



An ethnobotanical survey of medicinal plants in Cuddalore district

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ABSTRACT

India is a versatile emporium of medicinal plants and aromatic plants. The use of medicinal plants for the treatment of various diseases in Cuddalore district was studied. The main data was collected by a series of informal interviews and general conversation administered by the traditional medical practitioners. A number of hundred and thirty one (131) plant species belonging to 113 genera from 55 families were described as being traditionally used for the treatment of diseases. Discussion: From the study, plant species could be considered as a promising source for further scientific validation in the search for new, effective and affordable drugs. This report represents a useful long lasting document, which can contribute to preserve knowledge on the use of medicinal plants in this region and also stimulate the interest of future generation on traditional healing practices.

Keywords— Herbal medicine, Ethnobotanical survey, Cuddalore, Plant parts

1. INTRODUCTION

Herbal product is a source for bioactive compounds and has the potential for developing some novel therapeutic agent. Herbs are staging a comeback and herbal “renaissance” is happening all over the globe. Over the last decade, there has been a growing interest in drugs of plant origin and such drugs formed an important class for disease control.

According to the world health organization (WHO), approximately 80% of the world’s population relies on traditional medicine to fulfill their daily health needs (Simbo, 2010; Singh et al., 2012). The practice of herbal medicine is wide spread in China, India, Japan, Pakistan, Srilanka and Thailand (Deep et al., 2013; Krishnamoorthi et al., 2015; Salisu et al., 2015).

India is a versatile emporium of medicinal plants and aromatic plants. It has been estimated that out of 15,000 higher plants occurring in India, 9,000 are commonly useful, of which 7,500 are medicinal, 3,900 are edible, 700 are culturally important, 525 are used for fibre, 400 for fodder, 300 for pesticide and insecticide, 300 for gum, resin and dye and 100 are incense and perfume (Rajendran et al., 2008).

The herbal products today symbolize safety as it is free from side effects, adverse effects and they are economical, easily available (Alagesaboopathi, 2012; Seru Ganapathy et al., 2013) in contrast to the synthetics that are regarded as unsafe to human and environment (Jagtap et al., 2013). Medicinal plants contain some organic compounds which provide definite physiological action on the human body, as well as their physiological activities due to the presence of the bioactive substance, include tannins, alkaloids, carbohydrates, terpenoids, steroids and flavonoids (Divya et al., 2015).

Approximately 25% of known plants have been used in pharmaceutical studies, impacting the healthcare system in positive ways such as treating cancer and harmful diseases. Of the 252 drugs in the World Health Organization’s essential medicine list, 11 percent are exclusive of plant origin. Plants are able to produce a large number of diverse bioactive compounds (Simbo, 2010; Ayyanar and Ignacimuthu, 2011; Altemimi et al., 2017).

Consequently, the development of drug resistance in human pathogens against commonly used antibiotics has necessitated a search for new antimicrobial substances from other sources including plants. Traditional medical practitioners in Nigeria use herbal preparations to treat microbial infections such as typhoid and paratyphoid infections (Ali et al., 2017).

The ethnobotanical survey is an important step in the identification, selection, and development of therapeutic agents from medicinal plants (Abubhakar et al., 2016). It has become a crucial area of research for development in resource management and biodiversity conservation. It provides us profound understanding and appreciation of the richness and intimacy of the relationship between nature and human (Jagtap et al., 2013).

The knowledge of medicinal plants is normally passed orally from one generation to the next (Ahmed, 2016; Alfa et al., 2018) and if the next generation has no interest then the information is grossly lost lacking its continuity. Due to changing life style, extreme secrecy of traditional healers and negligence of youngsters, the practice and dependence of ethnic societies in folk medicines is in rapid decline globally therefore ethnobotanical exploitation and documentation of indigenous knowledge about the usefulness of such a vast pool of genetic resources is deliberately needed (Lingaiah and Nagaraja Rao, 2013). The peoples of Nigeria believe that all plants are medicinal (Mowobi et al., 2016). It is these facts that prompted this study to explore the use of medicinal plants for the treatment of various diseases used by the peoples of Cuddalore district.

