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# A SURVEY OF ETHNOMEDICINAL PLANTS USED BY LOCAL TRIBES OF AHERI AND BHAMRAGARH FOREST AREA OF GADCHIROLI DISTRICT IN MAHARASHTRA, INDIA

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**ABSTRACT**

Aheri tahsil is located on the southern part of Gadchiroli district. Among the 12 tehsils, Aheri is the largest tehsil in the Gadchiroli district covering an area of 2282.70 km², while Desaiganj (Wadsa) is the smallest in the district, covering an area of 262.74 km². Chamorshi is the most populous whereas Bhamragad is the least populous tehsil in Gadchiroli district. A major portion of Aheri and Bhamragad areas are covered by forest and the ethnic group is Gond. The major local language is Gondi, however these people also know Marathi and Telugu as well. The current study covers both Aheri and Bhamragad tahsils. These tribals depend on forest resources for their daily needs including medicines. Usually they visit hakims (local doctor who prepare medicines from locally available plants only), for the treatment of any ailment.

## INTRODUCTION

A wide variety of plants are known to have medicinal properties and many of them are in use in different systems of medicine. There are many books which give information about medicinal uses of plants. India is one of the rich biodiversity spots of the world and about 43% of plants from this subcontinent (approximately 7,500 species) are reported to have medicinal value (Pushpangadan, 1995).

According to a book on medicinal plants in Maharashtra, the state has around 384 medicinal plants (Dhale & Patil, 2022). A survey of the Nashik district of Maharashtra found 50 medicinal plant species from 11 families and 48 genera (Karande et.al., 2021).

A brief ethnobotanical survey of plants used by Gond and Halbi the tribes of Chandrapur and Gadchiroli districts has been conducted by Tiwari and Padhye (1993) and Tiwari (1994). Sivaprasad and Mistry (2021) reported ethnomedicinal uses of local tribes of Mulchera tehsil.

Phanikumar and Chaturvedi (2010) had published a work on ethnobotanical observations of Euphorbiaceae family, from Vidarbha region of Maharashtra. Ethnobotanical plants of Markanda forest region was reported by Chavan and Margonwar (2015).

An information on ethnomedicinal diversity of a very few plants was described by Khonde & Halami (2020). The uses of some ethnomedicinal plants of Etapalli and Bhamragad in Gadchiroli district was reported earlier (Khonde et.al., 2014 ~~2012~~). Jakhi (2021) reported that many plants of Gadchiroli district are used as Herbal medicine. The current study was made to explore the ethnomedicinal uses of wild species in this specific area.

**GEOGRAPHICAL DETAILS OF STUDY AREA**

Gadchiroli district is covered by dense forest area in Maharashtra state (Fig. 1). Aheri tehsil is a forest sub-division of Gadchiroli district in Maharashtra state and is located on the banks of River Pranahita, which is a tributary of Godavari River (Jain S.K. et.al, 2007). Bhamragarh another sub-division, is located on the banks of confluence of three rivers – (1) Indravati River, a tributary of Godavari River, (2) Pearl Kota, and (3) Pamul Gautami (Fig.2).

