

Review of: "Unravelling the Phytochemical and Pharmacognosy Contour of Traditional Medicinal Plant: Pterocarpus Marsupium Roxb"

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Potential competing interests: No potential competing interests to declare.

Overall, this is a well-written and comprehensive review summarizing the phytochemistry and pharmacological activities of *Pterocarpus marsupium*, an important medicinal plant. The authors have done a good job compiling information from many references on the phytochemicals isolated from different parts of the plant and the various bioactivities that have been investigated.

Some strengths of the paper:

- The introduction provides good background on the traditional uses and ethnobotanical significance of *P. marsupium*.
- The sections on botanical description and taxonomy are succinct yet informative.
- The table summarizing the chemical structures of key phytochemicals is very helpful.
- The authors cover a broad range of pharmacological activities reported for *P. marsupium* extracts, including antioxidant, antidiabetic, antimicrobial, anticancer, anti-inflammatory, and others. For each activity, multiple studies are cited to provide an overview of the current evidence.
- The conclusions effectively summarize the main findings and highlight the potential for future research and development of *P. marsupium* as a medicinal agent.

Some suggestions to further improve the paper:

- The section on phytochemistry could be expanded with more details on the classes of compounds, biosynthetic pathways, and distribution in different plant parts.
- When discussing the pharmacological studies, it would be helpful to provide more details on the models, doses/concentrations tested, and proposed mechanisms of action for the observed bioactivities.
- More discussion could be provided on the standardization and quality control of *P. marsupium* extracts to ensure reproducibility and clinical effectiveness.
- The authors could comment more on the safety, toxicity, and adverse effects associated with *P. marsupium*, if any.
- The manuscript would benefit from careful editing to improve the flow, reduce repetitiveness, and correct minor grammar errors.

