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

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Potential competing interests: No potential competing interests to declare.

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

Comment 1: Authors should carefully consider proper capitalization to ensure clarity and consistency in their writing. For example, in the reaction in ethanol, equimolar amounts of 6-methylbenzothiazol-2-ylamine and Diphenyl-methanone were combined to form the Schiff base ligand.

Comment 2: The Abstract has to be rewritten.

Comment 3: Schiff bases (named after Hugo Schiff) combine an aliphatic or aromatic amine with an active carbonyl compound (aldehyde or ketone) by nucleophilic addition to form a hemiaminal solution, followed by the removal of water to create a C=N double bond (Immigration). This is not required in experimental methods.

Comment 4: Mycobacterium tuberculosis has to be written in italics.

Comment 5: Why was PDB ID 3ZXR used for *in silico* studies? Please highlight the rationale and relevant research article.

Comment 6: To distinguish clearly between the reactant and product, it would be beneficial to include UV and IR spectra for the starting aminobenzothiazole compound.

Comment 7: Mention the coupling constant for the MTA Schiff base.

Comment 8: It would be beneficial to include the ^{13}C NMR spectrum of the MTA Schiff base ligand.

Comment 9: ESI-MS studies showed a mass-to-charge ratio with the following values: m/z: 329.1 (100%), 330.0 (15.6%), and 331.1 (15.1%). The various peaks are divided into two parts: one is the molecular peak, and the other is the isotope peak. Authors have to explain clearly the isotopes of what?

Comment 10: Authors have to cite some relevant articles: Kamat V, Santosh R, Poojary B, Nayak SP, Kumar BK, Sankaranarayanan M, Faheem, Khanapure S, Barretto DA, Vootla SK. Pyridine-and thiazole-based hydrazides with promising anti-inflammatory and antimicrobial activities along with their in silico studies. ACS omega. 2020 Sep 25;5(39):25228-39.

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