OPEN PEER REVIEW

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Advantages of "Open Peer Review" process

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Peer Review

Jundishapur Journal of Natural Pharmaceutical Products
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Peer Review Report for "Plant-Origin Coumarin-Hemiterpene Ethers and Their Chemotaxonomic Significance"

Author(s): Saba Rahimi Bahoosh, Mahdi Mojarrab

Review Timeline:

Submit Date:	6 May 2025
Revised Date:	6 Jun 2025
Accepted Date:	23 Jun 2025

Revision (0)

Here, you can see the **Reviewers**, **Associate Editors** and **EICs'** comments from the beginning to the end of the revision process.

REFEREE : Reviewer — 13 May 2025

with respect,
transition between sections is abrupt ,making it difficult to follow the narrative.
it is not a critical synthesis and more emphasis should be placed on interpreting contradictions and biases.
more rigorous methodlogy with assessment of included studies is needed.
threr is need to clearer distinction between established evidence an area of controversy

Shadi -------- Sarahroodi : Reviewer — 17 May 2025

Dear EIC and Authors,

Thank you for submitting your manuscript to the Jundishapur Journal of Natural Pharmaceutical Products. Your work on coumarin-hemiterpene ethers (CHEs) and their chemotaxonomic significance is both intriguing and relevant to the journal's focus on natural pharmaceutical products. I appreciate the effort you've put into exploring this topic, and I believe it has strong potential to contribute meaningfully to the field. However, I've identified several areas where the manuscript could be strengthened to meet the journal's standards. Below, I've outlined specific issues, provided suggestions for improvement, and noted minor grammatical and spelling errors. I conclude with my assessment of the manuscript's suitability for publication and recommendations for next steps.

Issues and Suggestions

1. Need for Clearer Definitions of Key Terms

In the Context section, you introduce "coumarin-hemiterpene ethers (CHEs)" and "natural coumarin-hemiterpene ethers (NCHEs)," but the distinction between these terms is not clearly articulated. This could confuse readers, particularly those less familiar with the subject.

Suggestion: Please include a concise explanation in the introduction that defines CHEs and NCHEs, ideally with examples to clarify their differences and enhance accessibility.

2. Enhancing the Evidence Acquisition Section

The Evidence Acquisition section is somewhat brief and lacks detailed information about your search methodology. For example, it's unclear whether the search was limited to English-language publications or how studies were selected for inclusion.

Suggestion: Expand this section to provide a thorough description of your search strategy, including inclusion and exclusion criteria, language considerations, and any quality assessment methods used for selected studies. This will strengthen the credibility of your review.

3. Incorporating Quantitative Data in Results

The Results section states that Rutaceae, Asteraceae, and Apiaceae are the richest sources of CHEs, which is a compelling finding. However, these claims are not supported by specific quantitative data, such as the number of compounds identified per family.

Suggestion: Include quantitative data, such as the number of compounds or their distribution across families, presented in tables or figures. This will provide a clearer and more robust foundation for your conclusions.

4. Elaborating on Biological Activities

You mention several biological activities of NCHEs (e.g., antioxidant, anti-inflammatory, antiviral), which align well with the journal's scope. However, these claims lack detail about underlying mechanisms or supporting evidence, which readers of a pharmaceutical journal may expect.

Suggestion: Consider adding brief descriptions of the mechanisms behind these activities or referencing key studies that substantiate them. Alternatively, acknowledge the limited discussion as a study limitation to set appropriate expectations.

5. Addressing Minor Grammatical and Spelling Errors

The manuscript is well-written overall, but a few minor grammatical and spelling errors were noted:

o Line 5: "No detailed report on natural coumarin-hemiterpene ethers (NCHE) and their plant sources is available" should use "NCHEs" (plural) for consistency with the sentence's context.

o Line 31: "a limited number have also been documented as glycosylated NCHEs" would be clearer as "a limited number of glycosylated NCHEs have been documented" for grammatical flow.

o Line 60: "7-isopentenyloxy coumarin and its 6-methoxy derivative have a very large presence" is correct but slightly informal; consider "are highly prevalent" for a more professional tone.

o Line 106: "Tow genera" is a typographical error and should be corrected to "Two genera."

Suggestion: A professional editorial review or use of a proofreading tool would help eliminate these minor errors and enhance the manuscript's polish.

