

## Ethnomedicinal plants used by *Konda Reddy, Koya Dora, Konda Kammara, Konda Kapu* and *Valmiki tribes* in East Godavari District of Andhra Pradesh, India

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**Ethnomedicinal survey was carried out in remote villages like Jaddangi & Thimmapuram under Rajavommangi range and Devarapalli under Rampachodavaram range of Kakinada forest division, one among three divisions under Rajamundry circle in East Godavari district of Andhra Pradesh. The survey focuses the documentation of indigenous knowledge by identifying, authenticating 28 plant species belonging to 20 different families with some less known ethnomedicinal uses as effective remedies for the local tribes.**

**Key words:** Ethnomedicine, Tribes, Indigenous, Jaddangi, Thimmapuram, Devarapalli.

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The use of plants by different ethnic groups as a source of medicinal agents lies deep in the antiquity<sup>1</sup>. Nearly 80 % of the world population use traditional medicine, mainly medicinal plants, to cure illness and ailments<sup>2</sup>. Modern Pharmacopoeias also contain atleast 25 % drugs derived from plants and others which are derived from synthetic analogues of prototype compounds isolated from plants<sup>3</sup>. The Indian system of medians predominantly uses plants viz Siddha (600), Ayurveda (700), Amchi (600), Unani (700) and Allopathy (30) for their preparations and formulations<sup>4</sup>. The maximum numbers of medicinal plants are used by folk (tribal people who are the

real stewards of the resource) traditions<sup>4-5</sup>. There are 67.75 million tribal people, 8 % of the total population in India belonging to 573 communities of 227 ethnic groups representing one of the greatest emporia of ethnomedicinal wealth. Andhra Pradesh is home to 33 communities (*Lambada, Yarukala, Yanadi, Valmiki, Kondh, Porja, Bagata, Konda Kapu, Konda Reddy, Koya Dora, Konda Dora, Konda Kammara* etc.), numbered 50,24,104 in the 2001 census officially designated as scheduled tribes (STs) comprising 6.59 % of the state's population<sup>5-6</sup>. They have a diverse sociocultural coexisted peaceful life of festivals, celebrations, functions etc. having a divergence and differentiation among various groups in terms of rites, rituals and functions with rare inter-tribal conflicts<sup>6</sup>. They have sound knowledge on different crude drugs used for their ailments<sup>7</sup>. There are several reports on ethnomedicinal studies of general ailments like skin diseases, cuts, burns, wounds, backache, diabetes, leucorrhoea, menorrhoea, veterinary diseases, dysentery, cold, cough, scorpion sting, snake bite, insect bite,

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tumours, anthrax, malaria, worm infestation etc<sup>7-8</sup>. The knowledge about the tribal medicine is on the way to extinction because of the negligence and the absence of documentation. Traditional medicine practices and ethnomedicinal information play an important role in the scientific research, particularly when the literature and the fieldwork data have been properly evaluated. Documentation of indigenous knowledge on the utilisation of the local plant resources by different ethnic groups or communities is one of the main objectives of ethnomedicinal research<sup>9</sup>.

## MATERIAL AND METHODS

### Study areas<sup>10</sup>

Jaddangi, Thimmapuram and Devarapalli are situated at 17° 29' 0.6494" N latitude & 82° 9' 0.5033" E longitude, 17° 22' 52.8879" N latitude & 82° 3' 13.198" E longitude and 17° 59' 18.8534" N latitude & 82° 58' 49.8317" E longitude (Figure 1) respectively. Godavari district can be broadly classified into three natural divisions namely Delta, Up and Agency or hill tracts. Rajavommangi (Jaddangi & Thimmapuram) and Rampachodavaram (Devarapalli) constitute delta with a vast expanse of rice-fields, surrounded by plantain, betel, coconut gardens and innumerable palmyrahs, upland and Agency or hill tracts ranging from few meters near sea level to 300 meters rise by gradations of Eastern Ghats at their different parts. There is mostly alluvial soil in delta region like Godavari, sandy clay soil at the tail end portions of river Godavari, red loamy soil in upland and agency area of the district. The major rivers flowing through the division are Godavari, Pampa and Eleru. The region mostly has a tropical climate (hot & humid summer, March-June and rainy, July-Jan) like the rest of the coastal Andhra. Temperatures ranging from 10° C to 48° C and the annual rainfall are about 1280mm.

### Method of collection of information and interview

Survey was conducted by recording the information obtained from the questionnaires on medicinal plants with their local names, parts used, mode of preparation and administration with the aged farmers and local tribes. The data were obtained by direct field visit and interviews (Figure 2-8) taken, firstly of individuals like (local old man, school teacher, forest dweller etc.), secondly of groups village chiefs (*Gramam Musali Vaaru*) and

thirdly of herbal healers/ local *Vaidhyas* (Ayori Venkata Rao at Jaddangi, Apanakondadoramma at Thimmapuram and S. Rambabu, *Vanamulika Vydulu* at Devarapalli)<sup>11-12</sup>. The plants after being identified the specimens had been authenticated in Botanical Survey of India, Hyderabad and incorporated in the herbarium.

