

Hypotensive bradykinin-like and phyllokinin peptides from *Phyllomedusa tarsius*

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Objectives: Due to the interest of many research groups and pharmaceutical companies in peptides from amphibian skin secretion and the development of high resolution techniques for biotechnological applications as *De Novo* sequencing mass spectrometry, many molecules firstly untold because of their minute natural occurrence are now being successfully studied. In this regard, the present work deals with the isolation and the characterization of hypotensive bradykinin-like and phyllokinin peptides found for the first time in *Phyllomedusa tarsius*, a native frog from Amazonian rain forest. **Methodology:** The skin secretion was obtained from frog adult specimens by mild electric stimulation (4-6V), filtered and lyophilized. Aliquots of 2mg of the crude secretion were fractionated and the fractions of interest were isolated and purified by RP-HPLC using silica C₁₈ and divinyl benzene columns. Resulting fractions were submitted to *De Novo* sequencing using *ABI 4700 Proteomics Analyzer* (Applied Biosystems) and *Q-TOF Ultima* (Micromass) mass spectrometers. **Results:** Five peptides displaying mass range from 900 to 1350Da were sequenced and identified with the *Swiss-Prot* databank (FASTA 3) as being similar to the well-known hypotensive bradykinin and phyllokinin peptides. **Conclusions:** This class of bioactive peptides is usually found in venomous animals such as vipers, insects and arachnids and gradually has been detected in alternative sources as amphibians. In this purpose, the five already studied peptides and some other fractions from *P. tarsius* venom are being characterized as putative hypotensive peptides and currently in process of concentration for further biological investigations.

Support: CNPq, Embrapa-Cenargen.