

POSTER PRESENTATION

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The effect of cisplatin in 5637 bladder cancer cell line

Rosário Pinto-Leite¹, Regina Arantes-Rodrigues^{2*}, M Luís Cardoso³, Lúcio Santos^{4,5}, Paula A Oliveira²

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Cisplatin is an inorganic platinum agent (cis-diammine-dichloroplatinum) with antineoplastic activity. It's been an important component of standard treatment regimens for several human malignancies including bladder cancer [1]. Cisplatin forms highly reactive, charged, platinum complexes which bind to nucleophilic groups such as GC-rich sites in DNA, inducing intrastrand and interstrand DNA cross-links, as well as DNA-protein cross-links. These cross-links result in apoptosis and cell growth inhibition [2]. We have studied the cisplatin induced apoptotic responses of one human urinary bladder cancer cell line 5637. The cytotoxic activity of cisplatin on the survival profiles of 5637 cell line was determined by MTT assay. The survival rates of 5637 cells in the presence of 1, 2, 3, 4, and 5 µg/ml cisplatin after 72h of exposure were averaged 82.6, 55.4, 18.6, 7.2 and 7.9%, respectively. Treatment with cisplatin markedly decreased the viability of 5637 cells in a dose-dependent manner and a significant correlation was found between cell proliferation and cisplatin concentration ($r = 0.964$; $p < 0.01$).

Author details

¹Genetics Service, Cytogenetic Laboratory, Hospital Center of Trás-os-Montes and Alto Douro, Vila Real, Portugal. ²Department of Veterinary Sciences, CECAV, University of Trás-os-Montes and Alto Douro, Vila Real, Portugal. ³Department of Biochemistry, Faculty of Pharmacy, University of Porto, Porto, Portugal. ⁴Department of Surgical Oncology, Portuguese Institute of Oncology, Porto, Portugal. ⁵Health Faculty, Fernando Pessoa University, Porto, Portugal.

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* Correspondence: arantesregina@hotmail.com

²Department of Veterinary Sciences, CECAV, University of Trás-os-Montes and Alto Douro, Vila Real, Portugal

Full list of author information is available at the end of the article

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