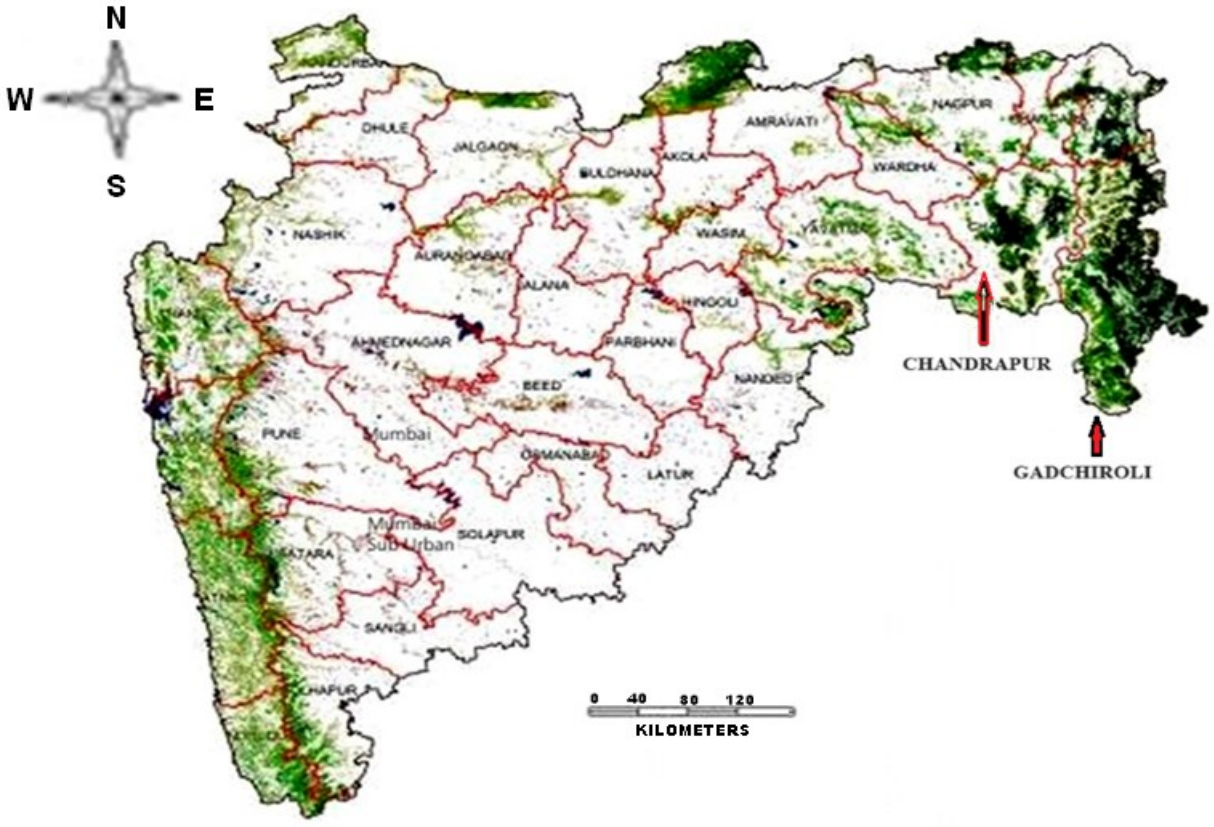


**Fig. 1: Map showing forest cover in Maharashtra state**

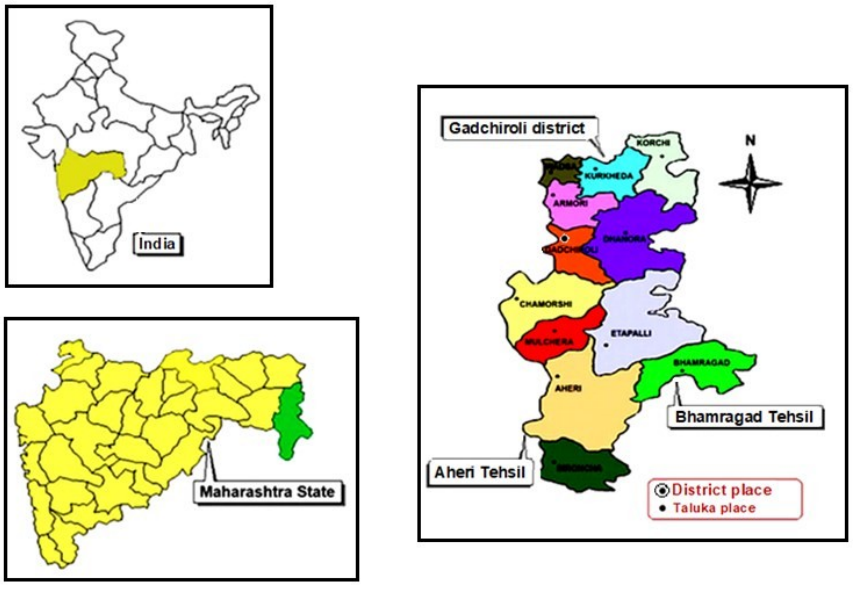


**Fig.2: Geographical details of study area**

A brief floristic survey of Gadchiroli district was done by Suresh and Sourav (2013). The dominant species is *Tectona grandis*. The other plants which are frequently found in this district include *Aegle marmelos, Annona squamosa, Anacardium occidentale, Annona reticulata, Azadirachta indica, Bombax ceiba, Borassus flabellifer, Buchanania lanzan, Clerodendron* species, *Diospyros melanoxylon, Dioscorea bulbilifera, Ficus bengalensis, F. racemosa, F. religiosa, Gardenia resinifera, Gloriosa superba, Limonia acidissima, Madhuca indica, Mangifera indica, Manilkara hexandra, Momordica dioica, Phylanthus emblica, Phoenix sylvestris, Pithecellobium dulce, Pongamia pinnata, Pterocarpus marsupiam, Semecarpus anacardium, Syzygium cumunii, Terminalia arjuna, T. bellirica, T. chebula, T. indica, T. tomentosa, Vitex nigundo. Ziziphus mauritiana, Z. oenoplia,*

**Material and Methods**:

The current survey has been conducted during winter and summer seasons to collect the information from tribal people, hakims. The data obtained through personal interviews with tribal group leaders and hakims was analysed. More than 70 plants are used by hakims for major diseases like blood pressure,

diabetes, broken bones, different types of pains and even Cancer.

## RESULTS AND DISCUSSION

Information on around seventy one Ethnomedicinal plants were collected, of which 67 plants belong to dicot families and rest are monocots. In the present observation, as many as 5 plants are from Fabaceae, followed by Asclepiadaceae and Acanthaceae 4 from each, while 20 families are represented by single useful species. The plants are used for common cold, cough, to kidney stones, urinary infections, and even for cancer treatment by the tribals.

The present survey revealed much of information which is not available in literature. This is completely new and many untold stories about the local plants and cure have been gathered from tribal groups of this division. One must accept the truth that extracting information from these tribals and hakims is not easy as they fear of mainly two things – first is exploitation of these plants for commercial use will destroy the nature which they treat as sacred one; secondly the hakims (local medical practitioners) feel a threat to their livelihood. For these reasons they prefer to speak in their own tribal language Gondi only, even though they knew state language Marathi and other local language Telugu.

Though, secretly, we have observed that the tribals perform pooja before excising the part (which is used as medicine) from the plant (leaves, flowers, fruits or Bark). If it is root part they prefer late in the evening or very early in the morning and more importantly, small and young plants are selected for this purpose. The probable reason is they never destroy large plants as it is useful for further flowering and fruiting. The specific time for excising is that no outsider could able to find out the plant. Literally, all plants look alike and there is a chance to get lost in the jungle.

Some tribals, even perform pooja and spell some words before preparing medicine and applying to the patient, without which they believe the medicine would not work well and the ailment persists long.

