STUDY OF THE *IN VITRO* EFFECT OF COPAIBA UPON VIRULENCE FACTORS OF THE CARIOGENIC BACTERIUM *STREPTOCOCCUS MUTANS*

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Acid production and adherence of bacteria on dental surfaces are key aspects of dental caries pathogenesis. We have evaluated the effect of hidroetanolic extract of Copaiba leaves (EE), oil resin of Copaiba (OR) and its volatile fraction (VF) upon virulence factors of *Streptococcus mutans*. Bacterial acid production was evaluated through the potentiometric measurement of pH from cell suspensions treated with serial concentrations of products. Minimum inhibitory concentration (MIC) and minimum bactericidal concentration (MBC) were determined. The effect of Copaiba products on glucan synthesis from sucrose was evaluated by enzymatic assay using partially purified glucosyltransferases of streptococci. All Copaiba products significantly inhibited *S. mutans* acidogenic potential, with IC_{50} values established at 0.36 mg/mL (EE) and 0.06 mg/mL (FV). They also presented bacteriostatic effect with MIC values of 1.0 mg/mL (EE), 0.2 mg/mL (FV) and 0.4 mg/mL (OR), but only OR displayed bactericidal effect (MBC = 0.8 mg/mL). In addition, OR suppressed glucan synthesis by 60%, at a concentration of 20 µg/mL. EE and FV did not affect significantly the activity of glucosiltransferases. Copaiba products appear to be useful for the control of biofilm development and acid production by mutans streptococci.

Key words: *Streptococcus mutans*, Copaiba, glucosyltransferases, acid production, glucan