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COMMON FOLK MEDICINAL AND ETHNOMEDICINAL USES OF THIRTY MEDICINAL PLANTS OF DISTRICTS DADU AND JAMSHORO, SINDH, PAKISTAN.

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Abstract

An ethnobotanical survey was carried out in Districts Dadu and Jamshoro, Sindh Province of Pakistan. In this region local people since their forefathers are using medicinal plants and their different parts for the treatment of many diseases. Although modern methods to treat disease by homeopathic and allopathic drugs reduced the use of local remedies but still countable people are using folk remedies. The knowledge about the use of medicinal plants and their remedies of these two districts are still remained untouched by ethnobotanist, ethnopharmacologist and pharmacist. Thirty (30) medicinal plants were documented which are mostly used in the treatment of many diseases by the local people of district Dadu and Jamshoro.

Keywords: Folk uses, Ethnobotanical uses, Dadu, Jamshoro.

1. Introduction

District Dadu of Sindh Province of Pakistan is situated at 27-27 and 24-57 north latitudes and 67 - 09 to 68-25 east longitudes. It is situated in the south of district Larkana, in the west of districts Hyderabad, Naushero Feroze and Nawabshah, in the north of district Thatta, in north-east of district Malir and districts Lasbela and Khuzdar of Balochistan Province. The total area of the district is 19070 sq. Km. Recently this district has been devided into two districts namely Jamshoro and Dadu. The Jamshoro district is comprised of Sewan and Kotri Talkas. (http://www.dadu.sdnpk.org/index.html)

Physical Feature and Topography

The land of Dadu district has three characteristics areas namely, a). Kohistan or Hilly area. b). Barrage zone. c). Low lands riverian area.

The Kohistan part consists of rocky area which is called as Kirthar Range. It embraces the whole western boundary of the district, having breadth of 19-24 Km. The most prominent peak named *Kutay-Ji-Qabar* (dog's grave) is 2096 m above sea level and 244 m. A plateau known as Dharyaro is present towards the north is immediately below it. Bleak, uneven and infertile look of these hills, they afford pasturage for large flocks of goats and sheep. After the rain the valleys are sheltered with green grass and capable to cultivate up to a height of about 1000 m. The twisted rocky channels which drain the hills there in the form of pools are sufficiently permanent source for the survival of several species of fish. Ever shady trees, wild flowers and ferns are seen at these spots. Some natural water courses (Dhoras) and depression (Dhandhs) are found in district daudu few of them retain water throughout the year and cause a large growth of *Acacia nilotica* trees at their boundaries. (http://www.dadu.sdnpk.org/index.html)

Rivers and Streams

with the eastern boundary of the district daudu the Indus River flows. There is no other river in the district except numerous hill torrents known as *Nais*. The Gaji Nai is one of the most important Nai. Baran, Sann and Sol Nais are also present in this district. Mancher is the biggest natural lake in Asia. The maximum full covering area of lake is 259 Sq. Km. and when it is empty or, it occupies 52 Sq. Km. it is one of the huge storage of fish, it is also a source of irrigation of

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about twenty to twenty five thousand acres of land. However the Manchar Lake is added drainage water through Main Nara Velly Drain (MNVD), the water quality, fish and funa of the Manchar Lake are being deteriorated due to the drainage water added into it through Main Nara Velly Drain (MNVD). Other important lake of this area is Ganero which is situated at the distance of about 16 Km. away from Talka Mehar. (http://www.dadu.sdnpk.org/index.html)

Weather

The weather of the district is cold enough in winter and so hot and dry in summer. There is profound difference of climate condituons between southern and northern areas. Talka Kotri, Thano Bula Khan and most part of Sehwan which belong the southern part of districts have noderate climate while Dadu, Mehar, Johi and Khairpur Nathan Shah Talkas which belong to northern part of district have intense weather conditions. The hill range known as Gorakh Hill Range posseses the special climate in which the temperature falls to sub-zero degree during winter while it remains between 20 °C even in summer. The district receives 120 mm average rainfall annually (http://www.dadu.sdnpk.org/index.html)

Flora

Various types of flora are present in district different plants of medicinal values are found in Manchar Lake. The common trees available in this district are *Acacia nilotica* (babul), *Ficus religiosa* (pipal), *Prosopis specigera* (kandi), *Aegle marmelos* (belgeri) and *Populus euphratica* (balm). (http://www.dadu.sdnpk.org/index.html)

Horticulture

To fulfill the needs of local people the ample horticulture is carried out to grow different flowers, fruits and vegetables.

Forestry

The total covered area by forestry in district Dadu is 217,000 hectares. Amri, Abad, Bhan, Gidarji, Budhapur, Budho Dero, Dero, Gagh, Kundah Khairo Kaloo Bhori, Kandi Baghban, Kacho Magsi, Manjhand, Kamal Dero, Keti Lalya, Keti Jatoi, Kacho, Nari, Rajri, Sita, Shah Grah Dhandan, Sona Bindi, Qasim Shah, Unerpur and Soi are the important forests of district Dadu. About 239,000 Cft of timber and 78,000 Cft of firewood are yielded by the forests of this district (Bai *et al*., 2003).

Aims of present study

Many indigenous plants are used in herbal medicine to cure diseases and heal injuries. Such medicinal plants include *Acacia nilotica* Lam.Willd. (Fam: Leguminosae), *Alhagi maurorum* Medic. (Fam: Papilionaceae) and *Eclipta alba* L. Hassk. (Fam: Compositae). *E. alba* is used in ethnomedicine as alexipharmic, anti-inflammatorry, and to treat hernia, bronchitis, asthma, leucoderma, anemia, heart and skin diseases, night blindness, syphilis, and also used for the treatment of complexion (Cheryl *et al*., 2001).

Local people are using commonly available plants for the treatment of many diseases and maintenance of their health. However introduction of allopathic and homeopathic drugs decreased human dependency on medicinal plants for their folk uses (Bhanu *et al*., 1998). The folk or traditional knowledge about the uses of medicinal plants and their remedies are at the risk of everlastingly loss, if these are not documented by pharmacist, especially pharmacognosist. Therefore it is needed to manuscript the folk remedies about the consumption of medicinal plants for the cure, treatment of many diseases and maintenance of health.

Dadu and Jamshoro are main districts of Sindh Province. Allopathic, homeopathic practitioners as well their pharmaceutical and homeopathical drug stores are limited in this district as compare to the population of this area.

The qualities and natural origins of the medicinal plants and their dried parts are well known to the villagers and local people through individual practices and inherited remedies. Special advantage is that the herbal therapy mostly has less side effects and charge if they are used appropriately for the particular disease or disorder.

