

## HAEMAGGLUTINATING ACTIVITY IN EXTRACTS FROM THE MARINE ASCIDIAN DIDEMNUM GRANULATUM

Fontenele, R.M.M.<sup>1,2</sup>; Freitas, F.R.<sup>1,2</sup>; Rodrigues, R. F.<sup>2</sup>; Souza, J.B.<sup>1,2</sup>; Sousa, A.E.C.<sup>1,2</sup>; Fernandes, A.B.<sup>1,2</sup>; Nascimento, K.S.<sup>2</sup>; Cavada, B.S.<sup>2</sup>; Lotufo, T.M.C.<sup>1</sup>; Sampaio, A.H.<sup>1</sup>

<sup>1</sup>Depto. de Engenharia de Pesca, UFC, <sup>2</sup> Depto. de Bioquímica e Biologia Molecular, UFC, CE

Lectins are proteins or glycoproteins of non-immune origin, which agglutinates cells and/or precipitate glycoconjugates. It is well known that marine organisms produce low molecular compounds possessing unique structures and biological activities and it might be possible to find lectins from marine organisms having unique properties. Some of the lectins isolated from marine organisms including algae and ascidians are much smaller than those derived from land plants. This characteristic alone may make the lectins from marine organisms more suitable for uses as drug targeting than those derived from land plants. In the present study we report the presence and preliminary characterization of a lectin present in extracts of the marine ascidian *Didemnum granulatum* collected in the coast of Ceará State. The biological material was collected and freeze-dried and extracted with 0,01M Tris-HCl buffer, pH 7,6, containing 0,15M NaCl. After centrifugation the total extract was used for the presence of lectin using native and enzyme-treated rabbit and human erythrocytes. The lectin agglutinated only trypsin-treated rabbit erythrocytes and failed to agglutinate human untreated and enzyme-treated ABO cells. Sugar inhibition studies using a large range of carbohydrates showed that the lectin activity was preferentially inhibited by the simple sugar galactose, and the disaccharides lactulose and lactose. Studies are under progress to isolate and further characterization of this lectin.

**Supported by:** CNPq, FUNCAP

**Key words:** Lectin, ascidian, *Didemnum granulatum*, characterization