

PURIFICATION AND PARTIAL CHARACTERIZATION OF A HYALURONIDASE FROM THE VENOM OF THE SCORPIONFISH *Scorpaena plumieri*.

Cassoli, J.S.^{1,2}; Andrich, F.^{1,2}; Carnielli, J.B.T.²; Bloch, C.Jr.⁴; de Lima, M.E.²; Cordeiro, M.N.³; Richardson, M.³; Figueiredo, S.G.¹

¹ LQP, Depto. Ciências Fisiológicas, UFES, ES, Brazil.

² LVTA, Depto. Bioquímica e Imunologia, UFMG, MG, Brazil.

³ Centro de Pesquisa Carlos Ribeiro Diniz, FUNED, MG, Brazil.

⁴ LEM, Embrapa Rec.Gen.Biotec., Brasília, DF, Brazil.

Fish's envenomation involves subcutaneous or intramuscular injection of venom into the prey/human victims. The pathology of envenomation includes local effects, such as the degradation of proteins and glycosaminoglycans in the extracellular matrix, in connective tissue surrounding blood vessels and capillaries beyond systemic effects, such as cardiovascular and neurological disorders. Agents as hyaluronidases, which promote degradative process, are referred to as "spreading factors", these has been considered as an invariant factor in the animals venoms. In this work a new hyaluronidase (SpH) from the scorpionfish venom *S. plumieri* was purified to homogeneity through a combination of three chromatographic steps: gel filtration on Sephacryl S200, anion exchange/FPLC on MonoQ HR and reverse phase/HPLC on a Source 15ST column. Activity was assayed by zymography (12% SDS-PAGE impregnated with hyaluronic acid). The molecular mass was found to be 76,863Da by MALDI-TOF mass spectrometry and the amino terminal sequence of 19 residues was determined by automatic sequencing using a standard Edman degradation program and is APADKVAWGVKKXKLLXKXXVMA. The carried out searches within the first 19 residues did not match significantly any sequence obtained from the protein data bank (BLAST). This is the first report of the isolation and characterization of a scorpionfish venom hyaluronidase.

Key words: *Scorpaena plumieri*, fish venom, hyaluronidase.

Financial support: CNPq, CAPES, PROBRAL (DAAD/CAPES), FUNED.