Majority of medicinal plants are available in these districts where they grown naturally but due to lack of knowledge to every common person there is damage of these valuable medicinal plants by a common illiterate people of these districts. So this study is performed to document folk remedies and uses of few important and commonly available plants to save their damage

and to invite pharmaceutical chemists and pharmacognosists to evaluate the ethnomedicinal and ethno pharmacological aspects of these medicinal plants scientifically.

This documentation can be translated in local language and to make it available for common people after comparing the ethnomedicinal uses of these medicinal plants and folk remedies with scientific literature if it is available.

On the other hand the most important aspect of this study is to inform about the nature of the phytochemical constituents and most potent toxic parts of plants. Because mostly local users of medicinal plants are utilizing them without any fear of dangerous side effects of these plants.This study consists information of each medicinal plant obtained on scientific and traditional bases.

2. Materials and Methods

Districts Dadu and Jamshoro were visited many times with a qualified team consisted of pharmacognosists, pharmacists, botanist, chemists and agriculture expert for the identification and collection of medicinal plants during the year of 2004. The required plants according to data were collected, preserved as herbarium sheets and submitted in the Department of Pharmacognosy, Faculty of Pharmacy, University of Sindh, Jamshoro, Pakistan. Local people above 40 years old age were interviewed for folk recepies and traditional uses of medicinal plants of this area. Two most senior, expert Hakeems (local folk practitioners) were also interviewed as they are utilizing these medicinal plants for the treatment of local people. The following questionnaire was adopted for this study.

Questionnaire

Personal Bio-data

Name:..... Father's Name:.....

Surname:.....CNIC No:.....

Age:.....Sex:..... Occupation:.....

Adress:.....

Used by,

a). Himself ☐ b). Some one else ☐

c). Suugested by Hakeem ☐ d). Fore fathers ☐ Local person. ☐

If b,c,e then,

Name of person:.....Fathers Name:.....

Surname:..... CNIC No:.....

Age:.....Sex:..... Occupation:.....

Adress:.....

Name of disease: .....

Condition of disease: Acute ☐ Chronic. ☐

Therapeutic effects: .....

Side effects:.....

Time period of therapy:.....

Dosage form:.....

Name of Plant (In local Language).....

Palce:..... Month of collection:.....

Parts used: Fresh ☐ Dried. ☐

Nature of plant

Nature of plant: cultivated ☐ Wild ☐ Purchased from shop ☐

Gifted by some one ☐

Used as,

House hold remedy ☐ Remedy prepared by expert. ☐

Botanical name:..... Family:.....

Name of taxonomist:..... Designation:.....

Address:.....

4. Results and discussion

During the present study ethnomedicinal uses with phytochemical constituents, folk uses and recepies for thirty medicinal plants of this area were documented which are discussed below.

Plant No: 01. *Acacia nilotica* Lam. Willd.
Botanical Name: *Acacia nilotica* Lam. Willd. (Fam: Mimosaceae). English Name: Arabic Gum. Local Name: Babul. Parts Used: Leaves, seeds, pods, barks and gum.
Chemical constituents: It contains tannins, quercetin, gallic acid, epigallocatechin, catechol, epicatechol, dicatechol, (Abdulkarim *et al.*, 2005), (+) catechin, (-) epicatechin, (-) dicatechin and (+) leucocyanidin gallate (Bhanu et al. 1998). The presence of (+) dicatechin and (+) leucocyanidin gallate is noted for the first time in nature (Bimla *et al.*, 2005). Calcium, magnesium, salts of Mecidu acid, malic acid, polysaccharides, L-arabinose, L-rhamnose, D-galactose and oxidative enzymes are present in the gum.

Uses:
Ethnomedicinal Uses: Astringent, anti-protozoal, anti-diarrhoeal, anti-inflammatory, anti-dysenteric agent, stomatitis, CNS depressant, demulcent, as a lotion in conjunctivitis, used in leucorrhoea, used as a gargle and mouthwash and to clear the ulcers and wounds (Eldeen *et al.*, 2007; Anderson *et al.*, 1967; Ghazi *et al.*, 1999).
Folk Uses and Recipe: Infusion of pods is used as anti-diarrheal for animals and flowers are used for infertility.

Plant No: 02. *Abutilon indicum* L. Sweet.
Botanical Name: *Abutilon indicum* L. Sweet. (Fam: Malvaceae). Local Name: Pat-tir. Parts used: Leaves.

Chemical constituents: The main active constituents of *Abutilon indicum* leaves are flavonoids, sapogenins, steroids and carbohydrates. (Jain, 1991; Evans, 2002).

Uses:
Ethnomedicinal Uses: Analgesic, diuretic, aphrodisiac (Syed, 1989), hypoglycemic and laxative (Evans, 2002).

Folk Uses and Recipe: Infusion of leaves traditionally is used to treat asthma, gonorrhoea and in toothache as mouthwash. But the scientific study failed to attribute these actions to any chemical constituent present in the leaves of *Abutilon indicum*.

Plant No: 03. *Aegle marmelos* L. Correa.
Botanical Name: *Aegle marmelos* L. Correa. (Fam: Rutaceae). English Name: Bael, or Bitter Orange. Local Name: Bel geeri. Parts used: Fruit and leaves.

Chemical constituents: The flavonoids, coumarins; monoterpenes and alkaloids (Subrata and Playford, 2003) are present in the fruit. Freshly picked fruits yield little vitamin C (Jagetia, 2003).

Uses:
Ethnomedicinal Uses: Anti-diarrhoeal, anti-dysentery, hypochondriasis, antifungal, antibacterial, anticancer, hypoglycemic, refreshing drink, anti-emetic, antispasmodic, carminative, laxative, deobstruent, stomachic, diuretic, expectorant, odontalgic, stimulant, vasoconstrictor. It is also used to treat toothache, intermittent fever, colds, abdominal distension, stuffy sensation in the chest, dyspepsia, constipation, prolepses of the rectum, stomach and uterus. (Subrata and Playford, 2003; Jagetia, 2003; Elizabeth *et al.*, 2005).

Folk Uses and Recipe: Fruit (ripe) is used in dysentery and Meciduas.

Plant No: 04. *Aerva javanica* Burm. F. Schult.
Botanical Name: *Aerva javanica* Burm. F. Schult. (Fam: Amaranthaceae). English Name: Snow Bush. Local Name: Booh. Parts used: Leaves.

Chemical constituents: Hentriacontane, nonacosane, nonacosanol, tritriacontane, tetra-triacontane, sitosterol and oleanolic acids are isolated from the fresh leaves of the plant (Usman *et al.*, 1982).

