

Review of: "Investigation and Synthesis of Benzothiazole-Derived Schiff Base Ligand Against Mycobacterium tuberculosis"

Sajjad H. Sumrra¹

¹ University of Gujrat, Pakistan

Potential competing interests: No potential competing interests to declare.

[Review Report of YSLN1H: Qeios]

The manuscript "Investigation and Synthesis of Benzothiazole-Derived Schiff Base Ligand Against Mycobacterium tuberculosis" reports the synthesis and characterization of heterocyclic Schiff base ligands. The paper has an interesting subject but needs to be more carefully written, as many unconvincing statements and grammatical mistakes exist. The authors need to address the following major queries before publication in *Qeios*.

1. Rewrite the abstract; it should summarize the main results of the work and not resemble the introduction and conclusion.
2. The introduction part of the manuscript is not appealing and must be revised. Emphasize the chemistry and biological importance of heterocyclic Schiff base ligands. Authors can refer to the following studies for more information:
 - <https://doi.org/10.1016/j.molstruc.2023.135744>
 - <https://doi.org/10.4314/bcse.v34i2.11>
 - <https://doi.org/10.1080/00958972.2023.2208260>
 - <https://doi.org/10.1134/S1070363218080248>
 - <https://doi.org/10.17344/acsi.2021.7182>
3. Mention why the docking studies were carried out. What is the importance of computational analysis? The novelty should be clear and emphasized. The authors must update the introduction with a good discussion regarding the docking analysis of compounds and cite the following papers for molecular docking simulation studies:
 - <https://doi.org/10.1016/j.molstruc.2022.134780>
 - <https://doi.org/10.1080/07391102.2023.2293260>
 - <https://doi.org/10.1007/s10534-022-00385-6>
4. Revise the Scheme. Redraw all the structures with appropriate bond lengths/angles.
5. The manuscript needs reorganization and should be re-structured and complemented with more computational/experimental information. All the results are not properly discussed. Include more discussion of the results

rather than simply tabulating them. Add statistical analysis for the obtained results.

6. What is the methodology used for selecting the protein in molecular docking studies?
7. The conclusion section needs improvement. Rewrite it and make it meaningful.
8. Species names and *in silico* should be italicized throughout the manuscript.
9. Some sentences are too weak, and there are a lot of grammatical mistakes throughout the manuscript. Authors are suggested to improve the grammar of the manuscript scientifically.