

Archiving ethnomedicinal knowledge and local health care systems from local health healers in Trivandram district of Kerala state, India

**B. NALLAKURUMBAN*¹, S. PARVATHI², L. KARPAGAPANDI¹, G. PUSHPA³,
J. SELVI⁴ AND A. VIJAYAKUMAR⁵**

¹Department of Family Resource Management, Home Science College and Research Institute, Madurai (T.N.) India.

²PHTC, TNAU, Coimbatore

³Home Science College and Research Institute, Madurai (T.N.) India.

⁴Krishi Vigyan Kendra, Sikkal, Tanjore (T.N.) India

⁵Krishi Vigyan Kendra, Thirupathisaram, Tuticorin (T.N.) India
(Email : nallsfoodtech@sifymail.com)

ABSTRACT

An ethnobotanical survey was undertaken to collect information from traditional healers on the use of medicinal plants in Trivandram district of Kerala state, India. The indigenous knowledge of local traditional healers and the native plants used for medicinal purposes were collected through personal interview. The investigation revealed that, the traditional healers used 34 species of plants belonging to 21 families to treat various diseases. The documented medicinal plants were mostly used to cure psoriasis, poison bites, stomachache, jaundice, dandruff, arthritis, blood pressure, blood purification, daeniasis, ear infection, male sterility, kidney stones, eye problem, leucorrhea, rejuvenation, scabies, piles and body massages. In this study the most dominant family was zingiberaceae and fruit, leaves and tubers of the plants were most frequently used for the treatment of diseases. The particulars of medicinal plant parts used, mode of preparation and administration are given. The plant medicines were arranged alphabetically in order of their botanical name, family, malayalam name, parts used, preparation of medicines, dosage and mode of administration, and ailments.

Key Words : Archiving ethno medicinal, Indigenous knowledge, Traditional healers, Practices, Mode of preparation, Mode of administration

INTRODUCTION

India has a glorious tradition of the arts and science of healing. The origin of Indian medicine is shrouded in 'myths' and 'inspired history'. But, organised medicine, Ayurveda emerged from folk medicine at least 2,000 yrs ago with its well developed recorded system and practices. The maximum numbers of medicinal plants are used by folk (tribal) traditions. The booming global market for herbal drugs, pushed more than 100 medicinal plant species in Kerala to the verge of extinction. India, having

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two out of the 34 biodiversity hotspots of the world, is perhaps the largest producer of medicinal plants in the world. Of the 43000 plant species recorded in India, 3000 are known to possess medicinal properties. The vast resource of medicinal plants has been widely used in various traditional systems of medicine like Ayurveda, Siddha, Unani and Amchi. In Kerala more than 900 medicinal plants are used in both classical and oral health tradition including tribal medicines. Out of these 200 medicinal plants are largely extracted for the preparation of diverse medicinal and food products. It is necessary to document local indigenous knowledge on the use of plants for health care.

METHODOLOGY

Description of the study area :

Thiruvananthapuram District is the southernmost district of the Indian state of Kerala. The headquarters is in the city of Thiruvananthapuram(Trivandrum) which is also the capital city of Kerala. The district has an area of 2192 km², the second largest in Kerala. It is divided into four talukas: Thiruvananthapuram, Chirayinkil, Nedumangad, and Neyyattinkara. The urban bodies in the district are the Thiruvananthapuram Corporation, Attingal, Neyyattinkara, Varkala and Nedumangad municipalities. Thiruvananthapuram literally means City of Lord Anantha. The district is situated between North latitudes at 8.17° and 8.54° and East longitudes 76.41° and 77.17°. The southern most extremity, Parassala is just 54 km away from the Southern Peninsular tip of India, Cape Comorin(Kanya Kumari). The district stretches 78 km along the shores of the Arabian Sea on the West, Kollam district lies on the North with Tirunelveli and Kanyakumari districts of Tamil Nadu on the East and South, respectively.

