# IN VITRO EFFECT OF *AUSTROPLENCKIA POPULNEA* EXTRACTS UPON VIRULENCE FACTORS OF THE CARIOGENIC BACTERIUM *STREPTOCOCCUS MUTANS*

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*Austroplenckia populnea* is a Brazilian plant that is used in folk medicine to treat dysenteries and rheumatism, and have exhibited antitumor and antibacterial activities. Herein, we investigated the effect of *A. populnea* bark hydroalcoholic extract (HEE), and its hexane (HF), chloroform (CF) and ethyl acetate (EAF) fractions on growth, acid production, and glucan synthesis of *Streptococcus mutans*. The effect of extracts on bacterial acidogenic potential involved standard pH-drop experiments with cell suspensions. Growth of *S.mutans* was examined in BHI broth supplemented with various concentrations of extracts. Glucan synthesis was evaluated by enzymatic assay using partially purified glucosyltransferases of streptococci. HF and CF significantly inhibited bacterial acid production. $IC_{50}$ values were estimated at 0.1 and 0.3 mg/mL, respectively. Conversely, EAF stimulated acidogenic potential at concentrations as low as 0.1 mg/mL, which was also observed for low concentrations of HEE. None of the extracts inhibited bacterial growth in the range of 0.01 – 1.0 mg/mL. HF did not interfere in water-insoluble glucan synthesis, while other extracts were stimulatory. Results suggest that HF of *A. populnea* might selectively inhibit the bacterial glycolytic pathway.
**Key words**: acid production, *Austroplenckia populnea*, *Streptococcus mutans*, glucan.