

Phytochemistry, traditional use and pharmacological activity of *Picrasma quassioides*: a critical reviews

ABSTRACT

Picrasma quassioides is a member of the Simaroubaceae family commonly grown in the regions of Asia, the Himalayas, and India and has been used as a traditional herbal medicine to treat various illnesses such as fever, gastric discomfort, and pediculosis. This study aims to critically review the presence of phytochemicals in *P. quassioides* and correlate their pharmacological activities with the significance of its use as traditional medicine. Data were collected by reviewing numerous scientific articles from several journal databases on the pharmacological activities of *P. quassioides* using certain keywords. As a result, approximately 94 phytochemicals extracted from *P. quassioides* were found to be associated with quassinoids, β -carbolines and canthinones. These molecules exhibited various pharmacological benefits such as anti-inflammatory, antioxidant, anti-cancer, anti-microbial, and anti-parasitic activities which help to treat different diseases. However, *P. quassioides* were also found to have several toxicity effects in high doses, although the evidence regarding these effects is limited in proving its safe use and efficacy as herbal medicine. Accordingly, while it can be concluded that *P. quassioides* may have many potential pharmacological benefits with more phytochemistry discoveries, further research is required to determine its real value in terms of quality, safety, and efficacy of use.

Keyword: *Picrasma quassioides*; Simaroubaceae; anti-inflammatory; antioxidant; anti-malarial; antifeedant; anti-cancer; anti-ulcer; quassinoids