

The Antivenom Potential of novel flavonoid (BUD-7) from *Baccharis uncinella* DC, against secretory Phospholipase A2 (sPLA2) from *Crotalus durissus terrificus* venom.

Oliveira S.C.B.<sup>1,4</sup>, Diz Filho E.B.S.<sup>1,4</sup>, Toyama D.O.<sup>2</sup>, Romoff, P.<sup>2</sup>, Favero, O.A.<sup>2</sup>, Lago, J.H.G.<sup>3</sup> and Toyama M.H.<sup>4</sup>

<sup>1</sup>Departamento de Bioquímica, Instituto de Biologia, Universidade Estadual de Campinas - UNICAMP, Campinas, Brazil; <sup>2</sup>Centro de Ciências Biológicas e da Saúde - Universidade Mackenzie, São Paulo, Brazil; <sup>3</sup>Universidade Federal de São Paulo, Diadema, Brazil, <sup>4</sup>Campus Experimental do Litoral Paulista, UNESP, São Vicente, Brazil.

Anti-inflammatory effect of flavonoids has been evaluated since these compounds were widely found in food, medicinal herbs and other plants. *Baccharis* genus occurs in some parts of Brazil, and several metabolites have been obtained such as flavonoids. Thus, in the present study, the crude extract from leaves of *B. uncinella* was subjected to several chromatographic steps to afford one fraction composed by 5,7-dihydroxi-6,4'-dimethoxyflavone. The structure of this compound was elucidated by analysis of NMR and MS spectra. After chemical characterization, this flavonoidical fraction was tested against the effects provoked by phospholipase A2 from *Crotalus durissus terrificus* (PLA2-F17). Thus, this compound was incubated with PLA2-F17 for 1 h at 37° C and the product was submitted to some enzymatic and biological assay. HPLC C-18 chromatographic analysis shows a clearly change in the protein retention time, indicating an interaction of PLA2-F17 with the obtained flavonoid. The enzymatic activity was reduced in 45% in comparison to native sPLA2. Additionally, 5,7-dihydroxi-6,4'-dimethoxyflavone showed also a decrease in the edema and miotoxic effect induced by sPLA2.

Key word: *Crotalus durissus terrificus*, Phospholipase, *Baccharis Uncinella*, BUD-7, Oleanolic acid

Supported by: Fapesp, Capes, CNPq.