

### Review Form 3

Journal Name:	<a href="#">South Asian Research Journal of Natural Products</a>
Manuscript Number:	Ms_SARJNP_124909
Title of the Manuscript:	Chemical analysis and biological studies of leaf extracts of <i>Smallanthus sonchifolius</i> (Poepp.) H. Rob. with an in-silico assessment of GC-MS identified compounds
Type of the Article	Original Research Article

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### PART 1: Review Comments

<b>Compulsory</b> REVISION comments	Reviewer's comment	Author's Feedback (Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
<p><b>Please write a few sentences regarding the importance of this manuscript for the scientific community. Why do you like (or dislike) this manuscript? A minimum of 3-4 sentences may be required for this part.</b></p>	<p>The manuscript presents a well-structured and comprehensive study on <i>Smalanthus sonchifolius</i> leaf extracts. The experimental approaches—GC-MS analysis, molecular docking, ADMET predictions, and biological activity assessments—are presented clearly, offering valuable insights into the pharmacological potential of the plant for antidiabetic and antimicrobial activities. The study also appropriately highlights the potential applications of these compounds for future drug discovery. The integration of in-vitro assays with in-silico assessments (molecular docking and ADMET) is a significant strength of the paper. This combined approach provides a more holistic understanding of the plant's therapeutic potential. The tables and figures are well-organized and help in visualizing the key findings, especially the binding affinities and drug-likeness of the compounds identified. The introduction section adequately covers the relevant literature, particularly on the biological activities of <i>Smalanthus sonchifolius</i>. The focus on potential drug candidates for diabetes and microbial infections is timely and relevant, given the global health burdens associated with these conditions.</p>	
<p><b>Is the title of the article suitable? (If not please suggest an alternative title)</b></p>	<p>Title is suitable</p>	
<p><b>Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here.</b></p>	<p>Abstract is well written</p>	
<p><b>Are subsections and structure of the manuscript appropriate?</b></p>	<p>The flow of certain sections, especially in the results and discussion, can be more cohesive. The transition between sections (e.g., from antimicrobial activity to brine shrimp lethality assay) feels abrupt at times. Consider revising for clarity in some sentences, particularly in the methods section. For example, the descriptions of the phytochemical screening and extraction process could be more concise and streamlined.</p> <p>While the study mentions positive controls like acarbose for <math>\alpha</math>-amylase inhibition and kanamycin for antimicrobial testing, a more explicit mention of negative controls throughout all experiments would strengthen the methodological rigor.</p> <p>The study suggests that the phytochemical potential of <i>S. sonchifolius</i> is underexplored. However, also mention that how do the specific compounds you identified and their activities compare to previous reports?</p>	
<p><b>Please write a few sentences regarding the scientific correctness of this manuscript. Why do you think that this manuscript is scientifically robust and technically sound? A minimum of 3-4 sentences may be required for this part.</b></p>	<p>The manuscript is scientifically sound and demonstrates a solid approach to the study of <i>Smalanthus sonchifolius</i> leaf extracts. The experimental design, which combines GC-MS analysis, in-vitro assays, and in-silico assessments, is appropriate for investigating the biological activities of the plant. The use of established methods, such as <math>\alpha</math>-amylase inhibition for antidiabetic potential and antimicrobial assays, adds credibility to the findings. The molecular docking studies are well-executed, and the ADMET predictions are in line with standard practices in drug-likeness evaluation. However, future research for validation of in-silico results through experimental pharmacokinetics and additional statistical analysis is recommended.</p>	

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<b>Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.</b> -	The references in the manuscript appear to be relevant and cover a broad spectrum of scientific literature related to the phytochemical analysis, antimicrobial and antidiabetic properties, and in-silico studies. However, while some of the references are from recent years, many are older (dating back to the early 2000s). For example, key studies on <i>Smallanthus sonchifolius</i> and molecular docking techniques are from 2001, 2003, and 2010. To improve the manuscript's relevance, more recent studies (from the last 5-10 years) could be included, particularly in areas like molecular docking, ADMET predictions, and advances in antidiabetic and antimicrobial research. This would ensure that the manuscript reflects the latest advancements in the field and maintains its scientific rigor.	
<b>Minor REVISION comments</b>  <b>Is the language/English quality of the article suitable for scholarly communications?</b>	<ul style="list-style-type: none"><li>• Ensure consistency in font sizes and styles, particularly in table headings. There are a few minor typographical issues in the paper (e.g., inconsistent spacing between numbers and units, such as "1000µg/mL" instead of "1000 µg/mL").</li><li>• Always maintain uniformity in presenting units, especially when discussing concentrations and measurements (e.g., µg/mL vs mg/mL).</li><li>• There are occasional grammar issues that could be resolved with a thorough proofreading. For example, the sentence "The chloroform extract was toxic, while the methanol extract was moderately toxic" can be revised for smoother flow.</li></ul>	
<b>Optional/General comments</b>	This study is a valuable contribution to the exploration of <i>Smallanthus sonchifolius</i> for potential therapeutic applications. However, certain sections need further clarification, especially regarding the methodological rigor. With minor revisions and enhancements, the manuscript will make a solid case for the bioactivity of this plant in diabetes and antimicrobial therapies.	

### **PART 2:**

	<b>Reviewer's comment</b>	<b>Author's comment</b> (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
<b>Are there ethical issues in this manuscript?</b>	<i>(If yes, Kindly please write down the ethical issues here in details)</i>	

### **Reviewer Details:**

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