Uses:
Ethnomedicinal Uses: Anti-inflammatory and sedative. It is also used as household remedy for treatment of toothache and kidney stone (Muhammad *et al.*, 2006).

Folk Uses and Recipe: Plant fumigation and plant paste with water is used to treat sexual

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incapacity, sexual asthenia and prossesing frigidity and aphrodisiac activity.

Plant No: 05. *Alhagi maurorum* Medik.
Botanical Name: *Alhagi maurorum* Medik. (Fam: Fabaceae). English Name: Camel thorn bush. Local Name: Kandeero. Parts used: Manna.

Chemical constituents: A sweet-tasting manna is exuded from the twigs at flowering time (Atta *et al.*, 2004). It contains about 47% melizitose, 26% sucrose and 12% invert sugars (Attia *et al.*, 2004).

Uses:
Ethnomedicinal Uses: Diaphoretic, diuretic, expectorant, laxative, antidiarrhoeal (Attia et al. 2004) and antinociceptive (Atta *et al.*, 2004).
Folk Uses and Recipe: Juice of leaves and flowers is used as anti-rheumatic and anti-piles.
Plant No: 06. *Bauhinia veriegata* L.
Botanical Name: *Bauhinia veriegata* L. (Fam: Caesalpinaceae). English Name: Mountain Ebony. Local Name: Kachnar. Parts used: Leaves.
Chemical constituents: Tree contains glycosides (Rajkapoor *et al.*, 2006), bark yields gum and tannins, seeds contain non drying oil 15% (Ciero *et al.*, 1998).

Uses:
Ethnomedicinal Uses: Astringent, antibacterial (Grubben and Denton, 2004), tonic, alterative, anthelmintic, stomachic, alexipharmic, anticancer (Rajkapoor *et al.*, 2006) and anti-worms (Ciero *et al.*, 1998).

Folk Uses and Recipe: The young leaves, flowers and fruits are boiled and eaten as a vegetable and useful in skin diseases.

Plant No: 07. *Brassica juncea*
Botanical Name: *Brassica juncea* L. Czern. (Fam: Cruciferae). English Name: Brown Mustard. Local Name: Saranh. Parts used: All parts.

Chemical constituents: Plant contains Vitamin A and K (Grubben and Denton, 2004), essential oils (Syed *et al.*, 1989). Seeds contain sinigrin and myrosinallylisothiosynate, fixed oils, proteins, mucilages and traces of sinapine hydrogen sulphate (Evans, 2002).

Uses:
Ethnomedicinal Uses: Antimicrobial, aperient, diuretic, emetic, anodyne, lactogogue, rubefacient, stimulant and anti-inflammatory (Grubben and Denton, 2004; Srivastava *et al.*, 1982).

Folk Uses and Recipe: Oil is used in foods acts as diuretic and condiment.

Plant No: 08. *Cassia holosericea* Fresen.
Botanical Name: *Cassia holosericea* Fresen. (Fam: Caesalpinaceae/Leguminosae). English Name: Indian senna. Local Name: Jhangli senna. Parts used: Pods.

Chemical constituents: It contains bergenin (Srinivasan *et al.*, 2007). It yields a novel spermidine alkaloid, caesalpinine A {$C_{25}H_{31}O_3N_3$} resins, glucosides, anthraquinone glycosides and mucilage. The amino acids and ethylideneglutamic acid are present in the seeds of *C. holosericea*. The composition of fatty acid of the seed-oil is a-, b-,y-,d-,e-and j-caesalpins, caesalpin-F and 7-hydroxy-4-methoxyhomo isoflavone {bounducelline} (Khalid *et al.*, 1989; Rai 1989).

Uses:
Ethnomedicinal Uses: Astringent, antipyretic, anti-periodic, diuretic, cicatrizant (Marta *et al.*, 2006), adaptogenic, antimicrobial, anti-fatigue, antioxidant, tanning material (Howes-Kew, 2005), antidiabetic and also used for curing senile pruritus and muscle contraction.

Folk Uses and Recipe: Pods in powdered form are used as cathartic and anthelmintic.

Plant No: 09. *Calotropis procera* Aiton.
Botanical Name: *Calotropis procera* Aiton. (Fam: Asclepiadaceae). English Name: Milkweed, Sodom Apple. Local Name: Akk. Parts used: Leaves, bark and latex.

Chemical constituents: The root bark contains α- and β-amyrin, taraxasterol its isomer taraxasteryl isovalerate, taraxasteryl acetate. Leaves, stem, latex and roots contain cyanidin-3 rhamnoglucoside, cycloart-23-en, 25-diol, cyclosadol, multiflorenol, procesterol, quercetin-3-rutinoside, β-sitosterol (also present in latex *of*

C. procera), β-sitost-4-en-3-one, stigmasterol calactinic acid, choline and O-pyrocatechuic acid benzolisolineolone, nemzoyllineolone, long-chain fatty acids, C_{18} isoursane and vitamin C (Malik and Chaugtai, 1979). The flowers contain calactin, calotoxin, calotropagenin, calotropin, polysaccharides with D-arabinose, glucose, glucosamine and L-rhamnose. Flowers also contain enzymes 3-proteinase and calotropain (protease). Other chemical constituents of *C. procera* flowers are lupeol, uscharin, proceroside, proceragenin (cardenolide), syriogenin, taraxast-20(30)-en-3-(4-methyl-3-pentenoate), 3-thiazoline cardenolide, gigantin, giganteol, isogiganteol, uscharidin, uzarigenin voruscharin a-calotropeol, 3-epimoretenol, α-lactuceryl acetate and α-lactuceryl isovalerate (Atef *et al.*, 1999).

Uses:

Ethnomedicinal Uses: Diaphoretic, expectorant, antimicrobial (Atef *et al.*, 1999), anti-ulcer, anti-fertility, anti-cancer, antifungal (Larhsini *et al.*, 1997), antipyretic, anti-inflammatory, analgesic (Ameeta *et al.*, 2006), anthelmintic, purgative mild stimulant. It is also used in leprosy, boils, to remove the prickle of body, cures earache and toothache (Aminuddin and Girach, 1993), abdominal pains.

Folk Uses and Recipe: Leaves and latex are rubbed and messaged on muscles and joints as antibacterial and anti-rheumatic.

Plant No: 10. *Caesalpinia bonduc* L. Roxb.
Botanical Name: *Caesalpinia bonduc* L. Roxb. (Fam: Caesalpinaceae). English Name: Fever Nut. Local Name: Kharpat. Parts used: Leaves and seeds.