2. MATERIALS AND METHODS

2.1 Study Area

Cuddalore is one of the largest city in the South Indian state of Tamil Nadu. It is located at 11.75°N 79.75°E. Apart from fishing and port related industries, Cuddalore houses chemical, pharmacological and energy industries in SIPCOT, an industrial estate set up by the state government. According to the 2011 census, Cuddalore district had a population of 2,605,914 and it comprises 10 taluks, 13 blocks, 5 municipalities, and 18 town panchayats. The district contributes significantly to the Tamil Nadu state production of cashew nut and jack fruit.

2.2 Ethnobotanical Survey

The main data sources consisted of a series of informal interviews and general conversation administered by the traditional medical practitioners. The information's gathered was sorted; the data collected included the local names of plants and parts of the plants used and method of using medicinal plants. Botanical name of the species, local name family and their uses were authenticated.

3. RESULTS

3.1 Ethnobotanical survey

A total number of hundred and thirty one (131) plant species belonging to 113 genera from 55 families were described as being traditionally used for the treatment of diseases by the villagers which include shrubs and trees. The plant parts mostly used were leaves, root bark, and fruits. The diseases used to be healed by these medicinal plants are asthma, jaundice, piles, rheumatism, dysentery, gynecological problems, cold, cough, fever, toothache, earache, skin diseases, scorpion sting, joint pains, and wound healing.

3.2 Characteristics of recipes used

It was observed that recipes were made in a combination of different parts from more than one plant species including fruits and leave mostly, while some were made from a single plant part. The most preferred mode of administration was oral, while decoction, infusion, paste, and powder were the most preferred methods of preparation. The leaves are the most used parts in the treatment of diseases, followed by stem bark and roots.

4. DISCUSSION

From the study, plant species could be considered as a promising source for further scientific validation in the search for new, effective and affordable drugs. Some of the plant species were considered to have an antimalarial activity which includes *Azadirachta indica*, *Carica papaya*, *Mangifera indica* and *Psidium guajava* (Abubhakar et al., 2016).

The leaves formed the most frequently used plant parts in the traditional treatment of various diseases as it occurred as a component in many herbal preparations (Mohammed et al., 2015). The use of leaves could be justified by the abundance of chemical groups they contain. In fact, leaves are known as main synthesis site of secondary metabolites in plants and are the most commonly used plant parts by the traditional medical practitioner (Abubhakar et al., 2016). The leaves are the main photosynthetic organs containing photosynthates which might be responsible for medicinal value. Another reason of using leaves could be concerning conservation of the plants as digging out roots might be the cause of death of the plant and putting the species in a vulnerable condition (Kumar Dey et al., 2014). Over 70% of the plant collection involves destructive harvesting because of the use of the parts like roots, bark, wood, stem and whole plant in case of herbs (Sivasankari et al., 2013).

The use of freshly collected plant parts was preferred by most of the respondents. Studies had also shown that there were quantitative and qualitative differences in the essential oil components of fresh and dry plant materials (Abubhakar et al., 2016; Shukla et al., 2010). The combination of different plants and parts in the preparation of herbal remedy is not uncommon among respondents and it is believed that some plants enhance the action of other herbs. Polyherbal therapy is said to be a current pharmacological principle having the advantage of producing maximum therapeutic efficacy with minimum side effects (Abubhakar et al., 2016).

Medicinal plants are prepared in the form juice or extract followed by infusion, decoction, and paste (Aadhan and Anand, 2017). Most plants were used to treat more than one medical conditions (Deep et al., 2017).

Most young people are not interested in traditional medical practice because it is less profitable compared to the growing cash crops. A commonly held view by the young people is that traditional medicine is superstitious and something for the poor and uneducated may result in a loss of this rich and useful knowledge (Simbo, 2010). Most interestingly, the herbal medicines are used in the case in which a chemical medicine has no effect on their health as an alternative with the hope of curing certain diseases (Ahmed, 2016).

