

## DUAL EFFECT OF RESVERATROL IN C6 GLIOMA CELLS: ANTI- AND PRO-OXIDANT PROPERTIES

QUINCOZES-SANTOS, A., NARDIN, P., LATINI, A., ANDREAZZA, A.C., FUNCHAL, F., WAJNER, M., GONÇALVES, C.A., GOTTFRIED, C.

Departamento de Bioquímica, ICBS, Universidade Federal do Rio Grande do Sul, Porto Alegre, RS, Brazil.

The redox active compound, resveratrol (3,4',5- trihydroxy stilbene), a phytoalexin found in grapes and red wine has been proposed to have beneficial effects in brain pathologies that may involve oxidative stress (OS). The objective of the present study was to investigate in C6 glial lineage cells, the protective effects of *trans*-resveratrol (10 -100  $\mu$ M) in two models of OS induced by hydrogen peroxide ( $H_2O_2$ ): I. 1 mM  $H_2O_2$  for 0.5 h and II. 0.1 or 0.5 mM  $H_2O_2$  for 6 h. It was analyzed the index of DNA damage, assessed by the comet assay as well as the content of GSH and lipid peroxidation. In model I, resveratrol prevented oxidative DNA damage in all concentrations tested and at 100  $\mu$ M resveratrol increased GSH content (about 44%) and decreased lipid peroxidation (about 28%), compared to  $H_2O_2$  exposure. In model II, the genoprotective effect was only partial, suggesting a pro-oxidant effect, in agreement with GSH decrease and lipid peroxidation increase. Our results provide evidence that resveratrol may contributes to brain health in disorders involving OS. However, the dual effect of resveratrol (presenting anti- and pro-oxidant activity) suggests more caution to evaluate the therapeutic effects of this compound in brain disorders. Supported by FAPERGS, CNPq, PROPESq-UFRGS.