



## AN ETHNOMEDICINAL SURVEY OF MEDICINAL PLANTS UTILIZED BY FOLK PEOPLE OF THE THRISSUR FOREST CIRCLE, KERALA

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### ABSTRACT

**Background:** Malayans are the tribes, residing in Malappuram, Palakkad and Thrissur districts of the Western Ghats of Kerala state, themselves, they are collecting both wooden materials for spiritual purposes and non-wooden products such as honey, gum, resin, and herbs for their commercial income. Therefore, this study wanted to focus the plants those were utilised in a huge manner for traditional medical practices in the study area. **Materials and Methods:** The ethnomedicinal survey had been conducted from August 2015 to August 2017 in the tribal folk villages at Elanad, Thirumani and Machad forest areas, Western-Ghats, Kerala. At the time of field survey, many interviews had been conducted to know the edible medicinal plants. By using the Questionnaire, interviews and discussions were made in between investigators and the folk people in their local language according to the methodology recommended by Jain. **Results:** Current exploration had assembled much of data relevant to make use of 39 plants belonging to 28 families were used by peoples to the treatment of diseases in the study area. Totally 66 parts of the different plants are being used by folk villagers in the study area to make the variety of formulations, towards the treatment of diseases. Quite interestingly porcupine horn was used to make an herbal potion contains other ingredients such as honey, hen egg, lemon juice for treating asthma in the study area. **Conclusion:** The folk village communities use several of traditional plants on a daily basis to heal a number of sicknesses in the regular practices. The Pesticide activity of *Cleistanthus collinus* and Anti asthmatic effect of *Hystrix indica* will be conducted in our institute in the near future.

**KEYWORDS:** Traditional healer, Machad, Malayan, Kerala, Herbs, Asthma.

### 1. INTRODUCTION

Malayans are the tribes residing in Malappuram, Palakkad and Thrissur districts of the Western Ghats of Kerala state, themselves, they are collecting both wooden materials for spiritual purposes and non-wooden products such as honey, gum, resin, and herbs for their commercial income. Peoples strongly believed that green products are secure, yet to consume together with synthetic molecules. Greenery medicaments provide care while initial unwell circumstances or to minimize unpleasant episodes created by synthetic molecules. An assortment of periodicals notifies that herb and drug interactions are mounting as herbal phytochemicals produced undesirable drug response. The unfavourable-response comes by means of interrelating acting cannot be acceptable provided the doctors are not known associated exercise of green-medicines. Now, much of researchers have undergone to searching for herbal and synthetic interconnections.<sup>[1]</sup>

Around the world, approximately twenty thousand herbage were consumed by folk medicine. More than ten thousands vegetation used in plant based -therapy in the habitual traditional system. More than seven-

thousand flora-life accounted as medicine in India, 65% population follows ethnomedicine is the main source of their primary health care needs. Over five-hundred-fifty clannish communes are brought into two hundred-twenty-seven ancestral categories reside in five-thousand hamlets in our country. Compile the information relevant to the knowledge of traditional medicines from the tribal and rural communities in various parts of India is needed and the collected data must be preserved. Preserved documented data corresponding to usage of bio-products facilitate to expose aboriginal proletarian wisdom tribes' in India. A botanical survey with documentation of data is crucial in-terms of storing up of natural's possessions and its upholding deployment.<sup>[2]</sup>

### 2. MATERIALS AND METHODS

#### 2.1. Study area

Thirumani, a small village settlement in Elanad and Machad forest division of Thrissur circle, Kerala, here totally 30 family units of Malayan tribes residing in a separate place, namely Adivasi colony.<sup>(3)</sup> Most of the family head and male elders went to a nearby forest to collect wooden matters; they were cut and sized to sell them in the market for the spiritual custom purpose.

They collected medicinal plants from wild if any demand made from Ayurvedic pharmaceutical industries. Most of the family units live in the government aided small house. In the early days these peoples were migrated from the Olakkara forest area, still, some of their relatives stayed there itself. Both woman and male peoples know many medicinal and wild food plants and spiritually used wooden products. This study compiled their aboriginal knowledge in respect of traditionally used medicinal plants through an ethnomedicinal survey.

## 2.2. Interviews with folk village people

The ethnomedicinal survey had been conducted from August 2015 to August 2017 in the tribal folk village at Thirumani in the Machad forest division, Western-Ghats, Kerala. At the time of field survey, many interviews had been conducted to know the edible medicinal plants. By using the Questionnaire, interviews and discussions were made in between investigators and the folk people in their local language according to the methodology recommended by Jain (1995)<sup>[4]</sup> The interview form prepared in both Malayalam and English-version handed-over to the informants of the folk village. The study compiled the data related to demographic profiles of informants and Ethno-medicinal knowledge. Much information relevant to plants were collected such as name of the plant, part used, therapeutic uses, formulations making protocols, administration mode, and dosage. In addition, botanical binomial name, family, the vernacular name has given.<sup>[5,6]</sup>

## 2.3. Ethical Consideration

Informants were informed about the objective and purpose of the study, after getting their verbal consent, the interview had conducted. The local community head was informed about the survey.

