

A comprehensive review on *Cosmos caudatus* (ulam raja): pharmacology, ethnopharmacology, and phytochemistry

ABSTRACT

Cosmos caudatus or Ulam Raja in Malay originated from Latin America and transferred to Europe, Africa, and tropical Asia. It has been known for many traditional practices worldwide such as to rigidify bones and tone up blood circulation. The aim of this review is to summarize and discuss the association between phytochemical and pharmacological reports of *C. caudatus* and their traditional uses via ethnopharmacological approaches. *Cosmos caudatus* is a traditional medicinal plant used widely for culinary and therapeutic purposes. Phytochemical studies indicated the presence of Phenolic acids, flavonoids, tannins, sesquiterpene lactones, carbohydrates, minerals and vitamins in leaves while phenylpropanoids were in roots. Pharmacological data have been compiled for diverse activities for fresh leaves and extracts such as antihypertensive, antihyperlipidemic, antidiabetic, antimicrobial, antioxidant and antiosteoporotic. These activities experimented by in vitro and in vivo studies. Multiple *C. caudatus* constituents propose many potential actions in different fields such as neuroprotection, antidepression, and gastroprotection.

Keyword: *Cosmos caudatus*; Ulam raja; Constituent; Phytochemistry; Traditional medicine Asia