

Medicinal plants and their traditional uses in local communities around Sivanmalai hills, Tiruppur district, Tamil Nadu, India

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Abstract

The present study is focused on the documentation of medicinal plants from the Sivanmalai hills, Tiruppur district and the frequently utilized medicinal plants by the local people. The plants were surveyed through field visit and the medicinal uses were documented by interacting with the local people in the surrounding area. The medicinal plants were tabulated with their Botanical name, Family name, Vernacular name, Parts used and therapeutic uses. Totally 101 plant species belonging to 40 family and 88 genera were documented. The reported medicinal plants are used for treating various kinds of diseases like diabetics, diarrhea, skin diseases, rheumatism, asthma and urinary disorders. The survey possesses a prosperity information about the medicinal plants and medicinal property that are beneficial in the development of new drugs.

Keywords: medicinal plants, traditional medicine, Tiruppur district, therapeutic uses

Introduction

Plants are important element of traditional medicinal system. Plants are traditional healer of the immune system of indigenous people. Documentation of medicinal plants helps to identify the new plants in the society and it is also utilized for new drug development [1]. India have rich diversity of medicinal plants, around 7000 plant species are underutilization for medicinal purpose in the Indian traditional Medicinal System. In ancient system of medicine, 90% of the formulations depend upon the plants medicinal properties. Traditionally people utilize these medicines with practical knowledge that are inherited from generation to generation and also there is major traditional records [2]. In many countries, scientific investigations of medicinal plants have been initiated because of their contribution to healthcare. During the last periodic decades, there has been an enhancement involved in the analysis of medicinal and food plants and their use in diverse parts of India [3]. Historically all the drug preparations were the derivatives of plants. They are consumed in different form like crude extracts or mixture [4]. Herbal drugs are safer form for the treatment of various diseases. Traditional medicine still remains as a major choice to most of the people for various treatments [5]. In remote places local people depend on the medicinal plants for their health care [6]. The present study was carried out to survey the medicinal plants and also to document the frequently utilized medicinal plants by local people from Sivanmalai hills, Tiruppur district, Tamilnadu, India.

Materials and methods

Study area

The study was conducted in Sivanmalai hills, it is found in Eastern Ghats of Tamil Nadu. The study area is located at 5 km away from Kangeyam, Tiruppur district. The presiding deity in the Sivanmalai is Lord Murugan, Valli, and Deivanai. The temple is located in 2 km by hill road. It lies between 11°2' 8'' N latitude and 77°32' 15'' E longitude

and altitude ranges from 299 m from the above mean sea level. Generally, the climate of area is hot but during the Northeast monsoon season mean annual rainfall is only 650 mm received in 37.5 days. Sivanmalai is the pride of Eastern Ghats, the gem of Tamil Nadu, otherwise known as Sivachalam, Sivathri is a diversity rich region.

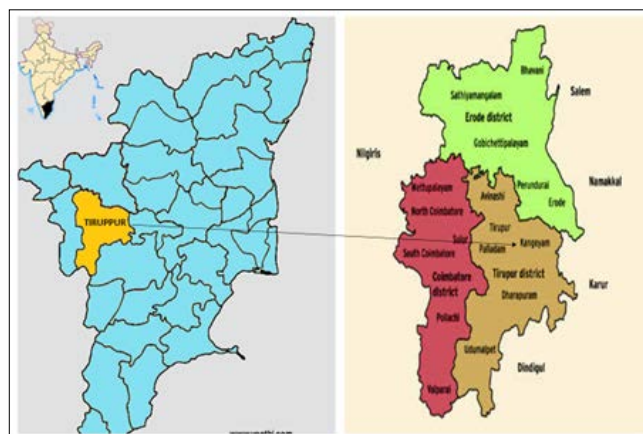


Fig 1: Map of Tiruppur District, Kangeyam town, Tamil Nadu, India.



Fig 2: The study area of Sivanmalai hills, Tiruppur District, Tamil Nadu, India.

Data collection

Extensive and repeated field survey was carried out during the month of October 2019 to April, 2020. The plants are enumerated alphabetically with their botanical name with author citation, family, habit form by referring Flora of Presidency of Madras and Flora of Presidency of Tamil Nadu Carnatic. The botanical data's were collected through discussions among traditional healers and local people residing near the study area. Most of the information was gathered from elderly people of an age group ranging from 50-80. The informants are selected based on their sound Knowledge of the medicinal plants. This information has transferred to successive generations. Totally 101 plant species belonging to 40 family and 88 genera were documented.