## 2.4. Data analysis

The data were analysed electronically by using the MS Excel spreadsheet for the percentage calculations on interview data's collected from villagers.

## 3. RESULTS

### 3.1. Sociodemographic profile of Informants at Thirumani

Totally 66 knowledgeable informants have been interviewed for this study among these 35 males and 31 females were interviewed and all belong to a folk village of Thirumani at most of the informants have interviewed were in the age range of 26 to 85 years. Regarding the level of education, most of the informants were completed school education. The study found one ethnic herbalist practicing traditional medicine as herbal healers. He received herbals all over the state and preparing numerous formulations including animal products. Non-ethnic people also practice herbal medicine exclusively for the treatment of all kinds of Jaundice. Both of them practices natural products surrounding area of Thirumani tribal area.

### 3.2. Plant families

Current exploration had assembled much of data relevant to make use of 39 plants belonging to 28 families were used by people in the study area. Each 3 families in Euphorbiaceae, Leguminosae, Rutaceae and each 2 families in Acanthaceae, Apocynaceae, Arecaceae, Bignoniaceae, Sapindaceae, and one family each in Alangiaceae, Acoraceae, Amaranthaceae, Asteraceae, Asclepiadaceae, Celastraceae, Cucurbitaceae, Caesalpiniaceae, Clusiaceae, Convolvulaceae, Fabaceae, Hypoxidaceae, Moraceae, Musaceae, Lamiaceae, Leeaceae, Scrophulariaceae, Sapotaceae, Zingiberaceae, Poaceae. Among the plant species an animal species *Hystrix indica* kerr., Hystricidae were also used by tribal healers for the treatment of asthma.

### 3.3 Part of the plant used categories

Totally 66 parts of the different plants are being used by folk villagers in the study area to make the variety of formulations, towards the treatment of diseases.

The plant parts were kind of leafy matters 20 (30.30%), root 13 (19.69%), Fruit 9 (13.63%), Bark 6 (9.09%), Seed 3 (4.54%), Whole Plant 3 (4.54%), Tuber 3 (4.54%), Flower 2 (3.03%), Stem 2 (3.03%), Wood 1 (1.51%), Rhizome 3 (4.54%), Latex 1(1.51%).

### 3.4. Route of administration of crude drugs

Various botanical preparations have given through the mouth, mostly infusion, decoction, and juice. Totally 34 preparations were consumed in the study area, among this oral administration is accounted as (15) 44%, and 18 preparations applied externally estimated as 53% and 1 preparation has inhaled calculated as 3%.

### 3.5. Formulation categories

Solo vegetation helped to make formulations in variety, sometimes only a few preparations taken as poly herbal formulations. Totally 60 plant products were consumed in different form in the study area is as follows Decoction (17) 28%, Juice (16) 26%, Paste (16) 26%, Powder (4) 6.66%, Oily preparation (1) 1.66%, Latex (1) 1.66%, Inhalation (03) 1.70%, Infusion (3) 5%, Volatile oil (1) 1.66%, Alcohol (1) 1.66%. The therapeutic plants used by folk villagers in Elanad and Machad forest are listed in the table 1.

**Table 1: A List of the medicinal plants used by the an ethnomedicinal survey of medicinal plants utilized by folk people of the Thrissur forest circle, Kerala.**

Sr.No.	Genus species	Local name	Part used	Dosage form	Indications	Direction
1.	<i>Alangium salvifolium</i> (L.F.) Wangerin, Alangiaceae	Ankolam/ Paypatti vishum/ Tree	Rt.	Decoction	Anti-rabies	Oral
			Lf.	Paste	Immunity enhancer	Oral
2.	<i>Aegle marmelos</i> (L.) Correa, Rutaceae	Koovalam/ Tree	Lf.	Juice	Anti diabetic	Oral
			Rt.	Paste	Immunity enhancer Ingredient of Dasamoola arista	
3.	<i>Acorus calamus</i> L. Acoraceae	Vayambu/ Herb	Rh.	Paste	Appetizer, Digestive, Dyspepsia, Colic, Anti-pyretic, Bronchitis, Asthma and Dysentery in children	Oral
			Lf.	Juice	Anthelminitic	
4.	<i>Borassus flabellifer</i> L. Arecaceae	Karimpana/ tree	St. pith	Juice	Rheumatism	Oral
5.	<i>Cardiospermum halicacabum</i> L., Sapindaceae	Ulincha, Valliuzhinja/ Climber	Lf.	Paste crushed with turmeric	Anti-inflammatory in arthritis	External
6.	<i>Cymbopogon flexuosus</i> Stapf., Poaceae	Inchipullu/ Herb	Lf.	Volatile Oil	Larvicidal, Antiseptic	External
7.	<i>Curculigo orchoides</i> Gaertn. Hypoxidaceae	Nilappana/ Herb	Tr. Rh.	Decoction Decoction	Nutritive /tonic Aphrodisiac Leucorrhoea	Oral Oral
			Tr.	Paste	Bone fracture	External
8.	<i>Cyathula prostrata</i> Blume. Amaranthaceae	Cheru kadaladi/ Herb	Rt.	Juice with coconut water	Abortifacient first trimester	Oral
			Lf.	Juice	Fever	Oral
9.	<i>Cocos nucifera</i> L., Arecaceae	Thenga/tree	Fr. Shell	Decoction	Anti-Cholesterimic Eye Boils	Oral External
			Fresh Lf. midrib	Paste		
10.	<i>Curcuma aromatica</i> Salisb. Zingiberaceae	Kasthuri manjal/ Kattumanjal Herb	Rh.	Powder	Pimples	External
11.	<i>Cleistanthus collinus</i> Benth.& Hook.f., Euphorbiaceae	Odugu/Tree	Lf.	Toxic	Powerful pesticide, Homicidal	External
12.	<i>Citrus medica</i> L. Rutaceae	Ganapathi narakam/ Shrub to small tree	Fr.	Juice	Anti microbial, Anti-Dandruff, Antifungal, Indigestion	Oral
			Rt.	Paste	Neuralgia	Oral
13.	<i>Cassia fistula</i> L. Caesalpiniaceae	Kanikonna/ tree	Bk.	Paste	Wound healer	External
14.	<i>Calotropis procera</i> (Ait.) R.Br. Asclepiadaceae	Vellaerikku /Shrub	Lx. Lf.	Latex Paste	To treat macula Black spots on the face	External External
			St.	Paste	Arthritis	External
15.	<i>Croton tiglium</i> L. Euphorbiaceae	Neervallam/ shrub to small tree	Sd.	Decoction	Anti-psychosis, To cure indigestion in elephant	Oral
16.	<i>Desmodium gangeticum</i> (L.) DC. Fabaceae	Orila/ Pulladi/ Herb	Rt.	Alcoholic infusion	Nutritive /Dasamoola arista	Oral

