

BIBLIOGRAFIA

BIBLIOGRAFIA

- Aarnio M, Sankila R, Pukkala E, et al. Cancer risk in mutation carriers of DNA-mismatch-repair genes. *Int J Cancer* 1999; 81:214-8.
- Abdel-Rahman WM, Katsura K, Rens W, Gorman PA, Sheer D, Bicknell D, Bodmer WF, Arends MJ, Wyllie AH, Edwards PA. Spectral karyotyping suggests additional subsets of colorectal cancers characterized by pattern of chromosome rearrangement. *Proc Natl Acad Sci U S A*. 2001 Feb 27;98(5):2538-43.
- Allison MC, Howatson AG, Torrance CJ, Lee FD, Russell RI. Gastrointestinal damage associated with the use of nonsteroidal antiinflammatory drugs. *N Engl J Med* 1992 Sep 10;327(11):749-54.
- Almeida EA, Ilic D, Han Q, Hauck CR, Jin F, Kawakatsu H, Schlaepfer DD, Damsky CH. Matrix survival signaling: from fibronectin via focal adhesion kinase to c-Jun NH(2)-terminal kinase. *J Cell Biol* 2000 May 1;149(3):741-54.
- Alnemri ES, Livingston DJ, Nicholson DW, Salvesen G, Thornberry NA, Wong WW, Juan J. Human ICE/CED-3 protease nomenclature. *Cell* 1996; 87: 171.
- Amit S, Hatzubai A, Birman Y, Andersen JS, Ben-Shushan E, Mann M, Ben-Neriah Y, Alkalay I. Axin-mediated CKI phosphorylation of beta-catenin at Ser 45: a molecular switch for the Wnt pathway. *Genes Dev* 2002 May 1;16(9):1066-76.
- Andjelkovic M, Alessi DR, Meier R, Fernandez A, Lamb NJ, Frech M, Cron P, Cohen P, Lucocq JM, Hemmings BA. Role of translocation in the activation and function of protein kinase B. *J Biol Chem* 1997 Dec 12;272(50):31515-24.
- Angers-Loustau A, Cote JF, Charest A, Dowbenko D, Spencer S, Lasky LA, Tremblay ML. Protein tyrosine phosphatase-PEST regulates focal adhesion disassembly, migration, and cytokinesis in fibroblasts. *J Cell Biol* 1999 Mar 8;144(5):1019-31.
- Annie Yu HJ, Lin KM, Ota DM, Lynch HT. Hereditary nonpolyposis colorectal cancer: preventive management. *Cancer Treat Rev* 2003 Dec;29(6):461-70.
- Antonsson B., Montessuit S, Lauper S, Eskes R and Martinou JC. Bax oligomerization is required for channel-forming activity in liposomes and to trigger cytochrome c release from mitochondria. *Biochem J* 2000; 345(Pt2):271-8.

- Arends JW. Molecular interactions in the Vogelstein model of colorectal carcinoma. *J Pathol* 2000; 190:412-416.
- Arico S, Patingre S, Bauvy C, Gane P, Barbat A, Codogno P, Ogier-Denis E. Celecoxib induces apoptosis by inhibiting 3-phosphoinositide-dependent protein kinase-1 activity in the human colon cancer HT-29 cell line. *J Biol Chem* 2002; 277: 27613-21.
- Asada M, Yamada T, Ichijo H, Delia D, Miyazono K, Fukumuro K and Mizutani A. Apoptosis inhibitory activity of cytoplasmic p21(Cip1/WAF1) in monocytic differentiation. *EMBO J* 1999; 18:1223-1234.
- Astier A, Manie SN, Avraham H, Hirai H, Law SF, Zhang Y, Golemis EA, Fu Y, Druker BJ, Haghayeghi N, Freedman AS, Avraham S. The related adhesion focal tyrosine kinase differentially phosphorylates p130cas and the Cas-like protein p105HEF1. *J Biol Chem* 1997; 272:19719-19730.
- Attwell S, Mills J, Troussard A, Wu C, Dedhar S. Integration of cell attachment, cytoskeletal localization, and signaling by integrin-linked kinase (ILK), CH-ILKBP, and the tumor suppressor PTEN. *Mol Biol Cell* 2003 Dec;14(12):4813-25.
- Attwell S, Roskelley C, Dedhar S. The integrin-linked kinase (ILK) suppresses anoikis. *Oncogene* 2000; 19:3811-3815.
- Bae SH, Jung ES, Park YM, Kim BS, Kim BK, Kim DG and Ryu WS. Expression of cyclooxygenase-2 (COX-2) in hepatocellular carcinoma and growth inhibition of hepatoma cell lines by a COX-2 inhibitor, NS-398. *Clin Cancer Res* 2001; 7:1410-1418.
- Bafico A, Liu G, Yaniv A, Gazit A, Aaronson SA. Novel mechanism of Wnt signaling inhibition mediated by Dickkopf-1 interaction with LRP6/ Arrow. *Nat Cell Biol* 2001; 3:683-6.
- Baker SJ, Fearon ER, Nigro JM, Hamilton SR, Preisinger AC, Jessup JM, vanTuinen P, Ledbetter DH, Barker DF, Nakamura Y, et al. Chromosome 17 deletions and p53 gene mutations in colorectal carcinomas. *Science* 1989 Apr 14;244(4901):217-21.
- Barbacid M. ras genes. *Annu Rev Biochem*. 1987; 56:779-827.
- Barnes CJ, Lee M. Chemoprevention of spontaneous intestinal adenomas in the adenomatous polyposis coli Min mouse model with aspirin. *Gastroenterology* 1998;114:873-877.

- Batlle E, Sancho E, Franci C, Dominguez D, Monfar M, Baulida J, Garcia de Herreros A. The transcription factor snail is a repressor of E-cadherin gene expression in epithelial tumor cells. *Nat Cell Biol* 2000; 2: 84-89.
- Bazan NG, Fletcher BS, Herschman HR, Mukherjee PK. Platelet-activating factor and retinoic acid synergistically activate the inducible prostaglandin synthase gene. *Proc Natl Acad Sci U S A*. 1994 Jun 7;91(12):5252-6.
- Beazer-Barclay Y, Levy DB, Moser AR, Dove WF, Hamilton SR, Vogelstein B, et al. Sulindac suppresses tumorigenesis in the Min mouse. *Carcinogenesis* 1996;17:1757-1760.
- Behrens J, Jerchow BA, Wurtele M, Grimm J, Asbrand C, Wirtz R, Kuhl M, Wedlich D, Birchmeier W. Functional interaction of an axin homolog, conductin, with beta-catenin, APC, and GSK3beta. *Science* 1998 Apr 24;280(5363):596-9.
- Behrens J. Loss of epithelial differentiation and gain of invasiveness correlates with tyrosine phosphorylation of the E-cadherin/beta-catenin complex in cells transformed with a temperature-sensitive v-SRC gene. *J. Cell Biol* 1993; 120: 757-766.
- Behrens J, Lowrick O, Klein-Hitpass L, Birchmeier R. The E-cadherin promoter: functional analysis of a G.C- rich region and an epithelial cell-specific palindromic regulatory element. *Proc. Natl., Acad Sci USA* 1991; 88:11495-11499.
- Bejsovec A . Wnt signaling : an embarrassment of receptors. *Curr Biol* 2000; 10: R919-R922.
- Bergin E, Levine JS, Koh JS, Lieberthal W. Mouse proximal tubular cell-cell adhesion inhibits apoptosis by a cadherin-dependent mechanism. *Am J Physiol Renal Physiol* 2000; 278:F758-F768.
- Berglund H, Olerenshaw D, Sankar A, Federwisch M, McDonald NQ, Driscoll PC. The three-dimensional solution structure and dynamic properties of the human FADD death domain. *J Mol Biol* 2000; 302: 171-88.
- Bhanot P, Brink M, Samos CH, Hsieh J-C, Wang Y, Macke JP, Andrew D, Nathans J, Musse R . A new member of the frizzled family from Drosophila functions as a Wingless receptor. *Nature* 1996; 382:225-230.
- Birchmeier W, Behrens J. Cadherin expression in carcinomas: role in the formation of cell junctions and the prevention of invasiveness. *Biochim Biophys Acta* 1994 May 27;1198(1):11-26. Review.

