

Chapter 25

Ethnobotanical, Phytochemical, and Pharmacological Aspects of *Hemidesmus indicus*: A Herbal Bliss for Mankind

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ABSTRACT

Hemidesmus indicus (L.) R. Br. is commonly known as Indian Sarsaparilla or Anantmula. Traditionally, it has been utilised as a vital herb for the treatment of several disorders. Indian Sarsaparilla is rich in a wide range of phytoconstituents such as pregnane glycosides, steroids, terpenoids, aromatic aldehydes, lignans, saponins, flavonoids and aliphatic acids which may further contribute to its pharmacological properties. This chapter gathers and compiles the traditional ethnobotanical and ayurvedic aspects of H. indicus and recently updated knowledge regarding the pharmacology, phytochemistry, adulteration, and current trends of this medicinally important herb in the field of modern phytomedicine. It also presents the ayurvedic pharmacology of this herb and summarizes the biomedical researches in as much as it helps glean a better understanding of H. indicus safety and effectiveness in humans, and describes the various natural products and polyherbal medicines containing H. indicus.

INTRODUCTION

The ethnobotanical evaluation of medicinal herbs can bring out many efficient plant species for the treatment of various human disorders. The herb *Hemidesmus indicus* (L.) R. Br. has been widely utilized for its therapeutic properties in Ayurveda and also an official drug in Indian and British pharmacopeia for nearly a thousand years (Swathi, Amareshwari & Venkatesh, 2019). Formerly, it was placed under the family Asclepiadaceae but on the basis of pollinial characters, it was transferred to family Periplocaceae (George, Tushar, Unnikrishnan, Hasim & Balachandran, 2008). It is commonly known as Indian Sarsaparilla or Sariba or “Anantamula” is a Sanskrit word means “endless root” (Gupta, 2006). Roots are sweet in taste, woody and aromatic due to the presence of essential oil. Over the past few decades, several researchers highlighted the potential pharmacological properties of *H. indicus* with numerous evidences from *in vitro* and *in vivo* experimentations.

Taxonomy

Kingdom Plantae
Phylum Tracheophyta
Class Magnoliopsida
Order Gentianales
Family Periplocaceae
Sub-family Asclepiadiaceae
Genus *Hemidesmus*
Species *indicus*

Distribution

H. indicus (Figure 1 and Figure 2) is found in tropical and subtropical parts of India, from the upper Gangetic plain eastwards to Assam and in some places of western, central and southern India, Sri Lanka, Bangladesh, Pakistan, Iran, and Moluccas. It grows as a deciduous bush up to an altitude of 600 m under mesophytic to semi-dry conditions in plains and quite common in uncultivated soil, open scrub jungles and hedges (Kawlni, Bora, Upadhyay, Mukherjee & Hazra, 2017).

Figure 1. Hemidesmus indicus



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