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A review on *Cosmos caudatus* as A potential medicinal plant based on pharmacognosy, phytochemistry, and pharmacological activities

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Abstract

Cosmos caudatus (Asteraceae), is known as Ulam raja in Malaysia or kenikir in Indonesia also sometimes referred to as "King's salad." It is usually consumed as a salad and the leaves have been widely used as a traditional medicine due to their pharmacological activities and beneficial effects on human health. The leaves have been reported to contain several phytoconstituents such as flavonoids and their derivatives, other phenolics, and essential oil, while the roots only contain non-flavonoids. Furthermore, the leaves have been reported to contain a high total phenolic content (TPC) which is attributable for various activities including antidiabetes, antioxidant, anti-inflammation, antibacterial, antifungal, anti-osteoporosis, anti-hyperlipidemic, anticancer, antihypertensive, anti-hepatoprotective, and to manage fertility problems. However, further research needs to be done in order to determine whether *C. caudatus* is effective in treating thrombolytic and leishmanial disorder. Clinical study regarding the use of *C. caudatus* as an antidiabetic agent has been reported as a supplement to improve insulin resistance and sensitivity in type 2 diabetes patients [NCT02322268]. The findings of the toxicity tests revealed that the leaves are nontoxic and that they can be taken without risk. It is still need to conduct an additional in vitro and in vivo investigations to confirm various traditional claims about the therapeutic potential of this plant in the treatment of various ailments. This traditional medicinal plant's genuine medicinal benefit will be further confirmed by additional clinical trials and toxicity assessments. © 2023, Published with license by Taylor & Francis Group, LLC. © 2023 Mustofa Ahda, Irwandi Jaswir, Alfi Khatib, Qamar Uddin Ahmed and Sharifah Nurul Akilah Syed Mohamad.

Author Keywords

Cosmos caudatus; Pharmacological activities; phytochemistry; toxicity

Index Keywords

Essential oils, Medical applications, Plants (botany), Toxicity; Asteraceae, Beneficial effects, *Cosmos caudatus*, Flavonoid, Indonesia, Malaysia, Medicinal plants, Pharmacological activity, Phytochemistry, Ulam raja; Flavonoids

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