

PREDICT PROTEOME OF *MICRURUS FRONTALIS* VENOM

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Coral snakes comprise a group of almost 50 species from the genus *Micrurus* found in the Southern United States and South America. The symptoms of envenomation by *Micrurus sp.* are the result of a progressive blockade at the neuromuscular endplate and, in severe cases, death results from respiratory arrest. Besides supportive clinical care, serotherapy with heterologous antivenoms is the only treatment for coral snake bite envenomation. Little is known about the biochemistry of *Micrurus* venoms due to low availability. In this work, we investigated the proteins and peptides present in this venom. To assess the venom proteomic profile from *Micrurus frontalis*, we used two different approaches without pre-purification steps: (i) one-dimensional SDS/PAGE plus HPLC with tandem MS and (ii) gel 2DE (two-dimensional gel electrophoresis) plus MALDI-Tof-Tof. We observed about 100 spots 2D gel with molecular masses ranging from 12-70 kDa and *pI* ranging from 4-7. The majority spots were found on the lower *pI* and MW values. 1D gel displayed about 30 bands. 2D and 1D proteins were excised and analyzed by mass spectrometry. Most of this bands displayed high-quality MALDI-TOF-MS spectra, resulting *de novo* sequencing of several peptides with molecular mass range of 900-2000 m/z.

Financial Support: CNPq, Faperj. Finep, Fapesp, MCT

Keywords: snake venom, proteome, mass spectrometry