5. CONCLUSION

The investigation proves that the study area is rich in traditional and herbal medicines with different medical uses. This report represents a useful long lasting document, which can contribute to preserve knowledge on the use of medicinal plants in this region and also stimulate the interest of future generation on traditional healing practices. The photochemical study of plants and screening by a team of experts may give an idea to local people about the collection and conservation of important plants. One of the major problems with the herbal formulation is that the active ingredients are not well defined. It is important to know the active component and their molecular interactions, which will help to analyze the therapeutic efficacy of the product and also to standardize the product.

6. REFERENCES

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APPENDIX

Table 1: Description of medicinal uses of plants used by traditional healers from Cuddalore district, Tamil Nadu, India

S. No	Plant Name	Family	Vernacular Name (Tamil)	Part Used	Medicinal Uses
1	<i>Andrographis paniculata</i>	Acanthaceae	Sirianangai/ Nilavembu	Whole plant/ Leaf	Leaf extract to treat jaundice. Dried leaf extract to treat body pain. Plant paste is applied externally for skin disease Decoction of whole plant is given orally twice a day in malarial fever.
2	<i>Hygrophila auriculata</i>	Acanthaceae	Neerumuli	Whole plant/Leaf	Leaf decoction are taken orally in the case of anemia and edema Whole plant paste is applied to treat body swellings. Powdered leaves are given with water to cure leucorrhoea.
3	<i>Justicia adhatoda</i>	Acanthaceae	Adathodai	Leaf	Leaf extract is taken internally to relieve cough and cure asthma.

4	<i>Achyranthes aspera</i>	Amaranthaceae	Nayuruvi	Whole plant/ Leaf/ Root	Fresh leaf juice mixed with dried ginger is applied externally to cure eye injuries and infections of cattle. Whole plant extract is given orally once as antidote in snakebite. Root decoction is used in stomach pain, fever and cough.
5	<i>Alternanthera sessilis</i>	Amaranthaceae	Vellai ponnanganni	Shoots/ roots/leaf	Shoots are used piles. Roots for stomach problems. Leaves to reduce blood glucose level.
6	<i>Amaranthus spinosus</i>	Amaranthaceae	Mulaikeerai	Leaves /Roots	Leaves keeps intestine clean and to treat anemia. Root paste is applied on stomach to treat urinary disorder.
7	<i>Celosia cristata</i>	Amaranthaceae	Kozhi kondai	Leaves	Leaf paste with honey consumed internally cures uterine bleeding, diarrhea and urinary tract infection.
8	<i>Spinaceae oleraceae</i>	Amaranthaceae	Palakkeerai	Leaves	Reduces hypertension, prevents anemia.
9	<i>Allium cepa</i>	Amaryllidaceae	Vengayam	Bulb	Raw bulb juice is taken to check sunstroke vomiting
10	<i>Allium sativum</i>	Amaryllidaceae	Poondu	Leaf/bulb	Leaf and bulb taken orally to control diabetes.
11	<i>Anacardium occidentale</i>	Anacardiaceae	Mundiri	Leaves/ stem bark	Decoction used for diarrhea and thrush.
12	<i>Mangifera indica</i>	Anacardiaceae	Maa	Leaves/seed/s tem/root/bark	Latex is applied over gums and teeth twice a day to cure pyorrhea. Seed kernel is taken internally to cure ring worm infection. Seed kernel with curd for dysentery. Used against malaria, diarrhea, and diabetes. Bark used for dysentery.
13	<i>Annona reticulata</i>	Annonaceae	Sitapalam	Leaves/stem bark	Paste taken orally with milk daily in the morning to cure diabetes. Decoction for cancer and piles.
14	<i>Coriandrum sativum</i>	Apiaceae	Kotthumalli	Leaf/seeds	Leaf paste is applied on allergic inflammation Green leaves are used in the preparation of soft drinks along with sugar and given orally for stomach ache.
15	<i>Catharanthus roseus</i>	Apocynaceae	Nitiyakalyani	Leaves/bark/ flower	Dry bark powder is used for cancer therapy Flower mixed with hot water and given orally to cure diabetes.
16	<i>Thevetia neriifolia</i>	Apocynaceae	Manja arali	Leaves / Roots	Used for cough, bronchitis and skin diseases.
17	<i>Wrightia tinctoria</i>	Apocynaceae	Veppaalai	Leaves	Leaves juice mixed with lime and turmeric powder is applied externally to the swellings.
18	<i>Areca catechu</i>	Arecaceae	Kottai pakku	Fruit	Applied on burns. Used for body refreshment
19	<i>Borassus flabellifer</i>	Arecaceae	Panai	Toddy	Fresh toddy is taken orally as cooling beverage.
20	<i>Cocos nucifera</i>	Arecaceae	Thennai	Toddy	Fresh toddy is taken orally as cooling beverage.
21	<i>Colocasia esculenta</i>	Arecaceae	Shaappamkizhangu	Tuber	Boiled root tubers consumed to cure piles.
22	<i>Phoenix sylvestris</i>	Arecaceae	Icham	Roots	Used for tooth ache.
23	<i>Calotropis gigantea</i>	Asclepiadaceae	Erukku	Leaves/milky latex/flower/ root	Leaves warmed in oil are applied in inflamed parts of the body. Warmed leaved covered with cotton cloth are tied on the painful parts of the body to cure rheumatic joints pain and swellings. Latex is applied externally around thumb nails and leg for getting immediate relief from burning sensation while passing urine. Flower powder is applied orally in cough, cold and bronchitis. Root paste is applied on boils, pimples and skin diseases.