- Birge RB, Fajardo JE, Reichman C, Shoelson Z, Songyang Cantley LC, Hanafusa H. Identification and characterization of a high-affinity interaction between v-Crk and tyrosine-phosphorylated paxillin in CT10-transformed fibroblasts. *Mol Cell Biol* 1993; 13:4648-4856.
- Blanke CD. Celecoxib with chemotherapy in colorectal cancer. *Oncology (Huntingt)* 2002 Apr;16(4 Suppl 3):17-21. Review.
- Bodmer W, Bailey C, Bodmer J, Bussey H, Ellis A, Gorman P, Lucibello F, Murday V, Rider S, Scambler P. Localization of the gene for familial adenomatous polyposis on chromosome 5. *Nature* 1987; 328: 614-616.
- Borràs JM, Borràs J, Viladiu P, Bosch FX. Epidemiología y prevención del cáncer en Cataluña : 1975-1992. Barcelona : Servei Català de la Salut e Institut Català d'Oncologia, 1997.
- Borràs JM, Borras J, Bosch FX, Fernandez E, Galceran J, Gispert R, Gonzalez JR, Izquierdo A, Marcos R, Moreno V, Peris M, Puig X, Sanchez V, Viladiu P. Càncer Catalunya 2001. Institut Català d'Oncologia. Departament de Sanitat i Seguretat Sociala. L'Hospitalet, 2001.
- Bouton AH, Riggins RB, Bruce-Staskal PJ. Functions of the adapter protein Cas: signal convergence and the determination of cellular responses. *Oncogene* 2001 Oct 1;20(44):6448-58. Review.
- Boyle P, Langman JS. ABC of colorectal cancer. *Epidemiology BMJ* 2000; 321(7264): 805-808.
- Bracke MC, van Roy FM, Mareel MM. The E-cadherin/catenin complex in invasion and metastasis. *Curr Top Microbiol Immunol* 1996; 213: 123-161.
- Bradley RS, Brown AM. The proto-oncogene int-1 encodes a secreted protein associated with the extracellular matrix. *EMBO J* 1990; 9 :1569-1575.
- Brantjes H, Roose J, van De Wetering M, Clevers H. All Tcf HMG box transcription factors interact with Groucho-related co-repressors. *Nucleic Acids Res.* 2001 Apr 1;29(7):1410-9.
- Brennan P, Babbage JW, Burgering BM, Groner B, Reif K, Cantrell DA. Phosphatidylinositol 3-kinase couples the interleukin-2 receptor to the cell cycle regulator E2F. *Immunity* 1997 Nov;7(5):679-89.

- Brideau C, Kargman S, Liu S, Dallob AL, Ehrich EW, Rodger IW, Chan CC. A human whole blood assay for clinical evaluation of biochemical efficacy of cyclooxygenase inhibitors. *Inflamm Res* 1996 Feb;45(2):68-74.
- Brinkman A, van der Flier S, Kok EM and Dorssers LC. BCAR1, a human homologue of the adapter protein p130Cas, and antiestrogen resistance in breast cancer cells. *J Natl Cancer Inst* 2000; 92:112-120.
- Brockstedt E, Rickers A, Kostka S, Laubersheimer A, Dorken B, Wittmann-Liebold B, Bommert K, Otto A. Identification of apoptosis-associated proteins in a human Burkitt lymphoma cell line. Cleavage of heterogeneous nuclear ribonucleoprotein A1 by caspase 3. *J Biol Chem* 1998; 273: 28057-28064.
- Brooks PC, Montgomery AM, Rosenfeld M, et al. Integrin alpha v beta 3 antagonists promote tumor regression by inducing apoptosis of angiogenic blood vessels. *Cell* 1994; 79:1157-1164.
- Brown WA, Skinner SA, Malcotenti-Wilson C, Vogiagis D, O'Brien PE. Non-steroidal anti-inflammatory drugs with activity against either cyclooxygenase-1 or cyclooxygenase-2 inhibit colorectal cancer in a DMH rodent model by inducing apoptosis and inhibiting cell proliferation. *Gut* 2001; 48: 660-666.
- Bullions LC, Notterman DA, Chung LS, Levine AJ. Expression of wild-type alpha-catenin protein in cells with a mutant alpha-catenin gene restores both growth regulation and tumor suppressor activities. *Mol Cell Biol*. 1997 Aug;17(8):4501-8.
- Burlacu A. Regulation of apoptosis by Bcl-2 family proteins *J Cell Mol Med* 2003; 17(3): 249-257.
- Burnham MR, Harte MT, Richardson A, Parsons JT, Bouton AH. The identification of p130cas-binding proteins and their role in cellular transformation *Oncogene* 1996; 12:2467-2472.
- Bus PJ, Verspaget HW, Lamers CB, Griffioen G. Chemoprevention of colorectal cancer by non-steroidal anti-inflammatory drugs. *Scand J Gastroenterol Suppl* 2000; 232: 101-104.
- Cahill D, Lengauer C, Yu J, Riggins G, Willson J, Markowitz S, Kinzler K, Vogelstein B. Mutations of mitotic checkpoint genes in human cancers. *Nature* 1998; 392:300-303.

