla	<i>Emblica officinalis</i>	Euphorbiaceae	Fruit	Vitamin – C, Cough, Diabetes, cold, Laxative, hyper acidity.	[3]
55)	Bellyache Bush	<i>Jatropha gossypifolia</i>	Euphorbiaceae	leaves, stems, roots, seeds, and latex	antimicrobial, anti-inflammatory, antidiarrheal, antihypertensive, and anticancer	[30]
56)	Castor Oil Plant	<i>Ricinus communis L</i>	Euphorbiaceae	leaves	hepatoprotective, anti-nociceptive, antioxidant, antiulcer, anticancer, anti-inflammatory, central analgesic, antidiabetic, antimicrobial, antiviral, and wound healing activity, Warm fresh leaves are smeared and applied on affected part for wound healing with antimicrobial, toxicological and anti-inflammatory activity	[2,21]
57)	Liquirice (Mulethi)	<i>Glycyrrhiza glabra</i>	Fabaceae	stem	respiratory disorders, hyperdipsia, epilepsy, fever, sexual debility, paralysis, stomach ulcers, rheumatism, skin diseases, hemorrhagic diseases, and jaundice	[15]
58)	Kaincha	<i>Mucuna Truriens</i>	Fabaceae	Root, Hair, Seed, Leaf	Nervous, Disorder, Constipation, Nephroaphy, Strangury, Dropsy	[3]
59)	Dhak, Palash	<i>Butea monosperma</i>	Fabaceae	Flower, Gum	The flower extract with water useful in gastritis [2]. Gum from bark known as Bengal Kino useful in treatment of ulcer, diarrhea,	[2]

					antioxidative, anti-inflammatory, hepatoprotective and anti-cancer activities	
60)	Chowkhara	<i>Cajanus scarabaeoides</i>	Fabaceae	Leaf	Crushed or rubbed leaves applied in throat disease, chewed in tonsillitis, Hepatoprotective and immense medicinal potentia.	[2]
61)	Chimi	<i>Lablab purpureus</i>	Fabaceae	Whole plant	Fresh juice is dropped in earache, and used as antidiabetic, antiinflammatory, analgesic, antioxidant, cytotoxic, hypolipidemic, antimicrobial, insecticidal, hepatoprotective, antilithiatic, antispasmodic.	[2]
62)	Shikanta	<i>Mimosa rubicaulis</i>	Fabaceae	Leaf	Leaf paste used in skin disease when applied directly on affected part, along with various other problems as bronchitis, cholera, cough, dyspepsia, fever, jaundice, smallpox, syphilis and tuberculosis.	[2]
63)	Salparni	<i>Pleurolobus gangeticus</i>	Fabaceae	Leaf	Paste of fresh leaves is applied on affected part for wound healing and used for toothache, chest pains, and fungal infections.	[2]
64)	Kaural	<i>Roylea cinerea</i>	Fabaceae	Leaf	Fresh leaves juice is useful in diabetes, mouth discases and throat diseases, including antioxidant and antimicrobial activities, to provide strength to liver and protect skin from infection.	[2]
65)	Babul	<i>Vachellia nilotica</i>	Fabaceae	Whole plant	Leaves have chemoprventive, anitmutagenic, anti-bacterial, anticancer, astringent, anti-microbial, anti-ulcers, anti-inflammatory activities , The roots are used in cancers, tuberculosis and indurations of liver and spleen, Bark is very useful as antibacterial, antioxidant, anti-mutagenic, cytotoxic, astringent, acrid cooling, styptic, emollient, anthelmintic, aphrodisiac, diuretic, expectorant, emetic, nutritive, in hemorrhage, wound ulcers, leprosy, leucoderma, small pox, skin diseases, biliousness, burning sensation, toothache, leucoderma, dysentery and seminal weakness.	[2]
66)	Urad dal	<i>Vigna mungo</i>	Fabaceae	Fruit	Paste of fruits applied over fractured bone to join also helpful to control urinary tract infections, sexually transmitted diseases	[2]
67)	Amaltas	<i>Cassia fistula</i>	Fabaceae	leaves, seeds, root, pulp, fruit, and bark	Antidiabetic, hepatoprotective (liver protecting), antipyretic, anti-inflammatory, hypolipidemic, antioxidant, antitussive, antimicrobial, antiparasitic, antitumor, anti-itching, antileishmanial, wound healing.	[18]
68)	Chirata	<i>Swartia chirata</i>	Gentianaccae	Whole Plan	Skin Disease, Burning, censation,	[3,2]

