

## 1-D AND 2-D ELECTROPHORESIS PROTEIN PROFILES OF THE SCORPION VENOM FROM *Brotheas amazonicus*.

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**INTRODUCTION:** Scorpions venoms show specific neurotoxins to insect or mammals. These toxins are very important molecular tools to development of new drugs or bioinsecticides. *Brotheas amazonicus* scorpion is an endemic specie in Amazonian Rain Forest, but your venom do not show toxicity in humans. Information about biological specific activity on insect of this venom is not known yet.

**OBJECTIVES:** Molecular protein toxins profiles of the venom from *Brotheas amazonicus* scorpion by 1-D and 2-D electrophoresis methods to detected toxins with potential biotech applications.

**RESULTS:** Several spots “families” with ~60, 70 and 80 kDa were detected in gel acidic region with pI ~4,5 – 6 range, in the same region 1-D zymography showed proteolytic activity on gelatin and fibrinogen and proteolytic activity was inhibited by PMSF, suggesting scorpion serineproteinases. 50 kDa proteins were detected with pI ~6,5 – 7 range. In 23 – 50 kDa gel acid region were observed some proteins. In 23 – 14 kDa gel acidic region were detected proteins with pI 4 - 7 range. 1-D Tris-tricine gel showed proteins with ~ 7 kDa, suggesting scorpion neurotoxins. In gel basic region only 14 kDa proteins were observed with pI ~9 – 10 range.

**CONCLUSION:** Molecular profile of the scorpion venom from *B. amazonicus* showed proteins with high and low molecular masses, mainly with acidic pI. Proteolytic activity suggest serineproteinases with high molecular masses and 7 kDa proteins in *B. amazonicus* venom suggest scorpion neurotoxins. Purification and molecular characterization of these toxins are in course.

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Key words: *Brotheas amazonicus*, electrophoresis, neurotoxins.