INTRODUCTION AND AIM OF THE WORK

Till near times, snake venoms were thought to be solitary toxins with single action such as neurotoxicity, cardiotoxicity, hematoxicity. Never the less, recent investigations revealed that, snake venoms are complex mixtures of multiple biologically active substances. Thus great efforts were directed to obtain these substances in a pure form aiming to highlight the potential benifits and possible applications of such substances (Chen and Robinson, 1990; Yoshikawa *et al.*, 1991).

Actually, a big number (more than 300) components with different biological activites have been isolated from various snake venoms, they have been found to be very helpful in understanding the mechanism of snake venoms toxicity and many of them became a useful tool in many fields such as Aids researches (Neri *et al.*, 1990), hemostaseology diagnosis (Meier and Stocher, 1991), receptors identification and many other applications (Hong and Chang, 1991).

This work was designed to isolate one of the biologically active substances from the venom Sistrurus miliarus barbouri.

Phospholipase A2 is one of the venom enzymes extensively studied for its chemical properties as well as for its biological effects, which include:

- Effect of pH.
- Effect of temperature.
- Effect of substrate concentration.

- Determination of Michealis constant.

- Determination of its molecular weight.

- Effect of some metals and inhibitors.

- Determination of its toxicity.

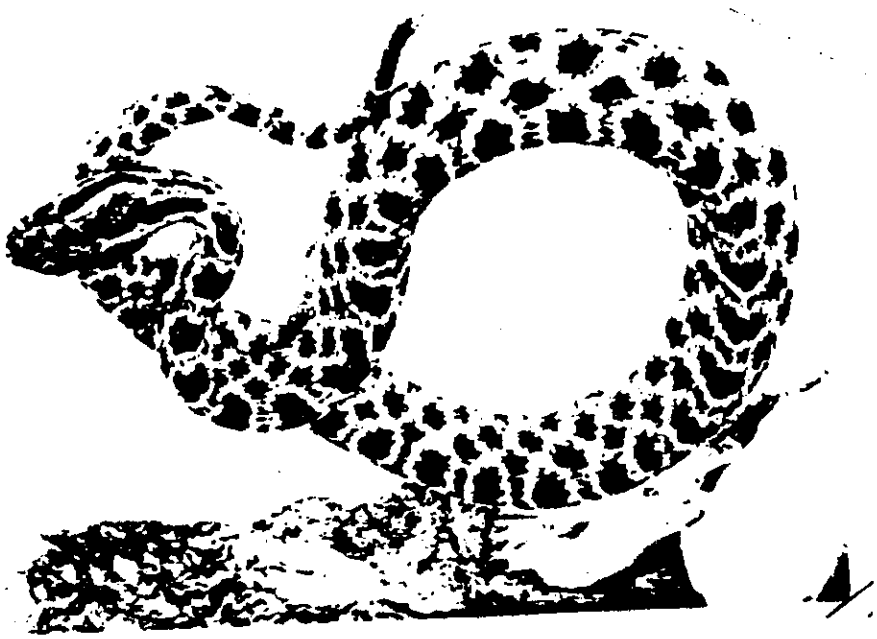
- We also aim to study some of the biological effects of PLA2 such as:

    - Effect on platelet aggregation.

    - Effect on fibrinogen clotting time.

    - The hemolytic effect of the enzyme.

This will be useful in understanding the role played by this enzyme in the toxicity mediated by the whole venom.



Sistrurus miliarius barbouri, Eastern pygmy rattlesnake, Specimen form Dade Country, Florida (Photo by Louis Porras).