

7. REFERENCES

Adlard JW, Dodwell DJ. Optimum anthracycline-based chemotherapy for early breast cancer. *Lancet Oncol.* 2001 Aug;2(8):469-74.

Akashi-Tanaka S, Fukutomi T, Tsuda H. Higher Level of P-glycoprotein Expression in Human Breast Cancer Cells after Radiation Therapy. *Breast Cancer.* 1995 Oct 31;2(2):99-103.

Andersson U, Grankvist K, Bergenheim AT, Behnam-Motlagh P, Hedman H. Rapid induction of long-lasting drug efflux activity in brain vascular endothelial cells but not malignant glioma following irradiation. *Med Oncol.* 2002;19(1):1-9.

Baird RD, Kaye SB. Drug resistance reversal- are we getting closer? *Eur J Cancer.* 2003 Nov;39(17):2450-61.

Beck WT, Grogan TM, Willman CL et al. Methods to detect P-glycoprotein-associated multidrug resistance in patients' tumors: consensus recommendations. *Cancer Res.* 1996 Jul 1;56(13):3010-20.

Berger W, Setinek U, Hollaus P, Zidek T, Steiner E, Elbling L. Multidrug resistance markers P-glycoprotein, multidrug resistance protein 1, and lung resistance protein in non-small cell lung cancer: prognostic implications. *J Cancer Res Clin Oncol.* 2005 Jun;131(6):355-63..

Berger W, Elbling L, Micksche M. Expression of the major vault protein LRP in human non-small-cell lung cancer cells: activation by short-term exposure to antineoplastic drugs. *Int J Cancer.* 2000 Oct 15;88(2):293-300.

Bu JG, Yuan YW, Chen J. Expression of multidrug resistance gene in nasopharyngeal carcinoma cells after irradiation exposure. *Di Yi Jun Yi Da Xue Xue Bao*. 2004 Jun;24(6):646-9.

Caney C, Singh G, Lukka H, Rainbow AJ. Combined gamma-irradiation and subsequent cisplatin treatment in human squamous carcinoma cell lines sensitive and resistant to cisplatin. *Int J Radiat Biol*. 2004 Apr;80(4):291-9.

Caney C, Bulmer JT, Singh G, Lukka H, Rainbow AJ. Pre-exposure of human squamous carcinoma cells to low-doses of gamma-rays leads to an increased resistance to subsequent low-dose cisplatin treatment. *Int J Radiat Biol*. 1999 Aug;75(8):963-72.

Chen LZ, Hua YB, Yu XM, Xu Q, Chen T, Wang JH, Wu WX. Tamoxifen can reverse multidrug resistance of colorectal carcinoma in vivo. *World J Gastroenterol*. 2005 Feb 21;11(7):1060-4.

Cheng SH, Lam W, Lee AS, Fung KP, Wu RS, Fong WF. Low-level doxorubicin resistance in benzo[a]pyrene-treated KB-3-1 cells is associated with increased LRP expression and altered subcellular drug distribution. *Toxicol Appl Pharmacol*. 2000 Apr 15;164(2):134-42.

Chin KV, Pastan I, Gottesman MM. Function and regulation of the human multidrug resistance gene. *Adv Cancer Res*. 1993;60:157-80.

Chion JF, Liang JA, Hsu WH, Wang JJ, Ho ST, Kao A. Comparing the relationship of Taxol-based chemotherapy response with P-glycoprotein and lung resistance-related protein expression in non-small cell lung cancer. *Lung*. 2003;181(5):267-73.

Cole SP, Bhardwaj G, Gerlach JH, Mackie JE, Grant CE, Almquist KC, Stewart AJ, Kurz EU, Duncan AM, Deeley RG. Overexpression of a transporter gene in a multidrug-resistant human lung cancer cell line. *Science*. 1992 Dec 4;258(5088):1650-4. Erratum in: *Science*. 1993 May 14;260(5110):879.

Dean M, Allikmets R. Complete characterization of the human ABC gene family. *J Bioenerg Biomembr*. 2001 Dec;33(6):475-9.

Davey MW, Hargrave RM, Davey RA. Comparison of drug accumulation in P-glycoprotein-expressing and MRP-expressing human leukaemia cells. *Leuk Res*. 1996 Aug;20(8):657-64.

Dempke WC, Hosking LK, Shellard SA, Hill BT. Differential cisplatin responses in human carcinoma cell lines pre-exposed to fractionated X-irradiation. *Biochem Soc Trans*. 1991 Apr;19(2):121S.

