

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

Saskia Kuipers

Potential competing interests: No potential competing interests to declare.

In-Vitro Antibacterial Activity of some Ganoderma Species: A Review. A Arora et al.

Reaction to Qeios

In general: The author chose diabetic foot infections (DFUs) as an example of treatment with *Ganoderma species*. However, in the article, conclusions as to how to treat DFUs are needed to finish the article.

Abstract:

While there is little information on *Ganoderma's* antiviral and antibacterial properties in humans, preliminary (*in vitro* and *in vivo*) research shows that the **plant** possesses a wide range of these properties. Ganoderma is not a plant but a fungus; please change.

"Diabetic Foot Ulcer in India: Aetiological Trends and Bacterial Diversity, Kale et al 2023" provides an overview of cultured bacteria.

Page 2: Wound healing in **itself** can be a time-consuming process, and the time it takes for complete healing can vary significantly from person to person.

Entrobacter = **Enterobacter**.

Page 4: Ganodermin is a protein with antifungal activity isolated from *G. lucidum*. It inhibits the growth of *Botrytis cinerea*, *Fusarium oxysporum*, and *Physalosporapiricola*. Please place together with the other antimycotic activity (the paragraph below).

Page 4: Ethanolic extracts obtained from *G. applanatum*, *G. carnosum* and *G. lucidum* **mycelium** also demonstrated antifungal activity. They were effective against *Acremonium strictum*, *Aspergillus glaucus*, *Aspergillus flavus*, *Aspergillus fumigatus*, *Aspergillus nidulans*, *A. niger*, *Aspergillus terreus* and *Trichoderma viride*. Please provide references.

Page 4: Antimicrobial activity: *Ganoderma* extracts contain substances with antibacterial properties, which are caused by phytochemicals synthesised in the **plant's** ... Ganoderma is a fungus, a basidiomycete.

Page 5: Please refer to the Table when speaking about numerous extracts. Also, is it possible to provide MICs?

Page 5: What makes Ag production a 'green' process?

Page 5: About CuONP – is wound infection meant by infectious illnesses?

Page 5: please use italics for bacteria.

Page 6:

Table 1.

Brenneria leads to drippy oak disease, not to human wound infections. Do you want to include this in the table?

Lepidium, or watercress, is hardly relevant to human wound infections. Do you want to include this in the table?

What is known about the toxicity of the nanoparticles for humans when used on skin, on wounds, or upon ingestion?

How is Ganoderma normally ingested or used on wounds, considering its ancient use?

Page 10: The strongest antibacterial activities against the studied pathogens were demonstrated by the "green synthesis" of silver nanoparticles (AgNPs) from *Ganoderma applanatum*. What was the difference with the silver nanoparticle controls? This is for a medical doctor who wants to treat wounds; it is quite important to know.

Page 10: *K. pneumoniae*.

Page 12: In DFUs, the most problematic bacteria are often *Staphylococcus aureus*, the alpha-hemolytic streptococci *Streptococcus pyogenes* or group A, and group C and G streptococcus. How would you advise to treat the DFUs? Or, which research is necessary in order to advise a medical doctor what to prescribe?