- Calalb MB, Polte TR and Hanks SK. Tyrosine phosphorylation of focal adhesion kinase at sites in the catalytic domain regulates kinase activity: a role for Src family kinases. *Mol Cell Biol* 1995; 15:954-963.
- Campisi J. Cancer, aging and cellular senescence. *In Vivo* 2000; 14:183-188.
- Cance WG, Harris JE, Iacocca M,V, Roche E, Yang X, Chang J, Simkins S, Xu L. Immunohistochemical analyses of focal adhesion kinase expression in benign and malignant human breast and colon tissues: correlation with preinvasive and invasive phenotypes. *Clin Cancer Res* 2000; 6:2417-2423.
- Canman CE, Lim DS. The role of ATM in DNA damage responses and cancer. *Oncogene* 1998 Dec 24;17(25):3301-8.
- Cano A., Perez-Moreno M.A., Rodrigo I., Locascio A., Blanco M.J., del Barrio M.G., Portillo F., Nieto M.A. The transcription factor snail controls epithelial-mesenchymal transitions by repressing E-cadherin expression. *Nat. Cell Biol.* 2000 ; 2: 76-83.
- Cardone MH, Roy N, Stennicke HR, Salvesen GS, Franke TF, Stanbridge E, Frisch S, Reed JC. Regulation of cell death protease caspase-9 by phosphorylation. *Science* 1998 Nov 13;282(5392):1318-21.
- Carpenter CL, Cantley LC. Phosphoinositide kinases. *Curr Opin Cell Biol* 1996; 8:153-158.
- Chan FK, Zhang J, Cheng L, Shapiro DN, Winoto A. Identification of human and mouse p19, a novel CDK4 and CDK6 inhibitor with homology to p16INK4. *Mol Cell Biol* 1995; 15, 2682-2688.
- Chan FK, Hung LC, Suen BYm Wu JC, Lee KC, Leung VK, et al. Celecoxib versus diclofenac and omeprazole in reducing the risk of recurrent ulcer bleeding in patients with arthritis. *N Engl J Med* 2002; 347:2104-2110.
- Chan PC, Lai JF, Cheng CH, Tang MJ, Chiu CC, Chen HC. Suppression of ultraviolet irradiation-induced apoptosis by overexpression of focal adhesion kinase in Madin-Darby canine kidney cells. *J Biol Chem* 1999; 274:26901-26906.
- Chan PY, Kanner SB, Whitney G and Arufo A . A transmembrane-anchored chimeric focal adhesion kinase is constitutively activated and phosphorylated at tyrosine residues identical to pp125FAK. *J Biol Chem* 1994; 269:20567-20574.

- Chan TA, Morin PJ, Vogelstein B and Kinzler KW. Mechanisms underlying nonsteroidal antiinflammatory drug-mediated apoptosis. *Proc Natl Acad Sci USA* 1998; 95: 681-686.
- Chandrasekharan NV, Dai H, Roos KL, Evanson NK, Tomsik J, Elton TS, Simmons DL. COX-3, a cyclooxygenase-1 variant inhibited by acetaminophen and other analgesic/antipyretic drugs: cloning, structure, and expression. *Proc Natl Acad Sci USA*. 2002 Oct 15;99(21):13926-31.
- Chau I, Cunningham D. Adjuvant therapy in colon cancer: current status and future directions. *Cancer Treatment reviews* 2002;28:223-236.
- Chen CR, Kang Y, Massagué J. Defective repression of c-myc in breast cancer cells: A loss at the core of the transforming growth factor beta growth arrest program. *Proc Natl Acad Sci USA* 2001; 98:992-999.
- Chen G, Fernandez J, Mische S, Courey AJ. A functional interaction between the histone deacetylase Rpd3 and the corepressor groucho in *Drosophila* development. *Genes Dev.* 1999 Sep 1;13(17):2218-30.
- Chen HC, Chan PC, Tang MJ, Cheng CH, Chang TJ. Tyrosine phosphorylation of focal adhesion kinase stimulated by hepatocyte growth factor leads to mitogen-activated protein kinase activation. *J Biol Chem.* 1998 Oct 2;273(40):25777-82.
- Chen Q, Ames BN. Senescence-like growth arrest induced by hydrogen peroxide in human diploid fibroblast F65 cells 1994 *Proc Natl Acad Sci USA* 1994; 91:4130-4134.
- Chen Q, Fischer A, Reagan JD, Yan LJ, Ames BN. Oxidative DNA damage and senescence of human diploid fibroblast cells. *Proc Natl Acad Sci USA* 1995; 92:4337-4341.
- Cheng CW, Wu PE, Yu JC, Huang CS, Yue CT, Wu CW, Shen CY. Mechanisms of inactivation of E-cadherin in breast carcinoma : modification of the two-hit hypothesis of tumor suppressor gene. *Oncogene* 2001; 20: 3814-3823.
- Cheresh DA et al. Regulation of cell contraction and membranes ruffling by distinct signals in migratory cells. *J Cell Biol* 1999; 146:1107-1116.
- Cho SY, Klemke RL. Extracellular-regulated kinase activation and CAS/Crk coupling regulate cell migration and suppress apoptosis during invasion of the extracellular matrix. *J Cell Biol* 2000 Apr 3;149(1):223-36.

- Cho SY, Klemke RL. Purification of pseudopodia from polarized cells reveals redistribution and activation of Rac through assembly of a CAS/Crk scaffold. *J Cell Biol.* 2002 Feb 18;156(4):725-36.
- Chu E, Callender MA, Farrell MP, Schmitz JC. Thymidylate synthase inhibitors as anticancer agents: from bench to bedside. *Cancer Chemother Pharmacol.* 2003 Jul;52 Suppl 1:S80-9.
- Chung DC, Rustgi AK. DNA mismatch repair and cancer. *Gastroenterology* 1995; 109:1685-1699.
- Comijn J, Berx G, Vermassen K, Verschueren K, van Grunsven L, Bruyneel E, Marcel M, Huylebroek D, van Roy F. The two handed E box binding zinc finger protein SIP1 downregulates E-cadherin and induces invasion. *Mol Cell* 2001 7:1267-1278.
- Coniglio SJ, Jou TS, Symons M. Rac-1 protects epithelial cells against anoikis. *J Biol Chem* 2001; 276: 28113-28120.
- Cory S, Adams JM. The Bcl-2 family: regulators of the cellular life-or-death switch. *Nat Rev Cancer* 2002; 2(9):647-56.
- Cowin P. Unraveling the cytoplasmic interactions of the cadherin superfamily. *Proc Natl Acad Sci USA* 1994 Nov 8;91(23):10759-61.
- Coyne DW, Nickols M, Bertrand W, Morrison AR. Regulation of mesangial cell cyclooxygenase synthesis by cytokines and glucocorticoids. *Am J Physiol* 1992 Jul;263(1 Pt 2):F97-102.
- D'Agostino L, Pignata S, Tirtto G, D'adamo G, Contegiacomo A, Daniele B, Calderopoli R, Pizzi C, Squame G, Mazzacca G. Hypergastrinemia in rats with azoxymethane-induced colon cancers. *Int J Cancer* 1995; 61(2): 223-6.
- Dashwood RH, Suzui M, Nakagama H, Sugimura T and Nagao M. High frequency of β -catenin (Ctnb1) mutations in the colon tumors induced by two heterocyclic amines in the F344 ras . *Cancer Res* 1998; 58:1127-1129.
- De Caestecker MP, Piek E, Roberts AB. Role of transforming growth factor-beta signaling in cancer. *J.Natl Cancer Inst* 2000; 92:1388-1402.
- De Gramont A, Figer A, Seymour M, et al. Leuvocorin and fluorouracil with or without oxaliplatin as first-line treatment in advanced colorectal cancer. *J Clin Oncol* 2000;18(16): 2938-47.