17.	<i>Eclipta prostrata</i> L. Asteraceae	Kanjunni/ Herb	Lf. Juice	Oily preparation	Hair growth	External
18.	<i>Ficus tinctoria</i> G.Forst. ssp. <i>F.gibbosa</i> (Blume.) Moraceae	Ithimottu/ Shrub to small tree	Rt. & Bk.	Decoction	Stomach ulcer , Ulcerative colitis	Oral
19.	<i>Garcinia gummigutta</i> (L.) Clusiaceae	Kodampuli/ Wooden-tree	Fr.	Juice	Anti-cholesteremic Anti- sclerosis Food additives	Oral
20.	<i>Holarrhena pubescens</i> Wall. Apocynaceae	Kudagapala/ Tree	Bk.	Decoction	Anti-dysentery, Anti- diarrhoea, Anti – haemorrhage, Indigestion and Skin diseases	Oral
21.	<i>Hemigraphis alternata</i> (Burm.F.) T. Anderson Acanthaceae	Murikootti Herb	Wp.  Lf.	Paste  Paste	Stomach ache, anti- diabetic, anaemia, skin ailment ,Wound healer (psoriasis) Bone fracture	Oral  External
22.	<i>Hystrix indica</i> kerr., Hystricidae	Porcupine	Horn Fried	Grounded powder	To cure Asthma	Oral
23.	<i>Ipomoea mauritiana</i> Jacq., Convolvulaceae	Palmuthukku/Climber	Tr. Lf.	Decoction Juice	Nutritive, stamina enhancer, Jaundice	Oral
24.	<i>Leea macrophylla</i> Roxb.ex. Hornem. Leeaceae	Njallu/ Shrub	Fr.	Juice	Nutritive	Oral
25.	<i>Musa paradisiaca</i> , L., Musaceae	Nenthran Herb	Fl.	Decoction	Asthma, Depression, Liver tonic	Oral
26.	<i>Madhuca indica</i> J.F.Gmel, Sapotaceae	Ilupa/Tree	Bk.	Alcohol	to make alcohol (ayurvedic arista) by fermentation	External
27.	<i>Nilgirianthus ciliates</i> Bremek. Acanthaceae	Karimkurinje/ Bush- Shrub	Rt. Wp. Lf. & Rt. Sd.	Paste  Juice  Decoction	Anti-rheumatic, Anti- gout, Jaundice, Diuretic To treat Urinary tract infection, Gonorrhoea Spermatorrhoea	External Oral Oral
28.	<i>Oroxylum indicum</i> , (L.). Bignoniaceae	Palakapayyani/tree	Rt.  Fr.	Alcoholic infusion Dasa moola arista  Raw fruit seed	Nutritive, Immunity enhancer, Anti- rheumatic  Anti-dysentery Leucoderma, expectorant	Oral  Oral
29.	<i>Pseudarthria viscida</i> (L.) Wight & Arn. Leguminosae	Moovila/ shrub	Rt.  Lf.	Alcoholic infusion Decoction Paste	Nutritive , Dasamoola arista Anti-diarrhoea Bone Fracture	Oral Oral External
30.	<i>Psoralea corylifolia</i> L., Leguminosae	Karpokkari / herb	Fr.	Powder with honey	Leucoderma	Oral
31.	<i>Putranjiva roxburghii</i> Wall. Euphorbiaceae	Poothilanjji/ Pongalam/ Tree	Lf. & Fr.	Decoction	Rheumatism	Oral
32.	<i>Pterocarpus santalinus</i> , Blanco. Leguminosae	Raktha chandanam/ Tree/	Bk./ pith Wd.	Powder Decoction	Pimples Diabetes, Anti cholesteremic	External Oral
33.	<i>Rauvolfia serpentina</i> Benth. ex Kurz Apocynaceae	Sarppa gandhi Amalpori/ Shrub	Rt.	Decoction	Mental Diseases, Eczema	Oral