					fever, Decoction of whole plant is administered orally to control fever, skin disease, dyspepsia, diarrhea with antipyretic, antifungal, hypoglycemic properties	
69)	Laljari	<i>Geranium wallichianum</i>	Geraniaceae	Root	Root extract useful in backache, gout, bone strengthening, hepatitis, liver problems, premature delivery.	[2]
70)	Black currant	<i>Ribes nigrum</i>	Grossulariaceae	Leaf	The extracted oil and juice useful as an antioxidant source and in treating rheumatoid arthritis and night and fatigue-related visual impairment, antimicrobial and anticancer.	[2]
71)	Nageswar	<i>Mesua Ferrea</i>	Guttiferae	Bark, Leaf, Flower	Asthma, Skin, Burning, Vomiting, Dysentery, Piles.	[3]
72)	Chhingewali	<i>Hypericum japonicum</i>	Hypericaceae	Whole plant	Plant powder is used as snuff for nose disease, along with hepatoprotective activity, protecting liver injury and hepatotoxicity.	[2]
73)	Saffron Kesar	<i>Crocus sativus</i>	Iridaceae	Flower	Antispasmodic, eupeptic, sedative, carminative, diaphoretic, expectorant, stomachic, stimulant, aphrodisiac, emmenagogue and abortifacient.	[16]
74)	Pashan Bheda	<i>Saxtragus ligulata</i>	Lamiaceae	Rhizome	Kidny stone, Calculus.	[3]
75)	Tulsi	<i>Ocimum sanctum</i>	Lamiaceae	Leaves/Seed	Cough, Cold, bronchitis, expectorand	[3]
76)	Pippermint	<i>Mentha pipertia</i>	Lamiaceae	Leaves, Flower, Oil	Digestive ,pain killer, Anti-obesity, antimicrobial, anti-inflammatory, anti-diabetic, and cardioprotective effects, as a result of its antioxidant potential	[3]
77)	Catmint	<i>Anisomeles indica</i>	Lamiaceae	Leaf	Fresh leaves as well as greenish parts contain volatile oil used in treatment of cough and cold, chronic rheumatism, psoriasis, snake bites.	[2]
78)	Daya	<i>Callicarpa macrophylla</i>	Lamiaceae	Fruit	Very helpful in urinary disorders, skin problem, diarrhea, defecation and hair care	[2]
79)	Guma	<i>Leucas cephalotes</i>	Lamiaceae	Guma	Orally use of whole plant used in fever and decoction ,Asthma, cough	[2]
80)	Pipermint	<i>Mentha longifolia</i>	Lamiaceae	Leaf	Juice or powder of leaves uses in common fever, coryza, rheumatism, dysentery, Dyspepsia.	[2]
81)	Masipatha	<i>Micromeria biflora</i>	Lamiaceae	Whole plant	Whole plant is administered orally with milk to control fever, Sciatica, arthritis, skin disease.	[2]
82)	Vantulsi	<i>Origanum vulgare</i>	Lamiaceae	Whole plant	Urinary disorder can be cure by oral decoction of whole plant various activities as antifungal and anti-hyperglycemic activity also reported.	[2]
83)	Van Ajwain	<i>Thymus serpyllum</i>	Lamiaceae	Leaf	Leaves used as spice to control dyspepsia	[2]
84)	Nirgundi	<i>Vitex negundo</i>	Lamiaceae	Leaf	A syrup of leaves with rice and water given orally to treat gonorrhoea ,along with anti-inflammatory, anticonvulsant, antioxidant, bronchial relaxant, hepatoprotective properties.	[2]
85)	Dalchini	<i>Cinnamomum Zeylanicum</i>	Lauraceae	Bark, Oil	Bronchitis, Asthma, Cardiac, Disorder, Fever	[3]
86)	Maida	<i>Litsea glutinosa</i>	Lauraceae	Bark	The bark is used to relieve pain,	[2]

