

The Cannonball Tree: An Integrated Review on Couroupita Guianensis and its Future Research Scope

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Abstract: *Couroupita guianensis*, commonly referred to as the Cannonball tree, is a species of significant medicinal value, recognized for its extensive array of bioactive compounds found in its flowers, fruits, leaves, and other parts. This plant is rich in various phytoconstituents, such as alkaloids, flavonoids, sterols, triterpenoids, phenolics, and carotenoids, many of which play a role in its traditional medicinal uses. These compounds demonstrate remarkable pharmacological properties, including antimicrobial, anti-inflammatory, antioxidant, analgesic, wound-healing, and antiproliferative effects. Recent research has increasingly concentrated on elucidating the chemical makeup and biological efficacy of compounds such as couroupiol, isatin derivatives, nerol, linalool, β -sitosterol, and an array of flavonoids. The accumulating evidence positions *C. guianensis* as a valuable resource for the formulation of herbal remedies and enhanced cosmetic and personal care products. This review highlights the phytochemical abundance of the plant and advocates for further investigation into its therapeutic uses, safety assessments, and potential for product development

Keywords: Couroupita guianensis, Cannonball tree, Antimicrobial, Phytoconstituents

