

Título: *IN VITRO* ANTIBACTERIAL ACTIVITIES OF *Cucurbita moschata*

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Resumo:

The foodborne diseases are considered today the major problem for global public health and *Staphylococci* are among the main cause of food poisoning outbreaks. The use of antimicrobial agents may help creating an additional barrier by interference of consumption of contaminated food by this bacterium. Pumpkin fruits show a myriad of medicinal properties, among antimicrobial activities. To obtain crude extract (ExtB), pumpkin pulp was macerated, lyophilized, and submitted to methanol extraction. The ExtB fractionation resulted in four chromatographic fractions (FA, G2, G2G1 and G2G1-B). The antibacterial activity was determined by the colony forming unit assay inhibition method in liquid media on the following microorganisms: *S. aureus* ATCC 25923, *S. aureus* ATCC 33591 (MRSA), *S. epidermidis* ATCC 12228, *S. aureus* human clinical strain LSAh1, and *S. aureus* strain LSA88. The positive and negative controls were gentamicin and DMSO, respectively. The antimicrobial activity was determined by the number Colony Forming Units (UFC) growth. All assays were performed in triplicates and the data that were expressed as standard deviation. For all bacteria tested the inhibition growth was accomplished by ExtB and by FA, G2, and G2G1-B fractions, and two of them inhibiting completely two strains, compared to the positive control (100% inhibition). *S. aureus* ATCC 25923 is already known as a standard strain and it was inhibited by all fractions used, except the ExtB. Surprisingly, *S. aureus* ATCC 33591, was inhibited by ExtB and FA and G2G1 fractions, and growth of *S. epidermidis* ATCC 12228 was not affected by FA e G2G1-B fractions, but was inhibited by ExtB, and this may reflect a probable synergistic activity of products present in the ExtB on this specific coagulase-negative strain. Meanwhile, LSAh1 strain was inhibited by FA and G2 fractions. The animal strain LSA 88, which is also an antibiotic-multiresistant was inhibited only by FA fraction. Seeds of pumpkin are related to antimicrobial activity, but no data related to the pulp activity on the growth inhibition or antimicrobial profile interference of *Staphylococcus* was found. However, other cucurbitaceae presented antimicrobial activity against *S. aureus*. All three fractions, named FA, G2, and G2G1 presented a consistent growth inhibition activity on the bacteria tested, and among the other characteristics of this cucurbitaceae, the data suggest the inclusion the material studied into the category of antimicrobial food.

Palavras-chaves: inhibition growth, pumpkin, *Staphylococcus* spp

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