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Cassia fistula Linn.: A Comprehensive Review on Its Phytochemical Constituents and Pharmacological Properties

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Abstract: *Cassia fistula Linn. (Family: Caesalpinaceae), commonly known as 'Sonali' or 'Bandarlati,' has been widely utilized in traditional medicine for treating various ailments. Native to Bangladesh and other Asian countries, including India, China, Hong Kong, the Philippines, Malaysia, Indonesia, and Thailand, this plant has been recognized for its diverse pharmacological properties. This review provides a comprehensive analysis of the phytochemical constituents and therapeutic potential of Cassia fistula. Traditionally, it has been used for managing diabetes, hematemesis, leucoderma, pruritus, intestinal disorders, and as an antipyretic, analgesic, and laxative. The plant's fruits, stem bark, and leaves contain several bioactive compounds, including anthraquinones, flavonoids, flavon-3-ol derivatives, alkaloids, glycosides, tannins, saponins, terpenoids, reducing sugars, and steroids, which contribute to its medicinal properties. Extracts from the fruit and stem bark have demonstrated various pharmacological activities such as antipyretic, anti-inflammatory, antioxidant, antidiabetic, hypolipidemic, hepatoprotective, antimicrobial, antitumor, and antiulcer effects. This review highlights the therapeutic significance of Cassia fistula and its potential applications in modern medicine*

Keywords: *Cassia fistula*, phytochemicals, traditional medicine, pharmacological properties, bioactive compounds, antioxidant, antimicrobial, antidiabetic, hepatoprotective, anti-inflammatory

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