24	<i>Calotropis procera</i>	Asclepiadaceae	Vellerukku	Latex	Used to treat scorpion bite.
25	<i>Hemidesmus indicus</i>	Asclepiadaceae	Nannari	Whole plants	Used against urinary diseases and skin troubles
26	<i>Sansevieria roxburghiana</i>	Asparagaceae	Marul	Stem	Juice used for ear ache
27	<i>Aloe vera</i>	Asphodelaceae	Kathalai	Leaves	Leaf paste with garlic is given to cattle to increase digestion. Leaf paste on heating with sugar given for fever and cough. Leaf paste with jiggery for menstrual problems.
28	<i>Eclipta alba</i>	Asteraceae	Manjal karisalanganni	Whole plant/leaves	Whole plant extract is taken orally as liver tonic, for jaundice and urinary disorders. Leaf is pasted for skin diseases.
29	<i>Eclipta prostrate</i>	Asteraceae	Karisalanganni	Whole plant/leaves	The poultice of whole plant is used for healing wounds and cuts.
30	<i>Tridax procumbens</i>	Asteraceae	Vettukkaaya thalai	Leaves/shoot	Leaf juice is used for healing cut and wounds. Leaf juice applied on insect bite. Powder is taken with water to cure leucorrhoea.
31	<i>Vernonia cinerea</i>	Asteraceae	Mukuthipundu	Whole plants	Used for skin diseases.
32	<i>Wedelia calendulacea</i>	Asteraceae	Majal karisalankanni	Leaves	Powder applied for hair loss.
33	<i>Basella alba</i>	Basellaceae	Kodi pasalai	Leaves	Dried powder used for stomachache, constipation.
34	<i>Bombax ceiba</i>	Bombacaceae	Elavampanchu	Leaves / Seeds	Powder mixed with goat milk is taken orally to treat diabetics.
35	<i>Brassica juncea</i>	Braceaceae	Kadugu	Seeds	Powder mixed with goat milk is taken orally to treat diabetics.
36	<i>Opuntia dillenii</i>	Cactaceae	Sapathikalli	Stem	Paste applied for wounds.
37	<i>Celtis australis</i>	Cannabaceae	Nettle	Leaves	Used to treat pains.
38	<i>Carica papaya</i>	Caricaceae	Pappali	Leaves/Seeds /Fruit	Cotton soaked with latex is put in between the affected teeth to cure toothache. Used against malaria, gonorrhoea. Fruit latex applied on piles, toothache and dysentery.
39	<i>Ipomoea batatas</i>	Convolvulaceae	Sakaraivalli	Tubers	Tubers boiled and taken to treat diabetes.
40	<i>Ipomoea carnea</i>	Convolvulaceae	Neyveli kattamanakku	Leaves	Leaf paste is applied over boils
41	<i>Coccinia grandis</i>	Cucurbitaceae	Kovai	Leaves	Leaf juice is used in diabetes and hypertension. Fresh leaves juice mixed with salt and breast milk is taken orally to cure eye disease.
42	<i>Cucurbita maxima</i>	Cucurbitaceae	Parangikai	Leaves/fruits	Cough, asthma
43	<i>Momordica charantia</i>	Cucurbitaceae	Pavakai	Fruits/leaves	Fruits given for diabetes and piles. Leaf juice used to remove worms.
44	<i>Mukia maderaspatana</i>	Cucurbitaceae	Musu-musukkai	Leaves	Paste used for body strength
45	<i>Cyperus rotundus</i>	Cyperaceae	Korai pul	Root	Root extract used to treat wounds.
46	<i>Acalypha indica</i>	Euphorbiaceae	Kuppaimeni	Leaves/whole plant	Leaf paste with lime juice is given in ringworm infection Leaf paste is applied on burns. Fresh leaf juice applied on rheumatoid arthritis. Leaf juice is applied externally for curing body itching. Leaf juice is used for cough. Whole plant decoction is given orally in toothache and earache.
47	<i>Jatropha curcas</i>	Euphorbiaceae	Kattamanakku	Stem/leaves	Fresh stem juice is gargled to cure tooth ache and angular stomatitis. Plant latex is used to cure head ache Juice for jaundice.
48	<i>Ricinus communis</i>	Euphorbiaceae	Amanakku	Leaf / seed	Leaves coated with mustard oil and warmed are applied externally on the chest and stomach during

