

**RESVERATROL INHIBITS CELL GROWTH BY INDUCING CELL CYCLE  
ARREST ON ACTIVATED HEPATIC STELLATE CELLS.**

Meira, L.A.<sup>1</sup>, Souza, I.C.<sup>1</sup>, Coelho, B.P.<sup>1</sup>, Grivicich, I.<sup>2</sup>, Guaragna, R.M.<sup>1</sup>,  
Gottfried, C.<sup>1</sup>, Borojevic, R.<sup>3</sup>, Guma, F.C.R.<sup>1</sup>

<sup>1</sup>Departamento de Bioquímica, CBS, UFRGS, Porto Alegre, RS, Brazil; <sup>2</sup>  
ULBRA, Canoas, RS, Brazil; <sup>3</sup>Departamento de Histologia e Embriologia, ICB,  
PABCAM, UFRJ, Rio de Janeiro, RJ, Brazil

Resveratrol (RVS) exerts antiproliferative and proapoptotic actions in different cell lines. Hepatic stellate cells (HSCs) are a major fibrogenic cell type during chronic liver disease. Here we investigated the effect of RVS on the cell growth of mouse HSC cell line GRX. Cells treated with 1 nM – 100 µM of RVS decreased cell growth by about 35% after 5 days. In addition, only 100 µM of RVS decreased significantly the cell viability. The effect of RVS on cell proliferation could be due to its actions on cell cycle. GRX cells treated with RVS were analyzed by flow cytometry. RVS induced an increase in the number of GRX cells in S- and sub-G1 phase. The increase of sub-G1 phase cells and the nuclear condensation and fragmentation showed by DAPI staining identified a possible pro-apoptotic effect of RVS on GRX cells. These actions are mediated at nanomolar levels, compatible with the concentrations of free RVS in biological fluids after ingestion of polyphenol-rich foods, suggesting a possible effect of these foods as an adjuvant treatment in chronic liver diseases. Supported by CNPq, FAPERGS, PROPESQ-UFRGS