Chemical constituents: Seeds contain diterpenoid bondenolide (Ahmad *et al.*, 1997), several bonducellpins, caesalpins (Jadhav *et al.*, 2002), cassane furanoditerpene, 17-methyl-vouacapane-8(14),-9(11)-diene (Atul *et al.*, 2003).

Uses:

Ethnomedicinal Uses: Antiviral, antifungal, anthelmintic, anti-diabetic (Roy *et al.*, 2005), antispasmodic, febrifuge, anthelmintic, anti-tumor, anti-oxidant (Malaya *et al.*, 2004), rubefacient, also used in liver and spleen disorders.

Folk Uses and Recipe: Paste of leaves and seeds is used as anti-asthmatic and in leucorrhoea.

Plant No: 11. *Cardiospermum grandiflorum* Sw.
Botanical Name: *Cardiospermum grandiflorum* Sw. (Fam: Sapindaceae). English Name: Baloon vine, Blister crepper. Local Name: Baihee amla. Parts used: All parts.

Chemical constituents: It contains cardiospermin sulfate, saponin and sulfur containing cyanogenic glycosides (Hübel *et al.*, 1979).

Uses:

Ethnomedicinal Uses: Antimicrobial, anti-malarial (Kubmarawa *et al.*, 2007; Waako *et al.*, 2005), anti-blennorrhagic, emmenagogue, demulcent, anthelmintic, stimulant, diuretic, diaphoretic, emetic, laxative, aperient, stomachic, rubifacient, tonic in fever. Externally used on rheumatic joints, swelling, tumor. It is curative in earache and gastric complaints (Ayyanar *et al.*, 2005)

Folk Uses and Recipe: Juice of leaves is used as anthelmintic.

Plant No: 12. *Capparis* □*eciduas* Forssk. Edgew.
Botanical Name: *Capparis* □*eciduas* Forssk. Edgew. (Fam: Capparidaceae). English Name: Capper. Local Name: Kirrir. Parts used: All parts.
Chemical constituents: It contains alkaloids spermidine, isocodonocarpine, anti-oxidants bioflavinoid and rutin (Viqar *et al.*, 1985; Viqar *et al.*, 1989).

Uses:

Ethnomedicinal Uses: Anti-rheumatic, diuretic, kidney disinfectant, vermifuge, tonics, reduce flatulence, improving liver functions. It is used to cure arteriosclerosis, dropsy, anemia, arthritis, gout and migraine (Jagtap *et al.*, 2006).

Folk Uses and Recipe: Decoction of young branches is used as alexipharmic and also used to cure toothache.

Plant No: 13. *Capparis spinosa* Forssk.
Botanical Name: *Capparis spinosa* Forssk. (Fam: Capparidaceae). English Name: Caper. Local Name: Gollaro. Parts used: Leaves.

Chemical constituents: The root bark contains stachydrine, rutic acid. Flower buds contain glucoside, rutin, rutic acid and pectic acid (Sethi *et al.*, 1978).

Uses:
Ethnomedicinal Uses: Emmenagogue, expectorant, vasoconstrictor, tonic (Ahmed *et al.*, 1972), analgesic, anthelmintic, anti-haemorrhoidal, ani-rheumatic (Khakberdyev *et al.*, 1968), aperient, deobstruent, depurative and diuretic (Chopra *et al.*, 1986).

Folk Uses and Recipe: Infusion of leaves is used as analgesic and to cure gonorrhoea.

Plant No: 14. *Chenopodium album* L.
Botanical Name: *Chenopodium album* L. (Fam: Chenopodiaceae). English Name: Fat hen. Local Name: Jhill. Parts used: Flowers, Leaves and Seeds.

Chemical constituents: The leaves contain N-caffeoyldopamine, proteins 4%, fat1% and carbohydrates 9%. The seed contains about carbohydrates 50% and proteins 16% (Clarisa *et al.*, 2000). Per 100g of leaves (Dry weight) contain minerals: Calcium: 2.3 g, Phosphorus 0.5g, Iron 0.025g. Vitamins: vitamin A (31.6 g), Thiamine (0.0007g), Riboflavin (0.0016g), Niacin (0.0025g). The major constituent is (17*S*, 20R, 22R)-4, 7, 20-trihydroxy-1oxowitha-2, 5, 24-trienolide (Kumar *et al.*, 2004).

Uses:
Ethnomedicinal Uses: Antiphlogistic, anti-rheumatic (Kumar *et al.*, 2004), contraceptive, anthelmintic, laxative and odontalgic (Muhammad *et al.*, 2002).

Folk Uses and Recipe: Juice of leaves is used in hepatic and spleen disorders.

Plant No: 15. *Chorchorus depressus* L.
Botanical Name: *Chorchorus depressus* L. (Fam: Tiliaceae). English Name: Gunny. Local Name: Mundairie. Parts used: leaves and seeds.

Chemical constituents: It contains two monodesmosidic cycloartane triterpene glycosides, i.e. depressosides E and F and two flavonols glycosides, depressonol A and B (Muhammad *et al.*, 2002; Ahmad *et al.*, 1998).

Uses:
Ethnomedicinal Uses: Emollient, tonic, cooling agent and also used for the treatment of gonorrhoea and wounds (Kebu *et al.*, 2006).

Folk Uses and Recipe: Decoction of leaves is used in gonorrhoea.

Plant No: 16. *Datura alba* Nees.
Botanical Name: *Datura alba* Nees. (Fam: Solanaceae). English Name: Thorn-apple. Local Name: Chario daturo / Sufed daturo. Parts used: Seeds.

Chemical constituents: The seeds contain the alkaloid *daturine*, atropine, hyoscine and hyoscyamine. It also contains fatty oil (25 %), which contains a new fatty acid, daturic acid ($C_{17}H_{34}O_2$). It stands intermediate between palmitic and stearic acids (Michael *et al.*, 2006).

Uses:
Ethnomedicinal Uses: Narcotic, mydiatric, diuretic, anesthetic, aphrodisaic, treating bruises and wounds, skin ulcers, hemorrhoids, asthma, rheumatism, whooping cough, muscle spasm, sciatica and painful menstruation (Priya *et al.*, 2002).

Folk Uses and Recipe: Powdered seeds are used as antiseptic and analgesic.

Plant No: 17. *Eclipta alba* L. Hassk.
Botanical Name: *Eclipta alba*. L. Hassk. (Fam: Compositae). Local Name: Bhangro. Parts used: Leaves.

Chemical constituents: It contains Ecliptasaponin C, a new triterpenoid glucoside with daucosterol and stigmasterol-3-O-glucoside (Zhang and Chen, 1996), other constituents include as wedelolactone, demethylwedelolactone, isodemethylwedelolactone, α-formylterthienyl, strychnolactone, β-sitosterol, nonacosanol, stearic acid, lacceroic acid and 3,4-dihydoxy benzoic acid (Zhang and Guo, 2001).

