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## **ANALYTIC TECHNIQUES TO ASSIST THE ANTIVENOM PRODUCTION IN BRAZIL**

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According to World Health Organization (WHO) the number of deaths by poisonous animals in developed countries is significant. The situation in Brazil has been monitored by SINAN (Sistema de Informação de Agravos e Notificação) and currently 400 accidents occur every month, of which 80% are due to venomous snakebites of the genus *Bothrops*. To meet the large number of incidences, Instituto Butantan (research center, at Brazil) has produced various types of antivenomous including anti-*Bothrops* serum. However, the high diversity of snakes (~380 species), a large portion of them being venomous, it can sometimes result of an inappropriate antivenom. In addition, recent investigation showed that the *Bothrops* venom of certain species can vary significantly according to geographic distribution (in the Northern region the snake poison of jararaca is 30 times more potent than that found in the Southeast region). In this study, the inorganic elements concentration in blood of mice immunized with different species of *Bothrops* snake venoms were investigated using NAA and XRF techniques. Comparing the results permit to assess whether it is possible to use a single anti-*Bothrops* serum. Moreover, these results were compared with human estimative to prevent damage due to toxicity of these elements in the immunological therapy.

**Keywords:** NAA, FRX, blood, mice, *Bothrops* snake venoms

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