

Phytochemical and ethno-pharmacological properties of *Desmodium triflorum*: A Review

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Abstract

Desmodium triflorum is a well-known Sri Lankan medicinal plant which is in folkloric use. Recent pharmacological studies have established its antioxidant, anti-inflammatory, anti-convulsant and analgesic activities. The plant is rich in alkaloids. The review depicts out on the folkloric uses along with pharmacological and biological activities of the extracts of *D. triflorum*. Habitat and distribution of the plant and the nature of compounds isolated are also reviewed.

Keywords: *Desmodium triflorum*, folkloric use, diabetes, medicinal plant, alkaloids, anti-inflammatory

Introduction

Herbal medicines are still the mainstay of treating diseases of more than half of the world population mainly in the developing countries.¹ *D. triflorum*, which is commonly known as “three-flowered beggar weed” is a dicotyledon.² It has been in folkloric use for many years.³ Roots, leaves and the whole plant are used in Ayurvedic medicine for various treatment purposes.⁴ Roots are

reported as carminative, tonic and diuretic. Leaves are antiseptic, antidiarrhoeal and galactagogue.⁵ The whole plant of *D. triflorum* is known to have expectorant, cooling and galactogouge properties.⁴ Faeces of wild rabbits those who have eaten the plant have been used for treatment purposes in folkloric medicine.⁶

Hedysarum triflorum is a synonymous Latin binominal for *D. triflorum*. Heen Undupiyaliya (Sinhala), Sirupullati (Tamil), Kudaliya and Jaialabihir (Hindi), Hansapadi, Tripadi and Amlana (Sanskrit) are vernacular names which have been used by different ethnic groups to identify this plant.⁴

Botanical description

D. triflorum is a very small, 15-45 cm long, perennial herb. It possesses numerous, long, slender, prostrate branches which are trailing and rooting at the nodes, clothed with white spreading hairs.⁴ Leaves are small, alternate, stipulate, trifoliolate, rachis less than 1.2 cm, stipules ovate, acuminate and persistent.⁷ Leaflets are membranous, oval or ovate, base cuneate, truncate or imarginate or