- De Vita VT, Hellman S, Rosenberg SA (ed.). Cancer. Principles and Practice of Oncology. 5th edition. 1997. Lippincott-Raven Publishers. Philadelphia.PA.
- De Wind N, Dekker M, Berns A, Radmand M, te Riele H. Inactivation of the mouse Msh2 gene results in mismatch repair deficiency, methylation, tolerance, hyperrecombination, and predisposition to cancer. *Cell* 1995; 82(2): 321-30.
- Dedhar S. Cell-substrate interactions and signalling through integrin linked kinase (ILK) *Curr Opin Cell Biol* 2000; 12:250-256.
- DeFilippo C, Caderni G, Bazzicalupo M, Briani C, Giannini A, Fazi M and Dolara P. Mutations of the Apc gene in experimental colorectal carcinogenesis induced by azoxymethane in F344 rats. *Br J Cancer* 1998; 77:2148-2151.
- DeJong R, Vanwijk A, Haataja L, Heisterkamp N and Groffen J. BCR/ABL-induced leukemogenesis causes phosphorylation of Hef1 and its association with Crkl. *J Biol Chem* 1997; 272:32649-32655.
- Delcommenne M, Tan C, Gray V, Ruel L, Woodgett J, Dedhar S. Phosphoinositide-3-OH kinase-dependent regulation of GSK3 and PKB/AKT by the integrin linked kinase (ILK). *Proc Natl Acad Sci USA* 1998; 95: 11211-11216.
- Dempke W, Rie C, Grothey A, Schmoll HJ. Cyclooxygenase-2: a novel target for cancer chemotherapy? *J Cancer Res Clin Oncol* 2001; 127: 411-417.
- DeWitt D, Smith WL. Yes, but do they still get headaches? *Cell* 1995 Nov 3;83(3):345-8.
- DeWitt DL, Meade EA. Serum and glucocorticoid regulation of gene transcription and expression of the prostaglandin H synthase-1 and prostaglandin H synthase-2 isozymes. *Arch Biochem Biophys* 1993 Oct;306(1):94-102.
- DiLeonardo A, Linke SP, Clarkin K and Wahl GM. DNA damage triggers a prolonged p53-dependent G1 arrest and long-term induction of Cip1 in normal human fibroblasts. *Genes Dev* 1994; 8:2540-2551.
- Dimri G, Lee X, Basile G, Acosta M, Scott G, Roskelley C, Medrano EE, Liskens M, Rubeji I, Pereira-Smith O, Peacocke M and Campisi J. A bio-marker that identifies senescent human cells in culture and in aging skin *in vivo*. *Proc Natl Acad Sci USA* 1995; 92: 9363-9367.

- Ding XZ, Tong WG, Adrian TE. Blockade of cyclooxygenase-2 inhibits proliferation and induces apoptosis in human pancreatic cancer cells. *Anticancer Res* 2000; 20:2625-31.
- Dong Z, Radinsky R, Fan D, Tsan R, Bucana CD, Wilmanns C, Fidler IJ. Organ-specific modulation of steady-state mdr gene expression and drug resistance in murine colon cancer cells. *J Natl Cancer Inst* 1994 Jun 15;86(12):913-20.
- Douglass EC. Development of ZD1839 in colorectal cancer. *Semin Oncol* 2003 Jun;30(3 Suppl 6):88-92.
- DuBois RN, Awad J, Morrow J, Roberts LJ 2nd, Bishop PR. Regulation of eicosanoid production and mitogenesis in rat intestinal epithelial cells by transforming growth factor-alpha and phorbol ester. *J Clin Invest* 1994 Feb;93(2):493-8.
- Dubois RN, Radhika A, Reddy BS, Entingh AJ. Increased cyclooxygenase-2 levels in carcinogen-induced rat colonic tumors. *Gastroenterology* 1996;110:1259-62.
- Duffy MJ. Cellular oncogenes and suppressor genes as prognostic markers in cancer. *Clin Biochem* 1993 Dec;26(6):439-47. Review.
- Eberhart CE, Coffey RJ, Radhika A, Giardello FM, Ferrenbach S, Dubois RN. Up-regulation of cyclooxygenase-2 gene expression in human colorectal adenomas and adenocarcinomas. *Gastroenterology* 1994; 107:1183-8.
- Eide BL, Turck CW, Escobedo JA. Identification of Tyr-397 as the primary site of tyrosine phosphorylation and pp60src association in the focal adhesion kinase, pp125FAK. *Mol Cell Biol* 1995 May;15(5):2819-27
- Eisenmann KM, McCarthy JB, Simpson MA, Keely PJ, Guan JL, Tachibana K, Lim L, Manser E, Furcht LT and Iida J. Melanoma chondroitin sulphate proteoglycan regulates cell spreading through Cdc42, Ack-1 and p130cas. *Nat Cell Biol* 1999; 1:507-513.
- El-Deiry WS, Harper JW, O'Connor PM, Velculescu VE, Canman CE, et al. WAF1/CIP1 is induced in p53-mediated G1 arrest and apoptosis. *Cancer Res* 1994; 54:1169-74.
- Elder DJ, Halton DE, Hague A, Paraskeva C. Induction of apoptotic cell death in human colorectal carcinoma cell lines by a cyclooxygenase-2 (COX-2)-selective nonsteroidal anti-inflammatory drug: independence from COX-2 protein expression. *Clin Cancer Res* 1997 Oct;3(10):1679-83.

- Elder DJE, Halton DE, Crew TE, Paraskeva C. Apoptosis induction and cyclooxygenase-2 regulation in human colorectal adenoma and carcinoma cell lines by the cyclooxygenase-2 selective non-steroidal anti-inflammatory drug NS-398. *Int J Cancer* 2000; 86:553-560.
- Ellis RE, Yuan JY, Horvitz HR. Mechanisms and functions of cell death. *Annu Rev Cell Biol* 1991; 7:663-698.
- Eshleman J, Casey G, Kochera M, Sedwick W, Swinler S, Veigl M, Willson J, Stuart S, Markowitz S. Chromosome number and structure both are markedly stable in RER colorectal cancers and are not destabilized by mutation of p53. *Oncogene* 1998; 17: 719-725.
- Evans T, Rosenthal ET, Youngblom J, Distel D, Hunt T. Cyclin: a protein specified by maternal mRNA in sea urchin eggs that is destroyed at each cleavage division. *Cell* 1983; 33:389.
- Eymin B., Gazzeri S., Brambilla C. And Brambilla E. Mdm2 overexpression and p14ARF inactivation are two mutually exclusive events in primary human lung tumors. *Oncogene* 2002; 2:2750-2761.
- Fadok VA, Voelker DR, Campbell PA, Coben JJ, Bratton DL, Henson PM. Exposure of phosphatidylserine on the surface of apoptotic lymphocytes triggers specific recognition and the removal by macrophages. *J Immunol* 1992; 148(7): 2207-2216.
- Fearon ER, Pierceall WE. The deleted in colorectal cancer (DCC) gene: a candidate tumour suppressor gene encoding a cell surface protein with similarity to neural cell adhesion molecules. *Cancer Surv* 1995;24:3-17.
- Fearon ER, Vogelstein B. A genetic model for colorectal tumorigenesis. *Cell* 1990; 61(5) :759.
- Fearon ER. Molecular abnormalities in colon and rectal cancer. In :Mendelsohn J, Howley PM, Israel MA, Liotta LA, eds. *The molecular basis of cancer*. Philadelphia: WB Saunders, 1995:340.
- Ferreira SH, Moncada S, Vane JR. Indomethacin and aspirin abolish prostaglandin release from the spleen. *Nat New Biol* 1971 Jun 23;231(25):237-9.
- Fidler IJ. New development in in vivo models of neoplasia. *Cancer Metastasis Rev* 1991; 10(3): 191-2.