34.	<i>Scoparia dulcis</i> , L. Scrophulariaceae	Karakanjavu Herb	Lf.	Juice	inflammation, stomach ulcer	Oral
35.	<i>Stereospermum colais</i> , Mabb. Bignoniaceae.	Pathiri /Karinkura Tree.	Lf.	Juice	Febrifuge	Oral
			Fl. and Rt.	Decoction	Anti psychosis	Oral
36.	<i>Sapindus trifoliatus</i> L. Sapindaceae	Aritha/ Uruvangi/ Tree	Fr. Sd.	Paste	Soap	External
37.	<i>Salacia reticulata</i> Wight. Celastraceae	Ekanayakam/ Tree	Rt.	Decoction	Anti-diabetic	Oral
38.	<i>Trichosanthes cucumerina</i> L. Cucurbitaceae	Kattu padavalam/ Climber	Wp.	Decoction	Cardiac tonic, anti- pyretic Emmenagogue, Skin diseases, Blood purifier, Bitter stomachic, Stomach ulcer, Anthelmintic	Oral
			Lf.	Juice		Oral
			Fr.	Food additive		Oral
39.	<i>Vitex negundo</i> L., Lamiaceae	Karinochi/ Shrub	Lf.	Inhale Chew leaf with Juice	Headache Mouth ulcer Stomach ache, Arthritis	Inhalation Oral
40.	<i>Zanthoxylum rhetsa</i> (Roxb.)DC. Rutaceae	Karimurukku/Mullilam /Tree	Horn in Bk. Lf.	Paste Juice	Antitumour Rheumatism	External Oral

Abbreviations of plant parts used: Ep – entire plant, Rt – root, Lf – leaf, Bk- bark, Bb – bulb, Fr – fruit, Rh – rhizome, St – stem, Fl – flower, Sd-seed, Tr-Tuber

## DISCUSSION

Plenty of industrial units in Kerala are the cottage or small-scale units. They are making few Ayurveda products. Industrialists collected raw herbs from ethnic tribes from all over the state, some well-known big industries producing most foliage drugs they have their own botanical gardens to planting and collecting herbs to make drugs. These firms have come under organized industries either private or government sectors. Kerala-finance Corporation has given the money back, up to the herb-industries for expansion of trade capabilities.<sup>[7]</sup> Many tribal groups in Kerala, collected necessary herbs in the wild and sell to small Ayurvedic industries due to that much of ethnic people aware about the industrially used plants as well as traditionally used herbs.

The plant-based drugs not only curing diseases in humans, the present study found that the plant *Cleistanthus collinus* Benth. & Hook.f., Euphorbiaceae, act as the powerful pesticide and the seed of this plant used for the purpose of homicide in the study area. The whole plant parts were toxic in nature, the leaves fallen from this tree is spread five-meter wide. The current study found that the plants those are grown nearby the tree were unaffected from insects and plant related diseases. Undergrown plants, were seems to be very healthy. Therefore, this study strongly recommended, the leaf part of this plant subjected to research materials to find its pesticide efficiency. In the future farmers may grow this plant in their land towards prevents the insect attack and spraying leaf extract over the agricultural products used as most a powerful pesticide compared to

any other natural pesticides what humankind found until now.

*Cleistanthus collinus* seed is noxious, to attempt to suicide, there was no proper antidote available for this poisonous plant so as to death rate is quite high in the study area. Toxicity described to connect frightening instability in nerve-muscle, cardiopulmonary, akinesia, added to reduce blood pressure, unmanageable malfunction of organs exhibited; the plant is a central nervous system toxin. Cleistanthin A, B and Diphyllin glycosides are poisonous components.<sup>[8]</sup> This plant has produced a significant amount of interest in current years as of its complex metabolites and their cytotoxic properties.<sup>[9]</sup>

*Aegle marmelos* is broadly explained in the Vedic text for the treatment of a range of illness. It is customarily used to treat hyper-acid secretion, feeling aflame stomach-discomfort, leprosy, painful-muscle, viral-macula, spermatorrhoea, white spot on skin, vision defect, psychological dilemma, endocrine sick, jaundice, constipation, chronic diarrhoea, dysentery, stomach ache, stomachic, pyrexia and upper respiratory tract infections. The lot nutrients were identified in the fruit pulp they were Vitamin-A, Vitamin-B1, Vitamin-C and Riboflavin, calcium, phosphorus, potassium, Iron, water, sugars, protein, fibre, and lipids.<sup>[10]</sup>

The fruit juice of *Alangium salviifolium* is given as anti-diabetic. Literatures, shown the plant has been described to have probable effectiveness towards hypertension, diabetes, epilepsy, cancer, inflammation, etc.<sup>[11]</sup>

