ANTIMICROBIAL PEPTIDES IN *AVICULARIA JURUENSIS* VENOM

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Introduction: Antimicrobial peptides (AMPs) are the key elements of the innate immunity against bacteria and fungi in both the animal and plant kingdoms. Due to the development of antibiotic resistance in microorganisms, antimicrobial peptides from natural sources have attracted attention in recent times, in order to find new therapeutic agents. Natural animal venoms are good sources of potential antimicrobial substances, and their venoms contain a large number of diverse biologically active components of various chemical structures, like proteins, polypeptides and amines. **Objective:** The objective of this study was to identify new antimicrobial peptides from *Avicularia juruensis* venom. **Methods:** The venom was obtained from glands of three animals, which were macerated with water, centrifuged and the soluble part was dried by vacuum centrifugation and reconstituted with 1mL of acidified water (TFA - trifluoracetic acid 0.05%). The soluble part was applied to HPLC reversed-phase chromatography on a semi preparative Jupiter C18 column. Elution was performed with a different linear gradients of ACN/TFA 0.05% over 60 min at a flow rate of 1.5mL. The presence of antibacterial activity was determinate by a liquid growth inhibition assay against Gram-negative bacteria *Escherichia coli SBS363*, Gram-positive bacteria *Micrococcus luteus A270* and yeast *Candida albicans*. **Results:** According our results, four fractions inhibited the growth of *C. albicans*, one presented partial activity against *M. luteus* and four inhibited the growth of *E. coli.* Those fractions will be re-purified in analytical column and submitted to a new assay of activities. The molecular masses of the fractions obtained from reverse-phase chromatography will be determinate by MALDI-TOF spectrometry analysis.

Financial Support: FAPESP- CNPq-FUNDAPSP