

Expression of multidrug resistance proteins in prostate cancer is related with cell sensitivity to chemotherapeutic drugs

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BACKGROUND. Multidrug resistance (MDR) proteins have been associated with the lack of chemotherapy response. Expression of these proteins has been described in the prostate, but there is no information about their role in the chemotherapy response of prostate cancer (PC). We studied the gene and protein expression of MDR proteins in primary cell cultures from PC tumors and PC cell lines, their relationship with chemotherapy and their effects on cell survival. **METHODS.** Primary cell cultures from PC were obtained from samples provided by our Institutional Hospital. Cell lines LNCaP, PC3, and DU145 were also examined. Cells were treated during 72 hr with several chemotherapeutic drugs. Protein and mRNA expressions of P-glycoprotein (P-Gp), MRP1 and LRP, before and after drug treatment, were evaluated by RT-PCR and Western blot analyses. The effect on cell survival was evaluated by proliferation assays (MTT), and cell cycle and apoptosis by flow cytometry. **RESULTS.** Primary PC cultures exhi