- Fincham VJ, Unlu M, Brunton VG, Pitts JD, Wyke JA., Frame MC. Translocation of Src kinase to the cell periphery is mediated by the actin cytoskeleton under the control of the Rho family of small G proteins. *J Cell Biol* 1996; 135:1551-1564.
- Flygare J, Armstrong RC, Wennborg A, Orsan S, Hellgren D. Proteolytic cleavage of HsRad51 during apoptosis. *FEBS Lett* 1998; 427: 247-251.
- Fodde R. The APC gene in colorectal cancer. *Eur J Cancer* 2002; May 38(7):867-871.
- Fodstad O. Tumorigenicity and dissemination of human tumors in congenitally immunodeficient mice. *J Natl Cancer Inst* 1991; 83(19):1419-29.
- Frame MC. Src in cancer: Deregulation and consequences for cell behavior. *Biochim Biophys Acta* 2002;1602:114-130.
- Franke TF, Kaplan DR, Cantley LC, Toker A. Direct regulation of the Akt proto-oncogene product by phosphatidylinositol-3,4-bisphosphate. *Science* 1997 Jan 31;275(5300):665-8.
- Franzén P, ten Dijke P, Ichtijo H, Yamashita H., Schulz P, Heldin C.H., et al. Cloning of a TGF beta type I receptor that forms a heteromeric complex with the TGF beta type II receptor. *Cell* 1993; 75:681-92.
- Frisch SM, Ruoslahti E. Integrins and anoikis. *Curr Opin Cell Biol* 1997; 9:701-706.
- Frisch SM, Francis H. Disruption of epithelial cell-matrix interactions induces apoptosis. *J Cell Biol* 1994 Feb;124(4):619-26.
- Frisch SM. E1a induces the expression of epithelial characteristics. *J Cell Biol* 1994 Nov;127(4):1085-96.
- Fu JY, Masferrer JL, Seibert K, Raz A, Needleman P. The induction and suppression of prostaglandin H₂ synthase (cyclooxygenase) in human monocytes. *J Biol Chem* 1990 Oct 5;265(28):16737-40.
- Fu XY, Besterman JM, Monosov A, Hoffman RM. Models of human metastatic colon cancer in nude mice orthotopically constructed by using histologically intact patient specimens. *Proc Natl Acad Sci USA* 1991 Oct 15;88(20):9345-9.
- Fu XY, Guadagni F, Hoffman RM. A metastatic nude-mouse model of human pancreatic cancer constructed orthotopically with histologically intact patient specimens. *Proc Natl Acad Sci USA* 1992; 89(12): 6545-9.

- Fu XY, Theodorescu D, Kerbel RS, Hoffman RM. Extensive multi-organ metastasis following orthotopic implantation of histologically-intact human bladder carcinoma tissue in nude mice. *Int J Cancer* 1991; 49(6): 938-9.
- Fukai F, Mashimo M, Akiyama K, Goto T, Tanuma S, Katayama T. Modulation of apoptotic cell death by extracellular matrix proteins and a fibronectin-derived antiadhesive peptide. *Exp Cell Res* 1998; 242:92-99.
- Gabriel SE, Jaakkimainen L, Bombardier. Risk for serious gastrointestinal complications related to use of nonsteroidal anti-inflammatory drugs. A meta-analysis. *C. Ann Intern Med* 1991 Nov 15;115(10):787-96.
- Gasparini G, Longo R, Sarmiento R, Morabito A. Inhibitors of cyclo-oxygenase 2: a new class of anticancer agents? *Lancet Oncol* 2003 Oct;4(10):605-15. Review.
- Geng Y, Blanco FJ, Cornelisson M, Lotz M. Regulation of cyclooxygenase-2 expression in normal human articular chondrocytes. *J Immunol* 1995 Jul 15;155(2):796-801.
- Giardiello FM, Hamilton SR, Krush AJ, Piantadosi S, Hylind LM, Celano P, Booker SV, Robinson CR, Offerhaus GJ. Treatment of colonic and rectal adenomas with sulindac in familial adenomatous polyposis. *N Engl J Med* 1993 May 6;328(18):1313-6.
- Giardiello FM. Gastrointestinal polyposis syndromes and hereditary nonpolyposis colorectal cancer, in Rustgi AK (eds): *Gastrointestinal cancers: Biology, Diagnosis and Therapy*. Philadelphia, Lippincott-Raven, 1995, pp367-377.
- Giardina C, Boulares H, Inan MS. NSAIDs and butyrate sensitize a human colorectal cancer cell line to TNF-alpha and Fas ligation: the role of reactive oxygen species. *Biochim Biophys Acta* 1999 Jan 11;1448(3):425-38.
- Giese K, Cox J, Grosschedl R. The HMG domain of lymphoid enhancer factor 1 bends DNA and facilitates assembly of functional nucleoprotein structures. *Cell* 1992 Apr 3;69(1):185-95.
- Giovannucci E, Stampfer MJ, Colditz GA, et al. Folate, methionine, and alcohol intake and risk of colorectal adenoma. *J Natl Cancer Inst* 1993; 85(11) 875-84.
- Giovannucci E, Willett WC. Dietary factors and risk of colon cancer. *Ann Med* 1994 Dec;26(6):443-52. Review.

