

PROTEOMIC ANALYSIS OF *B. JARARACUSSU* VENOM.

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Twenty-thousand accidents with venomous snakes are reported each year in Brazil; 90% of them are due to species from lance-headed pit vipers (genus *Bothrops*). Among this snakes from Latin America, the *B. jararacussu* bite is a major problem due to the low efficiency of the antivenom serum in neutralizing this venom. Therefore, the identification of toxic proteins from *B. jararacussu* venom can help a better comprehension of the envenomation caused by this snake. Techniques as protein separation by 2D-PAGE showed that proteins from this venom present a broad isoelectric point distribution. Analysis of trypsinized spots by MS/MS confirmed that proteins identified belong to the serine and metallo- proteases family. It could be established that the *B. jararacussu* venom is rich in thrombin-like enzymes. A protein (60kDa/ 2.2pI) was purified by isoelectric focusing. The analysis of tryptic peptides gave a match with BOTIN, a serine protease identified from *B. insularis* transcriptome. This protein showed to have amidolytic activity upon BapNA and structural analysis by Circular Dichroism demonstrated that it is rich in beta-sheet structural content (56%) as it has been reported for other thrombin-like structures. This protein was characterized and purified, for the first time, in this work.

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Key Word: *B. jararacussu* serine protease enzyme, thrombin-like enzymes.