

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.

The authors carried out a literature review on the biological activities and phytochemical composition of the plant "Pterocarpus Marsupium Roxb". Throughout the text, readers have the impression that this study is of great importance due to the medicinal use of this plant in Indian culture, however, some points are critical and need to be reviewed:

1. The use of English language needs revision, many sentences are confusing and disconnected from the text.
2. Although the authors report the extensive use of the plant as a medicine in India, no clinical studies are cited. This point is critical and needs to be discussed throughout the review.
3. The number of articles that evaluate the phytochemical composition is insufficient, more articles should be evaluated and better described in section "4. Phytoconstituents".
4. Throughout the text extracts obtained by different methods are cited, presenting different biological effects. It is crucial that the phytochemical composition of each extract is related to each effect.
5. It is necessary to discuss the lack of studies (or present studies) that show antimicrobial effects using techniques other than diffusion techniques in solid media.
6. The abstract and conclusion need to be rewritten.

Here are some specific points that need to be reviewed:

"Abstract"

This sentence is disconnected from the text: "Over the years, a lot of commercial and medicinal researchers have focused on resources from various herbs".

The sentence "Our present review is an attempt to unite its phytoconstituents and its pharmacological activities such as antidiabetic, antioxidant, antibacterial, antimicrobial, anticancer, anti-inflammatory, memory-enhancing activity, hepatoprotective, and antihyperlipidaemic activity" does not make sense.

"1. Introduction"

The phrase “The Indian government is promoting the medicinal plants sector through the Ministry of AYUSH.” is disconnected from the paragraph.

“2. Botanical Description”

It would be of great importance to show images of the plant parts targeted in this article.

“4. Phytoconstituents”

The phrase “researchers have emphasized that the following bioactive phytochemicals, such as about 45% of pterostilbene, 5% of tannins, 0.4% of alkaloids, and proteins, are presente” is confusing.

Some phytoconstituents cited on text does not appear on table 2, please review.

“5.1. Antidiabetic activity”

Some articles cited used aqueous extracts and other ethanolic extracts. I suggest the inclusion of the phytochemical composition found by the cited authors of these extracts, so that readers can relate the biological effects with the phytochemical composition of the extracts. If the articles cited do not provide phytochemical evaluations, I suggest not including them in the review. Otherwise, it is not clear which parts of the plant are being used to obtain these extracts.

Characterizing the authors as “Pant and his team” seems to be inappropriate.

“5.2. Antioxidant activity”

Failed to format the word "in vitro" in italics.

Did the extracts have the same results against all types of free radicals? The authors could enrich the text with such information.

I suggest including the phytochemical composition and which part of the plant were used to obtain these extracts.

“5.3. Antibacterial and Antimicrobial activity”

In the first textual appearance of the bacterium "E. coli", its name should have been written without an abbreviation (Escherichia coli).

The articles cited carried out evaluations of antimicrobial activity using diffusion tests in agar. Are there no articles that used other techniques to evaluate antimicrobial activity? I suggest including articles with methods such as MIC, MBC and mature biofilm.

I suggest including the phytochemical composition and which part of the plant were used to obtain these extracts.

“5.5. Anti-inflammatory activity”

I suggest the inclusion of an introductory paragraph on the importance of studying the anti-inflammatory activities of this

plant.

I suggest including the phytochemical composition and which part of the plant were used to obtain these extracts.

“6. Conclusion”

The phrases “*P. marsupium* Roxb can serve as an effective remedy for the detrimental effects posed by synthetic derivatives and drugs prevalent in this modern age.” and “Due to the high availability and use of *P. marsupium* Roxb in the formulation of diabetic medications, India is notoriously known to be the Diabetic capital of the world.” are confusing, please rewrite.

The phrase “The presence of bioactive phytoconstituents in the extracts of *P. marsupium* Roxb is very well scrutinized and documented by various researchers” seems to be exaggerated, since the part of the review that deals with phytochemical evaluation is small compared to other aspects covered. The reader is left with the impression that many articles were no longer included in the review.

For the reader to have a general overview of biological effects and phytochemical composition, it would be of great importance that a table summarizing all the findings of the review was presented.