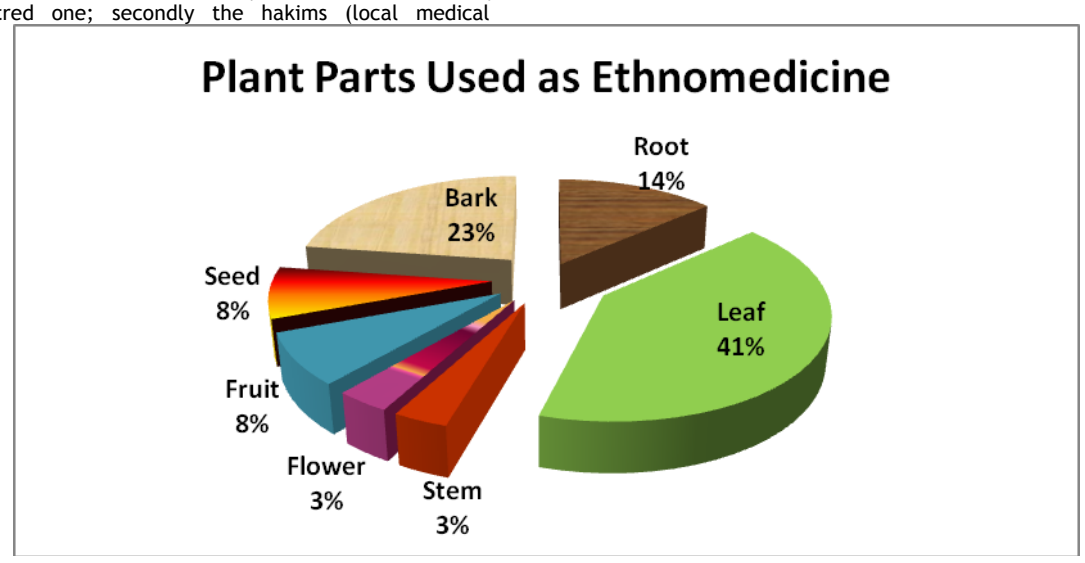


**Fig. 3: Pie chart showing Plant parts used as ethnomedicine**

It is observed that the tribal people are losing their traditional identity due to several developmental activities in and around tribal areas that are not related to their welfare, resulting in the loss of such treasures of plant genetic resources (Shankar, 1995). The plants are being used by the tribals for different diseases, some of which are already known to us as available in texts, but not for the ailment told by them (Table 1).

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## REFERENCES


- Chavan P. & Margonwar A. (2015). Ethnobotanical survey of Markanda forest range of Gadchiroli district, Maharashtra, India. British Journal of Research. 2(1): 55-62
- Dhale, D.A. and Patil D.A. 2022. "Maharashtratil Aushadhi vanspati Sangrah" (Medicinal Plants of Maharashtra). Prashant Publisher, Jalgaon, Maharashtra, India, ISBN: 978-93-90862-35-1
- Jain, S.K., Agarwal, P.K., and Singh, V.P. (2007). "Hydrology and Water Resources of India". Springer Dordrecht Publisher, 1260 pages.
- Jakhi, P.S. 2021. "Herbal Medicines Used By Local Inhabitants of Gadchiroli District of Maharastra", in book 'Herbal Medicine – A Benign and Conventional Medical System'. Dr. Suresh Kumar Agarwal, Dr. Aruna Kumari Nakkella, Dr. Sandeep Rout. (Eds). Immortal Publications, Vijayawada. (AP), India pp 253-267.
- Karande, R, Kshirsagar S.R., Shenpadu S.B. 2021. "Medicinal plants diversity in Nashik District (Maharashtra: India)-Polypetale & Gamopetalae". J. Scientific Research, 65(7): 94-98
- Khonde, V.K. and Halami, R.R. 2020. "Studies on ethnomedicinal diversity and conservation of plants in Bhamragarh, district Gadchiroli (M.S)". Parishodh J. Vol9(3): 54-60
- Khonde, V. S., M. C. Kale, and R. Badere. 2014. "Ethnomedicinal Plants Used by Gond /Madia Tribes of Etapalli, Bhamaragarh, Gadchiroli, District Gadchiroli". Int. J. Res. Biosci. Agric & Tech. Vol.2(2): 725-733
- Phanikumar G. and Alka Chaturvedi 2010. "Ethnobotanical observations of Euphorbiaceae species from Vidarbha region, Maharashtra, India. Ethnobotanical leaflets, 14: 674-680.
- Pushpangadan P. 1995. "Ethno biology of India". A Status Report, GOI, New Delhi.
- Shankar, R 1995. "Tribal community in India and PGR, In: Farmer's rights and plant genetic resources recognition and reward: A dialogue", Swaminathan, M.S. (Ed). Million India Limited Madras, India pp.106-111.
- Sivaprasad H. and Mistry A. 2021. "Utilization of Local Plant Resources as Medicine by Tribal Communities in Mulchera Tehsil of Gadchiroli District in Maharashtra, India". International Journal of Scientific Research in Science and Technology, Vol. 9(6). pp. 373-379.
- Suresh Jagtap and Sourav Mukherjee 2013. "Plant Diversity of Gadchiroli district of Maharashtra, India: A brief survey", Checklist, Vol. 9 (1): 51