Results and Discussion

The present study was carried out to document the medicinal plant species from Sivanmalai Hills, Tiruppur district and frequently utilized plants by local people residing at Sivanmalai hills. Totally 101 number of plant species belonging to 40 families were documented. The Botanical name of the plants, their Family name, Vernacular name, Habit, Parts used, Therapeutic uses and mode of usage of administration furnished are given in the Table-1. The information provided in the table is collected from the local people through discussion and questionnaire method. [7] reported that the modern medical development based on oldest form of medicinal health care practice which includes the herbal medicine with great traditional knowledge basis. In this survey different parts of the plants were used by the local people for the ailments of various diseases.

Parts used

Among the parts used, the leaf part (100%) is highly used for the medicinal preparations followed by the roots (44%), flowers (19%), fruits (14%), seeds (12%), bark (10%), stem (3%) and tuber (2%). [1] stated that leaf part is extremely used for making herbal preparation, this is due to traditional healers are believe that leaves are more effective than the other parts of the plant. [8] conveyed that documentation of evidence on conventional herbal remedies is a beneficial trait of conservation strategy. Due to the unavailability of synthetic drugs in the rural areas people depend on the plants around them for their medical needs [9]

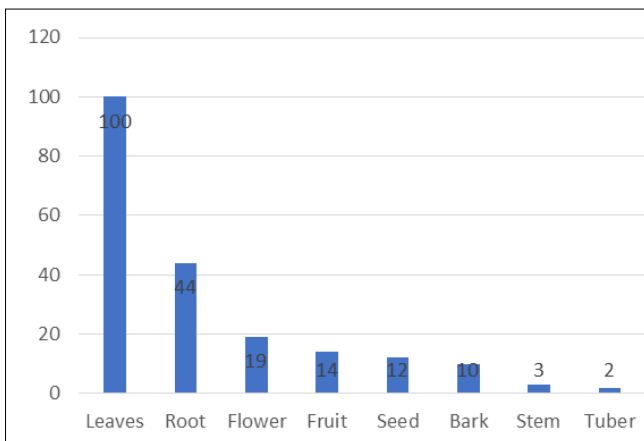


Fig 3: Percentage of the various plant parts used for the medicinal preparation by local people in Sivanmalai hills.

Frequently used Medicinal plants

Medicinal plants are frequently used by the local people and it is given in the Figure- 4. Some important medicinal plants are *Achyranthus aspera* (Amaranthaceae), *Adhatoda vasica* (Acanthaceae), *Alysicarpus vaginalis* (Fabaceae), *Acalypha indica* (Euphorbiaceae), *Aloe vera* (Liliaceae) *Cardiospermum halicacabum* (Sapindaceae), *Cissus quadrangularis* (Vitaceae), *Coccinia grandis* (Cucurbitaceae), *Cyperus rotundus* (Cyperaceae), *Indigofera enneaphylla* (Fabaceae). The majority of the remedies are taken orally and also for external application.[10] reported that the local people of Thoppampatti, Dindigul district consumed medicinal plants as major remedies externally and internally.

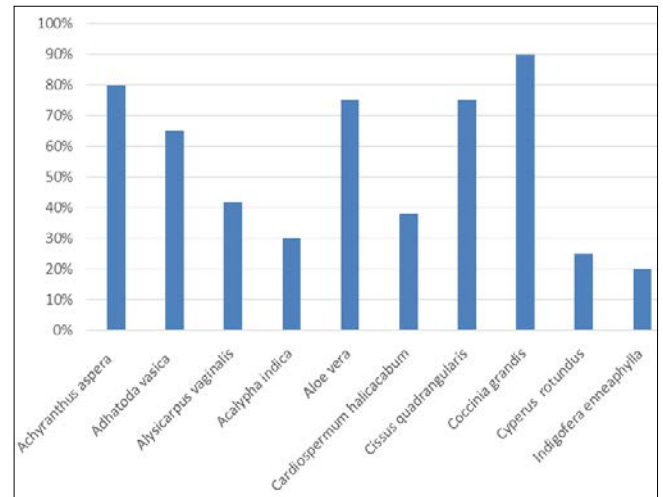


Fig 4: Percentage of some frequently utilized medicinal plant by local people in Sivanmalai hills.