Dempke WC, Hosking LK, Hill BT. Expression of collateral sensitivity to cisplatin, methotrexate, and fluorouracil in a human ovarian carcinoma cell line following exposure to fractionated x-irradiation in vitro. *Semin Oncol*. 1992 Apr;19(2 Suppl 3):66-72.

Eichholtz-Wirth H, Reidel G, Hietel B. Radiation-induced transient cisplatin resistance in murine fibrosarcoma cells associated with elevated metallothionein content. *Br J Cancer*. 1993 May;67(5):1001-6.

Ferguson RE, Jackson SM, Stanley AJ, Joyce AD, Harnden P, Morrison EE, Patel PM, Phillips RM, Selby PJ, Banks RE. Intrinsic chemotherapy resistance to the tubulin-binding antimetabolic agents in renal cell carcinoma. *Int J Cancer*. 2005 May 20;115(1):155-63.

Fujita T, Washio K, Takabatake D et al. Proteasome inhibitors can alter the signaling pathways and attenuate the P-glycoprotein-mediated multidrug resistance. *Int J Cancer*. 2005 Jun 8.

Germann UA. P-glycoprotein - a mediator of multidrug resistance in tumour cells. *Eur J Cancer*. 1996 Jun;32A(6):927-44.

Goldhirsch A, Glick JH, Gelber RD, Coates AS, Senn HJ. International Consensus Panel on the Treatment of Primary Breast Cancer. *J Clin Oncol*. 2001 Sep 15;19(18):3817-27.

Gottesman MM, Fojo T, Bates SE. Multidrug resistance in cancer: role of ATP-dependent transporters. *Nat Rev Cancer*. 2002 Jan;2(1):48-58.

Harvie RM, Davey MW, Davey RA. Increased MRP expression is associated with resistance to radiation, anthracyclines and etoposide in cells treated with fractionated gamma-radiation. *Int J Cancer*. 1997 Sep 26;73(1):164-7.

Hennes S, Davey MW, Harvie RM, Banyer J, Wasinger V, Corthals G, Davey RA. Changes in gene expression associated with stable drug and radiation resistance in small cell lung cancer cells are similar to those caused by a single X-ray dose. *Radiat Res*. 2004 May;161(5):495-503.

Hennes S, Davey MW, Harvie RM, Davey RA. Fractionated irradiation of H69 small-cell lung cancer cells causes stable radiation and drug resistance with increased MRP1, MRP2, and topoisomerase IIalpha expression. *Int J Radiat Oncol Biol Phys*. 2002 Nov 1;54(3):895-902.

Hill BT, Whelan RD, Hosking LK, Bedford P, Dempke WC, Shellard SA. Differential expression of drug resistance following in vitro exposure of human tumour cell lines to fractionated X-irradiation. *Cancer Treat Rev*. 1990 Dec;17 Suppl A:21-6.

Hill BT, Whelan RD, Hosking LK, Shellard SA, Bedford P, Lock RB. Interactions between antitumor drugs and radiation in mammalian tumor cell lines: differential drug responses and mechanisms of resistance following fractionated X-irradiation or continuous drug exposure in vitro. *NCI Monogr.* 1988;(6):177-81.

Hill BT. Interactions between antitumor agents and radiation and the expression of resistance. *Cancer Treatment Reviews.* 1991;18:149-190.

Hill BT, Moran E, Etievant C, Perrin D, Masterson A, Larkin A, Whelan RD. Low-dose twice-daily fractionated X-irradiation of ovarian tumor cells in vitro generates drug-resistant cells overexpressing two multidrug resistance-associated proteins, P-glycoprotein and MRP1. *Anticancer Drugs.* 2000 Mar;11(3):193-200

Hill BT, Deuchars K, Hosking LK, Ling V, Whelan RD. Overexpression of P-glycoprotein in mammalian tumor cell lines after fractionated X irradiation in vitro. *J Natl Cancer Inst.* 1990 Apr 4;82(7):607-12.

Hipfner DR, Mao Q, Qiu W, Leslie EM, Gao M, Deeley RG, Cole SP. Monoclonal antibodies that inhibit the transport function of the 190-kDa multidrug resistance protein, MRP. Localization of their epitopes to the nucleotide-binding domains of the protein. *J Biol Chem.* 1999 May 28;274(22):15420-6.

Hipfner DR, Deeley RG, Cole SP. Structural, mechanistic and clinical aspects of MRP1. *Biochim Biophys Acta.* 1999 Dec 6;1461(2):359-76.

