

CITOTOXICITY OF CvL, A LECTIN FROM MARINE SPONGE *CLIONA VARIANS*
AGAINST LEUKEMIA CELLS LINES K562 AND K562-LUCENA

Queiroz, A.F.S.¹, Cunha, D.C.S.², Moura, R.M.¹, Ferreira, C.V.³, Justo, G.Z.³, Silva R.A.³, Lyra, I.L.², Ribeiro, J.K.C.², Santos, E.A.², Sales, M.P.²

¹Departamento de Biofísica e Farmacologia, ²Laboratório de Química e Função de Proteínas Bioativas, Departamento de Bioquímica, Centro de Biociências, Universidade Federal do Rio Grande do Norte, Natal, Brasil; ³Laboratório de Sinalização Celular, Centro de Ciências Biológicas, Universidade de Campinas, Campinas, São Paulo, Brasil.

CvL a lectin from the marine sponge *Cliona varians* was purified by acetone fractionation followed by Sepharose CL 4B affinity chromatography. CvL agglutinated papainized treated human erythrocytes with preference for type A erythrocytes. The lectin was strongly inhibited by monosaccharide D-galactose and disaccharide sucrose. CvL is a tetrameric glycoprotein of 28 kDa subunits linked by disulphide bridges with a molecular mass of 106kDa by SDS-PAGE and 114 kDa by Sephacryl S300 gel filtration. The lectin was Ca²⁺ dependent, stable up to 60 C for 60 min, with optimum pH of 7.5. The CvL toxicity against K562 (quimioterapic sensitive cells) and k562-Lucena (quimioterapic resistant cells) leukemia cells lines was evaluated by tetrazolium salt reduction (MTT) colorimetric assay. The results showed an IC₅₀ of 70 µg/mL and 72 µg/mL for K562 and K562-Lucena cells lines respectively.

Support by CAPES, CNPQ and FINEP