					arouse sexual power, produce a soothing effect on the body and arrest bleeding. Bark paste is applied to bind fractured limbs.	
87)	Barringtonia	<i>Barringtonia acutangula</i>	Lecythidaceae	leaves and stems	treat arthralgia, chest pain, dysmenorrhoea, inflammation, haemorrhoids, diarrhoea, and psychological disorders	[28]
88)	Kalihari	<i>Gloriosa superba</i>	Liliaceae	Rhizome	Skin Disease, Labour pain, Abortion, General debility.	[3]
89)	Senna (Sanai)	<i>Cassia angustifolia</i>	Liliaceae	Dry Tubers	Rheumatism, general debility tonic, aphrodisiac.	[3]
90)	Gritkumari	<i>Aloe Vera</i>	Liliaceae	Leaves	Laxative, Wound healing, Skin burns & care, Ulcer.	[3]
91)	Kakoli	<i>Lilium polyphyllum</i>	Liliaceae	Root	Tonic and decoction of root used as refrigerant, galactagogue, expectorant, aphrodisiac, diuretic, antipyretic and tonic.	[2]
92)	Kochila	<i>Strychnos nuxvomica</i>	Loganiaceae	Seed	Nervous, Paralysis, healing wound.	[3]
93)	Gokhur	<i>Tribulus Terrestris</i>	Lygophyllaceae	Whole Plant	Sweet cooling, Aphrodisiac, appetizer, Digestive, Urinary	[3]
94)	Henna/Mehdi	<i>Lawsennia iermis</i>	Lythraceae	Leaf, Flower, Seed	Burning, Steam, Anti Inflammatory	[3]
95)	Dadim	<i>Punica granatum</i>	Lythraceae	Fruit	Fruit is very useful to worm infestation with antimicrobial, antioxidant, and anticancer, anti-inflammatory and anti-cancerous activities.	[2]
96)	Singhara, Water chestnut	<i>Trapa natans</i>	Lythraceae	Nut	Nuts are very useful in diarrhea, dysentery, cardiac diseases, and blood pressure with having antimicrobial, cytotoxic activities.	[2]
97)	Apple Mangrove	<i>Sonneratia caseolaris</i>	Lythraceae	seeds and pericarps	analgesic, anti-diarrhoea, Antibacterial, Anti-Diarrhoeal	[19]
98)	Neem	<i>Azardirchata – indica</i>	Mahaceae	Rhizome	Sedative, analgesic, epilepsy, hypertensive.	[3]
99)	Barbados Cherry	<i>Malpighia glabra</i>	Malpighiaceae	fruit	Antioxidant, anti-aging and multidrug resistant reversal, anti-HIV, antibacterial, antifungal, anti-Helicobacter pylori and MDR reversal activity	[27]
100)	Jangali bhindi	<i>Abelmoschus moschatus</i>	Malvaceae	Root, Seed	Fresh roots with young plant of Bombax ceiba used in the treatment of leucorrhoea in female and sexual impotency in male. Seeds are diuretic, aphrodisiac, ophthalmic, cardiotonic, digestive, stomachic, constipating, carminative, stimulant, antispasmodic, cardiac debility, cough, asthma, bronchitis, hyperdipsia, burning sensation, nausea, dyspepsia, flatulent colic, diarrhea, strangury, gonorrhoea, spermatorrhea, calculi, halitosis, ptialism, vomiting and other neural disorders, leukoderma, and general	[3]

