

## **GENE EXPRESSION, HOMEOSTASIS AND APOPTOTIC PROCESSES IN TWO HEPATOBLASTOMA CELL LINES TREATED WITH AS(III) AND AS(V)**

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The gene expression profiles of apoptosis-related genes and the cellular homeostasis of two hepatoblastoma cell lines (HepG2 and Hep3B) treated with different amount of As(III) and As(V) have been studied. The expression of a panel of 96 apoptosis-related genes has been investigated using TaqMan low density arrays (TLDA), while the expression of selected proteins has been studied by Western blotting. A detailed bioinformatics analysis has been also performed to obtain the statistically relevant biological processes and pathways.

HepG2 and Hep3B hepatoblastoma cell lines have peculiar and distinct properties since HepG2 constitutively express p53 while Hep3B cells are p53-deficient. We therefore focused the interest on p53-dependent apoptosis genes and their likely downstream effects in related pathways.

In this contribution we will report and discuss our results showing that As(III) and As(V) species induce a different response in terms of cytotoxicity, proliferation and induction of apoptosis.

Keywords: homeostasis and apoptotic processes