- Tiwari, V.J. 1994. "Ethnobotanical survey of Halbi tribe of Chandrapur and Gadchiroli districts of Maharashtra State, India". Fitoterapia 66(4): 346-350.
- Tiwari, V. J. and Padhye M. D. 1993. "Ethnobotanical study of Gond tribe of Chandrapur and Gadchiroli districts of Maharashtra state, India". Fitoterapia 64(1): 58-61.


TABLE 1: ETHNOMEDICINAL USES PLANTS USED BY LOCAL TRIBAL COMMUNITY

| S. No. | Botanical Name of Plant (Common Name) | Local name | Family | Part used | Uses |
|---|---|---|---|---|---|
| 1 | *Achyranthus aspara* | Khini, aghadamarra | Amaranthaceae | Root<br>Seeds | Fits<br>Powder of Seeds mixed with toothpowder for dental problems |
| 2 | *Adina cordifolia* | Haldumarra | Rubiaceae | Leaf | Wound healing |
| 3 | *Aegle marmelos* | Belmarra / Belptrimarra | Rutaceae | Leaf | Diabetes |
| 4 | *Amaranthus spinosus* | Kantemaath | Amaranthaceae | Leaf | Constipation |
| 5 | *Amarphophallus commutatus* | Janglisuran | Araceae | Rhizome | Dysentery |
| 6 | *Andrographis paniculata* | Kalgor marra | Acanthaceae | Roots<br>Fruit/Seed paste | Blood pressure; Typhoid fever<br>Lower back pain |
| 7 | *Argyreia nervosa* | Vardhara | Convolvulaceae | Leaves | Skin disease, arthritis. |
| 8 | *Asparagus racemosus* | Shatavarmarra | Asparagaceae (earlier Liliaceae) | Root | Galactagogue |
| 9 | *Bauhinia racemosa* | Sonamarra/ aptamarra | Fabaceae | Leaves | wound healer |
| 10 | *Barleria prionites* | Sonerimarra | Acanthaceae | Leaves, Flowers | Paralysis |
| 11 | *Boerhaavia diffusa* | Khapar khutti | Nyctaginaceae | Leaves | Vegetable for Sugar |
| 12 | *Bombax ceiba* | Savarimarra | Malvaceae (Bombacaceae) | Bark | Dysentery |
| 13 | *Bryophyllum pinnatum* | Panfuti | Crassulaceae | Leaf Chewing | Kidney stones |
| 14 | *Buchnania lanzan* | Charoli | Anacardiaceae | Leaves<br>Bark | Cold, Cough<br>Vomiting |
| 15 | *Butea monosperma* (Yellow flower variety) | Modukmarra / modugmarra – pivla | Fabaceae | Stem ash<br>Flowers (dired)<br>Flower juice<br>Gum, bark | Piles<br>Stomachachic<br>Kidney stones<br>Wound healing |
| 16 | *Butea superba* (Climber) | Yel palas | Fabaceae | Bark | Anti-ulcer; Liver protectant |
| 17 | *Calatropis gigantea* | Rui | Asclepiadaceae | Leaf | Mad dog bite † |
| 18 | *Calatropis procera* | Ruimarra | Asclepiadaceae | Root<br>Leaf (fried with oil) | Cobra bite<br>Knee/joint pains (external) |
| 19 | *Cardiospermum ~~helicabamum~~ helicacabum* | Kanphutimarra | Sapindaceae | Leaf | Ear ache |
| 20 | *Carica papaya* | Popay | Caricaceae | Leaf juice | increasing platelets; Dengue fever |
| 21 | *Cassia fistula* | Rela marra | Caesalpiniaceae | Bark | Fistula, Piles |
| 22 | *Cassia tora* | Tarotamarra | Caesalpiniaceae | Leaf | Anti-parasitic |
| 23 | *Catharanthus roseus # (=Vinca rosea)* | Baromashi | Apocynaceae | Leaf | Diabetes (direct chewing early in the morning- on empty stomach) |
| 24 | *Celastrus paniculatus* | Malkangoni | Celastraceae | Roots, seeds | acidity, worms, memory |
| 25 | *Centella asiatica* | Brahmi | Apiaceae | Leaf | Kidney and Liver |

