

TITLE: ANTIBACTERIAL ACTIVITY OF THE EXTRACT OF *Azadirachta indica*, FRONT OF THE BACTERIA OF CLINICAL ORIGIN *Staphylococcus aureus*.

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ABSTRACT

The neem or bitter tree (*Azadirachta indica*) of the Meliaceae family is widely used in the afforestation of Brazilian cities. This plant was introduced in Brazil in 1993, and has several applications, being used as antiseptic, acaricide and vermifuge. In the present work we sought to verify if it has antibacterial properties. In this sense, leaves of this plant were collected in Araguaína-TO city and were taken to the pharmacognosy laboratory where they were washed, excess water removed, and then dried in an oven at 40 ° C for 24 hours. After drying, they were removed from the greenhouse and crushed in the blender. The crushed was left in the 70% alcohol-coated percolator to numb the leaves for 10 days. Afterwards the percolation was carried out, finishing the extract. In the microbiology laboratory plates were prepared with Mueller-Hilton Agar for the disk diffusion test. Three clinical strains of *Staphylococcus aureus* were used. The discs of antibiotics used were amoxicillin, azithromycin and vancomycin, the technique used was disc diffusion. The results showed that for clinical strains there is resistance to antibiotics: amoxicillin and vancomycin. Azithromycin has been shown to significantly inhibit the microorganism tested. The extract of *Azadirachta indica* did not present satisfactory inhibitory activity for the strain of *Staphylococcus aureus* tested. After analyzing the results, it was observed that the extract of *Azadirachta indica* and the antibiotic disks of vancomycin and amoxicillin did not present significant inhibition antimicrobial activity in the tests performed with the clinical strains.

Keywords: Antibiotics; *Azadirachta indica*; *Staphylococcus aureus*.

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