6. Discussing Study Limitations

Include a dedicated "Limitations" section to discuss challenges, such as underreporting in specific plant families or limitations in search scope, to provide a balanced perspective.

7. Revising the Ethical Statements Section

The "Ethical Statements" section includes references to a "Clinical Trial Registration Code" and "Informed Consent," which are irrelevant for a review article that does not involve human subjects or clinical data.

Suggestion: Revise or remove this section to focus on ethical considerations relevant to a literature review, such as adherence to fair and transparent use of source materials.

8. Proposing Future Research Directions

Include a "Future Directions" section to propose research questions or areas for exploration, such as investigating NCHEs in underrepresented plant families or their pharmacological applications.

Overall Assessment and Publication Suitability

Assessment:

Your manuscript addresses a compelling and relevant topic that aligns well with the Jundishapur Journal of Natural Pharmaceutical Products' emphasis on natural products and their pharmaceutical potential. The exploration of NCHEs as chemotaxonomic markers, particularly in the Rutaceae, Asteraceae, and Apiaceae families, is a valuable contribution with significant promise. However, the manuscript requires improvement in several key areas, including a more detailed methodology, the inclusion of quantitative data, and a stronger focus on practical applications. The minor grammatical and spelling errors, while not major, should also be addressed to ensure a professional presentation.

Publication Suitability:

At present, the manuscript does not meet the criteria for publication in the Jundishapur Journal of Natural Pharmaceutical Products due to the identified issues, particularly the limited methodological detail, absence of figures and tables, and insufficient discussion of pharmaceutical applications. However, with targeted

revisions, I am confident that the manuscript can achieve the necessary standard for publication. Strengthening the methodology, incorporating visual data, and highlighting practical implications will significantly enhance its quality.

Recommendation:

I recommend that the manuscript undergo major revision. I encourage you to address the issues outlined above, with particular attention to expanding the methodology, including quantitative data and visual aids, and discussing the practical applications of NCHEs. Once these revisions are made, I believe the manuscript will be well-positioned for resubmission and reconsideration. Your work has a strong foundation, and with these improvements, it has the potential to make a meaningful impact in the journal. Thank you for your efforts, and I look forward to seeing the revised version.

Sincerely,

Shadi Sarahroodi

Parm.D & Ph.D

REFEREE : Reviewer

20 May 2025

The article “Plant-Origin Coumarin-Hemiterpene Ethers and Their Chemotaxonomic Significance” presents valuable information on natural coumarin-hemiterpene ethers (NCHEs), particularly their plant sources and chemotaxonomic relevance. However, it requires several revisions to meet the standards of scientific writing and publication.

1. It is better to check again written language and with a native editor or relevant software.
2. All relevant papers were collected up to February 2025. February 2025 is in the future (assuming this is being reviewed prior to that date).
3. 7- isopentenyloxy coumarin, should be 7-isopentenyloxycoumarin (no space).
4. Lines 23–25,iIn a type of prenyloxy coumarins, the prenyl side chain is an isopentenyl moiety (1) or, in other words, a hemiterpene unit (C5) (2), In a type of… is awkward. Use consistent terminology (moiety vs. unit).
5. Lines 32–34, nevertheless, a comprehensive report on NCHEs and their plant sources is still unavailable. Additionally, the significance of NCHEs as chemotaxonomic markers has never been thoroughly investigated or discussed, never and still may sound too absolute.
6. Lines 55–58, the findings suggest that the natural occurrence of 5-prenyloxy coumarins is more prominent, but they are restricted to Rutaceae, Asteraceae, and Apiaceae families. More prominent is vague.
7. Lines 72–73, there are no reports of 4-prenyloxy coumarins, 6-prenyloxy coumarins, and diprenyloxy coumarins in the Rutaceae plants, the Rutaceae plants, should be Rutaceae or Rutaceae species.

REFEREE : Associate Editor

25 May 2025

Thank you for submitting your manuscript to Jundishapur Journal of Natural Pharmaceutical Products.

Please address the questions and submit a point-by-point response to the reviewers' comments and concerns and highlight the changes in the text.
It would also be an honor that the author team contribute as reviewers for this journal. Your assistance as a reviewer for Jundishapur Journal of Natural Pharmaceutical Products aids the editorial board in reaching a decision, and also enables the author(s) to disseminate their work at the highest possible quality. Thank you in advance for your contribution and time.