					pneumonia fever. Leaf juice and milk on jaundice. Lukewarm seed oil is massaged over joints in rheumatism. Seed oil is used for cooling body during fever.
49	<i>Abrus precatorius</i>	Fabaceae	Kundumani	Seed	Seeds paste is used externally in skin diseases Seeds are administered in infection of nervous system and paste is applied locally on sciatica, stiffness of shoulder joints and paralysis.
50	<i>Albizia lebeck</i>	Fabaceae	Vagai	Bark	Bark powder mixed with unboiled goat milk, garlic, pepper and turmeric is given orally to cure rheumatic joints pain.
51	<i>Albizia saman</i>	Fabaceae	Thoongumoonji maram	Leaves	Used for colds, sore throat, head ache.
52	<i>Cajanus cajan</i>	Fabaceae	Thuvarai	Seeds	Cooked seed taken along with food is used to treat diabetes.
53	<i>Cassia auriculata</i>	Fabaceae	Avaram poo	Leaves / Flower / seeds	Flower used for stomach ache. Leaves used for skin irritation. Seeds used for diabetes
54	<i>Clitoria ternatea</i>	Fabaceae	Sangu pushpam	Leaves	Paste used for throat pain and swellings
55	<i>Pithecellobium dulce</i>	Fabaceae	Kodukkapuli	Leaves/root	Leaves together with salt cure indigestion. Roots for diarrhea and dysentery.
56	<i>Millettia pinnata</i>	Fabaceae	Pungai	Leaf/Bark	Leaves and bark powder is given orally to cattle for better digestion.
57	<i>Mimosa pudica</i>	Fabaceae	Thottalsuringi	Leaves	Paste applied for pimples
58	<i>Rhynchosia minima</i>	Fabaceae	Kaliyan thuvarai	Leaves	Leaves are used for healing wounds.
59	<i>Senna alata</i>	Fabaceae	Vandu kadi leaf	Leaves	Leaf extract used to treat constipation. Decoction used to treat hypertension. Shade dried stem bark is crushed with water/ coconut oil is used externally for chronic inflammation caused by insect bites.
60	<i>Sena auriculata</i>	Fabaceae	Avarai	Stem/leaves	Stem decoction mixed with garlic and powdered pepper is given to cattle as purgative. Leaf decoction for 8-10 days early in the morning for rheumatism.
61	<i>Sesbania grandiflora</i>	Fabaceae	Agathi	Leaves	Decoction used as body cooling agent
62	<i>Tamarindus indica</i>	Fabaceae	Puli	Fruit/Bark	Fresh fruit pulp paste mixed with lime is applied on the painful muscle swelling. Bark ash and coconut oil applied on burns Bark ash with honey in vomiting.
63	<i>Trigonella foenum-graecum</i>	Fabaceae	Vendayam	Seeds	Powder, decoction for anemia, diabetes, injuries, sore throat, rheumatism and cough.
64	<i>Leucas aspera</i>	Lamiaceae	Thumbai	Leaves/Whole plant	Fresh leaf juice mixed with turmeric powder is applied externally around throat tonsillities. Whole plant extract is taken in empty stomach to cure diabetes.
65	<i>Mentha spicata</i>	Lamiaceae	Pudhina	Entire plant	Leaves decoction is given orally to cure throat infection and indigestion Decoction of leaves with cinnamon is given orally to women for easy delivery.
66	<i>Ocimum americanum</i>	Lamiaceae	Nayitulasi	Whole plant	
67	<i>Ocimum basilicum</i>	Lamiaceae	Thulasi	Leaves	Headache, cold, bad breath, skin, cancer.
68	<i>Ocimum tenuiflorum</i>	Lamiaceae	Karunthulasi	Leaves	Leaf juice is dropped in ear to relieve ear ache Leaf decoction is used in fever. Leaf juice mixed with cumin is given to cure dry cough.
69	<i>Plectranthus amboinicus</i>	Lamiaceae	Omavalli	Leaves	Leaf is taken orally to cure whooping cough.
70	<i>Tectona grandis</i>	Lamiaceae	Thekku maram	Leaves	Decoction used for cold, piles and dysentery