Details of ethnomedicinal survey:

The study areas are selected for well known for traditional knowledge of medicinal plants at Trivandram district of Kerala state. Field trips were consumed in five villages namely Alankodu, Pallimukku, Attingal, Neyattinkara and Mangalapuram of Trivandram district during 2006-07, covering all seasons. The information on ethnomedicinal plants and practices were collected by standard procedures (Jain, 1995 and Jain and Mudgal, 1999) by interacting with ten traditional vaithiyars or herbal practioners and elders of the village those who have the knowledge of herbal medicines. The collected information was cross checked by used survey form. Plant specimens like fresh, dried and medicines such as powder, extract, thailam, paste, kasayam, oil and drops were collected and documented during the survey and herbarium specimens were prepared and identified with the help of the Rabinet Herbarium and Centre for molecular systamatics, Trichy, Tamilnadu, and and local floras (Pulliah and Silar, 1999; Gamble and Fischer, 1997 and Khan, 1953). Dried herbals/medicinal plants were collected and preserved in a pet jars for specimens. The 34 plant species belonging to 21 families used in primary health care are detailed below.

RESULTS AND DISCUSSION

The plant medicines collected were arranged alphabetically in the order of their botanical names, family, vernacular/local names, part used, ailments, preparation of medicines, dosage and mode of administration concerned below.

The present paper provides information about 34 plant species belonging to 21 different families used as herbal remedies in local health care practices by the surrounding villages of Trivandram district, Kerala, India. Different parts of medicinal plants were used as medicine by the local traditional healers. Among the different plant parts, the leaves, fruit and tuber were most frequently used for the treatment of diseases followed by whole plant parts, fruit, stem, root, seed and flower. The methods of preparation fall into nine categories, viz.: plant parts applied as a powder (7), extract (3),

Table 1 : Plant medicines of their botanical name, family, malayalam name, parts used, preparation of medicines, dosage and mode of administration and ailments						
Botanical Name and family	Malayanam name	Tamil name	Part used	Preparation of medicines :	Dosage and mode of administration	Ailments
<i>Ocimum basilium</i> linn. (Labiatae)	Thirunoothu pacha	Thirunoothu patchai	Tender leaves	Fifty grams of fresh leaves were washed with water and crushed with five gram of <i>Cuminum cyminum</i>	The jaundice drop is used only for external application. The patient was asked to lay down in the bed. Crushed ingredients were tide in the white cloth and squished 2 to 3 drops in the both the eyes at morning 7 -8 am and evening 4 -5 pm for three days. After adding drops to the eyes the patients were advised not to take bath or wash the eyes for three days. After three days, the patients were asked to take oil bath for five days within 10 days.	Jaundice
<i>Cuminum cyminum</i> (Umbelliferae)	Jeerakam	Seeragam	Seeds	and two gram of <i>Curcumatlonga</i> powder by using stone mortar. The crushed medicines were tide in a white cloth and kept in a powel or vessel.		
<i>Curcumatlonga</i> (Zingiberaceae)	Manjal	Manjal	Tuber	This medicine is prepared freshly and used for the treatment of jaundice		
<i>Lippia nodiflora</i> (Verberaceae)	-	Poduthalai	Tuber	Hundred gm of <i>Lippia nodiflora</i> tuber were washed with water. The cleaned and washed plants were ground by using stone mortar for extracting the extract.	Ten ml of <i>Lippia nodiflora</i> thailam was advised to apply on the scalp thoroughly before 2 hours of bathing at morning for seven days continuously. This oil can be used for both sexes and it can also be applied at the convenient time of the patient.	Dandruff
<i>Cocos newcefera</i> (Palmae)		Thenkai	Extracted oil (coconut oil)	The extract was added in 100 ml of <i>Cocos newcefera</i> oil in a mud pot and heated till it reduces to 10 ml and filtered.		
<i>Cunavalia ensiformis</i> (leguminosae)	Valaringha	Vellathambatankaai	Matured leaves	The filtered thailam was filled in a glass bottle for future use. Fifty grams of <i>Cunavalia ensiformis</i> leaves were washed and crushed by hand pounding using stone mortar for extracting the juice. The extract was filtered by using muslin cloth. Freshly prepared extract is used in the affected areas	The extract is applied on the affected areas (external application) and hot water bath has to taken after 12 hours of application of the extract at convenient time of the patients.	Arthritis