Life forms

Life form of documented medicinal plants Figure- 5. indicated that herbs are the dominant species followed by climbers, shrubs, and tree. The area exposed that herb (61%) constituted the largest number and a smaller number of the climber (14%), shrub (13%) and tree (12%). [11] reported that distributed dominantly plants are widely in Pechiparai hills, Western Ghats. Environmental condition is played a vital role for all the plant community occur in the ecosystem.

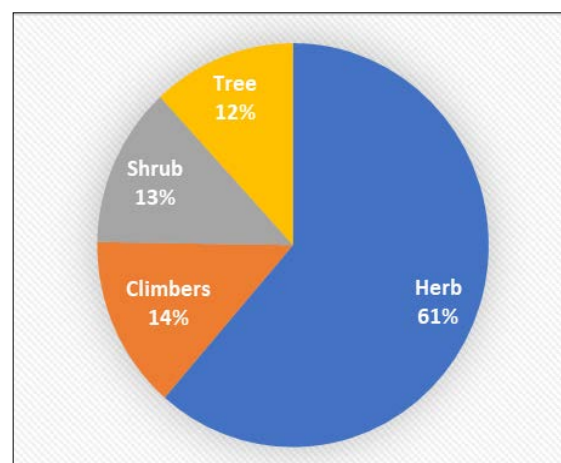


Fig 5: Percentage of life forms analysis.

Treatment for diseases

The results indicated that a single plant species is used to cure more than one ailment. *Abrus precatorius* is used to treat epilepsy, typhoid, dysentery and snake bite, *Acacia ferrunginea* for skin infection and ulcers, *Allimania nodiflora* for diarrhea and throat disorders, *Cassia absus* for liver diseases and tumors, *Clerodendru phlomidis* for asthma and diabetes mellitus, *Evolvulus alsinoides* for nervous debility, *Heliotropium indicum* for night blindness, *Hybanthus puberula* for urinary infection, *Jatropha gossypifolia* for blood purifier, *Plumbago zeylanica* for obesity and menstrual disorders, *Synedrella nodiflora* for rheumatism and headache. [12] stated that the local people utilized the plant for some diseases such as *Tribulus terrestris* for stomachic and urinary disorders, *Aegle marmelos* for diarrhea and dysentery, *Abrus precatorius* for nervous disorder, *Polycarphaea corymbosa* for jaundice and boils, *Portulaca quadrifida* for asthma and ulcer, *Tephrosia purpurea* for piles and skin problem. The local people are frequently used about 55 plant species for the treatment of common ailments like fever, cold, cough, dysentery, vomiting, ulcer, skin allergies, asthma problems, headache, diarrhea, throat infection, burns, inflammation,

urinaryinfection, wound healing, body pain, joint pain, eye inflammation, anemia, menstrual disorders, stomach disorders and tooth ache. [13] stated that local people residing at Kadambur hills frequently used many medicinal plants for minor treatments such as headache, jaundice, wounds, boils, cuts, diarrhea, skin infection, and general debility. The documentation method aids in analysing the active components and pharmacological functions of the plants were reported by [14]. The result of the present study provides evidence that the medicinal plants continue to play a vital role in the health care system and also it underlines the potential of the research and the need for the documentation of traditional knowledge pertaining to the medicinal plant utilization for the greater benefit of mankind.

Conclusion

The present survey concluded that the knowledge about medicinal plants in Sivanmalai hills and the natural health care system will get the greatest consideration in the world. Hence, this present study will improve the indigenous knowledge and strategies for conserving plants communities.

Table 1: Survey of medicinal plants from Sivanmalai Hills, Tiruppur district, Tamil Nadu, India.

