Review of: "Synthesis and Antibacterial Screening of Cefradine Schiff Bases and Their Metal Salts"

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Potential competing interests: No potential competing interests to declare.

Paper “Synthesis and Antibacterial Screening of Cefradine Schiff Bases and Their Metal Salts” by Mohsin Ali et al

An interesting work on the synthesis and antibacterial evaluation (against S. aureus and E. coli.) of 33 Schiff bases of cefradine and their salts. The manuscript can be accepted after revision following the points listed below.

1. Explain well in the introduction what the main purpose of your study is: Synthesis, Biological applications, or both, and highlight the originality of this work.
2. Lacks discussion on some spectroscopic and physico-chemical characterisation of synthetic compounds. The discussion of results needs to be more comprehensive for the two parts (Synthesis, Biological).
3. Lack of data for new compounds, for example, (melting points, elemental analyses, ….) and why the 13C NMR and MS were not recorded.
4. In the synthesis of compounds (3-8), do you not find problems obtaining a mixture of enantiomers (there are chirality centers in the target molecule Cefradine)?
5. Highlight the SAR (Structure-Activity Relationship), QSAR, and/or Docking and indicate the mechanisms for the enhanced antimicrobial activities of the prepared compounds.
6. Why there are differences in activities between Compounds (18, 5, 11, 27) and (5, 26, 27, 3, 13, 18, 19) against S. aureus and E. coli, respectively.
7. The author must update the bibliography (add recent references).

Recommendations: Article accepted after revision.