REFEREE : EIC

26 May 2025

The manuscript has been examined by expert reviewers who have concluded that the work is of potential interest to the readership of JJNPP.
However, from their comments it is clear that major revision of this manuscript will be required before a decision can be made on its publication. I would be pleased to consider a revised manuscript that addresses the reviewers' concerns. Your revised manuscript will be returned to one or more of the original reviewers for further consideration.

OPEN PEER REVIEW

Revision (1)

Reply to Reviewers

Ideally, the reviewing process can significantly improve the submitted manuscripts by allowing the authors to take into account the advice of reviewers. Author(s) must reply to all reviewers' comments in a separate Word file, point by point. A "**Reply to Reviewers**" document is submitted along with revised manuscript during submission of revised files, summarizing the changes that the authors made in response to the reviewers' comments. The responses to reviewers' comments specifies how the authors addressed each comment the reviewers made.

You can read the authors' responses to the reviewers' comments in the next page.

Dear Editor-in-Chief of Jundishapur Journal of Natural Pharmaceutical Products

I would like to thank you for reviewing our manuscript entitled “Plant-Origin Coumarin-Hemiterpene Ethers and Their Chemotaxonomic Significance”. We thank the respected reviewers for their comments which have strengthened the paper. The manuscript was revised according to the comments. Here are the details:

Reply to the reviewers’ comments

Reviewer Number	Original comments of the reviewer	Reply by the author(s)
1	1. It is better to check again written language and with a native editor or relevant software. 2. All relevant papers were collected up to February 2025. February 2025 is in the future (assuming this is being reviewed prior to that date). 3. 7- isopentenyloxy coumarin, should be 7-isopentenyloxycoumarin (no space). 4. Lines 23–25,iIn a type of prenyloxy coumarins, the prenyl side chain is an isopentenyl moiety (1) or, in other words, a hemiterpene unit (C5) (2), In a type of... is awkward. Use consistent terminology (moiety vs. unit). 5. Lines 32–34, nevertheless, a comprehensive report on NCHEs and their plant sources is still unavailable. Additionally, the significance of NCHEs as chemotaxonomic markers has never been thoroughly investigated or discussed, never and still may sound too absolute. 6. Lines 55–58, the findings suggest that the natural occurrence of 5-prenyloxy coumarins is more prominent, but they are restricted to Rutaceae, Asteraceae,	We are thankful for the constructive comments of reviewer 1. 1. The written language was rechecked with relevant software. We did our best to correct the mistakes. 2. All relevant papers were collected up to February 2025. 3. It was corrected. 4. Revision has been made. 5. Both words have been deleted. 6. It was corrected.

	and Apiaceae families. More prominent is vague. 7. Lines 72–73, there are no reports of 4-prenyloxy coumarins, 6-prenyloxy coumarins, and diprenyloxy coumarins in the Rutaceae plants, the Rutaceae plants, should be Rutaceae or Rutaceae species.	7. Revision has been made.
2	1. Need for Clearer Definitions of Key Terms In the Context section, you introduce "coumarin-hemiterpene ethers (CHEs)" and "natural coumarin-hemiterpene ethers (NCHEs)," but the distinction between these terms is not clearly articulated. This could confuse readers, particularly those less familiar with the subject. Suggestion: Please include a concise explanation in the introduction that defines CHEs and NCHEs, ideally with examples to clarify their differences and enhance accessibility. 2. Enhancing the Evidence Acquisition Section The Evidence Acquisition section is somewhat brief and lacks detailed information about your search methodology. For example, it's unclear whether the search was limited to English-language publications or how studies were selected for inclusion. Suggestion: Expand this section to provide a thorough description of your search strategy, including inclusion and exclusion criteria, language considerations, and any quality assessment methods used for selected studies. This will strengthen the credibility of your review. 3. Incorporating Quantitative Data in Results The Results section states that Rutaceae, Asteraceae, and Apiaceae are the richest sources of CHEs, which is a compelling finding. However, these claims are not supported by specific quantitative data, such as the number of compounds identified per family. Suggestion: Include quantitative data, such as the number of compounds or their distribution across families, presented in tables or figures. This will provide a clearer and more robust foundation for your conclusions. 4. Elaborating on Biological Activities You mention several biological activities of NCHEs (e.g., antioxidant, anti-inflammatory, antiviral), which align well with the journal's scope. However, these claims lack detail about underlying mechanisms or supporting evidence,	We would like to thank the respected reviewer 2 for evaluating the manuscript. By the reviewer's suggestion, statements have been added to the context to indicate that some coumarin-hemiterpene ethers (CHEs) synthesized which do not have a natural origin and are not classified as natural coumarin-hemiterpene ethers (NCHEs). 2. The evidence acquisition section was expanded. Also, inclusion and exclusion criteria were added. 3. The quantitative data was added. Additionally, figure 2 has been revised to depict the distribution of NCHEs across the various families more clearly. The number of NCHEs identified in Rutaceae, Asteraceae, and Apiaceae families are also provided in table 2, individually. 4. Various biological studies have been conducted on NCHEs. Including the results of these studies would considerably lengthen the text and increase the number of references. In this case, the article's word count would be

