Study of Antivenom on Plasma of *Bothrops jararaca* Snake

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**Introduction:** The snake venoms are a complex mixture of proteins, nucleotides and inorganic ions which confer toxic properties of these complex venoms. It is known that most venomous snakes have natural resistance against their own envenomation due to neutralizing potential of some plasma proteins. However, these resistance mechanisms are not fully elucidated. **Objective:** Thus, this study aims to characterize the plasma proteins from *Bothrops jararaca* responsible for protection against its own accidental poisoning. **Material and methods:** Venom and plasma was obtained from *B. jararaca* snake from Herpetology Laboratory of the Butantan Institute. The samples (plasma and venom) were maintained at -20 °C until the time of analysis. Determination of protein concentration was performed by absorbance at 280 nm on a plate reader (Biotek-Epoch). The plasma was subjected to electrophoresis on 2-D SDS-PAGE. We performed the transfer of proteins to PVDF membrane for identification of spots of interest (Western Blotting). After transfer, the membrane was incubated with the venom of *B. jararaca*. Then this was incubated with antithoracic serum, followed by anti-horse serum labeled with peroxidase and developed with DAB and H2O2. **Results and Discussion:** Western Blotting revealed spots in the plasma of *B. jararaca* that bind to this, suggesting a protective role of these proteins against self-envenomation. **Conclusion:** The prospect of this work is an identification of plasma proteins that recognize venom proteins by mass spectrometry.

**Keywords:** venom; *B. jararaca*; antivenom; proteomics

**Supported by:** CNPq and FAPESP (2012/10266-5)