

## Botany, chemistry, and pharmaceutical significance of *Sida cordifolia*: a traditional medicinal plant

### ABSTRACT

*Sida cordifolia* Linn. belonging to the family, Malvaceae has been widely employed in traditional medications in many parts of the world including India, Brazil, and other Asian and African countries. The plant is extensively used in the Ayurvedic medicine preparation. There are more than 200 plant species within the genus *Sida*, which are distributed predominantly in the tropical regions. The correct taxonomic identification is a major concern due to the fact that *S. cordifolia* looks morphologically similar with its related species. It possesses activity against various human ailments, including cancer, asthma, cough, diarrhea, malaria, gonorrhea, tuberculosis, obesity, ulcer, Parkinson's disease, urinary infections, and many others. The medical importance of this plant is mainly correlated to the occurrence of diverse biologically active phytochemical compounds such as alkaloids, flavonoids, and steroids. The major compounds include  $\beta$ -phenylamines, 2-carboxylated tryptamines, quinazoline, quinoline, indole, ephedrine, vasicinone, 5-3-isoprenyl flavone, 5,7-dihydroxy-3-isoprenyl flavone, and 6-(isoprenyl)-3-methoxy-8-C- $\beta$ -D-glucosyl-kaempferol 3-O- $\beta$ -D-glucosyl[1-4]- $\alpha$ -D-glucoside. The literature survey reveals that most of the pharmacological investigations on *S. cordifolia* are limited to crude plant extracts and few isolated pure compounds. Therefore, there is a need to evaluate many other unexplored bioactive phytoconstituents with evidences so as to justify the traditional usages of *S. cordifolia*. Furthermore, detailed studies on the action of mechanisms of these isolated compounds supported by clinical research are necessary for validating their application in contemporary medicines. The aim of the present chapter is to provide a detailed information on the ethnobotanical, phytochemical, and pharmacological aspects of *S. cordifolia*.

**Keyword:** Biological activities; Herb; Medicinal plant; Pharmacology; Phytochemicals; *Sida cordifolia*; Therapy; Traditional medicine