Informants in the study area mentioned the plant hold Anti-rabies & Immunity boosting properties. The *Acorus calamus* most broadly examined phytochemically and pharmacologically. Numerous of bio-molecules were isolated and their structure was identified from the rhizomes and leaves of their aromatic oils. Pharmacological and medicinal significance of the Acoraceae is constantly increasing due to many promising bioactivities such as, antimicrobial, fungicidal, Type II anti-diabetic, neuro-protective, anti-inflammatory, immunosuppressive, anti-adipogenic, wound healing, mitogenic, insecticidal, anthelmintic, antiepileptic, antispasmodic activities, and inhibitor of acetyl cholinesterase.<sup>[12]</sup> *Borassus flabellifer* Linn., (Arecaceae family) is known for toddy, traditionally berries whispered to have many applications, cured of leprosy, and dyspepsia, flatulence, skin diseases, haemorrhages, sedative, laxative and aphrodisiac, and useful in hyperdipsia, fever and general weakness.<sup>[13]</sup>

*Cardiospermum halicacabum*, L., This plant highly used in the management of Rheumatism, chronic bronchitis and stiffness of the limbs and snake bite.<sup>[14]</sup> *Cymbopogon* Gramineae, grasses under this category are well known perfumery, it extensively spread all-around globe. The oil of this plant species used as insecticidal and used to make-up formulations.<sup>[15]</sup> *Curculigo orchioides* the rhizome and tuberous roots of the plant has been comprehensively used in Ayurvedic formulations, for example, *Marmagulika*, *Musalyadi churna* and *Vidaryadighrta*, *Vidaryadi lehya* purpose. The tribal people made edible flour from this root is enhancing the endurance, rejuvenates neuro, revitalized brain.<sup>[16]</sup>

*Cyathula prostrata*; the methanol extract of leaves was valuable in slow down the tumour growth in ascetic tumour models and it illustrated antioxidant and hepatoprotective properties.<sup>[13,5]</sup> *Cocos nucifera*, which showed biological activities in the management of microbial diseases, musculoskeletal system pains, prostatic hyperplasia, diabetes gastrointestinal and breathing disorders, skin and leishmaniasis.<sup>[17]</sup> *Curcuma aromatics* have anti-microbial and anti-tumour, anti-oxidant "Kasturi manjal" improves the tone of skin.<sup>[18]</sup>

*Citrus medica* has antimicrobial, antiulcer, analgesic, hypoglycaemic, anti cholinesterase, anticancer, anti-diabetic, insulin enhancer, anthelmintic, and estrogenic hypocholesterolemic, hypolipidemic properties.<sup>[19]</sup> The leaves paste of *Cassia fistula* applied externally as emollient, a bandage is used to bug nibble, bony anarchy, and inflammation, nerve disability, leaf preparation curing hyper bilirubinemia, haemorrhoidal-veins, rheumatism, external-dermatitis, ringworm, fruit pulp facilitate the evacuation of bowels.<sup>[20]</sup> *Calotropis procera* it exhibited several pharmacological effects such as ant diarrhoeal; obstruct fertility and smooth muscle relaxant properties.<sup>[21]</sup> *Croton tiglium* L. is a habitual occurrence in the hottest region. Seeds were well-known medication in India by 450 BC. It relieved peptic ulcer, visceral pain,

GIT complications, and annoyance. Seeds used in alternative medicine for lots of applications such as wound healing, constipation, a purgative and traditional dyspepsia, and dysentery.<sup>[22]</sup>

*Desmodium gangeticum* has high therapeutic value and is used as digestive, anti-catarthal, bitter tonic, febrifuge, anti-emetic. The plant has calcium, phosphorus, magnesium, vitamins A and C. Root paste unified sugar, given empty stomach to prevent spermatorrhoea. Segregated sections of the plant are the ingredients in Ayurvedic medicine such as Dasamula Kwatha (M/s Zandu Pharmaceuticals), Dasamularishta (Dabur, Himalayan Drugs).<sup>[23]</sup> *Eclipta prostrata* grows in clammy region, plant for management of gastro-complications, breathing snags, additionally, anti-bacterial hepatotoxic minimized chattels. There is a report relating to the free radicals capturing was important.<sup>[24]</sup> *Ficus tinctoria* potion of the plant juices and leaves is given orally for the weakness after childbirth, leaves, juices used for dressing for the broken bones.<sup>[25]</sup>

*Garcinia gummi-gutta* particularly berries rally round to diminish fatty-matters of the human race, because of occurrence "hibiscus-acid". Swot up revealed powerful fungicidal action, enhanced invulnerability, rising anti-oxidation possessions, attributed to charisma of ascoltin, it exposed maximum anti-inflammatory, counteract bacterial, viral, fungal, ulcer.<sup>[26]</sup> *Hemigraphis colorata* has unbelievable strength to cure wounds. The leaf has the metallic purple lustre on the higher surface and a solid dark purple on the ventral side. The plant has the huge power to cure wounds, cuts, ulcers, inflammation, and skin diseases. In folklore, the leaf juice is spread directly on unwrap wound to stop haemorrhage. In folk medication, the plant potion is given orally to cure anaemia. By tradition, the leaves are taken to remove gallstones, too much menstruation and as a contraceptive. The Sap of leaf buds is squeezed in water and taken orally at dawn for 4 days as the contraceptive and to persuade sterility. In Java, leaves are used to cure bloody dysentery and haemorrhoids (piles).<sup>[27]</sup>

