

# Ethnomedicinal Uses of Leaf Preparations in Adilabad District, Andhra Pradesh, India

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## Abstract

Ethnobotanical surveys were conducted from June, 2008 through May, 2009 in the Adilabad district of Andhra Pradesh, India. Information on 67 angiosperms belonging to 38 families was gathered with regard to their ethnomedicinal use in leaf preparations. This paper reports for the first time the uses of leaf preparations by the tribal people in the form of extracts, decoctions, pastes, etc.

**Keywords:** Leaf preparations, Medicinal Plants, Ethnomedicine, Adilabad district, Andhra Pradesh.

## Introduction

India is very rich in ethnobotanical information. About 80% of the Indian population lives in villages and a considerable proportion comprises tribals living in remote forest areas. The population of several districts in central and eastern India is predominantly tribal. The different traditions, beliefs, needs and cultures of various tribes and the diversity of flora in India richly contribute to plant folklore. Ethnomedicine is the study of the beliefs and practices concerning illness in different human populations (Genest, 1978). A number of investigators (Shanker and Henry, 1992; Pullaiah, Prasanna, and Obeulesy, 1998; Madhu, 2009) have published notes on the medicinal plant wealth of Adilabad district and near areas. Ravishankar (1990), in his Ph.D. thesis, reports on "Ethnobotanical studies in Adilabad and Karimnagar districts of Andhra Pradesh, India," while Mubeen, Fatima, Khanum, Alikhan and Anwar (2004-2005) studied the medicinally important plants growing in and around Adilabad district of Andhra Pradesh. In the present work, we report the leaf preparations used by the tribal people to treat various disorders in Adilabad district, Andhra Pradesh, India.

## Study Area

Adilabad district lies between 77° 47' and 80° 0' of the eastern longitudes and 18° 40' and 19° 56' of northern latitudes. The district is bounded on North by Yeotmal, on the East by Chanda districts of Maharashtra and on the South by Karimnagar and Nizamabad and on the West by Nanded district of Maharashtra State. These harbour mainly dry deciduous forest and aborigines. These forests occupy about 44.5 percent of the total geographical area of the district. The total forest area in the district is 7218.86 sq.km. The total population of the district is 24,88,003 out of which the tribal population is 4,16,511 (Census of India 2001). The main occupation of the people is agriculture. The important rivers in the district are the Godavari, the Penganga, the Wardha, the Pranahitha, the Kadam and the Peddavagu. The Godavari is the largest river in peninsular India. The most important crop in the district is Jowar, followed by cotton. Other crops include Maize, Pulses, dry Paddy, Soybean and Sunflower.

## Methodology

Field trips were conducted from June 2008 through May 2009 in tribal parts of Adilabad district, Andhra Pradesh, India. Collection data included local name, plant part used and mode of administration. The information was given by tribal medicine people and the local rural informants, who are the *Vaidhya* or elderly village people in this district, and who have knowledge about folk medicines.

At the time, actual applications were also observed during the field work. Herbarium Voucher specimens are deposited in Department of Botany (KUH) at Kakatiya University, Warangal, Anhra Pradesh, India. The plant species are enumerated alphabetically by family followed by their tribal names and uses.

## Results & Discussion

In the present account, 67 species of angiosperms belonging to 38 families are reported (Table 1). They are used as ethnomedicines for various severe diseases like jaundice, cancer, etc. by employing the leaf preparations in the form of extracts, pastes, juices, etc. Other common diseases and health complaints like cough, piles, fever, bone fracture, rheumatic pains, stomachache, blood pressure, diabetes, dandruff, gonorrhea, filaria, mumps, skin diseases, ring worm, asthma, sun stroke are cured by using the leaf preparations of various plants found in the Adilabad district region. The leaf is employed in the form of decoctions, extracts, pastes, juice or some times in combination with other parts of same or different plants, viz. *Sesamum*, *Trigonella*, *Curcuma*, *Phyllanthus amarus*, *Zingiber officinalis*, *Piper nigrum*, *Terminalia chebula* etc. Other substances, such as sugar candy, curd, honey, hair oil, milk and turmeric powder, are also used in various preparations.

Table 1 : Ethnomedicinal uses of leaf preparations in Adilabad district.

