PRELIMINARY BIOCHEMICAL AND PHARMACOLOGICAL STUDIES OF NEWS PLA_2S FROM THE *CROTALUS DURISSUS RURUIMA* AND *CROTALUS DURISSUS CUMANENSIS* VENOMS.

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Crotoxin is the toxin responsible for the mains pharmacological and toxic effects induced by venom of South American rattlesnake venom. The main focus in this work was the isolation and structural characterization of two new PLA_2 isoforms, one from the *Crotalus durissus ruruima* that was named as R5 and other from *Crotalus durissus cumanensis* that was designated as C7. Both proteins showed a high enzymatic activity but showed hydrophobic differences between R5 or C7. Both PLA_2 isoforms R5 and C7 showed a molecular mass of 14.58 kDa and 13.89 kDa, respectively and both proteins showed, basic character and under circular dichroism analysis showed high content of a helix, and significative differences in the ß sheets and random coil. The partial N-terminal sequencing of both proteins reveals some structural differences that corroborate to the initial results for the reverse phase HPLC. In addition C7 shows a higher pharmacological and enzymatic activity than R5. Both PLA2 isoforms showed some similar structural aspects but we observed some slight different that probably were associated with the enzymatic and neurotoxic differences activities observed between this both PLA_2s, and crotoxins isolated from the C.d. c. and C.d.r venoms.