					debilit	
101)	Saimul	<i>Bombax ceiba L</i>	Malvaceae	Leaf, Root	Leaves paste applies over wounds with good property of pain killer and improve gynecological disorders. The formulation of root with leaves of Dalbergia sissoo is used in sexual impotency.	[2]
102)	Kamraj	<i>Byttneria herbacea</i>	Malvaceae	Root	Root paste used in fever and leucorrhoea	[2]
103)	Atanda	<i>Helicteres isora</i>	Malvaceae	Root	Orally use of crushed roots used in excessive appetite, empema and stomachic, having antioxidant and anticancer properties.	[2]
104)	Denusha	<i>Sida cordifolia</i>	Malvaceae	Root, Bark	Tonic of stem bark and root powder is given in general debility as stomatitis, blenorrea, asthmatic bronchitis, nasal congestion.	[2]
105)	Bara Mamas	<i>Urena lobata</i>	Malvaceae	Whole plant	Tonic and paste of whole plant is administered orally with milk to control urinary problems and sexual transmitted diseases.	[2]
106)	Dekrain	<i>Melia azedarach</i>	Meliaceae	Root	Paste of root is applied in headache, it has also various activities as anthelmintic, antilithic diuretic, astringent, stomachic, anticancer, antimalarial, analgesic, anti-inflammatory activities.	[2]
107)	Guluchi / Giloe	<i>Tinospora cordifolia</i>	Menispermaceae	Stem	Gout, Pile, general debility, fever, Jaundice	[3]
108)	Bengal Sage	<i>Meriandra benghalensis</i>	Moraceae	leaves	antimicrobial, antioxidant and cytotoxic activities	[31]
109)	Timul, Timil	<i>Ficus auriculata</i>	Moraceae	Whole plant	Gastrointestinal problems treated by using 50-100 ml fresh juice of leaves with water for about 10 days, Bark and root show hypoglycaemic and anthelmintic activity, The extract inhibits insulinase activity from liver and kidney. Fruit extracts exhibits anti-tumour activity, Leaves exhibit hypotensive activity.	[2]
110)	Bargad	<i>Ficus benghalensis</i>	Moraceae	Fruit, Bark	The milky latex of fruit with sugar used in treatment of sexual impotency , Leaf, fruit, bark are useful in central nervous system, endocrine system, gastrointestinal tract, reproductive system, respiratory system and infectious disorders.	[2]
111)	Bedu	<i>Ficus palmata</i>	Moraceae	Fruit	Fruits are beneficial in lung and bladder diseases. Along with these are good source of minerals, phosphorus and a small amount of Vitamin C, the latex is useful in wound healing.	[2]
112)	kafal, Kaphal	<i>Morella esculenta</i>	Myricaceae	Fruit, Bark	Specified decoctions of fruit, stone and bark are claimed to be beneficial in cardiac debility, edema and hemoptysis; wax from fruit covering used for ulcer healing, along with anti-inflammatory activity and anti tumour activities.	[2]

113)	Vai Vidang	<i>Embelia ribes</i>	Myrsinaceae	Fruit,root leaves	Skin disease, Snake Bite, Helminthiasis.	[3]
114)	Jamun	<i>Syzygium cumini</i>	Myrtaceae	Bark	Bark extracts useful diabetes, sore throat, bronchitis, asthma, thirst, biliousness, dysentery and ulcers.	[2]
115)	Punarnava	<i>Boerhavia diffusa</i>	Nyctaginaceae	Root	Juice of fresh roots is used as eye drops, very useful tonic to liver problem, jaundice, asthma with antimicrobial activity.	[2]
116)	Siyari	<i>Nyctanthes arbor- tristis</i>	Oleaceae	Leaf	Juice of leaves is applied on affected part to cure skin diseases, along with immunologic, antiallergic, antihistaminic, purgative, and antibacterial and cytotoxicity, antipyretic and ulcerogenic, anti - Inflammatory activity.	[2]
117)	Mishri	<i>Satyrium nepalense</i>	Orchidaceae	Root	Energetic tonic from roots cure various fever including antibacterial, antipneumonia properties.	[2]
118)	Bilimbi	<i>Averrhoa bilimbi</i>	Oxalidaceae	leaves	antidiabetic, antihypertensive, thrombolytic, antimicrobial, antioxidant, hepatoprotective, and hypolipidemic agent	[33]
119)	Chilmora, Salmosi	<i>Oxalis corniculata</i>	Oxalidaceae	Whole plant	Juice of plant is used to cure various eye diseases such as motiabind, along with it used in bacterial diseases, dysentery, diarrhea, skin disease.	[2]
120)	Bara Gokhru	<i>Pedaliium murex</i>	Pedaliaceae	leaves and stems, flowers	Anti- hyperlipidemia, Anti- nephrolithiatic, Nephroprotective, Antiulcer, Anti-inflammatory, Antioxidant, Antibacterial, Hepatoprotective.	[26]
121)	Amla	<i>Phyllanthus emblica</i>	Phyllanthaceae	Whole plant	Fruit are rich in polyphenols, minerals and regarded as one of the richest source of Vit. C. Therapeutically it has energy refilling potential, aperient, antibacterial, antifungal, antiviral activities, along with gonorrhea, analgesic and skin fairness, and to stop nausea and vomiting, antitumor and hepatoprotective activity.	[2]
122)	Long pepper (Pippal)	<i>Piper longum</i>	Piperaceae	Fruit	Appetizer, enlarged spleen, Bronchitis, Cold, antidote.	[3]
123)	Pippali	<i>Piper longum</i>	Piperaceae	Fruit	Powder of fruits is administered orally to cure cough, respiratory tract bronchitis, asthma, analgesic, muscular pains, inflammation, hematinic, carminative.	[2]
124)	Isabgol	<i>Plantago ovata</i>	Plantaginaceae	Husk/Seed	improve intestinal health, hypoglycemic effect, immunomodulatory effect	[10]
125)	Isabgol	<i>Plantago major</i>	Plantaginaceae	Seed	Seed powder is useful in dysentery, wound healing, anti-inflammation, analgesic, antioxidant, and antiulcer genic activity.	[2]
126)	Swet chitrak	<i>Plumbago Zeylanica</i>	Plumbaginaceae	Root, Rootbar, Fruit	Appetiser, Antibacterial, Anticancer & Paste of root and fruit is applied on affected part for wound healing and also having anti-atherogenic,	[3,2]

