

ISOLATION AND PARTIAL CHARACTERIZATION OF A LECTIN FROM ASCIDIA DIDEMNUM LIGULUM

Freitas, F.R.^{1,2}; Rodrigues, R. F.², Fontenele, R.M.M.^{1,2}, Souza, J.B.^{1,2}, Sousa, A.E.C.^{1,2},
Nogueira, S.M.S.^{1,2}, Nascimento, K.S.², Cavada, B.S.², Lotufo, T.M.C.¹, Sampaio, A.H.¹

¹Depto. de Engenharia de Pesca, UFC, ² Depto. de Bioquímica e Biologia Molecular,
UFC, CE

Lectins are a group of proteins or glycoprotein found in a broad diversity of organisms. It possesses the property to bind specifically and reversibly to carbohydrates. This ability makes possible the process of cell signalization, recognition and defence against pathogens between other functions in organism. 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. Lectins from ascidians, appear to have enormous potential for use in biochemistry and biomedical science. Saline extracts of the marine ascidian *Didemnum ligulum* was prepared under agitation with 0.1M Tris-HCl, 0.15M NaCl and pH 7.6. The lectin was partially purified by a combination of ammonium sulphate precipitation and ion exchange chromatography in DEAE-Sephacel. The lectin agglutinated only trypsin-treated rabbit erythrocytes and failed to agglutinate human untreated and enzyme-treated ABO cells. The lectin was not affected by exposure at temperature of 40°C and lost all its activity when heated at 60°C. The lectin showed to not require divalent cations for integrity of its biological activity. The lectin showed to be stable to pH from 7 to 10. The lectin was inhibited by galactose and some derivatives. Studies are in progress in our laboratory to improve the characterization of this lectin.

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