



Review Report

Final Title: Anticancer Potential of Xanthotoxol: Underlying Mechanistic Insights and Therapeutic Implications in Different

Cancer Types: A Literature Review

Submission Title: Anticancer Potential of Xanthotoxol: A Short Review

Submission Date: February 11, 2025

Initial Editorial Assessment: February 11, 2025

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Round 1

Reviewer 1 Name: Jannatul Ferdous Conflict of Interest: None Date of Reviewer's Comments: February 11, 2025 Date of Author Response: March 5, 2025	
Reviewer 1 Comments	Author Response
Reviewer Recommendation: Accept Submission In the abstract section: Line 41: The phrase "its anticancer review has not yet been evaluated" is unclear. Should be reworded for clarity.	Thank you for your observations. We have corrected this.
The abstract should briefly highlight limitations and the need for in vivo/clinical studies.	Thank you. We have updated the information.
Consider discussing the gaps in current research, possible challenges in translating XTL's effects from in vitro to in vivo studies, and future directions.	Thank you for your valuable comments. Current research on XTL is limited to in vitro studies, lacking in vivo validation and clinical trials to confirm its safety, bioavailability, and therapeutic efficacy. Future research should focus on optimizing its pharmacokinetics, overcoming bioavailability challenges, and evaluating its clinical potential for cancer therapy.
The manuscript is well written overall, but some minor grammatical issues are present (For example: Line 144: "XTL has showed significant potential...")	Thank you for your feedback. We have made the necessary corrections.
The manuscript briefly mentions caspase activation, apoptosis, and inhibition of migration but does not explore potential upstream signaling pathways or specific molecular targets.	We appreciate your suggestion. Currently, our study does not focus on signaling pathways, but further investigation is needed to identify its specific molecular targets and their contributions to its anticancer effects.
The caption of Table 1 could be more informative, summarizing the key takeaway rather than just listing data.	Thank you for your observation. We have revised this.
Some references lack DOI links. Adding these would improve accessibility.	Thank you. We have added all the DOI links.
Reviewer 2 Name: Mst Muslima Munni Conflict of Interest: None Date of Reviewer's Comments: February 28, 2025 Date of Author Response: March 5, 2025	
Reviewer 2 Comments	Author Response
Reviewer Recommendation: Revisions Required Recommendation: Minor revision Report The manuscript entitled "Anticancer Potential of Xanthotoxol: A Short Review" is suitable for publication in this journal. However, a few minor concerns should be addressed to enhance its clarity and presentation: In the abstract, you mentioned that the anticancer potential of Xanthotoxol has not yet been evaluated. How can you ensure this?	Thank you for your response. While the anticancer potential of Xanthotoxol (XTL) has been investigated in various in vitro studies, a review analyzing its anticancer activity across different cancer types is still lacking. This study aims to consolidate and critically evaluate the available research on XTL's anticancer effects.
In Table 1, please keep the lung cancer data in one section.	Thank you. We have updated this.
In the Results and Discussion section, improve the clarity of the lung cancer section. In the skin cancer and blood cancer sections, mention the compound name explicitly instead of referring to it as 'it.'	Thank you for your suggestion. We have updated the manuscript.
Please check the grammar errors	Thank you. We have corrected all the grammatical errors

Provide doi in the reference section	Thank you. We have added in the reference section.
Editor (Editor in Chief) Name: Muhammad Torequi Islam ORCID: 0000-0001-6392-3820 Conflict of Interest: None Date of Reviewer's Comments: February 28, 2025 Date of Author Response: March 5, 2025	
Editor's Comments	Author Response
Change the article title and provide suitable one	We have corrected this in the manuscript.
Follow the journal reference style	Thank you. We've correct this in the manuscript.
Provide orcid id of all authors	We have provided all the orcid id in the manuscript.

Round 2

Reviewer 2 Name: Mst Muslima Munni Conflict of Interest: None Date of Reviewer's Comments: Not responded Date of Author Response: N/A	
Reviewer 2 Comments	Author Response
No comments	-
Reviewer 3 Name: Md Shimul Bhuia ORCID: 0000-0002-6179-9720 Conflict of Interest: None Date of Reviewer's Comments: March 6, 2025 Date of Author Response: April 6, 2025	
Reviewer 3 Comments	Author Response
Reviewer Recommendation: Revisions Required The author should incorporate more data. The current manuscript is very short it's not suitable for publication	Thank you for your insights. Since there is no available data in the literature to include additional information, we have kept this review concise.
The authors can add information of more cancer types or pharmacokinetics, toxicity or clinical evidence	Thank you for your feedback. We have added pharmacokinetic and toxicological data in the manuscript.

Round 3

Reviewer 3 Name: Md Shimul Bhuia ORCID: 0000-0002-6179-9720 Conflict of Interest: None Date of Reviewer's Comments: April 6, 2025 Date of Author Response: May 10, 2025	
Reviewer 3 Comments	Author Response
Reviewer Recommendation: Revisions Required Still the data is not suitable for publication. Article with low data may influence the proper findings of this type of study.	Thank you for your feedback.
Incorporate the data of the following reference under the heading "Cytotoxicity" Gawron, A., & Kruk, I. (1992). Cytotoxic effect of xanthotoxol (8-hydroxypsoralen) on TCTC cells in vitro. Polish Journal of Pharmacology and Pharmacy, 44(1), 51-57.	Thank you for your feedback. We have added it.
Under the heading of "Leukemia" Kubrak, T., Czop, M., Kołodziej, P., Ziąja-Sołtys, M., Bogucki, J., Makuch-Kocka, A., ... & Bogucka-Kocka, A. (2019). The Effect of furanocoumarin derivatives on induction of apoptosis and multidrug resistance in human leukemic cells. Molecules, 24(9), 1824.	Thank you for your feedback. We have added it.
Also add biological sources of Xanthotoxol	Thank you for your feedback. We have added it.
Database report	Done. Included.

Round 4

Reviewer 3 Name: Md Shimul Bhuia ORCID: 0000-0002-6179-9720 Conflict of Interest: None Date of Reviewer's Comments: Not responded Date of Author Response: N/A	
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Reviewer 3 Comments	Author Response
No comments	-
Editor (Editor in Chief) Name: Muhammad Torequl Islam ORCID: 0000-0001-6392-3820 Conflict of Interest: None Date of Reviewer's Comments: May 12, 2025 Date of Author Response: May 12, 2025	
Editor's Comments	Author Response
There are some corrections needed- Line 80, correct the spelling Biologiical Provide a legend of the first table (Botanical sources), including all tables and figures and cite them Use hyphen to indicate "to" such as 10-15 Numberize to 3.2. Beneficial effects of xanthotoxol against different cancers Then -3.2.1. Lung cancer 3.2.1. Skin Cancer3.3. Biopharmaceutical profile, 3.4. Toxicology... 4. Conclusion	Dear Muhammad Torequl Islam, We hope this message finds you well. We are pleased to inform you that we have carefully addressed all the comments and made the necessary corrections to our manuscript entitled " <i>Anticancer Potential of Xanthotoxol: Underlying Mechanistic Insights and Therapeutic Implications in Different Cancer Types – A Literature Review.</i> " We believe the revised version now meets the journal's standards and respectfully submit it for your final consideration. Kindly find the corrected manuscript attached and note that we have also uploaded it to the discussion forum, as requested. Thank you for your continued guidance and support throughout the revision process.