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## Phyto chemical screening of Medicinal Plants Used by the Tribes of Bhadrachalam Forest Area

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**Abstract:** Medicinal plants play an important role in human health care. Most of the drugs are obtained from plants. Ethno medicines are receiving great attention all over the world. Human race is regarded as the most wonderful creature on earth. But now a days the human race is facing a lot of health problems to overcome their health problems, the nature has blessed us with so many medicinal plants which certain chemicals used as therapeutic medicines since so many years. Traditional healing systems play an important role in maintaining physical and psychological well being of the vast majority of tribal people in India. The plants certain phenols, alkaloids, quinols, steroids and so many other chemicals used as active medicines Hence a preliminary phyto chemical screening was carried out for medicinal plants used by the Koyas and Konda Reddies who are living in bhadrachalam forest area is reported in this paper.

**Key Words:** Phyto chemical screening, Medicinal plants, Used by the tribes, Bhadrachalam forest area.

### Introduction:

Bhadrachalam forest division is a territorial wild life division. Bhadrachalam forest division which is one of the major tribal inhabited area in Andhra Pradesh and Telangana. The main tribes of bhadrachalam forest area are Koyas and Konda Reddies. Bhadrachalam forest area is mostly along the Godavari river banks well marked plants are present.

Medicinal plants survey included repeated with aged ethnic tribal people in different villages, several field trips were conducted with the help of our students. The information of useful plant species, parts used, local names and mode of utilization was collected and later identified the plants and their botanical names with the help of available floras.

The medicinal plants are useful for healing as well as for curing of human diseases because of the presence of phyto chemical constituents. Phyto chemicals are naturally occurring in the medicinal plants like roots, stems, leaves, bark that have defence mechanism and protect from various diseases. Phyto chemicals are primary and secondary compounds. Primary phyto chemicals are proteins, carbohydrates, chlorophylls. Secondary metabolites are alkaloids, phenols, reducing sugars, terpenoids. These secondary phyto chemical compounds exhibit various important pharmacological activities like anti malarial, anti-inflammatory, anti-viral and anti-bacterial activities.

The main objective of our work was to analyze the presence of different phyto chemicals in the selected medicinal plants which are used by the tribes of bhadrachalam forest area for healing and curing various diseases.

### Methodology:

The plant parts were collected

from the plants, air dried for few days and plant parts were crushed in to powder the powder was taken in a test tube and distilled water was added to it and shake well, the solution then filtered with the help of filter paper and filtered extract of the plant sample were taken and used for phyto chemical analysis.

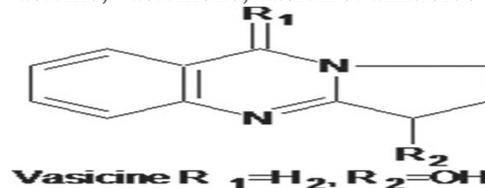
The plant compounds contain therapeutic properties mainly have three categories of chemicals alkaloids, terpenoids / steroids, and phenolic compounds.

The plants have 40% of alkaloids, 25% of steroids and 16 % of phenolic compounds

### Description of the plants:

#### 1. Adhatoda vasica (Addasaram) :

Adhatoda vasica Nees belongs to the Acanthaceae family. The plant is used extensively in the treatment of asthma, cough, bronchitis and tuberculosis, joint pain, lumber pain, sprains, eczema, malaria, rheumatism, swellings, venereal diseases, as an anti-hyperglycemic, anti diarrhoeal. The leaves contains mainly vasicine, vasicinone, vasicinol alkaloids.



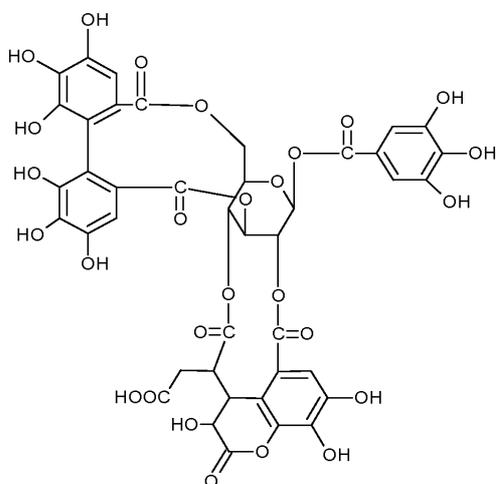
#### 2. Terminalia chebula (Karaka) :

Terminalia chebula is a moderate tree used in traditional medicines. It belongs to the family Combretaceae.

Dry fruits contains different types of phytochemicals such as glycosides, alkaloids,

flavonoids, phenolic compounds, saponin, steroids, quinine and tannin.

