

TITLE: MICROBIAL ACTIVITY OF *UNCARIA TOMENTOSA*'s ("UNHA DE GATO") EXTRACT AGAINST PATHOGENS RESPONSABLE TO INFECTIONS.

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ABSTRACT:

The *Uncaria tomentosa* is a climbing plant belonging to Family Rubiaceae knowing as "Unha de gato" because of their little curved thorns in its leaf armpit, it is finding in tropical forest and it's between the plants with the significant therapeutic and economical potential. Pharmacological studies realized with the extract of the *U. tomentosa* confirms its biological potential by having antioxidant activity, antiviral, anti-diabetes, antimicrobial, anti-inflammatory, immunomodulatory and reacts to the Parkinson's. That properties enable to the Sistema Único de Saúde Pública Brasileiro (SUS), includes the plant in its list of the herbal medicines to the anti-inflammatory treatment. In this sense, the objective of this work became the investigation of the antimicrobial activity in the ethanolic extract from *U. tomentosa* in fungi and bacteria. The extract of "unha de gato" was taken by crushing the botanic material and extracting by the hot method (Soxhlet). The pure extract was made soluble in Dimetilsulfóxido (DMSO). Its antimicrobial activity was realized against the gram-positive bacteria *Enterococcus faecalis* (ATCC®29212), *Staphylococcus aureus* (ATCC®25923), gram-negative *Escherichia coli* (ATCC®11229) and the yeast *Candida albicans* through the disk diffusion method realized three times on BDA (Batata dextrose Ágar) growing medium. Each one of the microorganisms after the inoculation period of 24 hours was transferred to the salt solution (NaCl 0,9%; p/v) until it muddies up to 0,5 in the McFarland scale. The paper discs were wet with 10 µL of the extract of *U. tomentosa*, for positive control was used 50 µg/mL of ampicillin and Dimetilsulfóxido as negative control, kept on freeze at 4°C for 8 hours, after, it were transferred to BOD greenhouse at 37°C, for 24 hours, after incubation was evaluated the inhibition halos results from the action of the extract with the help of a digital caliper that gave the results of the diameter (in millimeters). The extract of *U. tomentosa* ("Unha de gato") demonstrates active against all the tested bacteria and fungi showing inhibition halos between 5 and 42 millimeters of diameter. Its better effect was against strains of fungi *Candida albicans*, with inhibition halo from 25 to 42 millimeters, similar to the halo of the ampicillin control, in *Escherichia coli* showed less affective with halo of 5 and 7 millimeters in two of three repetitions. That results are relevant once the fungi and bacteria gram-positive are more sensible to antibiotics than the pathogenic gram-negative bacteria responsible to infections. In view of the knowledge of the properties of the plant against the resistant pathogens, more and more studies must be done to diversify its pharmaceutical use.

Keywords: "Unha de gato", antimicrobial, fungi.

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