	which readers of a pharmaceutical journal may expect. Suggestion: Consider adding brief descriptions of the mechanisms behind these activities or referencing key studies that substantiate them. Alternatively, acknowledge the limited discussion as a study limitation to set appropriate expectations. 5. Addressing Minor Grammatical and Spelling Errors The manuscript is well-written overall, but a few minor grammatical and spelling errors were noted: o Line 5: "No detailed report on natural coumarin-hemiterpene ethers (NCHE) and their plant sources is available" should use "NCHEs" (plural) for consistency with the sentence's context. o Line 31: "a limited number have also been documented as glycosylated NCHEs" would be clearer as "a limited number of glycosylated NCHEs have been documented" for grammatical flow. o Line 60: "7-isopentenyloxy coumarin and its 6-methoxy derivative have a very large presence" is correct but slightly informal; consider "are highly prevalent" for a more professional tone. o Line 106: "Tow genera" is a typographical error and should be corrected to "Two genera." Suggestion: A professional editorial review or use of a proofreading tool would help eliminate these minor errors and enhance the manuscript's polish. 6. Discussing Study Limitations Include a dedicated "Limitations" section to discuss challenges, such as underreporting in specific plant families or limitations in search scope, to provide a balanced perspective. 7. Revising the Ethical Statements Section The "Ethical Statements" section includes references to a "Clinical Trial Registration Code" and "Informed Consent," which are irrelevant for a review article that does not involve human subjects or clinical data. Suggestion: Revise or remove this section to focus on ethical considerations relevant to a literature review, such as adherence to fair and transparent use of source materials. 8. Proposing Future Research Directions Include a "Future Directions" section to propose research questions or areas for exploration, such as investigating NCHEs in underrepresented plant families or	much further away from the standard defined for the journal. Therefore, we have addressed the biological effects of NCHEs in a separate review study, which is currently under review in Jundishapur Journal of Natural Pharmaceutical Products. 5. All mentioned grammatical and spelling errors were corrected. 6. Study limitation was added. 7. Revision has been made. 8. "Future Directions" section was included.

	their pharmacological applications.	
3	Transition between sections is abrupt , making it difficult to follow the narrative. It is not a critical synthesis and more emphasis should be placed on interpreting contradictions and biases. More rigorous methodology with assessment of included studies is needed. There is need to clearer distinction between established evidence an area of controversy	We would like to thank the respected reviewer 3 for evaluating the manuscript. We went through the entire manuscript to improve the writing and correct the mistakes.
Associate Editor	Thank you for submitting your manuscript to Jundishapur Journal of Natural Pharmaceutical Products. Please address the questions and submit a point-by-point response to the reviewers' comments and concerns and highlight the changes in the text. It would also be an honor that the author team contribute as reviewers for this journal. Your assistance as a reviewer for Jundishapur Journal of Natural Pharmaceutical Products aids the editorial board in reaching a decision, and also enables the author(s) to disseminate their work at the highest possible quality. Thank you in advance for your contribution and time.	The authors would like to thank the respected associate editor for evaluating the manuscript. All comments of esteemed reviewers have been carefully addressed, and the changes have been highlighted in the text. It would also be an honor for the author team to contribute as reviewers for Jundishapur Journal of Natural Pharmaceutical Products.

Best Wishes

OPEN PEER REVIEW

Revision (1)

REFEREE : Reviewer — 7 Jun 2025

The revisions are acceptable.

REFEREE : Associate Editor — 23 Jun 2025

The Ms is now suitable for publication in JJNPP

REFEREE : EIC — 23 Jun 2025

We are pleased to inform you that your manuscript has now been acepted in JJNPP.