THE EFFECT OF ESSENTIAL OIL, EXTRACT AND ISOLATED COMPOUNDS OBTAINED FROM *Baccharis dracunculifolia* ON *Streptococcus mutans* GLUCOSE METABOLISM

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Dental caries results from irreversible destruction of mineralized structures of teeth by acid produced from microbial fermentation of dietary carbohydrates. *Streptococcus mutans* has been implicated as the principal etiological agent of such disease. Extracts from leaves of *B. dracunculifolia* proved to inhibit acid production by *S. mutans*. Our objective was to extend current knowledge of the physiologic bases for this inhibition and to clarify the plant active constituents responsible for such effect. Standard enzymatic assays were used to assess the effect of studied natural products on bacterial glycolytic pathway. Leaves hydroethanolic extract, EE (500 μg/mL) and essential oil, EO (50 μg/mL) reduced in 90% and 76%, respectively, acid production by 4mg of dry cells. EE stimulated ATPase and PEP-PTS activities by 90% and 80% at concentrations of 250 μg/mL and 50 μg/mL, respectively. This effect was attributed to caffeic and ferulic acids. EO also stimulated PEP-PTS activity by 135% at 25 μg/mL, but reduced in 34% ATPase activity at the same concentration, which partially justifies reduction in acid production. The effect of EO and EE on other glycolytic enzymes shall be assessed to clarify their mechanism of action. FAPESP, CNPq. **Key words**: *Streptococcus mutans*, glycolysis, *Baccharis dracunculifolia*.