Review of: "In-Vitro Antibacterial Activity of some Ganoderma Species: A Review"

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Potential competing interests: No potential competing interests to declare.

Dear Authors,

I received an article for review titled "In-Vitro Antibacterial Activity of Some Ganoderma Species: A Review." The article is a review and provides an overview of the available knowledge on the antibacterial activity of selected species of the Ganoderma fungus in the in-vitro model. Recently, there was another paper describing the assessment of the potential antibacterial effect, but the first one concerning a fungus. This certainly makes the topic of the paper seem interesting and requires detailed study at a good level. The paper requires some editorial changes, changes in structure, and expansion of certain issues. Unfortunately, the article is written in a chaotic manner, which makes it difficult to read and analyze.

I believe that the following tips will increase the scientific quality of the work.

Below are some more detailed tips and comments:

There is a sentence in the abstract:

"Ganoderma has long been used for the management of incessant infectious conditions such as diabetic foot ulcers, pneumonia, and chronic hepatitis."

The article itself begins with the entry "diabetic foot ulcers" - it is very disconnected from the other points. Moreover, an indication of why this particular issue is important and not the others given in the abstract was omitted.

Correct form: Enterobacter

The following properties have been proven: anti-diabetic [12], hypoglycaemic, anti-cancer [13], anti-inflammatory, anti-tumor [14], anti-oxidant [15], immunomodulators, anti-viral, anti-bacterial [16], anticonvulsant, anti-fungal, antihypertensive, anti-atherosclerotic, anti-aging, anti-androgenic, anti-hepatotoxic, radical scavenging property, neuroprotection, sleep promotion, cholesterol synthesis inhibition, inhibition of lipid peroxidation/oxidative DNA damage, hepatoprotective properties, maintenance of gut health, prevention of obesity, and stimulation of probiotics [17].

Until now, more than 300 triterpenes and 200 polysaccharides characterized by diverse chemical structures and biological activities have been isolated. It includes several species of mushrooms, each with its own characteristics and properties. Some of the most well-known Ganoderma species include:

These sentences are not logical - the first sentence is related to the triterpenes, and the second is related to the mushrooms. Please correct it.

The genus Ganoderma has antimicrobial components that stop the growth of fungi, viruses, and both gram-positive and gram-negative bacteria. Please add the references.

Antimicrobial part - please divide it into sections, e.g., mode of action, etc., or write it in a different way. The information in this part is really chaotic and difficult to read - there is some kind of mixture of general and very detailed information.

There was minimal antibacterial activity (MIC50 > 10 mg/mL) - it is not the right definition for MIC

Gram-positive and gram-negative plant pathogenic bacteria were suppressed by G. lucidum culture fluids - references?
The part is about Gram+...
Rathayibacter tritici, which is a plant pathogen of wheat, was inhibited by extracts of G. lucidum [39] - the work is focused on humans, so why the reference to plant pathogens (tomato canker elsewhere)?
The conclusions again refer to the diabetic foot, but the work does not show any real research on the effectiveness of the mushrooms in the treatment of this problem. Therefore, the conclusions drawn by the authors are too far-reaching.
Generally, the work is inconsistent, and the title does not match the content. The whole thing requires thorough re-editing.