71	<i>Vitex negunda</i>	Lamiaceae	Nochi	Leaves	Leaves are tied in cloth and made as a pillow in case of immediate relief from headache. Inhalation of leaf vapour in hot water cures sinus problem. Leaves, turmeric powder and salt applied on eye hurt of animals. Leaves used for cancer, whitening of hair and memory loss.
72	<i>Couroupita guianensis</i>	Lecythidaceae	Nagalingam	Leaves	Used to treat common cold, stomach ache and tooth ache.
73	<i>Asparagus racemosus</i>	Lilliaceae	Thanneervitanki langu	Leaves	Used to treat infertility, menopausal problems.
74	<i>Lawsonia inermis</i>	Lythraceae	Maruthani	Leaves	Leaf paste of dried leaves is applied externally as hair tonic and cooling effect.
75	<i>Punica granatum</i>	Lythraceae	Madhulai	Fruits	Used for stomach ache.
76	<i>Centella asiatica</i>	Mackinlayaceae	Vallarai	Leaves	Used for hair growth, head ache.
77	<i>Abutilon indicum</i>	Malvaceae	Thuthi	Leaves	Crushed leaf powder with wheat roti is given to cattle to treat diarrhea
78	<i>Hibiscus cannabinus</i>	Malvaceae	Pulicha keerai	Leaves	Prevents anemia, reduces hypertension
79	<i>Hibiscus rosa sinensis</i>	Malvaceae	Semparuthi	Flower/leaf	Flower extract is used in urinary tract problems. Fresh flower is chewed thrice a day to cure bronchitis and whooping cough, Stamina column is used as diuretic in kidney troubles. Leaf and flower paste is applied externally for hair growth and cooling effect. Leaves used to treat burning sensation, fatigue and skin diseases. Root extract used to treat cough and fever.
80	<i>Thespesia populnea</i>	Malvaceae	Puvarasu	Flower/leaves	Skin diseases, dysentery, piles
81	<i>Azadirachta indica</i>	Meliaceae	Veppai	Leaves/fruits, seed, bark	Leaf decoction is used in skin diseases Leaves juice for acidity. Poultice of leaves and bark is applied to boils Decoction of bark, gum, leaves and seeds are used in snakebite and scorpion sting. Bark for gynecological problems. Fresh fruit paste in water is applied over forehead to treat headache. Seed oil is taken orally to cure reddening and inflammation of eyes. Leaf extract along with neem oil is used to cure small pox and skin diseases.
82	<i>Melia azedarach</i>	Meliaceae	Malaivembu/Kattuvembu	Leaves	Juice taken orally to cure diabetes.
83	<i>Trichilia cannaroides</i>	Meliaceae	Karai	Leaves / bark	Used to treat cholera.
82	<i>Acacia caesia</i>	Mimosaceae	Soap bark	Bark / Flowers	Bark used against skin diseases. Flowers are used by women to treat menstrual disorders.
84	<i>Artocarpus heterophyllus</i>	Moraceae	Palaa	Leaf	Milky latex is applied externally as antibiotic to dog bite.
85	<i>Ficus benghalensis</i>	Moraceae	Aala	Leaf/roots	Latex is given to children in fever and dullness. Jiggery and crushed roots promote lactation in women.
86	<i>Ficus religiosa</i>	Moraceae	Arasamaram	Bark	Bark powder ashes on cow dung fire mixed with water is given to treat throat infection.
87	<i>Moringa oleifera</i>	Moringaceae	Murungai	Leaves/roots/ stem bark	Decoction in combination with alum used for Malaria Fresh leaf juice is taken during high blood pressure Powdered stem bark is taken orally as an antidote to poisonous bites. Decoction is taken as hot drink for diabetes.