## RESULTS

In the present survey 28 plant species under 20 different families are enumerated in Table 1 with their vernacular name (Telugu), scientific name/ family and part used & mode of administration. Among all the species, *Rauwolfia serpentina*, *Andrographis paniculata*, *Mimosa pudica*, *Ocimum gratissimum*, *Tinospora cordifolia*, *Datura metel*, *Semicarpus anacardium*, *Gymnema sylvestre* are used in daily life. Plant entirely or by part (tuber, root, bark, leaf, shoot tip, stem, seed, fruits, nut milky and exudates) is either taken internally in the form of pill, paste, powder, decoction, infusion etc. or applied externally as paste.

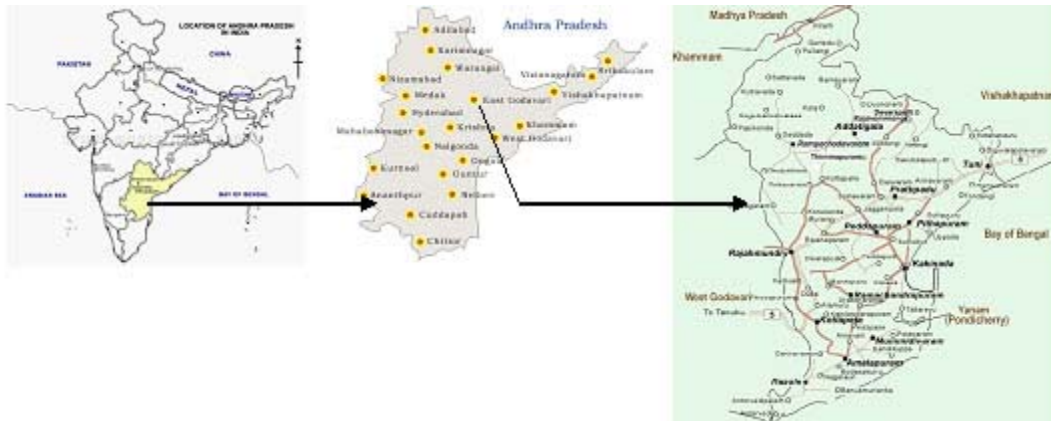
## DISCUSSION

Remedies by total plant species for different ailments like diabetes (3); diabetes & jaundice (2); cough & asthma (3); piles (2); wound healing (2); analgesic in arthritic pain (2), snake bite (1), joint & muscle pain (1), menstrual pain (1); digestive (1); toothache & gum infection (1); eye-sight disorder (1); oxytocic (1); paralysis (1); hypertension (1); worm infestation (1); kidney calculi (1); obesity (1); dysentery (1); anti-anxiety (1) are revealed in the study. A proper analysis and conservation of most of these endangered plant species favouring sustainable use by bringing more medicinal species into cultivation by scientific commercial farming (organic farming, irrigation, harvesting & preservation and marketing) in an attempt to develop awareness of the local people would be of immense help as the life saving remedies for the tribal villagers on the lap of remote hill tracts or agency areas. Hence Pharmacological and phytochemical investigation of these plant species is required to know the accuracy of the therapeutic values for better utilization of the traditional knowledge.