Sl. No.	Plant Name / Family	Local Name	Disease Treated	Mode of Administration.
1	<i>Acalypha India</i> L. (Euphorbiaceae)	<i>Muripinda</i>	Jaundice	Leaves crushed with Sugar candy and Curd and taken orally early in the morning for 3 days.
2	<i>Adhatoda Zeylanica</i> Medic. (Acanthaceae)	<i>Adda Saramu</i>	Cough	Leaf extract administered orally in 2 spoonfuls a day for 3-4 days.
3	<i>Alianthus excelsa</i> Roxb. (Simaroubaceae)	<i>Pedda manu</i>	Post-Partum problem	Leaves boiled with Sugar Candy and administered orally to women for debility after child birth.
4	<i>Aloe Vera</i> (L.) Burm.f. (Agavaceae)	<i>Kalabanda</i>	Piles and fistula	Leaf juice administered in 2 spoonfuls twice a day for about 20 days.
5	<i>Ampelocissus Latifolia</i> (Lam.) Planch. (Vitaceae)	<i>Pule-teega</i>	Ophthalmia	Leaf juice poured into eyes in 1-2 drops twice a day for 3 days.
6	<i>Andrographis Paniculata</i> (Burm.f.) wall.ex Ness (Acanthaceae)	<i>Nela Vemu</i>	Fever	Leaves grind with Sugar candy and given orally in 1 spoonful twice a day for children for about 3 days.
7	<i>Asparagus racemosus</i> Willd (LiLiaceae)	<i>Pilli teegalu</i>	Rheumatic pains	Leaf paste massaged gently on Painful parts twice a day till relief from suffering.
8	<i>Azadirachta indica</i> A. Juss. (Meliaceae)	<i>Vepa</i>	Worm killing	Leaf extract given orally at bed time for 3-4 days.
			Chicken-Pox	Leaf paste applied over the body for 3-4 days.
9	<i>Bambusa arundinacea</i> (Retz.) Willd. (Graminae)	<i>Veduru</i>	Abortion	Leaves ground with seeds of <i>Sesamum</i> and <i>Trigeonella</i> and the paste mixed with honey is taken of pregnancy to abort three months twice a day for 3 days.

10	<i>Boerhavia erecta</i> L. (Nyctaginaeae)	<i>Galijery</i>	Jaundice	Leaf extract mixed with Sugar and Curd and administered early in the morning for 3-4 days.
11	<i>Cajanus Cajan</i> (L.) Millsp. (Leguminosae)	<i>Thogarlu</i>	Stomach ache	Leaf extract administered in 2-3 spoonfuls twice a day for 3 days.
12	<i>Calotropis gigantea</i> (L.) R.Br. (Asclepiadaceae)	<i>Tella Jilledu</i>	Arthritis	Leaf extract applied externally on painful parts.
13	<i>Cascabela thevetia</i> (L.) Lippold (Apocynaceae)	<i>Pachaganneru</i>	Bone fracture	Leave ground and the paste plastered till cure.
14	<i>Cassia auriculata</i> L. (Leguminosae) Sf. Caesalpinaceae	<i>Tangedu</i>	Bone fracture	Leaf paste with egg albumen plastered over the parts of human as well as cattle till cure.
			Eye infection	Leaf Juice poured in 2-3 drops thrice a day for 3 days.
15	<i>Cassia fistula</i> (L.) (Leguminosae)	<i>Rela</i>	Amenorrhoea	Tender leaf juice taken in 2 spoonfuls once in morning for about 10 days.
16	<i>Cassia Occidentalis</i> (L.) (Leguminosae)	<i>Kasinta</i>	Cough	Leaf juice given in 2 spoonfuls thrice a day for 3 days.
			Eye infection	Leaf Juice poured in 3-4 drops once at night for 3-4 days.
17	<i>Catharanthus roseus</i> (L.) Don. (Apocynaceae)	<i>Billa ganneru</i>	Blood pressure	Tender leaves with dall cooked and eaten as vegetable for cure.
			Cancer	Leaf paste applied on tumors and the decoction given orally in 30ml twice a day for about 1 month.
18	<i>Centella asiatica</i> (L.) Urban. (Umbelliferae)	<i>Saraswati Aku</i>	Blood Purification	Leaf paste taken in a spoonful once in morning for a month.