88	<i>Musa paradisiaca</i>	Musaceae	Valai	Stem	Stem decoction is given to cure leucorrhoea. Juice obtained from central trunk is taken orally to dissolve the kidney stone.
89	<i>Eucalyptus tereticornis</i>	Myrtaceae	Thaila	Leaves	Inhalation of leaves vapour in hot water cures body pain.
90	<i>Psidium guajava</i>	Myrtaceae	Koya	Leaves and Steam bark	Decoction is consumed regularly for malaria, dysentery and gastro intestinal disorder.
91	<i>Syzygium cumini</i>	Myrtaceae	Naval	Bark/Seed	Fresh juice of bark is given with goat's milk in diarrhea. Bark boiled in water and gargled for toothache and pus in gums. Seed powder is taken orally to control diabetes.
92	<i>Bougainvillea spectabilis</i>	Nyctaginaceae	Kaagitha poo	Roots	Used in cough and fever.
93	<i>Nelumbo nucifera</i>	Nymphiaceae	Alli	Flower	Flower made to juice and taken to cure diabetes.
94	<i>Jasminum sambac</i>	Oleaceae	Kundu malli	Whole plant	Used antihelmintic, astringent.
95	<i>Pandanus fascicularis</i>	Pandanaceae	Thaalai	Leaves	Used for jaundice.
96	<i>Phyllanthus acidus</i>	Phyllanthaceae	Aria nelli	Leaves, bark, fruit	Peppered leaves are used to make a poultice to treat pains in bones, muscles, nerves and joints.
97	<i>Phyllanthus emblica</i>	Phyllanthaceae	Nelli	Fruit	Fruit jellies are taken as such to cure dysentery
98	<i>Phyllanthus niruri</i>	Phyllanthaceae	Keelanelli	Plant	Plant extract is used to cure jaundice.
99	<i>Piper betle</i>	Piperaceae	Vettilai	Leaves	Crushed and mixed with pepper powder boiled decoction in empty stomach for diabetes
100	<i>Piper nigrum</i>	Piperaceae	Milagu	Fruits	Used for cough, bronchitis, snake bite.
101	<i>Bambusa arundinacea</i>	Poaceae	Moongil	seed	Paste applied for rheumatism
102	<i>Cynodon dactylon</i>	Poaceae	Arugampul	Leaves	Juice for ulcer, as ear drop in earache. Paste is applied on cuts and wounds. Root infusion along with sugar is given orally in bleeding piles and indigestion,
103	<i>Oryza sativa</i>	Poaceae	Nel	Seed	Pain relief
104	<i>Saccharum officinarum</i>	Poaceae	Karumbu	Stem	Juice for jaundice, urinary diseases
105	<i>Portulaca oleraceae</i>	Portulacaceae	Paruppukeerai	Leaves	Paste reduces burns and wounds
106	<i>Portulaca quadrifida</i>	Portulacaceae	Pasalaikeerai	Leaves	Controls nerve weakness.
107	<i>Punica granatum</i>	Punicaceae	Madhulai	Fruit	Powder with water in morning and evening before meals for diabetes
108	<i>Zizyphus mauritiana</i>	Rhamnaceae	Ilanthai	Leaves / fruits	Used to treat piles and wound.
109	<i>Prunus dulcis</i>	Rosaceae	Badam	Seeds	Hair loss, thoracic inflammation, kidney stones and cold.
110	<i>Rosa damascena</i>	Rosaceae	Rose	Flower	Heart diseases
111	<i>Morinda tinctoria</i>	Rubiaceae	Nuna	Root, fruit, leaves	Haemorrhoidal pains and piles
112	<i>Aegle marmelos</i>	Rutaceae	Vilvam	Fruits	Diarrhea and dysentery
113	<i>Citrus limon</i>	Rutaceae	Lemon	Leaves /fruits	Leaves are chewed to expel intestinal worms. Root paste and fruit juices isn applied in pimples and dandruff.
114	<i>Limonia acidissima</i>	Rutaceae	Vilam	Fruit	Fruit juice used as health tonic.
115	<i>Murraya koenigii</i>	Rutaceae	Curry leaves	Leaves	Leaf extract is taken early in the morning to cure diabetes.
116	<i>Cardiospermum helicacabum</i>	Sapindaceae	Mudakkathan	Whole plant/leaf	Plant leaf extract reduces body pain. Decoction of whole plant is used for curing rheumatism and piles.
117	<i>Capsicum annuum</i>	Solanaceae	Milagai	Fruits	Application of red chillies mixed castor oil eases pain.