Izquierdo MA, Shoemaker RH, Flens MJ, Scheffer GL, Wu L, Prather TR, Scheper RJ. Overlapping phenotypes of multidrug resistance among panels of human cancer-cell lines. *Int J Cancer.* 1996 Jan 17;65(2):230-7.

- Izquierdo MA, Scheffer GL, Flens MJ, Shoemaker RH, Rome LH, Scheper RJ. Relationship of LRP-human major vault protein to in vitro and clinical resistance to anticancer drugs. *Cytotechnology*. 1996;19(3):191-7.
- Jin S, Scotto KW. Transcriptional regulation of the MDR1 gene by histone acetyltransferase and deacetylase is mediated by NF-Y. *Mol Cell Biol*. 1998 Jul;18(7):4377-84.
- Juliano RL, Ling V. A surface glycoprotein modulating drug permeability in Chinese hamster ovary cell mutants. *Biochim Biophys Acta*. 1976 Nov 11;455(1):152-62.
- Kane S. Multidrug resistance of cancer cells. *Act Drug Res* 1996. 28:181-252
- Kartalou M, Essigmann JM. Mechanisms of resistance to cisplatin. *Mutat Res*. 2001 Jul 1;478(1-2):23-43.
- Kitazono M, Sumizawa T, Takebayashi Y et al. Multidrug resistance and the lung resistance-related protein in human colon carcinoma SW-620 cells. *J Natl Cancer Inst*. 1999 Oct 6;91(19):1647-53.
- Kitazono M, Okumura H, Ikeda R, Sumizawa T, Furukawa T, Nagayama S et al. Reversal of LRP-associated drug resistance in colon carcinoma SW-620 cells. *Int J Cancer*. 2001 Jan 1;91(1):126-31.
- Komarov PG, Shtil AA, Holian O et al. Activation of the LRP (lung resistance-related protein) gene by short-term exposure of human leukemia cells to phorbol ester and cytarabine. *Oncol Res*. 1998;10(4):185-92.
- Kong LB, Siva AC, Kickhoefer VA, Rome LH, Stewart PL. RNA location and modelling of a WD40 repeat domain within the vault. *RNA*. 2000 Jun;6(6):890-900.

Krishna R, Mayer LD. Multidrug resistance in cancer. Mechanisms, reversal using modulators of MDR and the role of MDR modulators in influencing the pharmacokinetics of anticancer drugs. *Eur J Pharm Sci.* 2000; 11: 159-165.

Kruh GD. Introduction to resistance to anticancer agents. *Oncogene.* 2003 Oct 20;22(47):7262-4.

Kruh GD, Belinsky MG. The MRP family of drug efflux pumps. *Oncogene.* 2003 Oct 20;22(47):7537-52

Laurencot CM, Scheffer GL, Scheper RJ, Shoemaker RH. Increased LRP mRNA expression is associated with the MDR phenotype in intrinsically resistant human cancer cell lines. *Int J Cancer.* 1997 Sep 17;72(6):1021-6.

Lee JU, Hosotani R, Wada M et al. Role of Bcl-2 family proteins (Bax, Bcl-2 and Bcl-X) on cellular susceptibility to radiation in pancreatic cancer cells. *Eur J Cancer.* 1999 Sep;35(9):1374-80.

Ling V. Multidrug resistance: molecular mechanisms and clinical relevance. *Cancer Chemother Pharmacol.* 1997;40 Suppl:S3-8.

Locke VL, Davey RA, Davey MW. Modulation of drug and radiation resistance in small cell lung cancer cells by paclitaxel. *Anti-Cancer drugs.* 2003;14:523-531.

Loe DW, Deeley RG, Cole SP. Biology of the multidrug resistance-associated protein, MRP. *Eur J Cancer.* 1996 Jun;32A(6):945-57.

Longley DB, Johnston PG. Molecular mechanisms of drug resistance. *J Pathol.* 2005 Jan;205(2):275-92

Mattern J, Efferth T, Volm M. Overexpression of P-glycoprotein in human lung carcinoma xenografts after fractionated irradiation in vivo. *Radiat Res.* 1991 Sep;127(3):335-8.

McClellan S, Whelan RD, Hosking LK, Hill BT. Expression of drug resistance in Chinese hamster ovary (CHO) cells following X-ray pre-treatment in vitro. *Biochem Soc Trans.* 1991 Aug;19(3):278S.

McClellan S, Hosking LK, Hill BT. Dominant expression of multiple drug resistance after in vitro X-irradiation exposure in intraspecific Chinese hamster ovary hybrid cells. *J Natl Cancer Inst.* 1993 Jan 6;85(1):48-53.

