

Sahjan (*Moringa oleifera*): Phytochemistry, pharmacological effects, and therapeutic applications –A comprehensive review

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Abstract

Moringa oleifera, commonly known as Sahjan or the drumstick tree, is widely recognized for its nutritional richness and medicinal value. In recent years, it has gained significant attention due to its diverse bioactive compounds, including flavonoids, phenolics, and glucosinolates, which contribute to its therapeutic potential. This review provides an updated overview of the phytochemistry, pharmacological activities, and therapeutic applications of *M. oleifera*. Studies have reported its antioxidant, anti-inflammatory, antidiabetic, antimicrobial, and anticancer properties, largely mediated through key molecular pathways. Although preclinical findings are promising, clinical evidence remains limited, and issues related to standardization and safety need further investigation. Overall, *M. oleifera* holds strong potential as a natural therapeutic agent and functional food, warranting more focused research for its effective clinical application.

Key words: Bioactive compounds, molecular pathways, *Moringa oleifera*, pharmacological activities, phytochemistry