Uses:
Ethnomedicinal Uses: Alterative, alexipharmic, anti-inflammatory (Cheryl *et al.*, 2001), anti-asthmatic, bronchodilator, used to treat hernia, night blindness, leucoderma, anemia, skin diseases, syphilis and used for complexion.

Folk Uses and Recipe: Juice of leaves externally is used as hair restorer. Paste of leaves is used in enlargement of spleen, jaundice and asthma.

Plant No: 18. *Fagonia cretica* L.,
Botanical Name: *Fagonia cretica* L., (Fam: Zygophyllaceae) English Name: Cretan prickly clover. Local Name: Dammbo. Parts used: Leaves.

Chemical constituents: It contains Sitosterol, campesterol, oleanolic acid, betulic acid, docosyl docosanoate (Hamid *et al.*, 1989), sapogenin – fagogenin (15, 16-dihydroxy-7-oxo-cis-ent-erythro-3-one and 16-O-acetylfagonone (Abdel-Kader *et al.*, 1993), saponin-I and saponin-II (Saeed *et al.*, 2003), betulin (Ali and Hameed, 1967; Shaker *et al.*, 1999), nahagenin, hederagenin, ursolic acid and pimtol (Atta-ur-Rahman *et al.*, 1982; 1984) and 27-hydroxyoleanolic acid and 27-ursolic acid (Miyase *et al.*, 1996). It also contains glucose, rhamnose, xylose, arabinose, fatty acids, Tecidu ($C_{10}H_{13}N_2$) amino acids alanine, argamine, glycine, isoleucine, leucine, lysine, phenyalanine, tyrosine, and valine.

Uses:
Ethnomedicinal Uses: Febrifuge, antioxidant, anticancer, astringent and also used in the treatment of various types of haematological, hepatic, neurological skin lesion and inflammatory conditions (Kasture *et al.*, 2001; Chopra *et al.*, 1956).

Folk Uses and Recipe: Aqueous infusion of leaves is used as febrifuge and prophylactic against small pox. Twigs of leaves are used in snake bite.

Plant No: 19. *Ficus bengalensis* L.,
Botanical Name: *Ficus bengalensis* L. (Fam: Moraceae). English Name: Banyan tree. Local Name: Bhurh. Parts used: Leaves, roots, seeds and bark.

Chemical constituents: Its stem and bark contain three ketones, 20-tetratriacontene-2-one, 6-heptatriacontene-10-one, pentatriacontan-5-one and other compounds like β-sitosterol-α-D-glucose, meso-inositol, 6-heptatriacontene, pentatriacontan (Subramanian and Misra, 1978; Daniel *et al.*, 1998). It also contains flavonoids (Regi *et al.*, 2003). The petunidin di-glycoside and quercentin 3-galactoside are present in the leaves, cyanidin rhamnoglycoside and polysaccharides in the fruit are of *F. bengalensis*.

Uses:
Ethnomedicinal Uses: Antiatherogenic, hypocholesterolaemic, antioxidant (Rimi *et al.*, 2004), analgesic, anodyne, anti-rheumatism, tonic, anti-dandruff (Ravichandran *et al.*, 2004), astringent and cooling. It is also used to cure toothache and abscesses.

Folk Uses and Recipe: Juice of leaves and seeds is used in diabetes, leucorrhoea and lumbago.

Plant No: 20, *Hippophae salicifolia* D. Don.
Botanical Name: *Hippophae salicifolia* D. Don. (Fam: Eleagnaceae).English Name: Willow-leaved seabuckthorn. Local Name: Beehni. Parts used: Leaves and fruit.

Chemical constituents: Its fresh berries pulp oil contains total carotenoids ranged from 692 to 3420 mg/kg and total tocols from 666 to 1788 mg/kg, palmitoleic acid (32–53%) as the most abundant fatty acids followed by palmitic (25–35%), oleic (8–26%), linoleic (5–16%), and linolenic (0.6–2.6%) acids. The berries also contain higher amounts of lipophobic constituents such as vitamin C and flavonols (Ranjith, *et al.*, 2006). The leaves are rich in vitamin A (25 mg/100 g), vitamin C (454 mg/100 g), flavonoids (984 mg/100 g) (Li and Schroeder, 1996) and 16 amino acids. Seabuckthorn is primarily valued for its golden-orange fruits, which are very rich in vitamins A, B_1, B_{12}, C, E, K and P (Bounous *et al.*, 1988).

Uses:
Ethnomedicinal Uses: Anticancer, alexipharmic (Deepak *et al.*, 2007), nutritional (Alam, 2004), tonic for lungs, stomach, heart, spleen, removing blood stasis and promotes blood circulation, treating burns, eczema, and radiation injury (Shandesh *et al.*, 2006).

Folk Uses and Recipe: Ripe fruit and its juice are used in jaundice, respiratory diseases.

Plant No: 21. *Mangifera indica* L.
Botanical Name: *Mangifera indica* L. (Fam: Anacardiaceae). English Name: Mango tree. Local Name: Anmb / Amm. Parts used: Fruit.

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Chemical constituents: Plant contains amino acids, gallotannin, gallic acid m-digallic acid, ethylgallate, quercetin, isoquercetin, β-sitosterol, (±)-epicatechin, β-carotene, α-xanthophyll, ellagic, citric, m-trigallic and malic acids, β-glucogallin, meso-inositol, polysaccharides with highly branched arabinan, (1-4) linked galactouronan or glucan, mangiferin (1,3,6,7-tetrahydroxyxanthone-2-glucopyranoside), riboflavin, vitamin C. The fruit of *M. indica* contains citronellal, diterpene, geraniol, limonene, mangiferol, mangiferone, nerol, nerylacetate, α-phellandrene, tannin and α-,β-pinenes. Its panicles, leaves and seed oil contain amyl, butyl, ethyl, methyl, propyl, isobutyl, alcohols (Ansari *et al.*, 2004). The aromatic and aliphatic esters of gallic acid, galactose, D-arabinose and glucose are present in the leaf oil. The myrcene, limonene, isoamyl alcohol and α-, β-pinenes are present in the flowers (Ansari *et al.*, 2004).

Uses:

Ethnomedicinal Uses: Anti-inflammatory (Ojewole, 2005). Aquoues infusion of stem-bark has analgesic, hypoglycemic (Ojewole, 2005), antidiabetic (Aderibigbe *et al.*, 2001; Aderibigbe *et al.*, 1999) also used in asthma, bronchitis, cough and throat troubles (Kharkhongor *et al.*, 1981).