S. No	Botanical Name	Family	Vernacular Name	Habit	Parts Used	Threapeutic Uses	Mode of Usage
1	<i>Abrus precatorius</i> L.	Fabaceae	Gundumani	Climbing vine	Leaves & seed	Typhoid, dysentery, nervous disorder & snake bite	External application
2	<i>Abutilon indicum</i> (L.) Sweet	Malvaceae	Thuthi	Shrub	Leaves, seeds & Root	Ulcer and bleeding disorder.	External application and oral intake
3	<i>Achyranthus aspera</i> L.	Amaranthaceae	Naiuruvi	Herb	Leaves, root & bark	Nervous disordes & diarrhea	External application and oral intake
4	<i>Acalypha indica</i> L.	Euphorbiaceae	Kuppaimeni	Herb	Leaves & root	Ulcers & skin diseases	External application and oral intake
5	<i>Acacia ferrunginea</i> DC.	Fabaceae	Velvelam	Tree	Leaves & root	Skin infection & ulcers	External application
6	<i>Adhatoda vasica</i> Nees	Acanthaceae	Adatodai	Shrub	Root & Leaves	Asthma problems	External application and oral intake
7	<i>Aerva persica</i> L.	Amaranthaceae	Perumpulai	Shrub	Root & flower	Headache & skin disease	External application
8	<i>A. lanata</i> (L.) Juss. ex Schult	Amarathaceae	Ciru pulai	Herb	Root	Cough, Asthma, jaundice & headache	External application and oral intake
9	<i>Ageratum conyzoides</i> L.	Asteraceae	Pumppillu	Herb	Leaves, stem & root.	Skin infection	External application
10	<i>Albizia amara</i> (Roxb.)B.Boivin	Fabaceae	Unjal	Tree	Leaves, flower & bark	Ulcer, skin disease & diarrhea	External application and oral intake
11	<i>A.lebbeck</i> (L.) Benth.	Mimosaceae	Velai thughumoonji maram	Tree	Leaves, flower & bark	Skin infection & ulcers	External application and oral intake
12	<i>Allimania nodiflora</i> (L.) R.Br. ex Wight	Amarathaceae	Kumti keerai	Herb	Leaves	Diarrhea & throat disorders	Oral intake
13	<i>Aloe vera</i> (L.) Burm.f	Liliaceae	Sothu katalai	Herb	Leaves	Heals burns & skin problem	External application and oral intake
14	<i>A.pungens</i> Forsskal.	Amaranthaceae	Mul ponnanganni	Herb	Leaves	Diarrhea & asthma	Oral intake
15	<i>Alysicarpus vaginalis</i> (L.) DC.	Fabaceae	Namappoond	postrate climber	Leaves & Root	Jaundice & diabetes	Oral intake
16	<i>Amaranthus cruentus</i> L.	Amaranthaceae	Pungikeerai	Herb	Leaves & seed	Blood pressure, ulcer & diarrhea	Oral intake
17	<i>Argemone mexicana</i> L.	Papaveraceae	Pirama Thandu	Herb	Leaves and seed	Asthma problem, malaria & urinary disorders.	External application and