			Memory power	Leaves ground with jaggery and taken in morning for 30-45 days.
			Nervous weakness	Leaf paste administered in 2 spoonfuls twice a day for 40 days.
19	<i>Cleome gynandra</i> (L.) (Capparidaceae)	<i>Vaminta</i>	Ear ache	Leaf juice poured in 2-3 drops thrice a day till cure.
20	<i>Coccinia grandis</i> (L.) Voigt. (Cucurbitaceae)	<i>Kaki donda</i>	Diabetes	Leaf extract administered in 2 spoonfuls twice a day for about 10 days.
21	<i>Cocculus hirsutus</i> (L.) Diels. (Menispermaceae)	<i>Dushta teega</i>	Gonorrhoea	Leaf juice administered in 2 spoonfuls with a glass of Sugar water twice a day for 10-15 days.
			Syphilis	Leaf juice administered in 2 spoonful with a glass of Sugar water twice a day for 15 days.
22	<i>Cochlospermum religiosum</i> (L.) Alston (Cochlospermaceae)	<i>Konda Gogu</i>	Dandruff	Leaf paste applied to head, 1-hour before bath twice a week for 3-weeks.
23	<i>Crataeva magna</i> (Lour.) DC. (Capparidaceae)	<i>Vulimiri Chettu</i>	Piles and fistula	Leaf extract administered during the bleeding condition in 2 spoonfuls twice a day for 15 days, the paste applied externally as ointment.
24	<i>Datura metal</i> (L.) (Solanaceae)	<i>Erri Ummetta</i>	Muscular pains	Leaves ground into pulte and massaged gently on painful parts.
			Sprains	Leaves ground and applied externally till cure.
25	<i>Dodonaea viscosa</i> (L.) Jacq. (Sapindaceae)	<i>Puuli-vairu</i>	Bone fracture	Leaf paste mixed with turmeric and plastered over the broken parts of human beings as well as cattle.

26	<i>Eclipta Prostrata</i> (L.) L. Mant. (Compositae)	<i>Gunta galagra</i>	Filaria	Leaf paste applied externally in initial stages, also administered orally in 2 spoonful once a day for about 30 days.
			Jaundice	Leaf juice with curd and sugar given orally early in the morning for 3-4 days.
27	<i>Emilia Sonchifolia</i> (L.) DC. (Compositae)	<i>Pisapatri</i>	Night Blindness	Leaf juice extract poured in 1-2 drops thrice a day till cure.
			Ear Sores	Leaf juice poured in 2-3 drops thrice a day for 3-4 days or till cure.
28	<i>Euphorbia hirta</i> (L.) (Euphorbiaceae)	<i>Reddivari Nanubalu</i>	Jaundice	Leaf extract in combination with leaf extract of <i>phyllantus amarus</i> , sugar and curd is administered in 2 spoonful thrice a day for 2-3 days.
29	<i>Evolvulus alsinoides</i> (L.) L.f. (Convolvulaceae)	<i>Vishnu Krantha</i>	Hair growth	Leaf extract mixed with hair oil and used for promoting the growth.
			Liver disorders	Leaf extract taken in 2 spoonfuls with a glass of milk once a day for 15-20 days.
30	<i>Gloriosa Superba</i> (L.) (Liliaceae)	<i>Agnisika, Kondanabi</i>	Mumps	Leaf paste applied externally on effected areas till cure.
31	<i>Gymnema Sylvestre</i> (Retz.) R.Br.ex Schutt. (Asclepiadaceae)	<i>Poda Patri</i>	Diabetes	Leaf decoction administered in 2 spoonfuls twice a day for about 2 months.
32	<i>Hibiscus cannabinus</i> (L.) (Malvaceae)	<i>Gogu</i>	Purgative	Leaves ground with seeds of <i>Sesamum</i> and log of paste orally taken once at bed time for 3-4 days.
33	<i>Hyptis Suaveolens</i> (L.) Poit (Labiatae)	<i>Sima Tulasi</i>	Eye infection	An infusion of leaves poured in 1-2 drops thrice a day for 3-4 days or till cure.
34	<i>Indigofera tinctoria</i> (L.) (Leguminosae)	<i>Neeli, Konda Neeli</i>	Dog bite	A glassful of leaf juice administered in the morning with milk for 3 days.