Folk Uses and Recipe: Fruit is used as antiseptic and anti scorbutic.

Plant No: 22. *Malva sylvestris* L.

Botanical Name: *Malva sylvestris* L. (Fam: Malvaceae). English Name: Mallow. Local Name: Khubazzi. Parts used: Leaves, flowers and seeds.

Chemical constituents: Leaves contain tannins, mucilages (Syed, 1989; Evans, 2002). Polysaccharide which is composed of L-rhamnose, D,-galactose, galacturonic acid, glucuronic acid in the molar ratio of 22:6:22:11, 8 % peptide (Gonda *et al.*, 1990). Flowers contain anthocyanins glycosides (Farina *et al.*, 1995).

Uses:

Ethnomedicinal Uses: Antiphlogistic, astringent (Sukran, 2007), demulcent, diuretic, emollient, expectorant, laxative and antimicrobial (Coelho *et al.*, 2004).

Folk Uses and Recipe: Paste of leaves is used as emollient and febrifuge.

Plant No: 23. *Malva parviflora* L.

Botanical Name: *Malva parviflora* L. (Fam: Malvaceae). English Name: Cheese weed. Local Name: Ciogi sagh. Parts used: Leaves and seeds.

Chemical constituents: It contains glycerides of cyclopropene (malvalic and sterculic), cyclopropane (dihydromalvalic and dihydrosterculic), epoxy, and conjugated dienol acids. The epoxy and conjugated dienol acids are isolated as their methyl esters. These are characterized as *cis*-12,13-epoxy-*cis*-9-octadecenoic (vernolic) acid, 13-hydroxy-*cis*-9, *trans*-11-octadecadienoic (coriolic) acid (Farina *et al.*, 1995) and contains thiamine (Mayer, 1989). Seeds contain fatty oils (Moghis *et al.*, 2006).

Uses:

Ethnomedicinal Uses: Antidandruff, demulcent, emollient, pectoral, antimicrobial (Hailu *et al.*, 2005), anti-inflammatory and analgesic(Shale *et al.*, 2005).

Folk Uses and Recipe: Aqueous infusion of leaves is used as demulcent and anti-inflammatory.

Plant No: 24. *Melilotus indicus* L.

Botanical Name: *Melilotus indicus* L. (Fam: Papilionaceae). English Name: Yellow sweet clover. Local Name: Sinjhi. Parts used: Leaves and flowers.

Chemical constituents: It contains coumarins, melilotic (hydrocoumaric), orthocoumaric acids, and melilotic anhydride, or lactone. It also contains oleanane triterpenes (soyasapogenol B, soyasapogenol G, and messagenolide), a gammacerane triterpene (gammacer-16-en-3-one), five new ecidu triterpenes (messagenic acids), (27-*cis*-4-hydroxycinnamoyloxy)betulinic acid, 27-(*trans*-4-hydroxycinnamoyloxy) betulinic acid, 20(*S*)-3-hydroxy-29-oxolupan-28-oic acid; 3,30-dihydroxylup-20(29)-en-28-oic acid; and 3,20-dihydroxylup-18(19)-en-28-oic acid, respectively) and sterols β-sitosterol, ergosterol peroxide, 7-hydroxysitosterol, 7-hydroxysitosterol and 7-oxositosterol (Francisco *et al.*, 1997; Nigel, 2007).

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Uses:
Ethnomedicinal Uses: Antibacterial, anticoagulant, astringent, emollient, laxative, narcotic (Francisco *et al.*, 1997).

Folk Uses and Recipe: Juice of leaves is used as emollient and in infantile [illegible]eciduas.

Plant No: 25. *Portulaca oleracea* L.
Botanical Name: *Portulaca oleracea* L. (Fam: Potulacaceae). English Name: Green Purslane. Local Name: Lunak. Parts used: Leaves and seeds.

Chemical constituents: The leaves contain about carbohydrates 7%, proteins 2% and fat 0.5%, or per 100g of dried leaves, proteins 18-35g, fat 2-5g, carbohydrate36-63 g, fibre 9-15g, calcium0.8-2g, phosphorus 0.3-0.8g, iron 12-47g, sodium 0.05g, potassium 0.5-3 g (Habtemariam *et al.*, 1993), β-carotene10560-20000ug, thiamine 0.2-0.5mg, riboflavin 1.1- 1.6 mg, niacin 5-7mg and vitamin C 0.17-0.33 mg, β-sitosterol, β-sitosterol-glucoside, N.N-dicyclohexylurea and allantoin (Asia *et al.*, 2004). It contains alkaloids (oleraceins A, B, C, D and E) structurally these are known as 5-hydroxy-1-p-coumaric acyl-2,3-dihydro-1H-indole-2-carboxylic acid-6-O-β-D-glucopyranoside, 5-hydroxy-1-ferulic acyl-2,3-dihydro-1H-indole-2-carboxylic acid-6-O-β-D-glucopyranoside, 5-hydroxy-1-(p-coumaric acyl-7'-O-β-D-glucopyranose)-2,3-dihydro-1H-indole-2-carboxylic acid-6-O-β-D-glucopyranoside, 5-hydroxy-1-(ferulicacyl-7'-O-β-D-glucopyranose)-2,3-dihydro-1H-indole-2-carboxylic acid-6-O-β-D-glucopyranoside and 8,9-dihydroxy-1,5,6,10β-tetrahydro-2H-pyrrolo[2,1-α]isoquinolin-3-one. It contains new compound which is identified as 1-(2-hydroxy-4-methoxyphenylamino)-1-deoxy-β-glucoside 1,2-carbamate (1) {methoxy glucoside carbamate}) (Diana *et al.*, 2006).

Uses:
Ethnomedicinal Uses: Muscle relaxant (Habtemariam *et al.*, 1993), antibacterial, anti-scorbutic (Lan *et al.*, 2005), depurative, diuretic (Rocha *et al.*, 2002), febrifuge, tonic, vermifuge, anti-inflammatory and analgesics (Chan *et al.*, 1994).

Folk Uses and Recipe: Leaves are cocked and taken as food to act as vermifuge and externally used in skin disease.

Plant No: 26. *Solanum surattense* Burm. F.
Botanical Name: *Solanum surattense* Burm. F (Fam: Solanaceae). Local Name: Aederi Parts used: Whole Plant.

Chemical constituents: Berries contain solanocarpine, solanocarpidine, solanines and carpeatral (Syed, 1989).

Uses:
Ethnomedicinal Uses: Digestive, alterative, expectorant, aperient, diuretic, and anthelmintic. It is also used in cough, asthma, fever, chest pain, sore throat, locally to relieve pain.