							oral intake
18	<i>Asystasia gangetica</i> L.	Acanthaceae	Miti kirai	Herb	Leaves & flower	Diabetes.	Oral intake
19	<i>Bauhinia tomentosa</i> Sensu auct.	Fabaceae	Iruvatchi	Shrub	Bark	Thyroid & skin diseases	Oral intake
20	<i>Boerhavia diffusa</i> L.	Nyctaginaceae	Mukkurttaikkoti	Herb	Leaves	Kidney disorder, eye diseases & mainly treat for diabetes	Oral intake
21	<i>Cassia absus</i> L.	Caesalpiniaceae	Mulaipalyirai	Tree	Leaves	Liver diseases	Oral intake
22	<i>Catharanthus roseus</i> L.	Apocyanaceae	Nithyakalyani	Herb	Leaves, flower & root	Stomach ache & diabetes	Oral intake
23	<i>Calotropis procera</i> (Aiton) W.T.Aiton.	Asclepiadaceae	Velerukku	Shrub	Leaves	Skin disease & wound healing,	External application
24	<i>Cardiospermum halicacabum</i> L.	Sapindaceae	Mudakathan	Climber	Leaves & root	Diarrhoea	Oral intake
25	<i>Chenopodium album</i> L.	Chenopodiaceae	Chakaravarthy keerai	Herb	Leaves	Urinary problem & skin problem	Oral intake
26	<i>Cissus quadrangularis</i> L.	Vitaceae	Pirandai	Climber	Stem	Asthma, diabetes & joint pain	Oral intake
27	<i>Celosia argentea</i> L.	Amarathaceae	Panni keerai	Herb	Leaves	Diabetes & dysentery	Oral intake
28	<i>C. crristata</i> L.	Amarathaceae	Kozhi kondai	Sub - Shrub	Leaves	Eye inflammation, skin eruption & ulcer	Oral intake
29	<i>Clerodendru phlomidis</i> Var. rubrum	Verbenaceae	Taludalai	Shrub	Root, leaves & bark	Asthma problem	Oral intake
30	<i>Coccinia grandis</i> (L.) Voigt.	Cucurbitaceae	Kasappukovaikaai	Climber	Leaves & fruit	Skin eruptions, eye infections, Insect bites & Fever	Oral intake
31	<i>Commelina benghalensis</i> L.	Commelinaceae	Kanavazhai	Herb	Root, leaves & bark	Leprosy & nervous system disorders	Oral intake
32	<i>Corchorus trilocularis</i> L.	Tiliaceae	Talakkai poondu	Herb	Leaves	Skin disease	Oral intake
33	<i>Crotalaria juncea</i> L.	Fabaceae	Vakkunnar	Herb	Leaves & seed	Anemia, psoriasis & seed is promote the hair growth	Exxternal application and oral intake
34	<i>Crossandra infundibuliformis</i> Salisb.	Acanthaceae	Kattu Kanagamaram	Herb	Leaves & flower	Skin disease & insect bites	External application
35	<i>Croton bonplandianum</i> Bail.	Euphorbiaceae	Reilpoondu	Herb	Leaves	High blood pressure & skin disease	External application and oral intake
36	<i>Cucumis melo</i> L.	Cucurbitaceae	Thumattikai	Climber	Leaves & fruit	Diabetes & obesity	Oral intake
37	<i>Cynodon dactylon</i> L.	Poaceae	Arugampillu	Herb	Leaves & fruit	Diabetes & dysentery	Oral intake
38.	<i>Cyperus diffusus</i> Vahl.	Cyperaceae	Kudai pul	Herb	Leaves	Diabetes & diarrhoea	Oral intake
39.	<i>C. iria</i> L.	Cyperaceae	Yanaikkitti	Herb	Leaves & Tuber	Rheumatism & tuber used for treating fevers	Oral intake
40.	<i>C. rotundus</i> L.	Cyperaceae	Korai	Herb	Tuber	Diarrhea & menstrual irregularities	Oral intake.
41.	<i>Cymbopogon schoenanthus</i> (L.) Spreng	Poaceae	Karppura pul	Herb	Leaves	Diabetes & dysentery	Oral intake
42.	<i>Datura metel</i> L.	Solanaceae	Karu umatthai	Herb	Leaves & seed	Skin diseases, diarrhoea & fever	External application
43.	<i>Delonix elata</i> L.	Caesalpiniaceae	Vadaarayanan	Tree	Leaves & flower	Dysentery & throat disorders	Oral intake
44.	<i>Dipteracanthus prostrates</i> (poir.) Nees	Acanthaceae	Pottakanchi	Herb	Leaves & root	Healing of wounds, eye diseases & ulcer	External application and oral intake
45.	<i>Eragrostis uniolooides</i> L.	Poaceae	Poopul	Herb	Leaves &	Skin disease & ulcer	External application and
46.	<i>Euphorbia heterophylla</i> L.	Euphorbiaceae	Palperuki	Herb	Leaves & root	Root is used for increasing milk production in breast feeding women, Skin diseases, and Stomach ache problem	External application and oral intake
47.	<i>Euphorbia hirta</i> L.	Euphorbiaceae	Ammanpatchaiarisi	Herb	Leaves, flower & root	Skin disease, ulcer & diabetes	External application and oral intake