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<i>Rauvolfia serpentina</i> (Apocynaceae)	Suvarnamilpori	Sivanamelpodi	Root	Ten grams of fresh <i>Rauvolfia serpentina</i> root were washed with water and 50 ml of pure water was added and boiled till it reduces to 10 ml. The extract was filtered by using a muslin cloth. The filtered kasayam was filled in a glass bottle and stored for future use.	The patient has advised to take ten ml of sarpagantha kasayam before 30 minutes of breakfast and dinner for three days or till it cured.	Blood pressure	
<i>Amaranthus Viridis</i> (Amaranthaceae)	-	Kuppaikeraai	Tender leaves	Three hundred grams of <i>Amaranthus viridis</i> are washed with water and steamed for 3/4 th .	The prepared keerai has to consume at morning and in night while taking breakfast and dinner or the patients convenient time.	Blood purification	
<i>Allium Cepa</i> (Liliaceae)	Chuvamalli	Venkayam	Fruit	Ingredients such as <i>Allium cepa</i> -10g, green <i>Cabiscum Frutescens</i> -5g, salt-5g, <i>Cuminum cyminum</i> -5g, <i>Piper nigrum</i> -5g, turmeric powder-5g and steamed keerai were poured into the vessel and add 20 gm of ghee and kneading well till it gets a semi dry stage.			
<i>Cabiscum Frutescens</i> (Solanaceae)	Milagai	Milagai	Fruit				
<i>Cuminum cyminum</i> (Zingiberaceae)	Jeerakam	Seeragam	Seed				
<i>Piper nigrum</i> (Piperaceae)	Kurumilagu	Milagu	Seed				
<i>Curcumatlonga</i> (Zingiberaceae)	Manjal	Manjal	Tuber				
<i>Stenolobium stans</i>	-	Thangarali	Flower	Fifty grams of <i>Stenolobium stans</i> flower were washed with water. Fifty ml of lime juice was extracted by using home made lime extractor. The washed fifty grams of flowers were ground with 50 ml of lime juice by using stone mortar.	Ten ml of thangarali thailam was applied on the affected areas and head at night only and sleeping will be taken at after drying or observe the thailam from the body or affected area.	Daeniasis	
<i>Cocos nucifera</i> (Palmae)	Thengu; Nalikeram	Thennai; Kalpakavirutcham	Fruit	The ground flower extract was added with 100 ml of <i>Cocos nucifera</i> oil and heated in a mud pot till it reduce the volume of 10 ml then the thangarali flower thailam was filtered and stored in glass bottles.			
		Elumitchai	Fruit				