- Giroldi L.A., Bringuer P.P., de Weijert M., Jansen C., van Bokhoven A., Schalken J.A. Role of E boxes in the repression of E-cadherin expression. *Biochem Biophys Res Commun* 1997; 241: 453-458.
- Glaser T, Wagenknecht B and Weller M. Identification of p21 as a target of cycloheximide-mediated facilitation of CD95-mediated apoptosis in human malignant glioma cells. *Oncogene* 2001; 20: 4757-4767.
- Gonzalez-Garcia I, Moreno V, Navarro M, Marti-Rague J, Marcuello E, Benasco C, Campos O, Capella G, Peinado MA. Standardized approach for microsatellite instability detection in colorectal carcinomas. *J Natl Cancer Inst* 2000 Apr 5;92(7):544-9.
- Gorospe M, Cirielli C, Wang X, Seth P, Capogrossi MC, Holbrook NJ. p21(Waf1/Cip1) protects against p53-mediated apoptosis of human melanoma cells. *Oncogene* 1997; 14:929-935.
- Gorospe M, Wang X, Guyton KZ, Holbrook NJ. Protective role of p21(Waf1/Cip1) against prostaglandin A2-mediated apoptosis of human colorectal carcinoma cells. *Mol Cell Biol* 1996; 16:6654-6660.
- Grady WM. Genomic instability and colonic cancer. *Cancer and Metastasis Reviews* 2004; 23:11-27.
- Graff JR, Greenberg VE, Herman JG, Westra WH, Boghaert ER, Ain KB, Saji M, Zeiger MA, Zimmer SG, Baylin SB. Distinct patterns of E-cadherin CpG island methylation in papillary, follicular, Hurthle's cell, and poorly differentiated human thyroid carcinoma. *Cancer Res* 1998; 58, 2063-2066.
- Grindey GB. Current status of cancer drug development: failure or limited success? *Cancer Cells* 1990; 2(6):163-71.
- Groden J, Thliveris A, Samowitz W, Carlson M, gelbert L, Albertsen H, Joslyn G, Stevens J, Spirio L, Robertson M, et al. Identification and characterization of the familial adenomatous polyposis coli gene. *Cell*.1991 Aug 9; 66(3):589-600.
- Grosch S, Tegeder I, Niederberger E, Brautigam L, Geisslinger G. COX-2 independent induction of cell cycle arrest and apoptosis in colon cancer cells by the selective COX-2 inhibitor celecoxib. *FASEB J* 2001 Dec;15(14):2742-4
- Grünwald V and Hidalgo M. Development of the epidermal growth factor receptor inhibitor OSI-774. *Semin Oncol*. 2003 Jun;30(3 Suppl 6):88-92.

- Gu Y, Turck CW, Morgan DO. Inhibition of CDK2 activity in vivo by an associated 20K regulatory subunit. *Nature* 1993; 366:707-710.
- Guan JL. Role of focal adhesion kinase in integrin signaling. *Int J Biochem Cell Biol* 1997 Aug-Sep;29(8-9):1085-96.
- Guan KL, Jenkins CW, Li Y, Nichols MA, Wu X, O'Keefe CL, Matera AG, Xiong Y. Growth suppression by p18, a p16INK4/MTS1- and p14INK4B/MTS2- related CDK6 inhibitor, correlates with wild-type pRb function. *Genes Dev* 1994; 8, 2939-2952.
- Guo L, Sanders PW, Woods A, Wu C. The distribution and regulation of integrin-linked kinase in normal and diabetic kidneys. *Am J Pathol* 2001 Nov;159(5):1735-42.
- Gura T. Systems for identifying new drugs are often faulty. *Science* 1997; 278(5340):1041-42.
- Hall M, Peters G. Genetic alterations of cyclins, cyclin-dependent kinases, and Cdk inhibitors in human cancer. *Adv Cancer Res* 1996; 68:67-108.
- Hamaguchi M, Matsuyoshi N, Ohnishi Y, Gotoh B, Takeichi M, Nagai Y. p60v-src causes tyrosine phosphorylation and inactivation of the N-cadherin-catenin cell adhesion system. *EMBO J* 1993 Jan;12(1):307-14.
- Hamasaki Y, Kitzler J, Hardman R, Nettesheim P, Eling TE. Phorbol ester and epidermal growth factor enhance the expression of two inducible prostaglandin H synthase genes in rat tracheal epithelial cells. *Arch Biochem Biophys* 1993 Jul;304(1):226-34.
- Hamilston SR, Liu B, Parsons RE, et al. The molecular basis of Turcot's syndrome. *N Engl J Med* 1995; 332: 839.
- Han C, Leng J, Demetris AJ, Wu T. Cyclooxygenase-2 promotes human cholangiocarcinoma growth: evidence for cyclooxygenase-2-independent mechanism in celecoxib-mediated induction of p21waf1/cip1 and p27kip1 and cell cycle arrest. *Cancer Res* 2004 Feb 15;64(4):1369-76.
- Han Z, Pantazis P, Wyche JH, Kouttab N, Kidd VJ and Hendrickson EA. A FADD-dependent mechanism mediates the apoptotic action of non-steroidal antiinflammatory drugs in the human leukemic Jurkat cell line. *J Biol Chem* 2001 Oct 19;276(42):38748-54.
- Hanahan D, Weinberg RA. The hallmarks of cancer. *Cell* 2000; 100(1):57-70.

- Hanks SK and Polte TR. Signaling through focal adhesion kinase. *Bioessays* 1997 Feb;19(2):137-45.
- Hannigan GE, Leung-Hagesteijn C, Fitz-Gibbon L, Coppolino MG, Radeva G, Filmus J, Bell JC and Dedhar S. Regulation of cell adhesion and anchorage-dependent growth by a new beta 1-integrin-linked protein kinase. *Nature* 1996; 379:91-96.
- Hannon G.J, Beach D. p15INK4b is a potential effector of TGF- β induced cell cycle arrest. *Nature* 1994; 371:257-261.
- Harrington EO, Smeglin A, Newton J, Ballard G, Rounds S. Protein tyrosine phosphatase-dependent proteolysis of focal adhesion complexes in endothelial cell apoptosis *Am J Physiol Lung Cell Mol Physiol* 2001; 280:L342-L353.
- Harris RC, McKenna JA, Akai Y, Jacobson HR, Dubois RN, Breyer MD. Cyclooxygenase-2 is associated with the macula densa of rat kidney and increases with salt restriction. *J Clin Invest* 1994 Dec;94(6):2504-10.
- Hart M, Concorde JP, Lassot I, Albert I, del los Santos R, Durand H, Perret C, Rubinfeld B, Margottin F, Benarous R, Polakis P. The F-box protein beta-TrCP associates with phosphorylated beta-catenin and regulates its activity in the cell. *Curr Biol* 1999 Feb 25;9(4):207-10.
- Hart MJ, de los Santos R, Albert IN, Rubinfeld B, Polakis P. Downregulation of beta-catenin by human Axin and its association with the APC tumor suppressor, beta-catenin and GSK3 beta. *Curr Biol* 1998 May 7;8(10):573-81.
- Harte MT, Macklem M, Weidow CL, Parsons JT, Bouton AH. Identification of two focal adhesion targeting sequences in the adapter molecule p130(Cas). *Biochim Biophys Acta* 2000; 1499:34-48.
- Harvey JJ. An unidentified virus which causes the rapid production of tumours in mice. *Nature* 1964; 204:1104-1105.
- Hawcroft G, D'Amico M, Albanese C, Markham AF, Pestell RG, Hull MA. Indomethacin induces differential expression of beta-catenin, gamma-catenin and T-cell factor target genes in human colorectal cancer cells. *Carcinogenesis* 2002 Jan;23(1):107-14.
- Hayashi H, Abdollah S, Qiu Y, Cai J, Xu YY, Grinnell BW, Richardson MA, Topper JN, Gimbrone MA Jr, Wrana JL, Falb D. The MAD-related protein Smad7 associates