48.	<i>Evolvulus alsinoides</i> (L.) L.	Convolvulaceae	Vishnukranthi	Herb	Leaves, flower & root	Nervous disorder	Oral intake
49.	<i>Ficus racemose</i> L.	Moraceae	Atthi	Tree	Leaves, fruit & root	Stomachache & skin diseases	Oral intake
50.	<i>F. religiosa</i> L.	Moraceae	Arasu	Tree	Leaves, root & fruit	Ulcer, skin disease & diarrhea	External application and oral intake
51.	<i>Gloriosa superba</i> L.	Colchicaceae	Kannuvalik kodi	Climber	Leaves, flower & root	Snake bite, skin disease & kidney problems	External application and oral intake
52.	<i>Gymnenma sylvestre</i> (Retz.) Schult.	Apocynaceae	Amudupushpam	Climber	Leaves	Weight loss & diabetes	Oral intake
53.	<i>Heliotropium indicum</i> L.	Boraginaceae	Tetkotukki	Herb	Leaves & root	Dysentery	Oral intake
54.	<i>Hedyotis puberula</i> G.Don.	Rubiaceae	Chiruver	Herb	Leaves & root	Stomach ache & diabetes	Oral intake
55.	<i>Heteropogon contortus</i> L.	Poaceae	Oosipullu	Herb	Leaves	Diabetes & dysentery	Oral intake
56.	<i>Hibiscus cannabinus</i> L.	Malvaceae	Pulichhi	Shrub	Leaves	Dysentery & ulcer	Oral intake
57.	<i>Hybanthus enneaspermus</i> L.	Violaceae	Orilaitthamarai	Herb	Leaves & root	Urinary infection	Oral intake
58.	<i>Ipomoea nil</i> (L.) Roth	Convolvulaceae	Kakkattan	Climber	Leaves, seed & root	Skin disease & insect bites	External application
59.	<i>I. pes-tigridis</i> L.	Convolvulaceae	Punnaikkirai	Herb	Leaves	Headache & skin disease	External application
60.	<i>Indigofera enneaphylla</i> L.	Fabaceae	Seppu nerunjil	Herb	Leaves & flower.	Skin infection & burns	External application and oral intake
61.	<i>I. tinctoria</i> L.	Fabaceae	Avuri	Herb	Leaves	Nervous disorders, asthma & snake bites	External application and oral intake
62.	<i>Jatropha gossypifolia</i> L.	Euphorbiaceae	Siria amanakku	Shrub	Leaves, seed, & bark	Blood purifier	Oral intake
63.	<i>J. curcas</i> L.	Euphorbiaceae	Kattukotai	Shrub	Leaves & root	Skin diseases, respiratory & infectious disease	External application and oral intake
64.	<i>Justicia tranquebariensis</i> L.	Acanthaceae	Thavasi murungai	Herb	Leaves	Rheumatism, asthma & pneumonia	Oral intake
65.	<i>Martynia annua</i> L.	Martyniaceae	Thael kodukku	Herb.	Leaves, root, seed & fruit.	Sore throat, burns, skin affections & tuberculosis	External application and oral intake
66.	<i>Mimosa pudica</i> L.	Fabaceae	Thottar sinungi	Herb	Leaves, root & seed	Snake bites, diarrhea, small pox & jaundice	External application and oral intake
67.	<i>Mukia maderaspatana</i> (L.) M. Roem.	Cucurbitaceae	Musumusukkai	Climber	Leaves & fruit	Hyperacidity, asthma, dry cough & diabetes	Oral intake
68.	<i>Ocimum tenuiflorum</i> L.	Lamiaceae	Nai thulasi	Herb	Leaves & root	Skin disease, kidney stone & cures respiratory disorders	External application and oral intake
69.	<i>Oxalis corniculata</i> L.	Oxalidaceae	Puliyarei	Herb	Leaves & flower	Snake bite, diarrhea & stomachic	External application and oral intake
70.	<i>Passiflora foetida</i> L.	Passifloraceae	Poonaipiduku	Climber	Flower & fruit	Maintain healthy bones, prevent anemia and prevent cancer	Oral intake
71.	<i>Pentstemon capensis</i> (L.fil.) Bullock	Asclepiadaceae	Uppillangkodi	Climber	Leaves	Anemia, psoriasis & promote the hair growth	External application and oral intake
72.	<i>Pedaliium murex</i> L.	Pedaliaceae	Yanai nerunjil	Herb	Leaves, flower & fruits	Kidney stone, ulcers & Fever	Oral intake
73.	<i>Pergularia daemia</i> (Forsskal) Chiov.	Apocynaceae	Vaelipparuthi	Climber	Leaves & root	Diarrhea, rheumatic swelling & malarial	Oral intake
74.	<i>Peristrophe paniculata</i> Nees.	Acanthaceae	Nagananda	Herb	Leaves	Fever, eye disease & ulcer	External application and Oral intake
75.	<i>Phyllanthus amarus</i>	Phyllanthaceae	Kizhaanelli	Herb	Leaves &	Dysentery, jaundice & ulcer	Oral intake

