

## Abutilon a Vulnerable Genus: A Review

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### Review Article

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#### ABSTRACT

Plants are always been the greatest gift to them mankind's, from the domestication of the human life in the different centuries, they are directly and indirectly depend on the plants for the various kind of the purposes. They are the main sources of the medicines and the drugs for the treatment of the diseases, in this review article we are working on the one of the plant entitled as the *Abutilon indicum* of the Malvaceae family. This is the herb which is ephemeral, in nature, they grows best in the monsoon seasons and have always been utilized by the tribal communities for the treatment of the diseases.

### INTRODUCTION

Phytochemistry is the branches of the sciences which is concerned with the utilization of the plants for the various metabolites, in this branches of the sciences we concern with the total phytochemistry (isolation, structure elucidation and the identification of the metabolites) of the plants and there utility for the treatment of the, many kinds of the diseases.

Plants are the greatest gift to the human kinds, in the India as well as the other part of the world in the development of the, many civilizations, plants play a very significant role in the fulfilling the necessity of the human needs.

In India the chark sanshita is the collection of the many kinds of the plants for the treatment of the several disorders, which was written by the maharishi charak in the Vedic period, India has a rich sources of the literature of the medicinal plants.

After the discovery of the various kinds of the allopathic medicines, they were widely used for their rapid efficacy towards the various kinds of the disorders, however these medicines has the very strong negative effects on whole of the human system as well as they are very high in cost, so the cost of production is not very usable for the common middle class peoples. So, still today according to the report of the WHO about the 80 percent of the peoples utilizes the plants for the treatment of the disorders.

*Abutilon indicum* is the unique member of the *malvaceae* family, the whole plant is very useful from the roots to the seeds, and they are the reservoirs of the various kinds of the metabolites of the medicinal values. it grows in the whole wildly, from the north to the south the whole of the plants grows well in the loamy soils and the sandy soils, many of the tribal communities utilizes the plants for the treatment of the many kinds of the diseases.

The genus *Abutilon* has the around the 150 species globally, the plant is typically a herb, around the height of the 3-5 meters, the width of the herb is (-4-6) cm, the plant form the patches in the rainy seasons it grows in the groups, the plant is adapted to the various kind of the soil, the soil many be the hard and the many kinds of from loamy to the sandy. After the rainy seasons during the winters the plants starts the formation of the seed, and the part is visible above grounds (**Figure 1**).



**Figure 1.** *Abutilon indicum* wildly (sources NMPB).



**Figure 2.** Flower of the *Abutilon indicum* (sources NMPB).



**Figure 3.** *Abutilon indicum* whole plants.

Taxonomy of the plant: well different peoples classify the plants from the various methods; here we are presenting the one of the most accepted classification of the *Abutilon indicum* (**Figure 2**).

- Angiospermae
- Planate
- Dicotylidanae
- Thalmaflorae
- Malvalaes
- Malvaceae
- *Abutilon indicum*

The plant is commonly known as the *kanghi* or the *Atibala*, *Balya* in Sanskrit.

- 1) The plant is herbaceous weed.
- 2) The plant generally grows in the form of the dense patches in the wastelands.
- 3) The stem of the plants is yellow, and at the later stages they turn into the tomatoes.
- 4) The leaves are oval and the acuminate lobed.
- 5) The flower are typically yellow in color, the pattern of the arrangement of the flower part is typically of the malvaceous type.

6) The stamens are the abundant, and they are monothealous.

7) The fruit are capsules and they form the ridges on the fruit, which is the common term entitled as the kanghi.

## **PHYTOCHEMISTRY**

Some of the phytochemistry work of the *Abutilon* has been done by the different peoples in India as well as the other part of the world. Some of them are enlisted as which shows the presences of the different kinds of the metabolites in the different part of the plants<sup>[1]</sup>. They utilize the difference in chromatographic methods and the solvents for the different solubility of the metabolites, some of them works on the antimicrobial role of the metabolites which demonstrates the difference in medicinal role of the plants or the weeds scientifically which were utilized by the tribal community from the long decades.

Pharmacological and the phytochemical evaluation of the stem of the *Abutilon indicum* has been done<sup>[2]</sup>. Their studies suggest that the chloroform extract of the *Abutilon indicum* stem has remarkable anticonvulsant activity,

Also there studies indicate the potential usages of the *Abutilon indicum* stem, in the treatment of the convulsion disorders **(Figure 3)**.

Chemical constituents of the *Abutilon indicum* were investigated<sup>[3]</sup>; they investigated on the chemical constituents of the whole plants of the *Abutilon indicum*, their results show the two components Abutilin A (1) and (R)-N(1-methoxycarbonyl,2'-phenylethyl)4-hydroxybenzoate as well as 28 compounds. They utilized the NMR technologies for the structure elucidation.

One of the significant phytochemical investigations<sup>[4]</sup>; p-b-D-Glucosyloxybenzoic acid, Hydroxybenzoic, Caffeic acid and have been isolated from the complete plant of *Abutilon indicum*<sup>[4]</sup>.

Phytochemical and the pharmacological investigation of the leaves of the *Abutilon indicum* showed<sup>[5]</sup> the results indicate that the leaves contain the steroids, saponins, carbohydrates, and flavonoids. They analysed the metabolites for the blood glucose levels.

One of the good works<sup>[4]</sup>; the summary of their work has been presented as petroleum ether extracts, benzene extract, chloroform extract, ethanolic extract and aqueous methanolic extract, were subjected to the preliminary phytochemical investigations for their presences and absence of the phytochemical constituents.

Antibacterial activity of the various extract of the *Abutilon indicum* against the various pathogens has been evaluated<sup>[4]</sup> beta-D-glucosyloxybenzoic acid, para-hydroxybenzoic acid, caffeic acid has been isolated from the whole plant of the *Abutilon*<sup>[4]</sup>, as they analyse the IR, UV, NMR spectroscopy and chemical methods for the isolation of the compounds<sup>[4]</sup>.

However in addition to that another amount of the work can be presented over there.

## **THREATS**

*Abutilon* is the genus of the great concerns, it is the reservoirs of the many kinds of the metabolites of the great medicinal values, well it is widely distributed genus throughout the world, but the improper knowledge's of the people towards its medicinal values and the other beneficence to the ecosystem are overlooked by the peoples, so it is at the edge of the disappearances in many areas of the hot climates. Well the species is least concern and needs proper investigation for the treatment of the various kinds of the diseases.

## **CONCLUSION**

*Abutilon indicum* is the reservoirs of them any metabolites of the medicinal values, the plant always used by the tribal community from the centuries for the treatments of the many disorders, however prolonged work are required for the other species for the isolation of the many kinds of the metabolites the various significances.

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