

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.

The study describes the synthesis and antibacterial screening of Cefradine Schiff bases and their metal salts. Schiff bases were synthesized using various aldehydes/ketones and then converted into metal salts. The compounds were evaluated for antibacterial activity against *Staphylococcus aureus* and *Escherichia coli*. Compound 23 exhibited the best activity against both strains, while several others showed good activity against either *S. aureus* or *E. coli*. The study highlights the potential of these compounds as antibacterial agents and provides insights into their structure-activity relationships. Although this is a well-written paper, major updates are required.

1. Which particular methodology was employed during the compound synthesis process?
2. Could you provide more information on the characterization procedures used to verify the authenticity of the produced compounds?
3. What are the specific mechanisms of action of the synthesized compounds?
4. What are the possible uses of the produced chemicals in the medical field?
5. What are the constraints of the study, and what are some potential fields for further research?
6. Which chemicals had the most potent antibacterial action against *S. aureus* and *E. coli*?
7. How were the synthesized Schiff bases reacted with various metal hydroxides and silver nitrate to form their respective salts?
8. What were the outcomes of the antibacterial analysis conducted on the produced compounds?
9. Can you provide more details on the experimental methods used for the antibacterial screening, such as the specific concentrations of the tested compounds and the methods used to measure bacterial growth inhibition?
10. What are the potential limitations or drawbacks of the synthesized compounds in terms of their antibacterial activity or other biological properties?
11. Have any further studies been conducted to investigate the potential applications of these compounds in the field of medicine, and if so, what were the results?

