

**TITLE:** EVALUATION OF ANTIBACTERIAL AND CITOTOXIC ACTIVITY OF OLEORRESIN OF *Copaifera lucens* IN PERIODONTITIS CAUSING BACTERIA

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**ABSTRACT:** The oleoresin of the copaíba tree (*Copaifera* sp) is traditionally used in Brazilian popular medicine to treat a variety of diseases and symptoms, and its antibacterial potential is under investigation. However, it is important to evaluate the cytotoxicity of natural products during the development of chemicals, pharmaceuticals, food, cosmetics and others. This study aimed to evaluate the antibacterial and cytotoxic activity of *C. lucens* oleoresin against bacteria that cause periodontitis. The bacteria used in this study were *Porphyromonas gingivalis* (ATCC 33277), *Prevotella intermedia* (ATCC 15033), *Prevotella nigrescens* (ATCC 33563), *Actinomyces naeslundii* (ATCC 19039) and *Fusobacterium nucleatum* (ATCC 25586), and for the cytotoxicity assay was used fibroblasts of Chinese Hamster V79. For the antibacterial assay, the Minimum Inhibitory Concentration (MIC) and Minimum Bactericidal Concentration (CBM) methods were used. The cytotoxicity evaluation was based on the clonogenic efficiency assay (CEA). The best results of antibacterial activity ranged from 6.12 to 50 µg / mL for all bacteria except *F. nucleatum* with MIC greater than 400 µg / mL. A bactericidal effect was observed in *P. gingivalis* and *P. nigrescens* strains, for the other bacteria the results were bacteriostatic. The CEA showed that oleoresin was cytotoxic at concentrations greater than 78.1 µg / mL. Considering the present results, the *C. lucens* oleoresin exhibited antibacterial potential against bacteria responsible for periodontitis and, in addition, showed absence of cytotoxicity in V79 the cell line.

**Keywords:** *Copaifera* spp., Antibacterial activity, periodontal disease, cytotoxicity.

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