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	Kurumba	Manul	Stem	
<i>Sansevietia roburghiana</i> (Liliaceae)		Poomi kilangu	chakara Tuber	<p>Fifty grams of <i>Sansevietia roburghiana</i> stems were roasted for two minutes. The heated stems were crushed by using stone mortar for extracting the juice. The extract is filled in a glass bottle for seven days for future use.</p> <p>Hundred grams of poomi chakara kilangu are washed with water and cut into small pieces. The cut pieces of kilangu was dried in shade for four days and ground into powder by wooden mortar and sieved using with home made 80 mm sieve. The powder was stored in the plastic containers for future use.</p>
<i>Barleria cristata</i> (Acanthaceae)	-	Semnulli Nilamulli	or Root	<p>Ten grams of <i>Barleria cristata</i> roots are washed with water and cut into small pieces. The pieces were dried in shade for four days and ground into powder by wooden mortar. Thirty ml of water was added in grounded ingredients and heated till it reduce for 10 ml and the kasayam was filtered. The filtered kasayam was filled in a glass bottle for future use.</p>
<i>Urginea Indica</i> (Liliaceae)	Kaattulli	Narivengayam	Tuber	<p>Ten grams of <i>Urginea Indica</i> tubers are washed with water and cut into small pieces. The pieces were ground by wooden mortar. Five hundred ml of <i>Cocos nucifera</i> oil was added in grounded ingredients and heating till it will be reduce for 10 ml of kasayam and filtered.</p>
<i>Cocos nucifera</i> (Palmae)	Thengu; Nalikeram	Thennai; Kalpakavirutcham	Coconut oil	<p>One or two ml of marul extract was poured in the affected ears and closed by using small cotton pits and cleaned next day the affected ear should be cotton buds.</p> <p>Two gram of powder is consumed with 100 ml of milk at morning and evening before thirty minutes of meals. Because during empty stomach the medicines will be observed very quickly and also activity of the medicine in the body. So the diseases will be cured quickly.</p> <p>Ten ml of kasayam was given to the patient at morning and evening before 30 minutes of meals for seven days or till it cured.</p> <p>Ten ml of kasayam was consumed at morning and evening before 30 minutes of meals till it cured.</p>

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<i>Parthenium hysterophorus</i> (Asteraceae)	-	Sarkkarai vempu	Flower, leaves and fruits	<i>Parthenium hysterophorus</i> flowers, leaves and fruits each hundred grams were washed separately by using water. Dried in shade separately till it dried. The dried samples were ground into powder by using mixer and sieved in the fine powder and was packed in glass bottles for future use.	Ten gram of powder consumed with tender coconut water or milk or butter milk at morning and evening before meals for seven days or it will not cured continue again seven days.	Diabetes
<i>Vanilla planifolia andrews</i> (orchidaceae)	Vennila	Vanikkodi	Fruit	Fresh 50 nos or required quantities of <i>vanilla planifolia andrews</i> fruits were collected and boiled in required quantity of water at 65 °C for five minutes After boiling, the water is discarded and the boiled <i>vanilla planifolia andrews</i> fruit was packed in woolen cloth. The packed <i>vanilla planifolia andrews</i> was kept in a thermo cole box or wooden box for 12 hours at room temperature for moisture reduction and also stiffening of the fruits. The dried <i>vanilla planifolia andrews</i> fruit is extracted by using hydraulic expeller for extracting the vanilla juice or extract and it was stored for future use.	100 ml of vanilla extract consumed twice a day on before meals till it cured.	Psoriasis
<i>Alpinia officinarum</i> (Zingiberaceae)	Aratha	Chitharathai	Root	<i>Alpinia officinarum</i> root was cleaned (dirt and soil) and washed with cleaned water and the juice was extract from the root by using stone mortar. The root extract is mixed with required quantity of milk and filled in a glass bottle for storing and also using for body massaging	The ksheera bala oil is gently massaged on the painful areas of body at any time or during painful period.	Body massage
<i>Coleus vetiveroides</i> (Labiatae)	-	Vetiver	Root	Two gram of dried vetiver, nannari and pathimugam were put into the two litre of hot water and filtered by using muslin cloth or filter. The filtered water was cooled for few minutes or down the temperature, which is used for drinking to reduce body heat and also purifying the blood.	<i>Coleus vetiveroides</i> - ½ kg, <i>Hemidermus India</i> -½ kg, and pathimugam½ kg were dried in shade for seven days and used in future.	Healthy body and blood purification
<i>Hemidermus India</i> (Aselepiadaceae)	Narunanati	Nannari	Root			
		Pathimugam	Root			

