Review of: "Antimicrobial Sensitivity of Plant Extracts of Acacia arabica, Prosopis juliflora, Abutilon indicum, and Bryonia laciniosa on Staphylococcus aureus, Pseudomonas aeruginosa, and Escherichia coli"

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Potential competing interests: No potential competing interests to declare.

Thank you for submitting your manuscript titled "Antimicrobial Sensitivity Profiling of Staphylococcus aureus, Pseudomonas aeruginosa, and Escherichia coli against Phytochemical Extracts from Various Plants." The study focuses on the antimicrobial sensitivity of three important bacterial strains, namely Staphylococcus aureus, Pseudomonas aeruginosa, and Escherichia coli, using phytochemical extracts from four plant species: Acacia arabica, Prosopis juliflora, Abutilon indicum, and Bryonia laciniosa. The approach of utilizing phytochemicals for the green synthesis of antimicrobial agents is of significant interest in modern microbiology. However, before acceptance, there are several major modifications that need to be addressed.

1. Clarify the Research Objectives and Hypotheses:

The manuscript lacks clear research objectives and hypotheses. It is essential to explicitly state the main research questions this study aims to address. This will help readers understand the purpose of the research and the expected outcomes. Additionally, provide a brief rationale for selecting the mentioned bacterial strains and plant species.

2. Methodology Detail and Rigor:

The methodology section requires substantial expansion and clarification. Provide detailed information about the extraction process of phytochemicals from the selected plant species. Describe the antimicrobial sensitivity testing method, including how the Zone of Inhibition (ZOI) was measured. Clearly outline the experimental design, including controls and replicates, to ensure the study's reproducibility.

3. Results Interpretation:

The results section needs further elaboration and interpretation. Provide a comprehensive presentation of the ZOI results for each plant extract against each bacterial strain. Include statistical analysis to demonstrate the significance of the observed differences. Explain the criteria used to categorize the antibiogram patterns as Susceptible, Intermediate, and Slightly Resistant. Connect the ZOI values and antibiogram patterns with the phytochemical properties of the plant extracts.

4. Phytochemical Analysis:

While you mention that the plant extracts have potential for managing bacterial strains, the manuscript lacks detailed information about the specific phytochemicals present in these extracts. Expand the phytochemical analysis section to include techniques employed for identifying and quantifying active components. Discuss how the identified phytochemicals might contribute to the observed antimicrobial activity.

5. Discussion and Significance:

The discussion section should go beyond restating the results. Interpret the findings in the context of existing literature. Address the broader implications of using phytochemicals for antimicrobial purposes. Discuss the limitations of the study, potential applications, and future research directions.

6. Language and Writing Style:

Revise the manuscript for clarity, coherence, and grammatical accuracy. Ensure that the writing is concise and organized, guiding the reader through the study seamlessly.

Conclusion:

In summary, your manuscript presents a valuable contribution to the field of antimicrobial research through the examination of phytochemical extracts from various plants against significant bacterial strains. However, addressing the major modifications highlighted above is crucial to enhance the quality and impact of your study. Once these issues are thoroughly addressed, the manuscript can be reevaluated for publication.

Please make the necessary revisions and resubmit your manuscript. Feel free to reach out if you have any questions or require further guidance.