

**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.