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

Bhupesh S. Bhatt[1]

1 Chemistry, Sardar Patel University, India

Potential competing interests: No potential competing interests to declare.

The Schiff base ligand Benzhydrylidene-(6-methyl-benzothiazol-2-yl)-amine (MTA) was successfully synthesized by reacting 6-methyl-benzothiazol-2-ylamine with Diphenyl-methanone in ethanol. The product was thoroughly characterized using FT-IR, ^{1}H-NMR, UV-Vis, and ESI Mass spectroscopy. Our computational studies revealed that MTA has a promising molecular docking score of -8.1 kcal/mol against the glutamine protein enzyme, surpassing the standard anti-TB drug Pyrazinamide (-4.6 kcal/mol). With a synthesis yield of 86%, our findings suggest a strong potential for MTA in anti-tuberculosis applications. The manuscript can be accepted after minor revision.

Some grammatical and typographical errors need to be corrected.

Please correct cm^{-1} to cm^{-1} (-1 as superscript).

Please check the manuscript for such typographical errors.

The role of heterocyclic molecules in diverse biological activities can be incorporated along with a discussion on Schiff bases in the introduction part, and relevant references can be cited.

Some references on the biological activities of thiazole compounds can be cited along with reference 6.

It is crucial to provide high-resolution figures to ensure the visual clarity and quality of the manuscript. This will greatly enhance the reader's understanding and appreciation of your research.

Please add the application of compounds in the context of current research in the conclusion part.