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|---|---|---|---|---|---|
| | | | | | problems, jaundice |
| 26 | *Clerodenrdrum infortunatum* | Khandukchakka/ khandukmarra | Verbanaceae | Leaf | Bone fracture, skin disease, arthritis |
| 27 | *Cullen corylifolium* | Babechimarra | Fabaceae | Dried fruit/seed | Psoriasis |
| 28 | *Dendrocalamus strictus* | Vedurmarra | Poaceae | Young stem | Tuberculosis, cough |
| 29 | *Diaspyros melanoxylon* | Tendumarra | Ebenaceae | Young leaf<br>Bark | Sunstroke<br>Anti-malarial; anti-diabetic |
| 30 | *Diospyros montana* | Tembru | Ebenaceae | Bark | Snake (Krait) bite |
| 31 | *Dillenia pentagyna* | Michcho marra / Michad marra | Dilleniaceae | Bark | Blisters (External) |
| 32 | Drimia indica | pedda-ullimarra | Asparagaceae | Bulb | Urinary problems, Cardiac problems, Cough |
| 33 | *Elephantopus scaber* | Hastipatamarra | Asteraceae | Root | bleeding piles ** |
| 34 | *Euphorbia hirta* | Anikkaya | Euphorbiaceae | aerial part decoction | Stomach worms |
| 35 | *Feronia limonia* | Marmimarra | Moraceae | Fruits | white discharge |
| 36 | *Ficus racemosa* | Umbermarra | Moraceae | Root | Kidney stone |
| 37 | *Heliotropium indicum* | Hatisur | Boraginaceae | Leaf | Diabetes |
| 38 | *Hemidesmus indicus* | Khobarveli | Asclepiadaceae | Root, leaves, bark | Urinary infections, cough, worms, |
| 39 | *Hibiscus sabdariffa* | Pullakura | Malvaceae | Leaves | Sunstroke |
| 40 | *Holarrhena pubescens* | Kudamarra | Apocynaceae | Bark | Malarial fever, Paralysis |
| 41 | *Hygrophila auriculata* | Kulekhara | Acanthaceae | Leaf juice | Haemoglobin content in RBC increases (taken on empty stomach) |
| 42 | *Ixora pavetta* | Lokhandimarra | Rubiaceae | Bark,<br>Root | weakness;<br>Urinary infections in females |
| 43 | *Justicia adathoda (=Adathoda vasica )* | Adulsamarra | Acanthaceae | Leaf juice | Cold, coughs (along with Ginger juice + honey) |
| 44 | *Litsea glutinosa* | Geda-marka (ranamba) | Lauraceae | Leaves, bark | Arthritis |
| 45 | *Manilkara hexandra* | Pala marra | Sapotaceae | Bark<br>Bark-paste | Chest pain; Paralysis;<br>Skin infection (external use)<br>Broken bones* |
| 46 | *Mimosa hamata* | Chilalimarra | Mimosaceae | Bark | Fevers |
| 47 | *Mimosa pudica* | Lajulimarra | Mimosaceae | Leaf | Toothache |
| 48 | *Murraya konigii* | Kalyammarra | Rutaceae | Leaf | Digestion |
| 49 | *Nyctanthes arbor-tristis* | Pungamarra / Parijatamarra | Oleaceae | Leaf juice | Malaria; Typhoid fevers |
| 50 | *Oroxylum indicum* | Tattumarra | Bignoniaceae | Leaf juice<br>Roots, fruit, flowers, | Wound healing, tuberculosis, digestive tract problems, delivery related problem |
| 51 | *Phyllanthus maderaspatensis* | Nalla-usirika | Phyllanthaceae | Root, Leaf | Severe Stomach pain |
| 52 | *Phyllanthus niruri* | Bhui avlae | Euphorbiaceae | Leaf | Diabetes |

