

LECTIN CONBR INCREASES S100B SECRETION IN PRIMARY CORTICAL
ASTROCYTE CULTURE

ABIB, R.T.¹; QUINCOZES-SANTOS, A.¹; NARDIN, P.¹; CONCLHLEITE, M.¹;
COSTA, A.P.² CAVADA, B.S.³; GONÇALVES, C.A.¹; LEAL, R.B.²;
GOTTFRIED, C.¹

¹Departamento de Bioquímica, UFRGS, Porto Alegre, RS; ²Departamento de
Bioquímica, UFSC, Florianópolis, SC; ³BioMol-Lab, UFC, Fortaleza, CE
E-mail: renata.abib@terra.com.br

Plant lectins have been used as a tool to study molecular mechanisms that modulate animal cell physiology, including signaling in the brain. The main aim of this study was to investigate the effect of ConBr, a lectin isolated from *Canavalia brasiliensis* seeds, on primary cortical astrocyte cultures from rat. We analyzed cell morphology, viability and secretion of the S100B protein, a neurotrophic cytokine involved in synaptic plasticity and protection against glutamate toxicity. Cells were incubated (0-24 h) with ConBr (from 0.001 to 10 µg/mL) or vehicle and they were photographed with a Nikon inverted microscope. Cellular damage was assessed by propidium iodide assay and S100B secretion was measured by ELISA. ConBr treatment for 15 min, in a concentration dependent manner, increased S100B secretion. In addition, it was observed a 50% increment in S100B, without change on cell integrity with 0.1 µg/mL of ConBr. However, 10 µg/mL ConBr after 6 h of incubation induced dramatic alterations in cell morphology and death. Our results provide evidence that ConBr can increase S100B secretion by astrocytes, which in turn, is associated to the protective activity of these cells during brain injury. FAPERGS, CNPq, PROPESQ-UFRGS.