

Phytochemical Investigation of the *Acalypha Indica*: A Review

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Review Article

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ABSTRACT

Plants are the reservoirs of the number of the complicated metabolites of the medicinal values. They have been utilized by the number of the workers from time to time for the beneficitation of the treatment of the disease in different era.

In this context we are working on the review aspect of the one of the weed entitled as the *Acalypha indica*, this is the ruderal weed which grows in the different part of the world in the rainy seasons, it has been utilized by the different tribes for the various values and for the medicinal significance. Prolongs studies leads to the development of the treatment of the many kinds of the diseases.

INTRODUCTION

Folk medicines or the traditional plants medicines are the treatment which was the resultant of the interaction of the human with the nature ,as they are living in the natures form the millions of the years, so they are aware from the all the uses of the nature and the plants .

In the previous time the reasons for the diseases was very differ, it was supposed that in the previous era, the Devine power or any other supernatural power was reasons for the many kinds of the disease. So for the treatment of the diseases they have to depend on the nature and start the hunting of the plants for the treatment of the various kinds of the disorders, these concepts originates the folk medicines.

Folk medicines are the knowledge of the utility of the plants for the treatment of the various kinds of the diseases

A report of the WHO in 1990 states that still today a number of the peoples are utilizing the traditional medicines for the treatment of them nay kinds of the diseases, due to their easy availability and the less toxic side effects.

The chemical drugs are heavy in the utilization and they have the many side effects due to which still today many peoples of the world never relies on the modern synthetic antibiotics.

In this review article we are working on the one of the weed entitled as the *Acalypha indica* of the family *euphorbiaceous*. *Euphorbiaceae* has the number of the weeds of the medicinal values; they are the rich sources of the many kinds of the metabolites of the various values (petro crops). *Achlapha indicia* are the weed which grows as an ephemeral weed.

The different part of the world in different condition in the rains. Generally plants grow in the rainy seasons, the height of the plant is about the 4-5 cm, the width of the plant is also the 3-4 mm, and the plant has the typical features of the euphorbiaceous family. In different part of the world the tribal community utilizes the plant for the treatment of the many kinds of the disease **(Figure 1)**.



Figure 1 *Acalypha indica* (sources NMPB).



Figure 2 Flowering of the *Acalypha indica*(sources NMPB).

From the centuries the *Acalypha species* and their plant part are utilized by the tribal communities for the treatment of the various kinds of the disorders. In the Ayurveda system of the medicines and in the siddha system of the medicines the *Acalypha species* plant are utilized for the variety of the purposes.

It is believed that the pastes of the leaves are used by the tribal communities, for the treatment of the skin disorders. Herbal formulations are used for the safe uses of the medication and the plant extract are also used for the treatment of the Atherosclerosis (**Figure 2**). It has also been claimed that *Acalypha species* is also used for the treatment of the asthma as the rheumatism.

In Tamil Nadu it has been finding that paliyar tribes utilized the plant for the treatment of the diseases, they are utilized for the purposes of the laxatives. The leaves of the *Acalypha species* are utilized as the powder form for the purposes of the lauxatieves. It has also been stated that the oral paste of the extracts of the leaves are utilized for the treatment of the constipation. In Philippines the decoction of the leaves are utilized for the treatment of the dysentery.

In the treatment of the scabies the powder leaves are utilized. In the pharmacopeia the extract of the plant is utilized for the treatment of the diseases.

Here some of the work for the composition of the phytochemicals and the antimicrobial role is discussed here; it will help to know the extent and the level of the work in this weed.

Phytochemical screening and the antimicrobial roles of the extracts of the *Acalypha indica* has been reported ^[1], the aim of the study was to evaluate the antimicrobial and the phytochemical investigation of the *Achlypha indica*. The original solvents which were utilized are followed as, Ethnolic methanolic and the ethyl acetate extract of the whole plant of the *Acalypha indica*, It was tested against the *Salmonellea tyipurium*, *proteus valgarias*, *shigella* dysentery and candida albicans.

The agar disk diffusion was the method for the checking of the antibiotic potential of the leaf extract of the *Acalypha indica*. The result of the study shows the prominent antimicrobial potential towards the study ^[1]. One of the antimicrobial roles of the *Acalypha indica* has been studied ^[5].

There studies deals with the leaf extracts of the *Achlypha indica*, they tested the antimicrobial activity by the agar diffusion method. They investigated the antimicrobial nature by the different kinds of the solvents extraction methods which are active against towards the different kinds of the pathogens, these are enlisted as, staphylococcus aurous, *Bacillus subtilis*, *E coli*, *Klebsiella pneumonia* ^[5].

Another major work on the antimicrobial and phytochemical activity has been done by the ^[2], the objective of his study was to evaluate the antimicrobial activity and the quantitative analysis of the phytochemical compounds. Crude ethyl extract, petroleum ether and toluene extract of leaves form *Acalypha indica* were tested for the antibacterial activity against the four bacterial spe-

cies, *Klebsiella pneumonia*, *salmonella typhae*, *Bacillus subtilis* and *pseudomonas putida*. It was found that ethyl acetate extract exhibit the string antimicrobial activity ^[2].

Another significant work on the phytochemistry of the *Achlaphya indica* has been done by the Narul nadia group in 2016. They analyses the phytochemical components of the *Achlypha indica*, the group worked on the dried samples of the roots, stem and leaves contain the highest moisture, ash and water activity ^[3].

Phytochemistry of the *Achlypha indica* has been worked by the analyses the GCMs analysis of the phytochemicals ^[4,5].

The overall work of the different groups shows the different kinds of them metabolites of the various significance. Most of the work has demonstrated the metabolites of the various values. So, further careful work is essential for the treatment of the any diseases.

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