

Deciphering *Synsepalum dulcificum* as an Arising Phytotherapy Agent: Background, Phytochemical and Pharmacological Properties with Associated Molecular Mechanisms

ABSTRACT

Medicinal plants with less side effects are paramount important for humankind to cure various ailments as compared to newly developed allopathic medicines. *Synsepalum dulcificum* Daniell (Sapotaceae), is well known as miracle fruits due to its distinctive taste-modifying property. This review aimed to discuss its recent reported pharmacological properties and associated molecular mechanisms as a novel phytotherapy agent. In addition, background, phytochemical analysis and toxicological studies were also discussed as the foundation and added values for this review. It was discovered that *S. dulcificum* is endowed with various classes of phytochemicals, such as flavonoids, tannins, alkaloids and saponins. This review revealed that *S. dulcificum* is a potent medicinal plant associated with antioxidant, antidiabetic, antimicrobial, anticancer, anti-hyperuricemic, hepatoprotective, anti-hyperlipidaemic, and anticonvulsant activities, with less toxicity shown. Future research may explore further the corresponding phytochemicals, associated molecular mechanisms, toxicological and pharmacokinetic profile before subjecting to clinical testing.