McClellan S, Hill BT. Evidence of post-translational regulation of P-glycoprotein associated with the expression of a distinctive multiple drug-resistant phenotype in Chinese hamster ovary cells. *Eur J Cancer.* 1993;29A(16):2243-8.

Meuer et al. *Rapid Cycle Real-Time PCR.* Springer-Verlag, Berlin. 2003.

Mossink MH, van Zon A, Scheper RJ, Sonneveld P, Wiemer EA. Vaults: a ribonucleoprotein particle involved in drug resistance? *Oncogene.* 2003 Oct 20;22(47):7458-67.

Mossink MH, Scheper RJ, Sonneveld P, Wiemer EA. The vault complex. *Cell Mol Life Sci.* 2003 Sep;60(9):1828-37.

Nielsen D, Maare C, Skovsgaard T. Cellular resistance to anthracyclines. *Gen Pharmacol.* 1996 Mar;27(2):251-5

Nielsen D, Maare C, Eriksen J, Litman T, Skovsgaard T. Expression of P-glycoprotein and multidrug resistance associated protein in Ehrlich ascites tumor cells after fractionated irradiation. *Int J Radiat Oncol Biol Phys.* 2001 Nov 15;51(4):1050-7.

Ng IO, Lam KY, Ng M, Kwong DL, Sham JS. Expression of P-glycoprotein, a multidrug-resistance gene product, is induced by radiotherapy in patients with oral squamous cell carcinoma. *Cancer*. 1998 Sep 1;83(5):851-7.

Pavelic ZP, Reising J et al. Detection of P-glycoprotein with four monoclonal antibodies in normal and tumor tissues. *Arch Otolaryngol Head Neck Surg*. 1993 Jul;119(7):753-7.

Qadir M, O'Loughlin KL, Fricke SM, Williamson NA, Greco WR, Minderman H, Baer MR. Cyclosporin A is a broad-spectrum multidrug resistance modulator. *Clin Cancer Res*. 2005 Mar 15;11(6):2320-6.

Qian F, Wei D, Zhang Q, Yang S. Modulation of P-glycoprotein function and reversal of multidrug resistance by (-)-epigallocatechin gallate in human cancer cells. *Biomed Pharmacother*. 2005 Apr;59(3):64-9.

Robinson JP. *Current Protocols in Cytometry*. John Wiley&Sohns. 1999.

Salerno M, Loechariyakul P, Saengkhae C, Garnier-Suillerot A. Relation between the ability of some compounds to modulate the MRP1-mediated efflux of glutathione and to inhibit the MRP1-mediated efflux of daunorubicin. *Biochem Pharmacol*. 2004 Dec 1;68(11):2159-65.

Scheffer GL, Wijngaard PL, Flens MJ, Izquierdo MA, Slovak ML, Pinedo HM, Meijer CJ, Clevers HC, Scheper RJ. The drug resistance-related protein LRP is the human major vault protein. *Nat Med*. 1995 Jun;1(6):578-82

Scheper RJ, Broxterman HJ, Scheffer GL, Kaaijk P, Dalton WS, van Heijningen TH. Overexpression of a M(r) 110,000 vesicular protein in non-P-glycoprotein-mediated multidrug resistance. *Cancer Res*. 1993 Apr 1;53(7):1475-9.

Schrag D et al. Who gets adjuvant treatment for stage II and III rectal cancer? Insight from surveillance, epidemiology, and endresults-Medicare. *J Clin Oncol.* 2001;19:3712-18

Schroeijers AB, Scheffer GL, Flens MJ, Meijer GA, Izquierdo MA, van der Valk P, Scheper RJ. Immunohistochemical detection of the human major vault protein LRP with two monoclonal antibodies in formalin-fixed, paraffin-embedded tissues. *Am J Pathol.* 1998 Feb;152(2):373-8.

Schroeijers AB, Siva AC, Scheffer GL et al. The Mr 193,000 vault protein is up-regulated in multidrug-resistant cancer cell lines. *Cancer Res.* 2000 Feb 15;60(4):1104-10.

Schwanen C, Hecker T, Hubinger G, Wolfle M, Rittgen W, Bergmann L et al. In vitro evaluation of bendamustine induced apoptosis in B-chronic lymphocytic leukemia. *Leukemia.* 2002 Oct;16(10):2096-105.

Sharp SY, Smith V, Hobbs S, Kelland LR. Lack of a role for MRP1 in platinum drug resistance in human ovarian cancer cell lines. *Br J Cancer.* 1998 Jul;78(2):175-80.