			Burns	Leaf paste applied on effected areas.
35	<i>Ipomoea Carnea</i> Jacq. (Convolvulaceae)	<i>Besharam,</i> <i>Tutikada</i>	Blood pressure	Leaf juice with honey administered in 2 spoonfuls twice a day for about 3 months.
36	<i>Jatropha curcas</i> (L.) (Euphorbiaceae)	<i>Adivi Amudamu</i>	Piles	Leaf paste applied externally as Ointment in bleeding stages.
			Mouth sores and Ulcers	Leaf paste applied with honey on tongue of babies for 3-4 days or till cure.
37	<i>Justicia gendarussa</i> <i>Burm.f.</i> (Acanthaceae)	<i>Nalla Vavili</i>	Hair growth	Leaf paste applied on head 1 hour before the bath for black and dense hair growth weekly once for about 2 months.
			Leucoderma	Leaves ground with the leaves of <i>Lawsonia inermis</i> and the paste applied on patches and exposed to morning sun light for 30-45 minutes for about 2 months.
38	<i>Lawsonia inermis</i> L. (Lythraceae)	<i>Maidaku</i>	Alopecia	Leaf paste applied on effected areas till growth of hair.
			Dandruff	Leaf paste applied to head, 1-hour before bath twice a week for one month.
39	<i>Leucas aspera</i> (Willd.) Link. (Labiatae)	<i>Tella Tummi</i>	Pasoriasis	Leaf juice mixed with turmeric powder and applied on effected areas for 2-3 months or till cure.
40	<i>Melia azedarch</i> L. (Meliaceae)	<i>Turaka Vepa</i>	Anthelmintic	Leaves ground into powder with epicarps of <i>Terminalia Chebula</i> and administered in 2 spoonfuls twice a day for 2-3 days.
41	<i>Mimsa Pudica</i> L. (Leguminosae); Sf: Mimosoideae	<i>Atti Patti</i>	Filaria	Leaf paste applied on effected parts to prevent pain and swelling.

42	<i>Mullugo Pentaphylla</i> L. (Molluginaceae)	<i>Verri Chatarasi</i>	Anti Periodic	Leaf juice mixed with turmeric and honey and administered in 2 spoonfuls twice a day based on days requirement but not for more than a week.
43	<i>Mukia Maderaspatana</i> (L.) Roem. (Cucurbitaceae)	<i>Potti budama kai</i>	Dandruff	Leaf paste applied to head 1 hour before the bath twice or thrice a week.
44	<i>Muraya Koenigii</i> (L.) Spreng. (Rutaceae)	<i>Kare maku,</i> <i>Karivekpaku</i>	Dyspepsia	Leaves dried in shade and ground into powder and take in 1 spoonful twice a day for about week.
45	<i>Nerium oleander</i> (L.) (Apo cynaceae)	<i>Ganneru</i>	Tuberculosis	Leaves boiled and the extract administered in 2 spoonfuls thrice a day for about a month.
			Whooping cough	Boiled leaf extract administered in 2 spoonfuls thrice a day for 10 days.
46	<i>Ocimum tenuiflorm</i> (L.) (Labiatae)	<i>Tulasi</i>	Cold and cough	Leaf juice mixed with juice of <i>Zingiber officinale</i> and honey and administered in 2 spoonfuls twice a day for 3-4 days or till cure.
			Fever	Leaves ground with seeds of <i>piper nigrum</i> and the extract administered in 2 spoonfuls twice a day for 3-4 days.
			Skin allergy	Leaf juice applied on effected areas till cure.
47	<i>Orthosiphon rubicundus</i> (D.Don) Benth. (Labiatae)	<i>Nela tappidi</i>	Ring worm	Leaf paste applied on effected areas
48	<i>Ottelia alsinoides</i> (L.) Pers. (Hydrocaritaceae)	<i>Edakula Thamara</i>	Fever	Leaf poultice applied and gently massaged on arms and legs for refrigeration.
49	<i>Oxalis corniculata</i> (L.) (Oxalidaceae)	<i>Nela Chinta</i>	Jaundice	2-3 spoonfuls of leaf extract given with a glass of butter milk once early in the morning for about one week.