	Schumach.& Thonn.				root	problem	
76.	<i>Phyllanthus urinaria</i> L.	Phyllanthaceae	Cirukilanelli	Herb	Leaves & root	Jaundice & diabetes	Oral intake
77.	<i>Pithecellobium dulce</i> (Roxb.) Benth.	Fabaceae	Kodukapuli	Tree	Bark & fruit	Toothache & tuberculosis	Oral intake
78.	<i>Plumbago zeylanica</i> L.	Plumbaginaceae	Chithiramoolam	Herb	Leaves, root & flower.	Obesity and menstrual Disorders	External application and oral intake
79.	<i>Psilotrichum elliotii</i> Baker & C.B.Clarke	Amarathaceae	Manalik keerai	Herb	Leaves & root	Improve eye sight and snake bites	External application and oral intake
80.	<i>Salvia officinalis</i> L.	Lamiaceae	Seemaikarpurailia	Herb	Leaves, flower & fruit	Hair loss & psoriasis	External application and oral intake
81.	<i>Sarcostemma brunonianum</i> Wight & Arn.	Asclepidaceae	Kodikkalli	Climber	Flower	Skin disease & insects bites	External application
82.	<i>Senna auriculate</i> (L.) Roxb.	Fabaceae	Avaram	Herb	Leaves & root	Eye infections, Jaundice, Liver disease & Urinary tract disorders	Oral intake
83.	<i>S. occidentalis</i> (L.)Link	Fabaceae	Paayavarai	Herb	Leaves, root & seed	Urinary retention, Skin infections & cough	Oral intake
84.	<i>Sesbania grandiflora</i> (L.) Poiret	Fabaceae	Agathi	Tree	Leaves, flower, root & bark	Rheumatism, Itching & gastric troubles	Oral intake
85.	<i>Sida acuta</i> Burm. f.	Malvaceae	Arivalmukkan.	Herb	Leaves & root	Ulcer, dysentery & toothache problem	Oral intake
86.	<i>S. rhombifolia</i> L.	Malvaceae	Chith mutti	Herb	Leaves, stem & root.	Tuberculosis, nervous diseases & skin diseases	Oral intake
87.	<i>Solanum xanthocarpum</i> L.	Solanaceae	Kantankattari	Herb	Leaves, root & fruit.	Skin disease & toothache	Oral intake
88.	<i>Sphagneticola calendulacea</i> (L.) Pruski	Asteraceae	Manjalkarilamkanni	Herb	Leaves, flower & seed	Reproductive problems, & promote the Hair growth	External application and oral intake
89.	<i>Spermacoce ocymoides</i> Burm.f.var.	Rubiaceae	Tharakeerai	Herb	Leaves & flower	Cough, malaria & headache	Oral intake
90.	<i>Synedrella nodiflora</i> (L.) Gaertn	Asteraceae	Mudiyan pachchai	Herb	Leaves & root	Rheumatism & headache	Oral intake
91.	<i>Syzygium cumini</i> L.	Myrtaceae	Naaval pazham	Tree	Leaves, bark, seed & fruit	Mouth ulcers, sore throat & asthma	Oral intake
92.	<i>Thevetia peruviana</i> (Pers.) K. Schum.	Apocynaceae	Ponnarali	Shrub	Leaves, root & bark	Snake bite, nostrils problem & skin diseases	External application
93.	<i>Thespesia populnea</i> (L.) Sol.ex Correa	Malvaceae	Povarasam	Tree	Leaves & flower	Dysentery, skin disease & ulcer	External application and oral intake
94.	<i>Toddalia asiatica</i> (L.) Lam	Rutaceae	Kindu mulli	Shrub	Leaves, fruit & root	Malaria, Cough, chest pain & stomach problem	External application and oral intake
95.	<i>Trichodesma indicum</i> (L.) R. Br.	Boraginaceae	Kaasithumbai	Herb	Leaves, flower & root	Skin diseases, dysentery & snake bite	External application and oral intake
96.	<i>Trianthema portulacastrum</i> L.	Aizoaceae	Mookaratai	Herb	Leaves & root	Treat for anemia & stomache	Oral intake
97.	<i>Tridax procumbens</i> L.	Asteraceae	Vettukkayathalai	Herb	Leaves & flower	Skin disease & ulcer	External application and oral intake
98.	<i>Vernonia cinerea</i> L.	Asteraceae	Mukuttipundu	Herb	Leaves	Treat for round worms, coughs & skin disease	External application and oral intake
99.	<i>Vitex negundo</i> L.	Lamiaceae	Karu nochi	Shrub	Leaves, stem & root	Treat for asthma & ulcer	Oral intake
100.	<i>Wrightia tinctoria</i> R.Br.	Apocyanaceae	Nilapalai	Tree	Leaves	Skin disease & diabetes	External application and oral intake
101.	<i>Ziziphus mauritiana</i> Lam.	Rhamnaceae	Elanthai	Tree	Leaves, root & fruit	Stomache & fever	Oral intake

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