Antimicrobial action of propolis of *Apis mellifera* L. and *Solanum mammosum* L. (cow’s tit) against microorganisms of the oral cavity (*Streptococcus mutans* and *Streptococcus mitis*)

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**ABSTRACT**

We know that the propolis is a resinous substance used for bees to protect hive, it has antimicrobial, antifungal, antiviral, antiprotozoal, immunostimulatory and anti-inflammatory properties. Further, we have references about effects that *Solanum mammosum* L. (teta de vaca) has against some microorganisms, a Solanaceae plant close relative of tomato. Thus, in this work we searched test antimicrobial properties of propolis and the teta de vaca (cow’s tit) against microorganisms from oral cavity, specially *Streptococcus mitis* and *Streptococcus mutans*. The first bacterium is an important component of the flora of our oral cavity and the second is a principal causal agent of dental caries too. It was cultivated mitis-salivarius agar for isolation and propagation of *S. mitis* y *S. mutans*, and then they were transplanted to Mueller-Hinton medium where it was applied immediately *Apis mellifera* propolis in tincture to 5% and 10 %, and alcoholic solution of *Solanum mammosum* to 10 %, besides the amoxicillin was used as control. After 24 hours, the sensibility or growing of the bacteria is evaluated, measuring and comparing the diameters of the inhibition halos of bacteria growing.

*Apis mellifera* propolis to 10% has an antimicrobial effect against to *S. mitis* (15mm of diameter) and better effect to *S. mutans* (24mm of diameter). The propolis to 5% showed too good antimicrobial effect (13mm against *S. mitis* and 20mm against *S. mutans*) compared to the known effect of the amoxicillin (18 mm against *S. mitis* and 21 mm against *S. mutans*); and the teta de vaca solution (cow’s tit solution) demonstrated a regular inhibitory effect for *S. mitis* (13mm of diameter) and lightly smaller effect for *S. mutans* (7mm of diameter). Finally, after the good antimicrobial results, we elaborated toothpaste based in *Apis mellifera* propolis with a concentration to 10% and with good organoleptic features, the same which could inhibit the formation of dental plaque, therefore to decrease the presentation of dental caries.