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.

Review Report

The emerging paradigm on pharmacotherapeutics and concerns like side effects, resistance, high cost of treatments, and safety support research concepts like this one. The authors are commended for designing a study that could expand the list of benign and beneficial natural resources of therapeutic value. I intend to approach this review by raising suggestions for the improvement of the different aspects of the report as follows:

General comments

I suggest that author be more circumspect in their presentations to reduce ambiguity or misunderstanding. Language clarity and explicitly need to be considered. The study is not new to science and did not project any gaps for future research.

Abstract

The background could be more explicit if broken as "……due to several reasons, including performance effectiveness, host-specificity, ……".

The aim of the study is unclear. Did the authors mean "This study investigated the ……to extracts from Acacia arabica, …….. and Bryonia laciniosa.

Please delete the last sentence in the background because it is of no relevance in this context.

The methodology is poorly presented and fails to express/outline what the author did through the extractions to the sensitivity assays. The authors need to revise this section of the abstract.

The result section has nothing significant for me to comment on as it lacks comparative sensitivity metrics or percentage compositions of phytochemicals.

Introduction

The introduction would have been more interesting if properly edited and the language of expression was more appropriate e.g Medicinal plants have been widely used by humans for millennia as sources of therapeutic drugs or medicine. Their widespread use as herbal remedies in traditional healthcare is described in the Vedas and Bible. The editors should use some language editors. The botanical representations of the medicinal plants mentioned are incomplete without their respective authority (Acacia arabica (Lam.) Willd.).

Computational tools do not discover naturally derived drugs but affirm their binding affinity to receptors, and efficiency. It is a critical tool in the drug discovery process and not what discovers the drug.

The botanical table presented in the introduction and the pictures of the plants are not required and I advise that they should be deleted.

The phytochemical constituents (1.4) and antimicrobial properties (1.5) should be merged.

Material and methods

The parts or parts of the health plants collected are to be mentioned in 2.1.

How did you know when and if they were dehydrated?

Method did not state if crude was used, was the filtrate not concentrated? How do we describe the process of extraction? Is it effusion, decoction, or fractionation.

What model or kind of mixer or homogenizer was used for the pulverization?

Where isolate bacteria from type cultures or a culture bank? Aren't the cultures supposed to have code numbers or voucher numbers?

What results were noted after culture preparation?

Why the plate diffusion method?

With what were the wells in the plates made?

The nature of the control(s) is unclear. What is it exactly that was used as control?

The dosage or concentration disparity between the treatments and the control might impact the result.

The methodology did not state how the isolates were characterized or verified or identified or validated, yet the results reflected colony characterization.

Results

Knowing what constitutes the control can give better insight into why NZ was observed for aqueous. Also, we need to factor in the disparity in control and treatment concentrations.

Please present the results from treatments either graphically or in tables but not both.

Authors to inject more recent references 2020-2023