It is used for the treatment of number of diseases like cancer, paralysis, cardio vascular diseases, ulcers, leprosy, arthritis, gout, epilepsy etc.



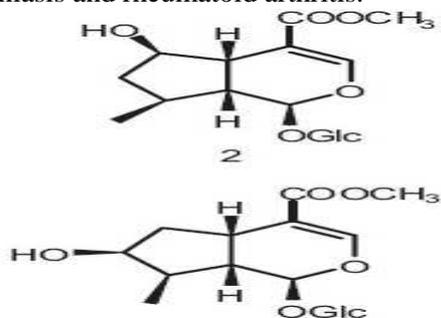
Chebulagic acid

**3. Tinospora cordifolia(Tippa teega) :**

Tinospora is a perennial climber useful parts are stem, succulent petioles, leaves.

The natural drug present in this plants is berberin, sesquiterpine, tinocordifoline, corambin,

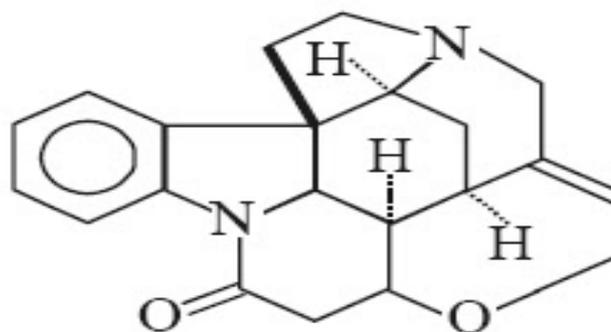
This is used for fevers, diabetes, dyspepsia, jaundice, urinary problems, skin diseases and chronic diarrhoea and dysentery. It has been also indicated useful in the treatment of heart diseases, leprosy, helmenthiasis and rheumatoid arthritis.



Tinosporocide

**4. Strychnos nux-vomica(mushti) :** The strychnine tree (Strychnos nux-vomica L.) (S. nux-vomica) belonging to family Loganiaceae. This plant contains active

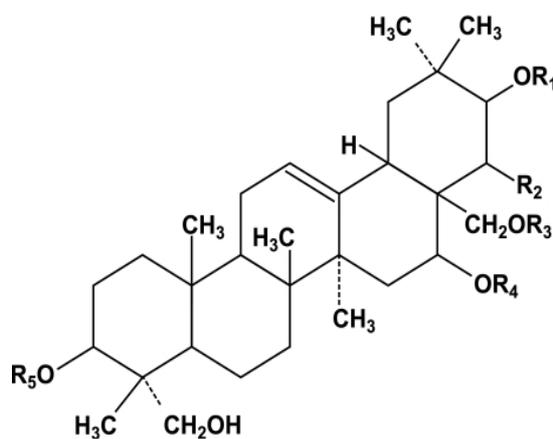
chemical compounds like Indole alkaloids sterinin, bruciene, vomicine, colubrine, icogine, novacine, N-Oxy striurine, loganine, glycosides, chlorogenic acid. Strychnos leaves and seeds are used for analgesic, antipyretic and anti-inflammatory activities.



Strychnine

**5. Gymnema sylvestre (Poda patri) :** Gymnema sylvestre (Asclepiadaceae), popularly known as “gurmar” for its distinct property as sugar destroyer. The herb exhibits a broad range of therapeutic effects as an effective natural remedy for diabetes, besides being used for arthritis, diuretic, anemia, osteoporosis, hypercholesterolemia, cardiopathy, asthma, constipation, microbial infections, indigestion, and anti-inflammatory

Useful parts are leaves, the leaves contains mainly alkaloids like Gymnemic acid, formic, tartaric and butyric acids.



Gymnemic Acid

**Qualitative Phytochemical analysis**

S.No	Phyto chemicals	Adathoda vasica	Terminalia chebula	Tinospora cordifolia	Strychnos nuxvomica	Gymnima silvestry
1	Alkoloids	+	+	+	+	+
2	Flavonoids	+	+	+	+	+
3	Phenolic compounds	+	-	+	+	+
4	Triterpinoids	-	+	-	+	-
5	Saponins	+	-	+	-	-

**Conclusion:**

The selected medicinal plants are the source of the secondary metabolites i.e., alkaloids, flavonoids, terpenoids and reducing sugars. Medicinal plants play a vital role in preventing various diseases. The antidiuretic, anti-inflammatory, antianalgesic, anticancer, anti-viral, anti-malarial, anti-bacterial and anti-fungal activities of the medicinal plants are due to the presence of the above mentioned secondary metabolites. Medicinal plants are used for discovering and screening of the phytochemical constituents which are very helpful for the manufacturing of new drugs.

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