



## Ethno Botanical Survey of Medicinal Plants of Nagaur District in Rajasthan, India used in Traditional Medicines for Rural People

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### ABSTRACT

Plants are an integral part of nature. These are the life sustaining force on the earth. Local communities regularly use medicinal plants for treatment of diseases, wounds, fractures and other ailments. Tribal areas in the district of Nagaur were visited to collect informations on ethnomedicinal plants used by local people, Vendors, Ojha, Bhopa, Bhagat, Vaidyas and Sadhus. The present investigation is aimed to create awareness about the ethnomedicinal value of the plants and their uses to draw the attention of pharmacologists, phyto chemists and pharmaceuticals.

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### Introduction

India has a rich heritage of using medicinal plants. The knowledge of medicinal plants has been accumulated in the course of many centuries. Rigveda which is one of the oldest book, supplies curious information on the medicinal plants (Negi *et al.*, 2012).

The Indian sub continents is being inhabited by over 53.8m tribal people in 5000 forest dominated villages of tribal communities. Rajasthan is the largest state of India, located in the north western part of India. The most geological features of Rajasthan are the Aravali ranges which runs from Khetri in north east to Kheda Brahma in South west. Plants are an Integral part of nature. These are the life sustaining force on the earth (Khan *et al.*, 2012).

Nagaur district is the arid to semi-arid type of climate. Mean annual rainfall of the district is 410 mm where as normal rainfall is lower than annual rainfall. Metra, Degana, Ladnun, Deedwana, Makarana, Parbatsar and Kuchaman are the major urban centre of the district. This district is rich in the forest resources.

The present investigation is aimed to create awareness about the ethnomedicinal value of the plants (Kapoor *et al.*, 2013).

### Methodology

Nagaur district is situated in Rajasthan were visited during the year 2014-2016. Some different persons including Vaidhyas, Sadhus, Bhagat, Bhopa, Ojha, Priests, Vendors and tribal local healers. The informations were collecting during filed visit, standared literature and reputed scientific journals. The data collected was compared and cross linked with already available data to ascertain its validity and integrity.

### Result and Discussion

Ethnomedicinal plant species of nagaur district used in traditional medicines are *Adhatoda zeylanica* Nees., *Bombax ceiba* Linn., *Cassia fistula* (Linn.), *Cordia dichotoma* (Forst.F.), *Delonix regia* (Bojer.) Raf., *Holoptelea integrifolia* (Roxb.) Planch.

*Moringa oleifera* (Lam.), *Phyllanthus emblica* Linn., *Pongamia pinnata* (L.) Pierre. and *Tinospora cordifolia* (Miers.).

These ten plant species which have great medicinal values are arranged systematically with their ethnomedicinal uses :

#### 1. *Adhatoda zeylanica* Nees.

**Local Name** - Aldusa, Aadusa

**Family** - Acanthaceae

**Ethnomedicinal uses:**

Leaves are used for the stimulant effect on the respiratory system.

Powdered of leaves boiled with sesame oil is used in the ear infections and stop bleeding.

Boiled leaves are used to treat rheumatic pain, urinary tract and cough.

It is used to stimulate uterine contractions for speeding child birth (Gangwar *et al.*, 2014).

#### 2. *Bombax ceiba* Linn.

**Local Name** - Semal, Cotton tree, Semul

**Family** - Bombacaceae

**Ethnomedicinal uses:**

Powder of roots is used in the treatment of seminal disorder.

Leaves grind with water are used in the purification of blood.

Paste of bark is applied on the wound.

Powder of root take twice per day to improve breast milk.

Powder of root with black pepper and dry ginger powder is used to cure cold and cough.

It is also used as aphrodisiac, astringent, antidysertric and antipyretic.

It is referred as "Silent Doctor".

#### 3. *Cassia fistula* (Linn.)

**Local Name** - Amaltash, Baldavan

**Family** - Fabaceae.

**Ethnomedicinal uses:**

Leaves are useful in skin disease, burning sensations, dry cough and fever.

Fruits are used in dysentery and inflammations.

Flowers are used in cardiac disorder and general debility.

Paste of root is useful in skin disease and syphilis.

Bark is useful in boils, leprosy, diabetes, ringworm and cardiac problems.

**4. *Cordia dichotoma* (Forst.F.)**

**Local Name** - Leswa, Lasora, Gunda, Gondi

**Family** - Boraginaceae

**Ethnomedicinal uses:**

Decoction of bark is used in the disorder of blood, skin disease, ulcer and small pox.

Juice of bark with coconut milk is used in the colic, fever and dyspesia.

Fruits are useful in the treatment of ring worm.

Decoction of leaves is used in cough and cold.

Leaves are applied on ulcer and in headache.

**5. *Delonix regia* (Bojer.) Raf.**

**Local Name** - Gulmohar, Goldmohar

**Family** - Fabaceae

**Ethnomedicinal uses :**

Decoction of leaves is used in rheumatism.

Leaf extract is used as antidiabetic.

The plant also possessed antiemetic (Salman *et al.*, 2012).

The parts of plant are traditionally used for the treatment of different ailments as inflammations, anemia, Gynecological disorder and pneumonia.

**6. *Holoptelea integrifolia* (Roxb.) Planch.**

**Local Name** - Churel, Churel papri

**Family** - Ulmaceae

**Ethnomedicinal uses:**

Extract of leaves applied on the ringworm.

Bark and leaves are used as bitter, astringent, thermogenic, anti-inflammatory, digestive and carminative.

