

Antimicrobial Peptides in the Venom of Spider of the Genus *Phoneutria* from Western Amazonian

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Introduction: Infectious diseases are among the main causes of death in human beings. The main reason is the resistance of microorganisms to different antibiotics. Owing to this, the search for antimicrobial molecules in Brazilian fauna and flora could be important. In arachnid toxins, mainly from spiders and scorpions, some antimicrobial peptides have been identified. Objective: The objective of this study was to identify antimicrobial peptides in the venom of spiders of the genus *Phoneutria* from Western Amazonian rainforest. In this region, three species of the genus can be found: *P. fera*, *P. reidy* and *P. boliviensis*. Contrary to the non-Amazonian species *P. nigriventer*, the *Phoneutria* spp. from the Amazon have the venom poorly studied. Methods: The venom was milked by electric stimulation and lyophilized. The venom was reconstituted in trifluoroacetic acid (TFA) 0.05% and the soluble part was applied to HPLC reversed-phase chromatography on a semi preparative Jupiter C18 column. Elution was performed with a linear gradient of ACN/TFA 0.05% over 60 min at a flow rate of 1.5mL. The column effluent was monitored by absorbance at 225 nm. 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* MND8 (Silva Jr. *et al.*, JBC 2000). Results: Several factors inhibited the growth of the bacteria *M. luteus* and *E. coli* and the yeast *C. albicans*. The purification and characterization of these antimicrobial factors are in progress. Keywords: *Phoneutria* venom, Antimicrobial peptides, Western Amazonian Rainforest.

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