Shaw HJ, Price LA, Hill BT, Calvert AH, Dalley VM, Levene A. A randomized combination chemotherapy trial, with and without adriamycin, in squamous cell carcinoma of the head and neck. *Otolaryngology.* 1978 Nov-Dec;86(6 Pt 1):ORL-845-50

Stammler G, Pommerenke EW, Masanek U, Mattern J, Volm M. Messenger RNA expression of resistance factors in human tumor cell lines after single exposure to radiation. *J Exp Ther Oncol.* 1996 Jan;1(1):39-48.

Sugawara I, Akiyama S, Scheper RJ, Itoyama S. Lung resistance protein (LRP) expression in human normal tissues in comparison with that of MDR1 and MRP. *Cancer Lett.* 1997 Jan 15;112(1):23-31.

Sukhai M, Piquette-Miller M. Regulation of the multidrug resistance genes by stress signals. *J Pharm Pharm Sci.* 2000 May-Aug;3(2):268-80.

Szakacs G, Annereau JP, Lababidi S, Shankavaram U, Arciello A, Bussey KJ, Reinhold W, Guo Y, Kruh GD, Reimers M, Weinstein JN, Gottesman MM. Predicting drug sensitivity and resistance: profiling ABC transporter genes in cancer cells. *Cancer Cell.* 2004 Aug;6(2):129-37

Takara K, Sakaeda T, Tanigawara Y et al. Effects of 12 Ca²⁺ antagonists on multidrug resistance, MDR1-mediated transport and MDR1 mRNA expression. *Eur J Pharm Sci.* 2002 Aug;16(3):159-65.

Trompier D, Chang XB, Barattin R, du Moulinet D'Hardemare A, Di Pietro A, Baubichon-Cortay H. Verapamil and its derivative trigger apoptosis through glutathione extrusion by multidrug resistance protein MRP1. *Cancer Res.* 2004 Jul 15;64(14):4950-6.

Ueda K, Cornwell MM, Gottesman MM, Pastan I, Roninson IB, Ling V, Riordan JR. The *mdr1* gene, responsible for multidrug-resistance, codes for P-glycoprotein. *Biochem Biophys Res Commun.* 1986 Dec 30;141(3):956-62.

Wang W, Ke S, Chen G, Gao Q, Wu S, Wang S. Effect of lung resistance-related protein on the resistance to cisplatin in human ovarian cancer cell lines. *Oncol Rep.* 2004 Dec;12(6):1365-70.

Wazer DE, Joyce M, Jung L, Band V. Alterations in growth phenotype and radiosensitivity after fractionated irradiation of breast carcinoma cells from a single patient. *Int J Radiat Oncol Biol Phys.* 1993 Apr 30;26(1):81-8.

Wernyj RP, Morin PJ. Molecular mechanisms of platinum resistance: still searching for the Achilles' heel. *Drug Resist Updat.* 2004 Aug-Oct;7(4-5):227-32.

Wittwer CT, Herrmann MG, Moss AA, Rasmussen RP. Continuous fluorescence monitoring of rapid cycle DNA amplification. *Biotechniques*. 1997 Jan;22(1):130-1, 134-8.

Wittwer CT, Ririe KM, Andrew RV, David DA, Gundry RA, Balis UJ. The LightCycler: a microvolume multisample fluorimeter with rapid temperature control. *Biotechniques*. 1997 Jan;22(1):176-81.

Wolmark N et al. Randomized trial of postoperative adjuvant chemotherapy with or without radiotherapy for carcinoma of the rectum: National Surgical Adjuvant Breast and Bowel Project Protocol R-02. *JNCI*. 2000; 5:388-96

Wyller B, Shao Y, Schneider E, Cianfriglia M, Scheper RJ, Frey BM et al. Intermittent exposure to doxorubicin in vitro selects for multifactorial non-P-glycoprotein-associated multidrug resistance in RPMI 8226 human myeloma cells. *Br J Haematol*. 1997 Apr;97(1):65-75.

Young LC, Campling BG, Cole SP, Deeley RG, Gerlach JH. Multidrug resistance proteins MRP3, MRP1, and MRP2 in lung cancer: correlation of protein levels with drug response and messenger RNA levels. *Clin Cancer Res*. 2001 Jun;7(6):1798-804.

Zheng CL, Sumizawa T, Che XF et al. Characterization of MVP and VPARP assembly into vault ribonucleoprotein complexes. *Biochem Biophys Res Commun*. 2005 Jan 7;326(1):100-7.