118	<i>Datura metal</i>	Solanaceae	Umathai	Root/leaf	About six inches long root is tied over the pregnant women to check abortion. Leaves warmed with castor oil and tied externally releases pus and heal wounds. Leaf smoke cures asthma. Juice and salt on swellings and pains in muscles of animals.
119	<i>Solanum erianthum</i>	Solanaceae	Kattuchundai	Fruits	Unripe fruits are taken internally for diarrhea.
120	<i>Solanum lycopersicum</i>	Solanaceae	Thakkali	Fruits	Controls blood pressure and dibetes.
121	<i>Solanum nigrum</i>	Solanaceae	Manathakkali	Whole plant/leaf	Decoction of whole plant is used in diarrhea and fever. Cooked leaves are taken orally to cure ulcer in mouth and stomach.
122	<i>Solanum torvum</i>	Solanaceae	Sundai	Fruits/leaves	Unripe cooked fruits are taken orally to eradicate intestinal worms. Leaves used for asthma and influenza
123	<i>Solanum trilobatum</i>	Solanaceae	Thoothuvalai	Leaves	Leaf extract is taken orally to cure cough and fever.
124	<i>Solanum virgianum</i>	Solanaceae	Kandankathiri	Whole plant / fruit	Decoction of whole plant is used in pneumonic fever. Fruit pulp is applied over gums and teeth in tooth ache and mouth ulcer. Unripe fruits are eaten to cure cough.
125	<i>Urtica dioica</i>	Urticaceae	Neetle	Leaves	Prevents bood pressure and diabetes.
126	<i>Lantana camara</i>	Verbenaceae	Unnichedi	Leaves	Used for dysentery.
127	<i>Tectona grandis</i>	Verbenaceae	Thekku maram	Seeds	Used aginst dandruff
128	<i>Cissus quadrangularis</i>	Vitaceae	Pirandai	Stem	Used for piles, asthma
129	<i>Curcuma longa</i>	Zingiberaceae	Manjal	Rhizome	Powdered rhizome with milk is given in internal injuries. Dried rhizomes are used in cough and cold. Rhizome paste is applied to reduce body swelling and for healing of wounds.
130	<i>Zingiber officinale</i>	Zingiberaceae	Ingi	Rhizome	Fresh rhizome juice is taken internally for improving digestion.
131	<i>Tribulus terrestris</i>	Zygophyllaceae	Nerunji	Fruit/leaf/shoot	Powdered fruits are taken with water in urine disorders. Leaf juice is used for jaundice. Vegetable given in waist pain. Decoction on seminal disability.