

## STRUCTURAL AND PHARMACOLOGICAL MODIFICATION OF BHTX-I INDUCED BY TWO NEW SYNTHETIC COUMARIN.

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In this article we evaluated the effects induced by two novel synthetic coumarins on the structure and pharmacological action of BthTx-I. Coumarin is a chemical compound found in plants. By other side, BthTx-I is the main PLA<sub>2</sub> isoforms found in the *B.jararacussu* venom, it is a catalytically inactive K49 myotoxic PLA<sub>2</sub> isoform, responsible for several pharmacological effects. In this article we chemically treated the isolated PLA<sub>2</sub> isoform with coumarins that it was purified by analytical reverse phase HPLC. We demonstrate that both coumarins induced several modifications on the secondary structure of PLA<sub>2</sub> that they were measured by Circular Dichroism. In addition we observe significant changes in the amino acid proportion between treated and non treated proteins. The chemically modification induced by both coumarins decrease significantly the edematogenic and myotoxic effects by decreasing the creatine kinase levels induced by native BthTx-I. We showed that BthTx-I was able to induce the platelet aggregation activity independently the generation of pharmacologically active lipids such as arachidonic acid and this effect was decreased in presence of coumarin modified PLA<sub>2</sub>.