| | | | | | |
|---|---|---|---|---|---|
| 53 | *Pergularia daemia* | Utaranveli | Asclepiadaceae | Leaf | fevers (liver disorders) |
| 54 | *Pongamia glabra* | kanugamarra / karajamarra | Fabaceae | Seed | Oil in rheumatism and skin diseases |
| 55 | *Phyllanthus emblica* | Usarimarra | Euphorbiaceae | Fruits | Burning pain |
| 56 | *Ricinus communis* | Erandimarra / | Euphorbiaceae | Leaf (fried) | Piles |
| 57 | *Santalum album* | Chandanmarra | Santalaceae | Dried stem paste | Reduce body heat |
| 58 | *Schleichera oleosa* | Kusumbamarra | Sapindaceae | Seeds | seed powder for ulcers; mixed with coconut oil for skin diseases |
| 59 | *Semicarpus anacardium* | Coccamarra | Anacardiaceae | Seeds | heart disease, asthma |
| 60 | *Soymida febrifuga* | Sami mara / Somi marra | Meliaceae | Bark | Malaria fever; Asthma |
| 61 | *Spermacoce* spp. | Madanaghanti Ghantichi bhaji | Rubiaceae | Root, root bark | Snake bite |
| 62 | *Tamarindus indica* | Chintamarra | Caesalpiniaceae | Leaf juice | Viral fevers |
| 63 | *Terminalia arjuna* | Arjuna | Combretaceae | Bark powder | Blood pressure, heart burning |
| 64 | *Terminalia bellerica* | Baheda | Combretaceae | Bark | Scorpion bite |
| 65 | *Terminalia elliptica* | Maddimarra | Combretaceae | Bark | Bone fracture |
| 66 | *Tinospora cordifolia* | Gudvel | Menispermaceae | Leaves | Jaundice |
| 67 | *Tribulus terrestris* | Gokhru jaddi | Zygophyllaceae | Fruit | rheumatism, sex power, urinary tract infection |
| 68 | *Tridax procumbens* | Kambarmodi | Asteraceae | Leaf juice | Wound healing |
| 69 | *Vitex negundo* | Nirgundi | Verbanaceae | Leaf | Insomnia, vertigo |
| 70 | *Wrightia tinctoria* | Nallkuda | Apocynaceae | Bark | Skin infections |
| 71 | *Zizyphus jujuba* | Rengamarra | Rhamnaceae | Fruit | Toothache |

† = Treatment can be done successfully only when the patient is brought within 5-7 days only.
# = White flowered plant is more preferred than pink flowered one.

* = not only pain is relieved but broken bones could also be joined in some cases.
** = root is mixed with some ingredient(s) – which are not disclosed by the hakims – to prepare the exact medicine

George, U. U., Mbong, E. O., Bolarinwa, K. A., & Abiaobo, N. O. (2023). Ethno-botanical verification and phytochemical profile of ethanolic leaves extract of two medicinal plants (Phragmenthera capitata and Lantana camara) used in Nigeria using GC-MS Technique. In Acta Biology Forum (Vol. 5, No. 2, pp. 78-89).

Nazneen, S., & Nausheed, R. (2022). Exploring the Contribution of Botanical Families to Medicinal Ethnobotany. Journal of Plant Biota.

Naik, D. B., Rao, B. B., Kumar, C. U., & Bhavani, N. L. (2022). Phytochemical analysis of different varieties of sorghum biocolor in Telangana State, India. Agriculture Archives, 1, 16-20.

Afreen, A., Khasim, S. M., Bathool, S. U., & Tehseen, F. (2024). Evaluation of Anti-in lammatory activity of Jacquemontia caerulea leaf methanolic extract in Wistar rats. Journal of American Medical Science and Research.

Anushi, A. K., & Ghosh, P. K. (2024). From seed to succulence: Mastering dragon fruit propagation techniques. Journal of Plant Biota.