

## EXECUTIVE SUMMARY OF THE MINOR RESEARCH PROJECT

**Title of the Project:** Phytochemical analysis of some rare Ethnomedicinal Plant in Melghat Forest, Amravati District [M. S.]

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**Objectives of the study:** The study of Ethnomedicinal plants includes following objectives

1. Exploration, collection, identification and documentation of Ethnomedicinal plants from specific location in the region.
2. Preparation of laboratory specimens.
3. Ethnomedicinal significance plants by repeated visit to the field, establishing rapport with local practitioners.
4. To authenticate the information provided by herbal practitioners by carrying out detail investigation and chemical analysis.
5. Conservation of Ethnomedicinal germplasm by bringing plants under cultivation practices among the tribes and also conserve the plants in botanical gardens.
6. To scrutinize the important plant for their propagation through tissue culture technique in order to develop the desire qualities.

**Major findings:** In present study extensive survey of Melghat was conducted alongwith the visits to the tribal community reside in different areas. As per the ethnomedicinal information collected from the tribes 10 important plants namely *Careya arborea* (Myrtaceae), *Cleome viscosa* (Capparidaceae), *Litsea glutinosa* (Lauraceae), *Xanthium strumarium* (Solanaceae), *Memordica dioica* (Cucurbitaceae), *Erythrina suberosa*(Papillionaceae), *Diospyruos melanoxylon*(Ebenaceae), *Radermachera xylocarpa* (Bignoniaceae) , *Adiantum lunulatum* (Polypodiaceae) , *Phyllanthus virgatus* (Euphorbaceae) were collected along with their parts used and selected for phytochemical screening. The phytochemical analyses of 10 promising plants widely used as folk medicine in that region shows remarkable significance. The most significant *Careya arborea* (Myrtaceae) is strongly recommended to cure asthmatic patient. The chemical analysis of root revealed the dominance of saponins in all the solvent. Alkaloids are also found in low concentration. This preliminary data of phytochemical helps in searching new

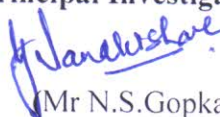
biotic compound and subsequent pharmacological action. Therefore, the plant *Careya arborea* is require to conserve through ex-situ techniques.

*Cleome viscosa* (Capparidaceae) possesses tuberous roots. Dried powder mix with coconut oil is a good remedy for wounds and sores. It is also effective against guinea worm and ringworm. The healing property of the plant is due to dominance of alkaloids. Saponins and phenolic compound are present in small quantity. The significance of root powder is treating hydrophobia among tribes in Melghat. The application of root powder of *Litsea glutinosa* (Lauraceae) with milk in healing bone fracture in novel Ethnomedicinal information provided by Gond and Korku tribes of this region. Phytochemical analysis revealed the occurrence of alkaloids in all the six solvents. On the other hand glycosides, phytosterol and saponins could not be isolated in solvents other than water. The plant demands its protection through cultivation in the Botanical garden.

The dried powder of rhizomes of *Xanthium strumarium* (Solanaceae), is used in sores and injuries. Upon detailed phytochemical analysis, the roots exhibit the predominance of alkaloids followed by saponins. Decoction of root is also preferred for fever. The corms of *Momordica dioica* (Cucurbitaceae) are strongly recommended for antitumorous activity and against stomachache. Phytochemical analysis showed the occurrence of alkaloids, phytosterol and saponins. The plants are widely used by the tribal peoples. The cultivations of this Ethnomedicinal plants should be undertaken due to which they are available for medical practitioners. The plants *Erythrina suberosa* (Papilionaceae) is used as an antiseptic and healing purpose due to the presence of alkaloids and phenolic compound. The tubers of *Diospyros melanoxylon* (Ebenaceae) are bitter in taste. In small doses it is useful in ulcers of stomach. Phytochemical investigation shows the presence of alkaloids.

*Radermachera xylocarpa* (Bignoniaceae) tubers are also bitter in taste. It is used in snake bites, piles, stomachache. The bitter taste of tuber is due the presence of alkaloids. *Adiantum lunulatum* (Polypodiaceae) tubers are used against body swelling. The fumes of this plants when in contact with the affected part of the body, it gets relief. *Phyllanthus virgatus* (Euphorbaceae) is used in the treatment of jaundice.

**Principal Investigator**



(Mr N.S.Gopkar)