					cardiotonic, hepatoprotective and neuroprotective properties very useful to rheumatic pain, dysmenorrhea, carbuncles, and contusion of the extremities, ulcers and elimination of intestinal parasites.	
127)	Rakta Chitrak	<i>Plumbago Indica</i>	Plumbaginaceae	Root, Root bar	Indyspeipsia, colic, imflammation, cough.	[3]
128)	Amloraha	<i>Rumex hastatus</i>	Polygonaceae	Root, Leaf	Uses in decoction when administered orally for skin diseases, leaf juice is good for abdominal colic, including Antioxidant and anticholinesterase and antituberculosis properties	[2]
129)	Jangali palak	<i>Rumex nepalensis</i>	Polygonaceae	Leaf	Juice or powder of leaves is useful in abdominal colic and skin diseases with wound healing and anti-allergic properties	[2]
130)	Chalmora	<i>Rumex vesicarius</i>	Polygonaceae	Leaf	Leaves are good source of antioxidants with good antibacterial properties.	[2]
131)	Arrow Leaf Pondweed	<i>Monochoria hastata</i>	Pontederiaceae	leaves	anti-inflammatory, Analgesic/Anti-Nociceptive Activity	[22]
132)	Silver Oak	<i>Grevillea robusta</i>	Proteaceae	Leaf	Paste of fresh leaves with vegetable ghee and coconut oil very useful in burning and burning sensation.	[2]
133)	Ber	<i>Ziziphus jujuba</i>	Ramanaceae	Whole plant	Delicious fruits used to increase weight, stamina, improve muscular and liver strength along with diuretic, emollient and expectorant properties. Dried fruits useful as anticancer, pectoral, refrigerant, sedative, stomachache, blood purifier. Seeds are used internally in the treatment of palpitations, insomnia, nervous exhaustion, night sweats and excessive perspiration A decoction of the root has been used in the treatment of fever, wound and ulcer treatment. The leaves are applied in liver troubles, asthma and fever.	[2]
134)	Atees	<i>Aconitum heterophyllum</i>	Ranunculaceae	Rhizome	Fever, cough, piles, stomachache	[8,14]
135)	Vatsnabh (Vish)	<i>Aconitum ferox</i>	Ranunculaceae	Rhizome	antipyretic, analgesic, anti-rheumatic, appetizer and digestive	[17]
136)	Indian wild pear	<i>Amelanchier canadensis</i>	Rosaceae	Fruit	The juice of the ripe fruit is used in the treatment of diarrhea	[2]
137)	Bihi	<i>Cydonia oblonga</i>	Rosaceae	Leaf, Seed	Leaves having phenolic compounds as antioxidants properties, Vitamin-E, carotenoids, L-ascorbic acid and other organic acids in folk medicine for their sedative, antipyretic, anti-diarrheic and antitussive properties along with treatment of various skin diseases , Seeds used in diarrhea, dysentery, cough, sore throat and bronchitis, intestinal colic and constipation and also used for allergic rhinitis and asthma	[2]
138)	Khubani	<i>Prunus armeniaca L</i>	Rosaceae	Fruit	The fruit having high in carotene and Vitamin-C provides a valuable source	[2]