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<i>Coralliocarpus epigaeus</i> (Cucurbitaceae)	-	Akashakanudan	Tuber	Fresh <i>Coralliocarpus epigaeus</i> (tuber) was washed and dried in shade for four days for removing the moisture content. The shade dried <i>Coralliocarpus epigaeus</i> root was cut into small size (1") and ground into powder by using a mixie and sieved. The powder was used for the treatment of scabies.	<i>Coralliocarpus epigaeus</i> powder is used for external application. One teaspoon of powder is dissolved in 10 litre of water and add 10 ml of lime juice for bathing at morning and evening continuously for 15 days.	Scabies
<i>Cissus quadrangularis</i> Linn. (Lauraceae)	Sannalam	Kuthu piranadai	Fruit	Fifty gram of <i>Cissus quadrangularis</i> is washed with water.	Ten gram of adamant creeper paste is consumed twice a day at morning and evening before meals till it cured.	Piles (haemorrhoids)
<i>Tamarindus indica</i> (Cassalpinia)		Puli	Fruit	The washed <i>Cissus quadrangularis</i> was roasted with 50 gm of tamarind and one number of dried chillies in the vessel without using of oil for 1 to 2 minutes.		
<i>Cabscium frutescens</i> (Solanaceae)		Milagai	Fruit	The roasted ingredients were mixed with required amount of salt for paste form. The prepared paste will be packed in the glass bottle for the treatment of piles problem.		
<i>Euphorbia hirta</i> Linn (Euphorbiaceae)	Cherucheera : Nilapala	Amman pachecharisi or Baladai	Whole plant	Fifty gram of fresh leaves are washed with water and dried in shade for one week for removing the water for one week. The dried <i>Euphorbia hirta</i> Linn leaves were ground by using mixie. The <i>Euphorbia hirta</i> Linn leaves powder will be stored in the glass bottles for further treatment.	Five gram of <i>Euphorbia hirta</i> Linn powder administered with 100 ml of milk at morning and evening before 30 minutes of meals for 15 days.	Stomach pain
<i>Curculigo orchioides</i> Gaertn (Amaryllidea)	Nelapana	Nil panai	Tuber	<i>Curculigo orchioides</i> Gaertn (tuber) are washed with water and cut into small pieces and dried for 8 days in shade. The dried <i>Curculigo orchioides</i> Gaertn was ground into powder by using stone mortar to make a powder	Ten gram of powder is mixed with 100 ml of milk or two ml of honey and consumed at morning and evening before meals for one week.	Rejuvenation
		Besengan birari	Mature leaves	Two hundred gram of besengan leaves were dried in shade for one week. Dried leaves was ground with one gram of banana fruit to make a powder	One teaspoon of besengan powder is consumed with 100 ml of milk at morning and evening or till it cured.	Leucoderma (white discharge)

kasayam (3), thailam (2), drops (1), oil (1) and paste (1). External applications (mostly for skin diseases and wounds) and internal consumption of the preparations were involved in the treatment of diseases. Traditional healers are using these plants to cure diseases related psoriasis, poison bites, stomachache, jaundice, dandruff, arthritis, blood pressure, blood purification, daeniasis, ear infection, male sterility, kidney stones, eye problem, leucorrhea, rejuvenation, scabies, piles and body massages.⁶ In this study the most dominant family was zingiberaceae and fruit, leaves and tubers were most frequently used for the treatment of diseases. The plant medicines were arranged alphabetically in order of their botanical name, family, malayalam name, parts used, preparation of medicines, dosage and mode of administration, and ailments (Table 1).

Conclusion:

The survey indicated that, the study area has plenty of medicinal plants to treat a wide spectrum of human ailments. It is evident from the interviews conducted in different villages. The scientific knowledge of medicinal plants is limited to the traditional healers, herbalists and elderly persons who are living in rural areas. This study also points out that certain species of medicinal plants are being exploited by the local residents who are unaware of the importance of medicinal plants in the ecosystem. Due to lack of interest among the younger generation as well as their tendency to migrate to cities for lucrative jobs, there is a possibility of losing this wealth of knowledge in the near future. It thus becomes necessary to acquire and preserve this traditional system of medicine by proper documentation and identification of specimens.

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