*Hystrix indica* kerr: The soup attained from anus prescribed for two-time duration in a day for a week for curing colic.<sup>[28]</sup> Traditional practitioners in the study area are making formulation contains fried powder of the horns of *Hystrix indica* is mixed with egg and lemon and honey added as additives to prepare herbal recipe for the treatment of asthma. *Ipomoea mauritiana* root powder used as Aphrodisiac in clannish-area.<sup>[29]</sup> *Musa paradisiaca* is knowingly plantain-tree, soft trunk concentrate supports to eliminate urinal-pebbles, diarrhoea, dysentery, intestinal lesions in ulcerative colitis, has been reported in the text.<sup>[30]</sup> The plant *Madhuca indica*, (Sapotaceae) is endowed in Siddha remedies. The syrup prepared from the flower of Mahua is applied in the different purpose, either in the manufacturing of chocolate or as a sweetening agent.<sup>[31]</sup>

*Nilgiranthus ciliates* roots are emollient, diuretic, febrifuge, diaphoretic, and depurative, anti-inflammatory, bitter, sweet, thermogenic, expectorant, and tonic.<sup>[32]</sup> *Oroxylum indicum* is being used to treat tumours, air-passage disorders, and diarrhoea. The ranges of the traditional therapeutic uses were printed in journals delineated upon utilizations.<sup>[33]</sup>

*Pseudarthria viscid* resembles bushy-vegetation belongs to leguminosae units. The plant is prescribed for the treatment of inflammation, cardiopathy, fever, haemorrhoids, gout, diabetes, hyperthermia and neuro weaken, it exhibited powerful anti-fungal.<sup>[34]</sup> The *Psoralea corylifolia* Linn. (Fabaceae) is used in Leucoderma, Psoriasis, Leprosy, Pityriasis, Phlegmatic Fever, and intestinal worms.<sup>[35]</sup> *Putranjiva roxburghii* Wall., Leafed, kernel conventionally allocates simply management on condition that fleshy-twisting, rheumatics, and bones-allergy. Formulation from this plant used as anti-nociceptive, antipyretic, anti-inflammatory.<sup>[36]</sup> *Pterocarpus santalinus* L., The wood paste is employed outwardly specifically for healing a variety of skin diseases and blemishes.<sup>[37]</sup> *Scoparia dulcis* is native of hot American provinces and afterward it has arrived, in India habitually it is a wild plant. Leaflets are given for treatment of dental pain, analgesic, anti-inflammatory, and antipyretic properties.<sup>[38]</sup>

*Stereospermum colais* Mabb (Bignoniaceae), Leaves prescribed for and antipyretic, root significant contents in Dasamoola an Ayurvedic liquor-therapy, it cares for an appetizer, the management of lung complaint, and it reduces oxides competence. Root used in antibacterial, the flowers used in inflames conditions.<sup>[39]</sup> *Sapindus trifoliatius* L. is generally named as a soap nut tree, units of sapindaceae. It spread in south-Indian, plant seed oil, used in the producing of soaps owing to the occurrence of  $\beta$  sitosterol in seeds.<sup>[40]</sup> *Salacia reticulata* huge climbers-shrubs, obviously seen in Ceylon, it extensively, to take care sugary-metabolites as anti-diabetic, it actively uses in gynaecological compliances, dermal syndromes, haemorrhoids.<sup>[41]</sup> *Trichosanthes cucumerina* is a potential plant antediluvian medication because of wide salutary properties, anti-diabetic deworming.<sup>[42]</sup>

*Vitex negundo* Linn., is a wild plant distributed mainly in the Indian subcontinent. People used to sleep on pillows stuffed with *Vitex negundo* leaves to relieve from catarrh (mucus secretion in the throat and nose due to cold) and headache and crushed leaf poultice is employed to cure headaches, neck, gland, sores, tubercular neck puffiness, and sinusitis. Aromatic oil of the leaves cured sexually transmitted woes other syphilitic dermal disorder.<sup>[43]</sup> The bark paste of *Zanthoxylum rhetsa* Roxb applied externally applied to snake bites, stem paste applied over the breast to getting relief from pain and enhance lactation in nursing mothers.<sup>[44]</sup>

## CONCLUSION

The folk village communities use several of traditional plants on a daily basis to heal a number of sicknesses in the regular practices. The native residents were well aware especially of the plants of their surroundings. They knew how to employ flora, fauna towards the treatment of diseases. Therefore, the current study would be beneficiary for the research and development sectors in pharmaceutical industries towards new drug discovery and find new bio-molecules, through the information about the medicinal plants that have been documented. The Pesticide activity of *Cleistanthus collinus* and Anti asthmatic effect of *Hystrix indica* will be conducted in our institute in the near future.

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## Conflict of interest

Authors not declared any conflict of interest.