					of food. The amygdalin a chemical extracted from apricot kernels used as an alternative treatment for cancer [112] along with having antioxidant and antimicrobial properties	
139)	Ghigharu	<i>Pyracantha crenulata</i>	Rosaceae	Fruit, Bark	Fruits used as preservative. Medicinally it has cardio-tonic, coronary vasodilator and hypertensive properties and used in cardiac failure, myocardial weakness, paroxysmal tachycardia, hypertension, arteriosclerosis and Burgor's disease. Rejuvenation property, reduce joint pains. The bark used in heavy bleeding during menstrual cycles, malarial fever.	[2]
140)	Dog Rose	<i>Rosa canina L</i>	Rosaceae	Leaf, Fruit	The plant has high antioxidants and vitamin-C level, used to make syrup, tea and marmalade. The fruits have been used internally as tea for treatment of viral infections and disorders of the kidneys and urinary tract.	[2]
141)	Kunja	<i>Rosa moschata</i>	Rosaceae	Leaf	Leaves juice is used as nasal drops to control hemorrhage, useful to control stomach disorder.	[2]
142)	yellow Himalayan raspberry	<i>Rubus ellipticus</i>	Rosaceae	Fruit	It has good antioxidant properties to providing free energy for the people who are travelling mountains.	[2]
143)	Bael	<i>Aegle marmelos</i>	Rutaceae/Asteraceae	fruit/St.Bark ,Flower leaf	Diarrhoea, Dysentery, Constipation Flowers used for increasing saliva so useful in treatment of mouth dryness, Leaves paste use in wound healing.	[3,2]
144)	Jangli-jira	<i>Adenostemma lavenia</i>	Rutaceae	Fruit, Root	Astringent, antidiarrheal, antidysentric, demulcent, antipyretic, laxative	[2]
145)	Pissumar	<i>Boenninghausenia albiflora</i>	Rutaceae	Whole plant	External application of whole plant juice cure headache and eyes pain also shows various effects as hepatoprotective, antioxidative, anti-inflammatory and immunomodulation.	[2]
146)	Ban Nimbu	<i>Glycosmis pentaphylla</i>	Rutaceae	Root	Seeds of plant used in curing of vomiting.	[2]
147)	Timur	<i>Zanthoxylum armatum</i>	Rutaceae	Leaf	Regular use of leaves' Pakora up to 3-4 days very useful to control allergy with carminative, stomachic, anthelmintic activities.	[2]
148)	Vasa	<i>Adhatoda vesica</i>	Sacanthaceae	Whole Plant	Antispasmodic, respiratory, Stimulant	[3]
149)	Safed Chandan	<i>Santalum album</i>	Santalaceae	Heart wood	Skin disorder, Burning, sensation, Jaundice, Cough.	[3]
150)	Panker	<i>Aesculus indica</i>	Sapindaceae	Fruit	Rheumatism (warm paste applies on affected part)	[2]
151)	Sirparha	<i>Bergenia ciliata</i>	Saxifragaceae	Root	Root powder is very useful in kidney stones and ulcers.	[2]
152)	Brahmi	<i>Bacopa monnieri</i>	Scrophulariaceae	Whole Plant	Nervous, Memory enhancer, mental disorder	[3]
153)	Kutkin	<i>Picrohiza Kurroa</i>	Scrophulariaceae	Root	Hepatoprotective, anticholestatic, antioxidant, and immunomodulatory	[13]