**Table 1.** Ethnomedicinal plants used by the tribal villagers in East Godavari district of Andhra Pradesh

Plant Vernacular name (Telugu)	Scientific name/Family	Uses of parts and mode of administration.
Papataku	<i>Rauwolfia tetraphylla</i> L. Apocynaceae	Fresh bark is ground to paste and given orally for the treatment of kidney calculi.
Neredu	<i>Syzygium cumini</i> (L.) Skeels ( <i>Myrtus cumini</i> L.) Myrtaceae	Bark and seed powder is given internally to treat diabetes.
Karakkai chettu	<i>Corynocarpus laevigatus</i> J.R. Forst. & G. Forst. Corynocarpaceae	Fruits are ground and taken orally to treat cough.
Masala aku	<i>Kalanchoe mortagei</i> (Syn: <i>Bryophyllum mortagei</i> ) Crassulaceae	Fresh leaves are taken orally in the treatment of piles.
Koravi	<i>Xora pavetta</i> Andr. Rubiaceae	Bark powder is used in the treatment of piles.
Juvvi, Jiri, Kaljuri etc.	<i>Ficus benghalensis</i> L. Moraceae	Ground fresh shoot tips are applied externally for wound healing.
Nallajidi	<i>Semicarpus anacardium</i> L.f. Anacardiaceae	Nut powder is boiled in edible oil and applied topically to get rid of arthritic pain. Aqueous nut extract is used against fungal infection topically and to treat cancer and tumour internally. Milky latex is administered orally as an anti-inflammatory and analgesic.
Podapatri teega	<i>Gymnema sylvestri</i> R. Br. Asclepiadaceae	Leaf extract is taken internally for diabetes.
Erupu chitramulam	<i>Plumbago indica</i> Linn ( <i>Plumbago rosea</i> L.). Plumbagenaceae	Milky latex from stem is used for treatment of eye infection of livestock.
Jilledu	<i>Calotropis gigantea</i> (L.) W.T. Aiton ( <i>Asclepias gigantea</i> L.) Asclepiadaceae	Paste of tuber is applied externally for arthritis as an analgesic.
Chitramulam	<i>Plumbago zeylinicum</i> Linn. Plumbagenaceae	Milky exudates from leaves and stem are taken orally in snake bite.
Ponnagantikura	<i>Altheranthera sessilis</i> (L.) R. Br. ( <i>Gomphrena seaailis</i> L.) Amaranthaceae	Herb is ground to paste and taken orally as analgesic in joint and muscle pain.
Tuturabenda	<i>Abutilon hirtum</i> (Lam.) Sweet ( <i>Sidda hirta</i> Lam.) Malvaceae	Herb paste is taken orally to improve eye sight.
Madana-grandhi	<i>Spermacoce hihpida</i> L. Rubiaceae	Decoction of dried entire plant is given orally for removal of placenta after parturition in livestock.
Gedaga	<i>Mirabilis jalapa</i> L. Nyctagenaceae	Freshly ground paste is applied in gum to get rid of toothache. Tuber is ground and mixed with turmeric paste along with coconut

Sarpagandha	<i>Rauwolfia serpentina</i> (L.) Benth. ex Kurz Apocynaceae	oil in equal proportion. Resultant paste is applied locally for paralysis. Root decoction is administered internally for the treatment of hypertension.
Bodanta	<i>Bahinia purpurea</i> L. Fabaceae	Pill made of bark paste is taken orally in the treatment of menstrual cramps.
Ippa	<i>Madhuca indica</i> J. F. Gmel	Bark is soaked in water overnight for cold maceration and taken orally for the treatment of diabetes and hypertension.
Dudipalatiaga	Sapotaceae <i>Dregea volubilis</i> (L.f.) Benth. ex Hook. f.	Leaf extract in water is taken internally for worm infestation and externally as an antiseptic.
Nelavemu, Nelavepu etc.	<i>Andrographis paniculata</i> (Burm.f.) Nees ( <i>Justicia paniculata</i> Burm.f.) Acanthaceae	Leaf decoction is taken orally in the treatment of diabetes, jaundice and arthritis.
Kampu rotta	<i>Eupatorium coelestinum</i> L.	Ground paste of tender shoot tips along with leaves is applied externally on the wounds for quick healing.
Attaapatti	Asteraceae <i>Mimosa pudica</i> L. Fabaceae	A belief of <i>Konda Reddy</i> tribal community: Ground leaf paste is applied on the skull of husband by wife and vice versa to get rid of anxiety for peaceful marital life.
Brynda, Gaggera, Krishnatulsi etc.	<i>Ocimum gratissimum</i> L. Lamiaceae	Leaf infusion administered orally for the treatment of cough and asthma.
Uttareni	<i>Achyranthes aspara</i> L. Amaranthaceae	Ground herb is made into paste and taken orally for the treatment of obesity.
Kodisepala-vittulu,	<i>Hollerhena pubescens</i> Apocynaceae	Bark powder is used internally in kodeseepala, girmallika etc. (Buch.-Ham.) Wall. ex G. Don the treatment of dysentery.
Teppatiaga	<i>Tinospora cordifolia</i> (Thunb.) Miers Menispermaceae	Stem powder is given orally in the treatment of diabetes and jaundice.
Ummatta	<i>Datura metel</i> L. Solanaceae	Leaf decoction is taken internally to treat the wheezing of asthma.
Mushidi, Mucidi, Musthi etc.	<i>Strychnos nux-vomica</i> (Linn.) Loganiaceae	Seed infusion is administered orally as a stomachic for digestion.



**Fig. 1.** Map showing the study areas



**Fig. 2.** Ayori Venkata Rao at Jaddangi, demonstrating the plant *Rauwolfia tetraphylla*



**Fig. 3.** Ayori Venkata Rao at Jaddangi, demonstrating the plant *Plumbago indica*



**Fig. 4.** *Plumbago zeylinica*, demonstrated by old men of Jaddangi



**Fig. 5.** Apanakondadoramma at Timmapuram, demonstrating the plant *Spermaceoehipida*



**Fig. 6.** S. Rambabu at Devarapalli, demonstrating the plant *Myrabilis jalapa*



**Fig. 7.** S. Rambabu at Devarapalli, demonstrating his Ayurvedic dispensary



**Fig. 8.** S. Rambabu at Devarapalli, in front of his Ayurvedic dispensary "Devarapalli Vanamulika Mandalu"

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