- with the TGFbeta receptor and functions as an antagonist of TGFbeta signaling. *Cell* 1997 Jun 27;89(7):1165-73.
- Hayflick L and Moorhead PS. The serial cultivation of human diploid cell strains. *Exp Cell Res* 1961; 37:585-621.
 - He TC, Chan TA, Vogelstein B, Kinzler KW. PPARdelta is an APC-regulated target of nonsteroidal anti-inflammatory drugs. *Cell* 1999 Oct 29;99(3):335-45.
 - He TC, Sparks AB, Rago C, Hermeking H, Zawel L, da Costa LT, Morin PJ, Vogelstein B, Kinzler KW. He TC, Sparks AB, Rago C, Hemerkin. Identification of c-MYC as a target of the APC pathway. *Science* 1998 Sep 4;281(5382):1509-12.
 - Heldin CH, Miyazono K, ten Dijke P. TGF-beta signalling from cell membrane to nucleus through SMAD proteins. *Nature* 1997; 390: 465-71.
 - Henderson BR. Nuclear-cytoplasmic shuttling of APC regulates beta-catenin subcellular localization and turnover. *Nat Cell Biol* 2000 Sep;2(9):653-60
 - Hengartner MO, Horvitz HR. *C.elegans* cell survival gene ced-9 encodes a functional homolog of the mammalian proto-oncogene bcl-2. *Cell* 1994 Feb 25;76(4):665-76.
 - Hermiston ML and Gordon JL. In vivo analysis of cadherin function in the mouse intestinal epithelium: Essential roles in adhesion , maintenance of differentiation, and regulation of programmed cell death- *J Cell Biol* 1995; 129:489-506.
 - Hermsen M, Postma C, Baak J, Weiss M, Rapallo A, Sciuotto A, Roemen G, Arends JW, Williams R, Giaretti W, De Goeij A, Meijer G. Colorectal adenoma to carcinoma progression follows multiple pathways of chromosomal instability. *Gastroenterology* 2002; 123: 1109-1119.
 - Higgins GA, Dwight RW, Smith JV, Keehn RJ. Fluorouracil as an adjuvant to surgery in carcinoma of the colon. *Arch Surg.* 1971 Apr;102(4):339-43.
 - Higuchi T, Iwama T, Yoshinaga K, Takooka M, Taketo MM and Sugihara K. A randomized, double-blind, placebo-controlled trial of the effects of rofecoxib, a selective cyclooxygenase-2 inhibitors, on rectal polyps in familial adenomatous polyposis patients. *Clin Cancer Res* 2003; 9: 4756-4760.
 - Hinck L, Nathke I, Papkoff J, Nelson W. Dynamics of cadherin/catenin complex formation: Novel protein interactions and pathways of complex assembly. *J Cell Biol* 1994; 125:1327-1340.

- Hirsch T, Marzo I, Kroemer G. Role of the mitochondrial permeability transition pore in apoptosis. *Biosci Rep* 1997 Feb;17(1):67-76. Review.
- Hirsch T, Marchetti P, Susin SA, Dallaporta B, Zamzami N, Marzo I, Geuskens M, Kroemer G. The apoptosis-necrosis paradox. Apoptogenic proteases activated after mitochondrial permeability transition determine the mode of cell death. *Oncogene* 1997; 15: 1573-1581.
- Hirst JJ, Teixeira FJ, Zakar T, Olson DM. Prostaglandin endoperoxide-H synthase-1 and -2 messenger ribonucleic acid levels in human amnion with spontaneous labor onset. *J Clin Endocrinol Metab* 1995 Feb;80(2):517-23.
- Hockenberry D, Nuñez G, Milliman C, Schreiber RD, Kormeyer SJ. Bcl-2 is an inner mitochondrial membrane protein that blocks programmed cell death. *Nature* 1990; 348(6299):334-6.
- Hoff PM. Practical considerations in the use of oral fluoropyrimidines. *Semin Oncol* 2003 Jun;30(3 Suppl 6):88-92.
- Hoffman RM. Orthotopic is orthodox: why are orthotopic-transplant metastatic models different from all other models? *J Cell Biochem* 1994 Sep;56(1):1-3. Review.
- Honda R and Yasuda H. Activity of MDM2, a ubiquitin ligase, toward p53 or itself is dependent on the RING finger domain of the ligase. *Oncogene* 2000; 2:1473-1476.
- Hsu AL, Ching TT, Wang DS, Song X, Rangnekar VM, Chen CS. The cyclooxygenase-2 inhibitor celecoxib induces apoptosis by blocking Akt activation in human prostate cancer cells independently of Bcl-2. *J Biol Chem* 2000 Apr 14;275(15):11397-403.
- Hu PP, Datto MB, Wang XF. Molecular mechanisms of transforming growth factor-beta signaling. *Endocr Rev* 1998 Jun;19(3):349-63.
- Huber AH, Nelson WJ, Weis WI. Three-dimensional structure of the armadillo repeat region of beta-catenin. *Cell* 1997 Sep 5;90(5):871-82.
- Hungerford JE, Compton MT, Matter ML, Hoffstrom BG, Otey CA. Inhibition of pp125FAK in cultured fibroblasts results in apoptosis. *J Cell Biol* 1996; 135:1383-1390.
- Hunter T, Pines J. Cyclins and cancer. II: Cyclin D and CDK inhibitors come of age. *Cell* 1994; 79, 573-582.