					activity	
154)	Kalber	<i>Verbascum thapsus</i>	Scrophulariaceae	Leaf	Boiled leaves are applied over inflamed parts to cure headache, inflammatory diseases, also used to control asthma, spasmodic coughs, diarrhea, and Pulmonary problems.	[2]
155)	Kukundara	<i>Smilax aspera</i>	Smilacaceae	Root	Paste of root is given orally with water to control diarrhea.	[2]
156)	Ashwagandha	<i>Withania somnifera</i>	Solanaceae	Root	Restorative Tonic, stress, nerves disorder, aphrodisiac	[3]
157)	Makoy	<i>Solanum nigrum</i>	Solanaceae	whole plant	Dropsy, General debility, Diuretic, Antidysentric & It has expectorant, analgesic, sedative, diaphoretic properties. Its external application cures skin diseases and gives relief in burns, itching, pain etc. Leaves juice used in earache.	[3,2]
158)	Kantakari	<i>Solanum Xanthocarpum</i>	Solanaceae	Whole Plant, Fruit, Seed	Diuretic, Anti-inflammatory, Appetiser, Stomachic.	[3]
159)	Dhatur	<i>Datura metel</i>	Solanaceae	Leaf	Boil and warm leaves used in affected part for antibiotics, antibacterial, antimicrobial activity.	[2]
160)	Dhatura	<i>Datura stramonium</i>	Solanaceae	Flower	Flower's juice used in earache, having analgesic and antiasthmatic activities	[2]
161)	Chitrika	<i>Solanum lasiocarpum</i>	Solanaceae	Leaf, Root	Seven leaves are to be placed on the head during sleeping and this process is to be continued for three nights to control fever and decoction of root is administered orally.	[2]
162)	Brahati	<i>Solanum violaceum</i>	Solanaceae	Fruit	Four ripe fruits are taken orally at a time to control cough [10] along with various properties such as hypertension, poisonous, insect bites	[2]
163)	Benachar	<i>Vetiveria Zizinioides</i>	Toaceae / Graminae	Root	Hyperpiesia, Burning, ulcer, Skin, Vomiting.	[3]
164)	Mandukparni	<i>Centella asiatica</i>	Umdelliferae	Whole plant	Anti-inflammatory, Jaundice, Diuretic, Diarrhoea.	[3]
165)	Shishuna	<i>Urtica ardens</i>	Urticaceae	Leaf	Leaves are useful in bone fracturing, cough, cold, digestive problems, fever, headache, skin infection.	[2]
166)	Jatamansi	<i>Nardostachys jatamansi</i>	Valerianaceae	Rhizome	Antimicrobial, antifungal, hypotensive, antiarrhythmic, and anticonvulsant, hepatoprotective, hypolipidemic, and antiarrhythmic activity.	[12]
167)	Banchalita	<i>Leea asiatica</i>	Vitaceae	Roots and leaves	Fever, diarrhea, dysentery, joint pain, rheumatism, diabetes, bone fracture, body ache, wound, sexual disorders anticancer, cytotoxic, antimicrobial, antidiabetic, hepatoprotective, cardiovascular, and CNS activity.	[24,25]
168)	Bandicoot Berry	<i>Leea indica</i>	Vitaceae	leaves	body pain, skin problems, and relief from dizziness, analgesic, anti-angiogenesis, anti-oxidant, anti-inflammatory, anti-microbial, anti-proliferative, hepatoprotective, sedative, and anxiolytic activities [[24,25]
169)	Bush Grape	<i>Cayratia trifolia</i>	Vitaceae	Whole plant	Antiviral, Antidiabetic,	[35]

					Cardioprotective , Anti-inflammatory, Neuroprotective, Anticancer, Antimicrobial, Antioxidant, diuretic, in tumors, neuralgia and splenopathy, cure of wounds and edema	
170)	Jungle Angoor	<i>Vitis vulpina</i>	Vitaceae	Leaf Fruit	Unripe grapes used for treating sore throats; raisins useful to control tuberculosis while ripe grapes used for the treatment of cancer, cholera, smallpox, nausea, skin & eye infections, kidney & liver diseases .	[2]
171)	Kapurkachari	<i>Hedychium spicatum</i>	Zingiberaceae	Root	Root powder is very useful in neuro muscular disorders and body pain along with ant cancerous and antimicrobial activities.	[2]
172)	Indian Berberry	<i>Barberis aristata</i>	Berberidaceae	Root/Stem	skin diseases, menorrhagia, diarrhea, jaundice and also in various affections of the eyes, antiperiodic, antipyretic, antidiabetic and diaphoretic properties,hepato-biliary disorders	[8]

HERBAL REMEDIES USING MEDICINAL PLANTS

There are 172 medicinal plants from all across India listed in the table along with their therapeutic characteristics. All of these plants' botanical data were reviewed and analyzed using the Plants of the World Online database.

CONCLUSION

People can treat their health naturally with medicinal herbs. Their major method of treating illnesses is based on careful observation of nature and knowledge of conventional medical treatments. The usage of plant parts such as leaves, roots, stems, fruits, and bark is due to the negative effects of chemical preservatives as well as the rise in drug resistance. The chemicals found in medicinal plants can be employed for antimicrobial, antifungal, hypotensive, antiarrhythmic, and anticonvulsant activities, as well as to prevent cardiovascular disorders and other diseases. Due to human progress, population growth, the impact of tourism, deforestation, and other factors, plants are currently in danger of going extinct; therefore, it is important to preserve them for local, ecological, and biological diversity.

CONFLICT OF INTEREST

There is no conflict of interest.

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