Folk Uses and Recipe: Juice of leaves is used as expectorant, Anthelmintic, and anti-asthmatic.

Plant No: 27. *Solanum nigrum* Auctplur.
Botanical Name: *Solanum nigrum* Auctplur. (Fam: Solanaceae). English Name: Black nightshade. Local Name: Kailperoon. Parts used. Leaves and seeds.

Chemical constituents: The plant contains six new steroidal saponins, solanigrosides, degalactotigonin, the 60% ethanolic extract of the dried herb contains two new pregnane saponins, i.e. solanigroside A and solanigroside B (Syed, 1989; Xin-Lan *et al.*, 2007).

Uses:
Ethnomedicinal Uses: Antioxidant, anti-periodic, anti-inflammatory, perspirative, diuretic, emollient, purgative, sedative, anti-pyretic and analgesic (Kyung-Sun, *et al.*, 2004).

Folk Uses and Recipe: Ripe fruit is taken as sedative. Berries are used in piles.

Plant No: 28. *Solanum melongena* L.
Botanical Name: *Solanum melongena* L. (Fam: Solanaceae). English Name: Aubergine. Local Name: Wanghan / Bhengan. Parts used: Fruit and leaves.

Chemical constituents: It contains γ-hydroxyglutamic acid, 5-hydroxytryptamine, isoleucine, leucine, aspartic acid, phenylalanine, threonine, tryptophan, methionine, pipecolic acid, valine, arginine, lysine, γ-aminobutyric acid,

histidine, delphinidin 3-biside (ruosmin), choline, pantothenic acid, riboflavin, vitamins A and C, fructose, glucose, sucrose, monohydroxylycopene, lycoxanthin, 6-amino-4-ethylpyrazaline, caffeic, chlorogenic and neochlorogenic acids, hydroxycinnamic acid, oxalic acid, pectins, scopoletin, trigonelline, withasomine. The fruit contains arachidic, linoleic, myristic, oleic, palmitic and stearic acids, diosgenin (also in root bark), tigogenin, β-amyrin, citrostadienol, cycloartanol, 24-methylenecycloartanol, 31-norcycloartanol, cycloartenol, 31-norcycloartenol, cycloeucalenol, daturnolone, daturadiol, lupeol, 4α-methylcholesta-8-enol, 4α,24-dimethylcholesta-7,24-dienol, 4α-methyl-24-ethylcholesta-7,24-dienol, 4α-14α,24-trimethylcholesta-8,24-dienol, gramisterol, lanost-8-en-3β-ol, 24-methylene-lanost-8-en-3-β-ol, 31-norlanost-9(11)-enol, 24-methyl-31-norlanost-9(11)-enol, lanosterol, lophenol and its 24ϖ-ethyl and 24-methyl derivatives, obtusifoliol (seeds); chlorogenic, hydrocaffeic, protocatechuic and trans-caffeic acids,4-ethylcatechol. The leaves contain p-aminobenzaldehyde, ethylcaffeate, trans-ferulic acid, N-trans-feruloyltyramine, N-trans-p-coumaroyltyramine, vanillin and isoscopoletin. The root contains n-alkanes, arginine glycoside phytoalexin (lubimin), imidazoylethylamine, neotigogenin, solanina solasonin, β-sitosterol and stigmasterol (Negi *et al.*, 1993).

Uses:

Ethnomedicinal Uses: Anticholesterolemic, antidote for poisons, astringent, narcotic and poultice (Parmod *et al.*, 2004; Cheryl *et al.*, 2007).

Folk Uses and Recipe: Fruit is used as food and leaves are narcotic.

Plant No: 29. *Vitex negundo* L.

Botanical Name: *Vitex negundo* L. (Fam: Verbinaceae). Local Name: Sumbhaloo. Parts used: Whole plant.

Chemical constituents: The leaves of *Vitex negundo* contains new flavone glycoside (Om, *et al.*, 2007; Sathiamoorthy *et al.*, 2007). The constituents of the leaf oil are α-pinene (35%), limonene (11%) and bicyclogermacrene (9%), while the fruit oil contained α-pinene (32%), bicyclogermacrene (14%) and limonene (11%), and the flower oil contained α-pinene (14%), bicyclogermacrene (9%) and limonene (6%).

Uses:

Ethnomedicinal Uses: Anti-rheumatic, anti-inflammatory, antifungal, antibacterial, febrifuge, expectorant, and tonic. Used to cure stomachache, eye disease, pain in body, catarrhal fever, headache and earache (Sathiamoorthy *et al.*, 2007).

Folk Uses and Recipe: Decoction of leaves is used as febrifuge and vermicide.

Plant No: 30. *Withania somnifera* Dunal.

Botanical Name: *Withania somnifera* Dunal. (Fam: Solanaceae). English Name: Winter cherry. Local Name: Asagandh. Parts used: Leaves and seeds.

Chemical constituents: It contains Withaferin A, chemically characterized as (4β, 27-dihydroxy-5β-6β-epoxy-1-oxowitha-2, 24-dienolide), withianolide A, D, withinone (Sangwan *et al.*, 2004). The roots of *Withania somnifera* contain two new sterols, namely 3-epi-β-sitosterol and 20, (21)-dehydrocampesterol along with β-sitosterol and campesterol (Kumar *et al.*, 2000).

Uses:

Ethnomedicinal Uses: Adaptogenic, anticancer (Christina *et al.*, 2004), anti-convulsant, immunomodulatory, antioxidative. It is used to cure arthritis, geriatric, behavioural and stress-related problems. It is also used as nervine tonic, memory and cognition improver, natural sleep inducer, anxiolytic. Relieves anxiety neurosis, physical and mental stress, and relieves general debility and depression. It is used to treat sexual impotency, oligospermia, and general weakness, fatigue, convalescence, recuperation from general debility, neurasthenia and better disease resistance (Sangwan *et al.*, 2004).

Folk Uses and Recipe: Aqueous infusion of leaves is used as narcotic and diuretic.

Fig. 1. Collected medicinal plants of Districts Dadu and Jamshoro, Sindh, Pakistan.



Acacia nilotica.



Abutilon indicum.



Aegle marmelos.



Aerva javanica.



Alhagi maurorum.



Bauhinia veriegata.



Brassica juncea.



Cassia holosericea.



Calotropis procera.



Caesalpinia bonduc.



Cardiospermum grandiflorum.



Capparis ∃eciduas.



Capparis spinosa.



Chenopodium album.



Chorchorus depressus.



Datura alba.

Fig. 2. Collected medicinal plants of Districts Dadu and Jamshoro, Sindh, Pakistan.



Eclipta alba.



