

Phytochemical and pharmacological profile of genus *Icacina*

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Abstract

The genus *Icacina* has over 400 species grouped into about 54 genera. Members of this genus have been reported to exhibit antifungal, antibacterial, antioxidant, anti-inflammatory, anticonvulsant, analgesic, anti-inflammatory, anti-diabetic and anti-plasmodial activities. Though reports have shown that some species belonging to this genus contain toxic chemicals, extracts from the leaves and roots of members of the genus have shown no harmful effects on living cells. Reported compounds isolated from some species of the genus *Icacina* contain pimarane skeleton which could be responsible for their similar biological activity as well as classification. Hence, chemical constituents and biological activity can be useful alongside physical features for plants' classification.

Keywords: *Icacina*; *Ethnomedicinal*; *phytochemical*; *pharmacological*;

Introduction

Plants of the genus *Icacina* belong to the family of flowering plants called *Icacinaceae*. *Icacinaceae* were first described by Miers in 1851. At that time, more than 400 species grouped in about 54 genera were recognised in this predominately pantropical family of tall rainforest trees, shrubs, and lianas (Kårehed, 2002). Some species of the genus *Icacina* include *Icacina oliviformis*, *Icacina trichantha*, *Icacina mannii*, *Icacina claessensi*, *Icacina guessfeldtii*, *Icacina dubia*, *Icacina grandifolia*, *Icacina ledermannii*, *Icacina macrocarpa*, *Icacina mauritiana*, *Icacina poeppigiano*, and *Icacina sarmentosa* (http://zipcodezoo.com/Key/Plantae/Icacina_Genus.aspOverview, (accessed on December 28, 2011). The species *Icacina oliviformis* in some works has been reported to be synonymous to *Icacina senegalensis* (Fay, 1987, Dei *et al.*, 2011). *Icacina species* are perennial shrubs with many variations. They have erect leafy shoots springing out from a large underground fresh tuber (National Research Council, 2008). *Icacina trichantha* has broad elliptic simple alternate leaves (Timothy and Idu, 2011). The aerial stems of some species can reach the height of 1 meter. Some members bear inconspicuous flowers with five petals usually white or cream and pediculate on an ascending panicle (National Research Council, 2008). Members bear