## REFERENCES

1. Shaw Debbie, Ladds Graeme, Duez pierre, Williamson Elizabeth, Chan Kelvin pharmacovigilance of herbal medicine, J Ethnopharmacol, 2012; 140: 513-18.
2. Suman Singh, Neha Parmar, Bhupesh Patel. A review on *Shalparni* (*Desmodium gangeticum* DC.) and *Desmodium* species (*Desmodium triflorum* DC. & *Desmodium laxiflorum* DC., Ethnomedicinal perspectives, J Med Plants Stud, 2015; 3(4): 38-43. <http://www.circle.forest.kerala.gov.in>.
3. Sreedharran TP. Biological diversity of Kerala, A survey of Kalliassere panchayath, Kanoor-district, Kerala Research Programme on Local Level Development, Centre for Development Studies, Prasanth nagar, Ullur, Thiruvandrum, 2000; 11-15.
4. Jain SK, Rao RR. A handbook of field and herbarium-methods, New Delhi; Today and Tomorrow Printer's and Publisher, 1967; 33-58.
5. Gamble J, Fischer CEC. Flora of Presidency's of Madras (I-III Vol.) Bishen-Singh and Mahendra-Singh, Dehradun, 1987.
6. [www.keralaagriculture.gov.in/mediplant](http://www.keralaagriculture.gov.in/mediplant).
7. Jayanthe M, Ravendran R, Debdatta Bashu. Role of melatonin against oxidative tissue damage induced by *Cleistanthus collinus* in rat-brain, Indian J Med Res, 2009; 130: 467-74.
8. Chandravathi Devi J, Vasantha Kumar Pai K. Chemical Examination of Fruits of *Cleistanthus collinus*, Der Pharma Chem, 2011; 3(6): 160-64.
9. Dinesh Kumar Sekar, Gaurav-Kumar L, Karthik KV, Bhaskara-Rao A review on pharmacological' and phyto-chemical properties of *Aegle- marmelos*