Fagonia cretica.



Ficus bengalensis.



Hipophae salicifolia.



Mangifera indica.



Malva sylvestris.



Malva parviflora.



Melilotus indicus.



Portulaca oleracea.



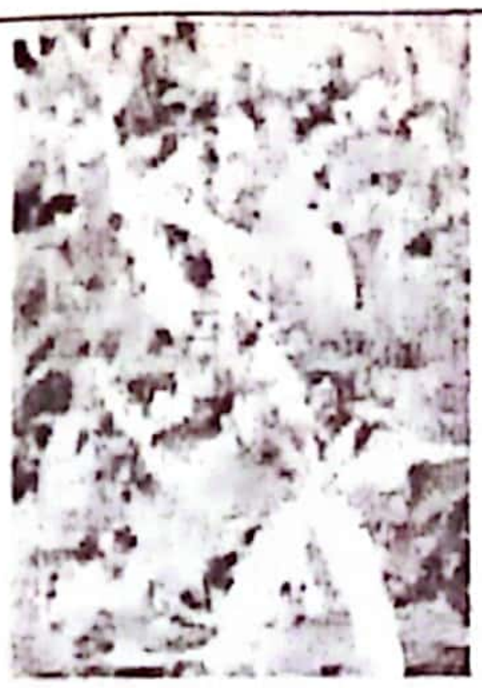
Solanum surattense.



Solanum nigrum.



Solanum melongena.



Vitex negundo.



Withania somnifera.

Table 1. Collected medicinal plants from Dadu and Jamshoro Districts, Sindh, Pakistan.

S.#	*Botanical name*	Local name	Family	Folk uses
01	*Acacia nilotica* Lam. Willd.	Babul.	Leguminosae.	Anti-diarrheal for animals.
02	*Abutilon indicum* L. Sweet.	Pat-tir.	Malvaceae.	Laxative & Diuretic.
03	*Aegle marmelos* L. Correa.	Bel geeri.	Rutaceae.	Anti-dysentery.
04	*Aerva javanica* Burm.F.	Booh.	Amaranthaceae	Anti-inflammatory.
05	*Alhagi maurorum* Medic.	Kandeero.	Papilionaceae.	Anti-rheumatic. Anti-piles.
06	*Bauhinia veriegata* L.	Kachnar	Caesalpinaceae	Useful in skin diseases.
07	*Brassica juncea* L. Czern.	Saranh.	Cruciferae.	Diuretic.
08	*Cassia holosericea* Fresen.	Jhangli senna.	Caesalpinaceae	Cathartic & Anthelmintic.
09	*Calotropis procera.* Aiton.	Akk.	Asclepiadaceae	Anti-rheumatic.
10	*Caesalpinia bonduc* L. Roxb.	Kharpat.	Caesalpinaceae	Anti-asthmatic.
11	*Cardiospermum grandiflorum.* Sw.	Baihee amla.	Sapindaceae.	Anthelmintic.
12	*Capparis decidua* Forssk.	Kirrir.	Capparidaceae.	Alexipharmic.
13	*Capparis spinosa* L.	Gollaro.	Capparidaceae.	Analgesic.
14	*Chenopodium album* L.	Jhill.	Chenopodiaceae.	In hepatic & spleen disorders.
15	*Chorchorus depressus* L.	Mundairie.	Tiliaceae.	Used in gonorrhoea.
16	*Datura alba* Nees.	Chario daturo.	Solanaaceae.	Antiseptic & Analgesic.
17	*Eclipta alba* L. Hassk.	Bhangro.	Compositae.	Anti-asthmatic.
18	*Fagonia cretica* L.	Damaho.	Zygophyllaceae.	Febrifuge, used in snake bite.
19	*Ficus bengalensis* L.	Bharh.	Moraceae.	Used in diabetic & lumbago.
20	*Hipophae salicifolia* D. Don.	Beehni.	Eleagnaceae.	Used in jaundice.
21	*Mangifera indica* L.	Anbh. / Amm.	Anacardiaceae.	Antiseptic & Anti-scorbutic.
22	*Malva sylvestris* L.	Khubazzi.	Malvaceae.	Emollient & Febrifuge.
23	*Malva parviflora* L.	Gogi sagh.	Malvaceae.	Anti-inflammatory.
24	*Melilotus indicus* L.	Sinjhi.	Papilionaceae.	Emollient.
25	*Portulaca oleracea* L.	Lunak.	Potulacaceae.	Vermifuge & Diuretic.
26	*Solanum surattense* Burm. F.	Aederi.	Solanaceae.	Expectorant & Anthelmintic.
27	*Solanum nigrum* Auctplur.	Kailperoon.	Solanaceae.	Sedative. & anti-piles.
28	*Solanum melongena* L.	Waghan.	Solanaceae.	Leaves are narcotic.
29	*Vitex negundo* L.	Sunbhaloo.	Verbinaceae.	Febrifuge & Vermicide.
30	*Withania somnifera* Dunal.	Assgandh.	Solanaceae.	Narcotic & Diuretic.

4. Discussion

The prehistoric people of all ages had knowledge of medicinal plants which they aquire as a result of trial and error. This knowledge still exists and many plants are used in traditional herbal remedies as whole plant or part of plant or its aqueous extract is used. Pakistan has a diverse flora containing about 6000 species of phenerograms. It is estimated that around 700 plant species are used as medicinal or aromatic plants.

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In Dadu and Jamshoro districts, it is recorded that most of species are used for multiple therapies. For example aqueous extract of leaves of *Withania somnifera* is used as narcotic and diuretic and juice of *Solanum surattense* leaves is used as expectorant, Antihelmintic, and anti-asthmatic.

The medicinal plants which are collected from districts Dadu and Jamshoro Sindh Province of Pakistan are utilized by local people to treat and cure various diseases such as infusion of pods of *Acacia nilotica* is used as anti-diarrheal, and flowers are used for infertility in animals. Infusion of leaves of *Abutilon indicum* traditionally are used to cure asthma, gonorrhoea and in toothache as mouthwash. The phytochemical study is failed to attribute these therapeutic activities to any chemical constituents of *Abutilon indicum* leaves. Plant fumigation and plant paste of *Aerva javanica* plant with water is used for treatment of sexual incapacity, sexual asthenia, frigidity and aphrodisiac. Although ethnopharmacological its sedative effect is observed so there is need to stop such use of this plant by local people by informing scientific exploration.

Local people had a little knowledge about proper use and phytochemicals of medicinal plants. So various awareness programs can be adopted to inform the people from the hazardous effects of medicinal plants by informing them verbally or document the scientific research in local language so that misuse of such medicinal plants can be minimized.

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