

### Review Form 3

Journal Name:	<a href="#">Chemical Science International Journal</a>
Manuscript Number:	Ms_CSIJ_127406
Title of the Manuscript:	Synthesis of new dihydropyrimidine-2-thione derivatives for antibacterial purposes
Type of the Article	Original research article

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**PART 1:** Review Comments

Compulsory REVISION comments	Reviewer's comment	Author's Feedback <i>(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)</i>
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.	<p>“Manuscript Number:2024_CSIJ_127406” The manuscript titled “Synthesis of New Dihydropyrimidine-2-thione Derivatives for Antibacterial Purposes” has been reviewed, It could be accepted after major revision. The comments are as follows:</p> <p><b>Title and Bioactivity Screening (Table 1):</b> The title of the manuscript mentions the synthesis of “dihydropyrimidine-2-thione” derivatives; however, in the bioactivity screening (Table 1), the inclusion of compounds 3a-3h is unnecessary. Furthermore, the authors should compare the effect of different substituents on both types of derivatives to better understand their influence on bioactivity.</p> <p><b>Introduction Section:</b> The introduction is quite brief. It would benefit from the addition of the aim of the current study, as well as a discussion of earlier, well-known methods related to this topic. Additionally, the authors should highlight the drawbacks of these previous methods, particularly in terms of bioactivity.</p> <p><b>References:</b> The references cited are not up to the journal's standards. The authors need to include more recent studies, particularly those from internationally peer-reviewed journals, to reflect the current state of research in this field.</p> <p><b>Experimental Section:</b> The experimental section requires refinement. For instance, the phrase “Capillary tubes allowed us to measure” is unnecessary and should be omitted. Instead, the authors should specify the type of melting point apparatus used, including the make and model.</p> <p><b>Tense in Experimental Section:</b> The procedures in the experimental section are written in the present tense. This needs to be revised to the past tense, as the procedures were conducted in the past.</p> <p><b>Scheme 2 (Mechanism for Chalcone Preparation):</b> The mechanism for chalcone preparation is available in textbooks. The authors should present the mechanism more scientifically, ensuring that arrows are properly directed and the flow of the reaction is clear.</p> <p><b>Table 1 (Bioactivity Results):</b> In Table 1, all chalcones show the same inhibition diameter, regardless of the substituent pattern. For example, compounds 3a-3f (EA, SA, and PA) all show a diameter of 6 mm. This should be addressed, as it raises questions about the consistency of the results and the influence of the substituents.</p> <p><b>References (Current Status of Derivatives):</b> The reference section needs to be updated to reflect the latest developments in the field and provide a more comprehensive background on the current status of these derivatives.</p>	<p>Title was revised.</p> <p>The introduction were revised. Addition of the aim of the current study, as well as a discussion of earlier, well-known methods related to this topic were added. Additionally, the drawbacks of these previous methods, particularly in terms of bioactivity were added.</p> <p>The introduction were revised. Addition of the aim of the current study, as well as a discussion of earlier, well-known methods related to this topic were added. Additionally, the drawbacks of these previous methods, particularly in terms of bioactivity were added.</p> <p>Abstract was revised with additional points.</p> <p>This manuscript is scientifically robust and technically sound.</p> <p>The mechanism for chalcone preparation was deleted.</p> <p>all chalcones don't show the same inhibition diameter. Example: Chalcones 3g and 3h. We described chalcones which are intermediates of dihydropyrimidine-2-thiones in all the paper.</p> <p>More recent studies, particularly those from internationally peer-reviewed journals, to reflect the current state of research in this field were added.</p> <p>The procedures in the experimental section are written in the past tense.</p>
Is the title of the article suitable? (If not please suggest an alternative title)		

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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.		
Are subsections and structure of the manuscript appropriate?		
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.		
Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.		
Minor REVISION comments		
Is the language/English quality of the article suitable for scholarly communications?		
Optional/General comments		

PART 2:

	Reviewer's comment	Author's comment (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)
Are there ethical issues in this manuscript?	(If yes, Kindly please write down the ethical issues here in details)	No