PRODUCTION OF RECOMBINANT DISINTEGRIN FROM *B. Leucurus*

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Disintegrins is a family of small proteins mainly derived from snake venoms. Most of the disintegrins contain the RGD (Arg, Gly, Asp) dominium, however there are a subgroup called non-RGD disintegrins in which this sequence is replaced by ECD (Glu, Cys, Asp). Disintegrins are recognized by several integrins expressed on vascular endothelial cells and some tumor cells. Studies on disintegrins have revealed their new applications to inhibit angiogenesis and tumor growth. In addition disintegrins present potent anti-platelet activity. This work has as objective the production of recombinant disintegrin from *Bothrops leucurus* using the expression system *Pichia pastoris* yeast. Total RNA was extracted from *B. leucurus* venom gland and used in RT-PCR to generate a cDNA which is 310 bp long. This nucleotide sequence was subcloned into pPIC9 vector and the recombinant protein was expressed in *Pichia pastoris*. The sequence encoded a polypeptide composed of 94 amino acids, including two ECD motifs. Analysis with computation program showed that the peptide has a molecular mass around 9.8 kDa and 4.33 as a theoretical pI. Our preliminary results show that the protein was expressed in an active form (anti-platelet activity) with a molecular weight around of 11 kDa as determined by polyacrylamide gel electrophoresis. Financial Support: Fapesp, CAPES and FAEP.