



## Bactericidal effect of the aqueous extract of the leaves of *Lantana camara* L. (Verbenaceae), a plant used in Benin in the treatment of skin infections.

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### ABSTRACT

Objective: *Lantana camara* is a tropical plant whose leaves are used in Benin in traditional medicine to treat skin infections. This work aimed to test *in vitro* the effectiveness of the aqueous extract of *Lantana camara* leaves in the treatment of these infections.

Method and results: The aqueous extract of *Lantana camara* leaves were incubated for 24 hours at a dose of 50 mg/ml with strains of *Staphylococcus aureus* and *Pseudomonas aeruginosa*, two bacteria often isolated from skin infections. After incubation, the bacteria were cultured. The extract was bactericidal for all strains of *Staphylococcus aureus* and not for those of *Pseudomonas aeruginosa*. These strains were tested resistant to Amoxicillin + Clavulanic Acid. Then, the extract was administered for 28 days to Wistar rats at a dose of 300 mg/Kg/day. The blood leukocyte count of the rats was not significantly changed by the extract administered.

Conclusion and application of results: The aqueous extract from the leaves of *Lantana camara* was bactericidal against strains of *Staphylococcus aureus*. This result offered good prospects for the treatment of infections caused by Gram-positive cocci, a category to which *Staphylococcus aureus* belongs. The bactericidal effect was not noted on strains of *Pseudomonas aeruginosa*, which was part of the gram-negative bacilli. The extract administered *in vivo* to Wistar rats did not alter the leukocyte profile, suggesting its efficacy *in vivo* was due directly to its bactericidal

property and not to stimulation of the immune system. It could therefore be used not only in the treatment of internal infections, but also in that of skin infections by application to these lesions caused by these bacteria. Since the strains of *Staphylococcus aureus* used were resistant to Amoxicillin + Clavulanic Acid, the extract could be turned into an improved traditional medicine to offer an alternative to the problem of antibiotic resistance.

Keywords : *Lantana camara*, *Staphylococcus aureus*, *Pseudomonas aeruginosa*.