

REVIEWER'S REPORT

Manuscript No.: IJAR-58620

Title: *In-Vitro* Anti-Microbial Potential of Indigenous Medicinal Plant *Pepper ceba* Extracts Against Some Human Pathogenic Bacterial Strains.

Recommendation:

Accept as it is

Accept after minor revision...

Accept after major revision

Do not accept (*Reasons below*)

Rating	Excel.	Good	Fair	Poor
Originality	Excellent			
Techn. Quality	Excellent			
Clarity	Excellent			
Significance	Excellent			

Reviewer's ID: Dr. Sumathi

Detailed Reviewer's Report

1. Native North American medicinal plants include Echinacea, Goldenseal, and Yarrow, which indigenous groups historically used to treat infections, wounds, and fevers. These versatile perennials support local biodiversity while providing traditional remedies.
2. An ethanolic extract is a solution made by using ethanol (grain alcohol) as a solvent to pull active, useful compounds out of plant materials. It is widely used to capture plant parts like phenols, flavonoids, and oils for food, medicine, and skin care.
3. Antimicrobial activity is the power of a substance to kill or stop the growth of tiny living things like bacteria and fungi. Common types of agents with this power include antibiotics, antifungals, and natural plant extracts.
4. Human pathogenic bacteria are single-celled microscopic organisms that cause infectious diseases in people, such as *Mycobacterium tuberculosis*, *Streptococcus*, and *Escherichia coli*. While most bacteria are harmless or helpful, these specific types invade the body and make people sick.

REVIEWER'S REPORT

5. A zone of inhibition is the clear, circular area around an antimicrobial disk on an agar plate where bacteria cannot grow. Key aspects include the clear measurement area, the diffusion process, and its use in testing drug resistance.
6. Antimicrobial resistance (AMR) happens when germs like bacteria, viruses, fungi, and parasites change and stop responding to the medicines designed to kill them. As a result, standard treatments fail, making common infections harder to cure and increasing the risk of severe illness or death.
7. Antibacterial activity refers to the ability of a substance to inhibit the growth of or completely destroy bacteria. Agents function either by killing the bacteria (bactericidal) or by stopping them from reproducing (bacteriostatic). They target essential bacterial processes like cell wall formation, DNA replication, and protein synthesis.
8. *Klebsiella pneumoniae* are two distinct types of bacteria that cause different human infections, ranging from mild throat and skin conditions to severe, hospital-acquired illnesses.
9. *Escherichia coli* (*E. coli*) is a common bacterium; most strains are harmless and live healthily in human and animal guts, but specific pathogenic strains can cause severe food poisoning, diarrhea, and urinary tract infections.
10. Indigenous medicinal plants exhibit significant antimicrobial potential driven by secondary metabolites like alkaloids, phenolics, and terpenes, offering promising alternatives to combat antibiotic-resistant pathogens.
11. Human pathogenic bacterial strains are specific genetic variants of microscopic, single-celled organisms that cause disease in people. Key groups include *Mycobacterium tuberculosis*, *Staphylococcus aureus*, and *Escherichia coli*.
12. Key words are very impressive.
13. Medically very valued research.
14. Result part is awesome with tables, graphs and microbial plants.
15. Significant points are great.
16. Summary points only can be included.
17. After a small changes good to publish in your journal.

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