50	<i>Pavonia odorata</i> Willd. (Malvaceae)	<i>Teega benda</i>	Gonorrhea	Leaf juice given in 2 spoonfuls twice a day for about 10 days.
51	<i>Pedaliium murex</i> Willd. (L.) (Pedaliaceae)	<i>Pedda palleru,</i> <i>Yenugu palleru</i>	Hydrocele	Leaves and fruits ground togetherly into paste and applied on testicles for a week.
52	<i>Pergularia daemia</i> (Forssk.) Chiov. (Asclepiadaceae)	<i>Dustapu teega</i>	Asthma	Leaf decoction taken in 2 spoonfuls 2-3 times a day for about 15 days.
			Bone fracture	Leaves ground with leaves of <i>Plumbago Zeylanica</i> and the paste is plastered till cure.
53	<i>Plumbago Zeylanica</i> (L.) (Plumbaginaceae)	<i>Chitra moolam</i>	Chest Pain	Leaf paste mildly heated and gently massaged.
54	<i>Psidium guajava</i> (L.) (Myrtaceae)	<i>Jami, Jama</i>	Dyspepsia	Tender leaf extract taken in 2 spoonfuls twice a day for about 5 days.
55	<i>Ricinus Communis</i> (L.) (Euphorbiaceae)	<i>Amudamu</i>	Sun Stroke	Leaf paste applied on forehead for relief.
			Jaundice	Leaf paste administered in 1 spoonful with buttermilk early in the morning for 5-7 days.
56	<i>Stereo Spremum Personatum</i> (Hassk.) Chatterjee (Bignoniaceae)	<i>Kod, Kala-goru</i>	Arthritis	Leaf decoction given in 2 spoonfuls twice a day for about 20 days.
57	<i>Strychnos nux - Vomica</i> (L.) (Loganiaceae)	<i>Esha mushti</i>	Blood pressure	Leaves, ground with ginger and make into small pills, administered in 2 pills thrice a day for 10-15 days.
58	<i>Syzygium Cumini</i> (L.) Skeels (Myrtaceae)	<i>Alla neredu</i>	Diarrhea	Leaf juice with Sugar water given to children.

59	<i>Tamarindus indica</i> (L.) (Leguminosae) Sf: Caesalpionioideae	<i>Chinta</i>	Fever	Tender leaves ground with leaves of <i>justicia adhatoda</i> and <i>ocimum tenuiflorum</i> and the juice given in 2 spoonfuls twice a day for 3 days.
60	<i>Tiliacora acuminata</i> (Lamk.) Miers (Menispermaceae)	<i>Kappa teega</i>	Snake bite	Leaf paste applied on bitten area and also root decoction given in 50ml immediately and thrice a day till relief from suffering.
61	<i>Tragia involurata</i> (L.) (Euphorbiaceae)	<i>Durada gondi,</i> <i>Durdha gondi</i>	Contraceptive	Leaf paste dissolved in rice cleaning water is taken by women in 2-3 spoonfuls once in morning for 5 days from 5th day of menses.
62	<i>Tridax procumbens</i> (L.) (Compositae)	<i>Gaddi Chamanti</i>	Hemorrhage	Leaf juice applied externally for cuts, sores, ulcers and wands to arrest the bleeding.
63	<i>Vanda tessellata</i> (Roxb.) Hook.ex.G.Don (Orchidaceae)	<i>Badanika</i>	Ear ache	2-3 into ear leaf juice with <i>Brassica</i> oil is poured for 3 days.
64	<i>Vicoa indica</i> (L.) DC. (Compositae)	<i>Adavi poddu</i> <i>tirugudu</i>	Asthma	Leaf juice administered in 2 spoon fuls twice a day for 15 days.
65	<i>Vitex negundo</i> (L.) (verbenaceae)	<i>Vavili</i>	Post partum problems	It is believed that all kinds of problems such as debility, head ache and body pains will be cured if bath is taken with boiled water containing leaves.
66	<i>Waltheria indica</i> (L.) (Sterculiaceae)	<i>Nalla Benda</i>	Harshness of voice	Leaves and flowers are chewed adns said to be effective.

67	<i>Ziziphus Oenoplia</i> (L.) Mill. (Rhamnaceae)	<i>Pariki</i>	Bone fracture	Leaf paste mixed with gum of <i>sterculia urens</i> and plastered over the effected parts of human and domestic animals till cure, also the decoction with leaf decoction of <i>Acacia chunara</i> given with ghee and applied externally till cure.
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### Conclusions

The data collected from the tribal people of Adilabad district pertaining to the treatment of various ailments by leaf preparations in the form of decoctions, extracts, paste, etc., should prove useful for researchers in the field of medicine, biotechnology, pharmacology, etc.

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