Mucilagenous bark is boiled and the juice squeezed out applied on rheumatic swelling.

Paste of stem bark is applied to treat the scabies, ringworm and fever.

Decoction of leaves is to regulate the fat metabolism and cutaneous disease.

It is also used in the treatment of malaria and cancer disease.

Dry fruits are used in the treatment of polyurea and urinary disorder (Ganie *et al.*, 2014).

**7. *Moringa oleifera* (Lam.)**

**Local Name** - Senjana, Senana, Sahjan

**Family** - Moringaceae

**Ethnomedicinal uses :**

Root is applied externally in inflammations.

The root-wood is endowed with anti urolithiatic activity.

All parts of the tree have been used in folk medicines.

It is used to help treat heart disease, lower cholestrol, reduce sugar levels and boost immune system.

Stem is used in preparing of soap (stevens *et al.*, 2013).

**8. *Phyllanthus emblica* (Linn.)**

**Local Name** - Amla, Aamvla

**Family** - Euphorbiaceae

**Ethnomedicinal uses :**

Fruits are used in the treatment of diarrhoea, jaundice and inflammations.

Plant parts show antidiabetic, antibacterial, antioxidant, gastro protective and chemo preventive properties (krishnaveni *et al.*, 2010).

Juice of fruits with honey is given to stop cough and in painful respiration.

Juice of bark with honey and turmeric is also used in the treatment of gonorrhoea disease (Jain *et al.*, 2015).

Fruits are used in pickles and in sugar.

It is used in the treatment of cancer disease.

**9. *Pongamia pinnata* (L.) Pierre.**

**Local Name** - Karanja

**Family** - Fabaceae

**Ethnomedicinal uses:**

It is also used as antioxidant, antimicrobial, anti inflammatory and antidiabetic activities (Muqarrabun *et al.*, 2013).

Leaves are useful in piles, cough, diarrhoea, inflammations and constipation.

Fruits are used in urinary tract disorder, diabetes and skin disease.

Karanja oil is widely used in the treatment of skin disease.

Its oil is also tested for use as biodiesel.

**10. *Tinospora cordifolia* (Miers.)**

**Local Name** - Giloy, Neem Giloy

**Family** - Menispermaceae

**Ethnomedicinal uses:**

The extract of stem is useful in skin disease.

Root and stem are used as anti-dote to snake bite and scorpion sting.

Dry bark is useful in antispasmodic, antipyretic and antiallergic etc.

Stem is used in debility, dyspesia, stimulates bile secretion, burning sensation, vomiting and cure jaundice (Singh *et al.*, 2003).

**Conclusion**

Rajasthan state offers a big promise for sustainable utilization of its herbal diversity for economic development of our country. Nagaur district of Rajasthan is very rich in medicinal plant wealth. These medicinal plants used by local people, tribals, native vaidhya, vendors, priests, village headmen, Kalbellia and expert of Ayurvedic fields. These medicinal plants have great tolerance to be used in drugs.

**References**

- Ganie, S.A. and Yadav, S.S. 2014. *Holoptelea integrifolia* (Roxb.) Planch. : A review of its Ethnobotany, Pharmacology and phytochemistry. Biological medicinal research International, (2014) : 1-12.
- Gangwar, A.K. and Ghosh, A.K., 2014. Medicinal used and Pharmacological activity of *Adhatoda vasica*. International journal of herbal medicine (IJHM), 2 (1) : 88-91.
- Jain, R., Pandey, R., Mahant, R.N. and Rathore, D.S. 2015. A review on medicinal importance of *Embllica officinalis*. International journal pharmaceutical science and research, 2320-5148.
- Kapoor, B.B.S. and Kishor, K. 2013. Some ethnomedicinal tree species of shekhawati region of Rajasthan used in folk and herbal medicines. Unique journal of Ayurvedic herbal medicines, 01 (01) : 5-9.
- Khan, J.B. and Singh, G.P. 2012. Ethnomedicinal diversity of churu district traditionally used by Rural people. Indian Journal fundamental applied life science, 2 (1) : 109-114.
- Krishnaveni, M. and Mirunalini, S. 2010. Therapeutic potential of *Phyllanthus emblica* (amla): The ayurvedic wonder. Journal basic clinical physiological pharmacology, 21(1): 93-105.

- Muqarrabun, LMR. A.L. and Sahidin, L., 2013. Medicinal uses phytochemistry and pharmacology of *Pongamia pinnata* (L.) Pierre.: A review. *Journal of ethnopharmacology*, 150 (2) : 395-420.
- Negi, R.S., Pareek, A., Menghani, E. and Ojha, C.K. 2012. Ethno-medicinal studies at Sanchor and Mount Abu regions, located in Sirohi district of Rajasthan. *Cibtech journal of pharmaceutical sciences*, 1(1) : 14-21.
- Salman, A., Toseef, S., Mohtasheemul, H.M. and Iqbal, A. 2012. Antiemetic activity of leaves extract of five leguminous plants. *International journal research Ayurveda pharmacology*, 3: 251-253.
- Stevens, G.C., Baiyeri, K.P. and Akinhnagbe, O. 2013. Ethnomedicinal and culinary uses of *Moringa oleifera* Lam. in Nigeria. *Journal of medicinal plant research*, 7 (13) : 799-804.
- Singh, S.S., Pandey, S.C., Srivastav, S. Gupta, V.S., Patro, B. and Ghosh, A.C. 2003. Chemistry and medicinal properties of *Tinospora cordifolia* (Guduchi). *Indian journal of pharmacology*, 35: 83-91.