Inhibition of Ehrlich Ascites Tumor Cell Growth by Canavalia rosea Lectin in Mice

<u>Araújo, G. O.¹</u>; Silva, B.T.F.^{1,2}; Moreira, R.A.²; Rezende Neto, J. M.³; Xavier-Filho, L.³; Monteiro-Moreira, A.C.O.²

¹Centro de Ciências da Saúde, Universidade de Fortaleza, UNIFOR; ²Departamento de Patologia, Centro de Ciências Biológicas e da Saúde, Universidade Federal do Maranhão, UFMA; ³Centro de Ciências Biológicas e da Saúde, Universidade Tiradentes, UNIT.

Lectins, carbohydrate-binding proteins widely distributed in the plant kingdom, show antitumoral activity against human and murine malignant neoplasm. The aim of this study was to evaluate Ehrlich ascites tumor growth after treatment with Canavalia rosea lectin (CRL), a D-glucose/mannose-binding lectin. For the in vivo treatment, a suspension of 1x10⁶ cells/mL of Ehrlich ascite was inoculated in adult (± 25 grams) male swiss mice (n =10), by intraperitoneal route. On the day of tumor inoculation tumor and in alternate days, the animals were treated with 1.0 mg/Kg dose of CRL while the control group was treated with Tris HCl 0.1 M buffer. After 8 days treatment, 5 animals were sacrificed for the observation of number of tumor cells and viability, and 5 animals were maintained alive to follow the surveillance. In the *in vivo* treatment with CRL, it induced a significant decrease in the body weight gain when compared with the control group (CG: 31.6%; CRLG: 17.6%). The animals treated with the CRL and sacrificed on the eighth day of the experiment, only one developed the tumor. The animal treated with the CRL, which developed the tumor, showed a decrease in the number of tumor cells when compared with the control group (730.2 x 10⁶ cel/ml to 128.0 10⁶ cel/ml). The treatment also increased the survival of animals (CG: 3 weeks; CRLG: 8 weeks).

Keywords: *Canavalia rosea*, Ehrlich tumor, lectin,. Supported by: RENORBIO, CNPq, UNIFOR