- (L.) Corr. Serr. (Rutaceae), Asian J Plant Sci Res, 2011; 01(2): 8-17.
11. Vineet C, Jain Patel, NM, Dhiren PS, Paras K. Patel and Bhavesh H. Joshi, Antioxidant and antimicrobial activities of *Alangium salvifolium* (L.F) wang root, GJP, 2010; 4(1): 13-8.
  12. Asha Devi S, Raksha Bawankar, Babu S. Current status on biological activities of *Acorus calamus* - a review, Int J Pharm Pharm Sci, 2014; 6(10): 66-71.
  13. Chayanika sahani, Najam AS, Vidyanathjha, Rajinder kumargupta. Screening of nutritional, phytochemical, antioxidant and antibacterial activity of the roots of *Borassus flabellifer*. J Pharmacogn Phytochem, 2014; 3(4): 58-68.
  14. Gopal RM, Prabhakaran K, Pradeepa Devi CB, Amirtham S, Settu. A Phytochemical and antibacterial activities of *Cardiospermum halicacabum* leaf extract, Arch Appl Sci Res, 2014; 6(4): 74-7.
  15. Opeyeme Avoseeh., Opeoluwa Oyedeje. Pamelaarungqu. Benedicta-Nkeh-Chungag. Adebola-Oyedeji. *Cymbopogon* Species Ethnopharmacology, Phyto-chemistry and the Pharmacological-importance, Molecules, 2015; 20: 7438-53.
  16. Asif M. A Review on Phytochemical and Ethnopharmacological Activities of *Curculigo orchoides*, Mahidol University, J Pharm Sci, 2012; 39(3-4): 1-10.
  17. Cristiane do Nascimento T Figueira, Regina M. dos Santos, Eliane A. Campesatto, Ingrid-Martins L Lúcio, Ednaldo C de Araújo, Maria Lysete de A Bastos. Biological activity of the *Cocos nucifera* L. and its profile in the treatment of diseases, A review, J Chem Pharm Res, 2013; 5(05): 297-302.
  18. Sikhaa A, Harine A, Hegde Prakassh L. Pharmacological activities of wild turmeric (*Curcuma aromatica* Salisb): a review J Pharmacogn and Phytochem, 2015; 3(5): 1-4.
  19. Kalpesh-Panara, Krutika-Joshi Nishteswar K. A Review on Phyto-chemicals and Pharmacological-Properties of *Citrus medica* Linn, IJPBA, 2012; 3(6): 1292-97.
  20. Bhale rao SA, Kelkar TS. Traditional medicinal uses, phytochemical are profile and pharmacological activities of *Cassia fistula* Linn, Int Res J Biol Sci, 2012; 1(5): 79-84.
  21. Ali Esmail Al-Snafi. The constituents and pharmacological properties of *Calotropis procera*? - An overview Int J Pharm Sci Rev Res, 2015; 5(3): 259-75.
  22. Ariharan, VN, Meena Devi, VN, Parameswaran NK, Nagendra Prasad P. Physico-chemical analysis on *Croton tiglium* oil for potential use as biodiesel, Int J Pharm Biol Sci, 2015; 6(2): 231-36.
  23. Harshal A, Deshpande, Sanjivani RB. A Review of Phytochemical-Profiles of *Desmodium gangeticum* (L.) DC: A valued endangered-medicinal-plants, IJPHR, 2014; 1(4): 36-48.
  24. Karthekumar S, Vignesvari K, Jegatheshan K. Screening of anti bacterial and antioxidants activities of leave of *Eclipta prostrata* (L) Sci Res Essays, 2007; 2(4): 101-104.
  25. <http://tropical.theferns.info/viewtropical.php-id-Ficus-tinctoria>.
  26. Kizhakedathel Monie, Philip Jacob, Mahuwala Arif Ali, Hemant visnu, Gunasehkar Shylaja, Sathivelu Mythile, Arunachalum Sathivelu. Evaluation of Antibacterial, Antioxidant Activity of *Garcinia gummigutta*, Int J Drug Dev Res, 2015; 7(3): 57-9.
  27. Devi Priya M. Review on pharmacological activity of *Hemigraphis colorata* (Blume) HG Hallier, Int J herb, 2013; 1(3): 120-21.
  28. Jana, Nithar Ranjan Madhu. A review on Zooethnomedico-biological-studies and human-welfare, Int J Curr Res Acad Rev, 2014; 2(12): 179-87.
  29. Humayra Anzumi, Shahnaz Rahman, Md. Ashraful Islam, Mohammed Rahmatullah. WJPPS, 2014; 39(12): 176-88.
  30. Vijai Lakshmi SK, Agarval, Jamalibyya, Akhtar-Ansare, Abbas Ali Mahdi, Arvind Kumar Srivastava. Anti-diabetic potential of *Musa paradisiaca* in Streptozotocin-induced diabetic rats' The Journal of Phytopharmacology, 2014; 3(2): 77-81.
  31. Pushpendra K, Patel Narendra K, Prajapati, Dubey BK. *Madhuca indica*: A Review of its Medicinal-Property, Int J Pharm Sci Res, 2012; 3(5): 1285-1293.
  32. Reneela P, Shubashini K. Sripathi. Triterpenoid and sterol constituents of *Strobilanthes ciliatus* Nees, NPIJ, 2010; 6(1): 35-8.
  33. Dinda B, Sil-sarma I, Dinda M, Rudra-paul P. *Oroxylum indicum* (L.) Kurz, an important-asian traditional medicine: from traditional uses to scientific data for its commercial exploitation .J Ethnopharmacol, 2015; 161: 255-78.
  34. Vijayabhaskaran M, Venkateswaramurthy N, Babu G, Khatale PN. Antidiarrhoeal Activity of *Pseudarthria-viscida* roots, Int J Pharm Technol, 2010; 2(2): 307-313.
  35. Mohd. Shamim Khan, Qamrul Hasan Lari. Mahmood Ahmad Khan. Babchi (*Psoralea corylifolia* linn.) and its therapeutic use in unani system of medicine, a review, IJPPR, 2015; 5(1): 1-5.
  36. Durre Shahwar, Muhamad Asam Raza, Afifa Saeed, Madiha Riasat, Faiza Ilyas Chattha, Merva Javaid, Sami Ullah, Saif Ullah. Antioxidant potential of the extracts of *Putranjiva-roxburghii*, *Conyza bonariensis*, *Woodfordia-fruticosa* and *Senecio-chrysanthemoid*, Afr J Biotechnol, 2012; 11(18): 4288-95.
  37. Arunkumar AN, Joshi G. *Pterocarpus-santalinus* (Red Sanders) an Endemic, Endangered Tree of India: Current Status, Improvement and the Future, JTFE, 4(2): 1-10.

38. Muthumany P, Christiana AJM, Venkataraman S, Meera R, Jiju Abraham, Deve P, Kamesvari B, Eswara priya B. Preliminary phytochemical-screening, chemical-investigation, Enzyme-inhibiting activity and atomic-absorption Spectrophotometric determination of minerals of plant-extracts of *scoparia-dulcis*. Linn. Int J Pharm Sci Rev Res, 2010; 2(2): 51-6.
39. Prema, S, Sarasvathi A, Chitra, K, Gopal V. A Review on *Stereospermum colais* Mabb: Bignoniaceae, Int J Pharm Sci Rev Res, 2013; 21(1): 314-17.
40. Lakshmi-Srinivas T, Mohana Lakshmi S, Neelufar Shama S, Koteswara Reddy G, Prasana KR. Medicinal Plants as Anti ulcer Agents, J Pharmacogn and Phytochem, 2013; 2(4): 91-7.
41. Arunakumara, Suba singh S, *Salacia-reticulata* Wight: A Review of Botany, Phytochemistry and Pharmacology, TARE, 2010; 13(2): 41-7.
42. Sandhya S, Vinod KR, Chandra Sekar J, Aradhana R, Vamshi Sarath Nath. An Updated Review on *Tricosanthes-cucumerina* L, Int J Pharm Sci Rev Res, 2010; 1(2): 56-60.
43. Vishwanathan AS, Basavaraju. A review on *Vitex negundo* L., A medicinally important plant, EJBS, 2010; 3(1): 30-42.
44. Medhe K, Dekha M, Bhau BS. The genus *Zanthoxylum* A stockpile of biological and ethnomedicinal properties open access, Sci Rep, 2013; 2(3): 1-8.