- Hunter T, Sefton BM. Transforming gene product of Rous Sarcoma virus phosphorylates tyrosine. Proc Natl Acad Sci USA 1980; 77:1311-1315.
- Hurwitz HI, Fehrenbacher L, Cartwright T, et al. Bevacizumab (Avastin, a monoclonal antibody to vascular endothelial growth factor) prolongs survival in first-line colorectal cancer (CRC): results of a phase III trial of Bevacizumab in combination with bolus IFL (Irinotecan, 5-fluorouracil, Leuvocorin). Proc Am Soc Clin Oncol 2003; 22:3646.
- Huse M, Muir TW, Xu L, Chen YG, Kuriyan J, Massagué J. The TGF beta receptor activation process: an inhibitor- to substrate-binding switch. Mol Cell 2001; 8: 671-82.
- Hutter RV, Sabin LH. A universal staging system for cancer of the colon and rectum. Let there be light. Arch Pathol Lab Med 1986 May;110(5):367-8.
- Hwang D, Scollard D, Byrne J, Levine E. Expression of cyclooxygenase-1 and cyclooxygenase-2 in human breast cancer. Natl Cancer Inst 1998 Mar 18;90(6):455-60.
- Irby R, Mao W, Coppola D, et al. Activation of c-src by receptor tyrosine kinases in human colon cancer cells with high metastatic potential. Oncogene 1997; 15:3083-3090.
- Jaattela M.. Escaping cell death: survival proteins in cancer. Exp Cell Res 1999; 248: 30-43.
- Jacoby RF, Marshall DJ, Newton MA, Novakovic K, Tutsch K, Cole CE, Lubet RA, Kelloff GJ, Verma A, Moser AR and Dove WF. Chemoprevention of spontaneous intestinal adenomas in the APC^{MIN} mouse model by the nonsteroidal anti-inflammatory drug piroxicam. Cancer Res 1996; 56:710-714.
- Jacoby RF, Seibert K, Cole CE, Kelloff G and Lubet RA. The cyclooxygenase-2 inhibitor celecoxib is a potent preventive and therapeutic agent in the min mouse model of adenomatous polyposis. Cancer Res 2000; 60:5040-5044.
- Jaing XH, Lam SK, Lin MCM, Jiang SH, Kung HF, Slosberg ED, Soh JW, Weinstein IB and Wong BC. Novel target for induction of apoptosis by cyclooxygenase-2 inhibitor SC-236 through a protein kinase c-β1-dependent pathway. Oncogene 2002; 21:6113:6122.
- Jass JR, Whitehall LJ, young J, Leggett BA. Emerging concepts in colorectal neoplasia. Gastroenterology 2002; 123:882-876.

- Jeffrey PD, Russo AA, Polyak K, Gibbs E, Hurwitz J, Massague J, Pavletich NP. Mechanism of CDK activation revealed by the structure of a cyclinA-CDK2 complex. *Nature* 1995; 376:313.
- Jendrossek V, Handrick R, Belka C. Celecoxib activates a novel mitochondrial apoptosis signaling pathway. *FASEB J* 2003 Aug;17(11):1547-9.
- Johnson AJ, Hsu AL, Lin HP, Song X, Chen CS. The cyclo-oxygenase-2 inhibitor celecoxib perturbs intracellular calcium by inhibiting endoplasmic reticulum Ca²⁺-ATPases: a plausible link with its anti-tumour effect and cardiovascular risks. *Biochem J* 2002 Sep 15;366(Pt 3):831-7.
- Johnston PG, Fisher ER, Rockette HE, Fisher B, Wolmark N, Drake JC, Chabner BA, Allegra CJ. The role of thymidylate synthase expression in prognosis and outcome of adjuvant chemotherapy in patients with rectal cancer. *J Clin Oncol.* 1994 Dec;12(12):2640-7.
- Johnstone RW, Ruefli AA, Lowe SW. Apoptosis: a link between cancer genetics and chemotherapy. *Cell* 2002; 108(2):153-64.
- Jones DA, Carlton DP, McIntyre TM, Zimmerman GA, Prescott SM. Molecular cloning of human prostaglandin endoperoxide synthase type II and demonstration of expression in response to cytokines. *J Biol Chem* 1993 Apr 25;268(12):9049-54.
- Kaikuchi H, Ushijima T, Ochiai M, Imai K, Ito N, Yachi A, Sugimura T, Nagao M. Rare frequency of activation of the ki-ras gene in rat colon tumors induced by heterocyclic amines-possible alternative mechanisms of human colon carcinogenesis. *Mol Carcinog* 1993; 8:44-48.
- Kaikuchi H, Watanabe M, Ushijima T, Toyota M, Imai K, Weisburger JH, Sugimura T and Nagao M. Specific 5'-GGGA-3' to 5'-GGA-3' mutation of the Apc gene in rat colon tumors induced by 2-amino-1-methyl-6-phenylimidazo(4,5-b)pyridine. *Proc Natl Acad Sci USA* 1995; 92:910-914.
- Kanner SB, Reynolds AB, Wang HC, Vines RR, Parsons JT. The SH2 and SH3 domains of pp60src direct stable association with tyrosine phosphorylated proteins p130 and p110. *EMBO J* 1991; 10:1689-1698.
- Kantak SS, Kramer RH. E-cadherin regulates anchorage-independent growth and survival in oral squamous cell carcinoma cells. *J Biol Chem* 1998, 273;16953-16961.
- Kaplan KB, Swedlow JR, Varmus HE, Morgan DO. Association of p60c-src with endosomal membranes in mammalian fibroblasts. *J Cell Biol* 1992; 118:321-333.

- Kargman S, Charleson S, Cartwright M, Frank J, Riendeau D, Mancini J, Evans J, O'Neill G. Characterization of Prostaglandin G/H Synthase 1 and 2 in rat, dog, monkey, and human gastrointestinal tracts. *Gastroenterology* 1996 Aug;111(2):445-54.
- Kataoka H, Murayama T, Yokode M, Mori S, Sano H, Ozaki H, Yokota Y, Nishikawa S, Kita T. A novel snail-related transcription factor Smuc regulates basic helix-loop-helix transcription factor activities via specific E-box motifs. *Nucleic Acid Res* 2000 28: 626-633.
- Kavanagh J, Tresukosol D, Edwards C, Freedman R, Gonzalez de Leon C, Fishman A, Mante R, Hord M, Kudelka A. Carboplatin reinduction after taxane in patients with platinum-refractory epithelial ovarian cancer. *J Clin Oncol* 1995 Jul;13(7):1584-8.
- Kawamori T, Rao CV, Seibert K, Reddy BS. Chemopreventive activity of celecoxib, a specific cyclooxygenase-2 inhibitor against colon carcinogenesis. *Cancer Res* 1998; 58:409-412.
- Kazanov D, Dvory-Sobol H, Pick M, Liberman E, Strier L, Choen-Noyman E, Deutsch V, Kunik T, Arber N. Celecoxib but not rofecoxib inhibits the growth of transformed cells in vitro. *Clin Cancer Res* 2004 Jan 1;10(1 Pt 1):267-71.
- Kee BL, Bain G and Murre C. IL-7 alpha and E47: independent pathways required for development of multipotent lymphoid progenitors. *EMBO J* 2002; 21_103-113.
- Kemler R. Classical cadherins *Sem Cell Biol* 1992; 3:149-155.
- Kern MA, Schubert D, Sahi D, Schoneweiss MM, Moll I, Haugg AM, Dienes HP, Breuhahn K, Schirmacher P. Proapoptotic and antiproliferative potential of selective cyclooxygenase-2 inhibitors in human liver tumor cells. *Hepatology* 2002 Oct;36(4 Pt 1):885-94.
- Kerr JF, Wyllie AH, Currie AR. Apoptosis: a basic biological phenomenon with wide-ranging implications in tissue kinetics. *Br J Cancer* 1972 Aug;26(4):239-57. Review.
- Kim W, Kook S, Kim DJ, Teodorof C, Song WK. The 31-kDa caspase-generated cleavage product of p130cas functions as a transcriptional repressor of E2A in apoptotic cells. *J Biol Chem*. 2004 Feb 27;279(9):8333-42.
- Kinzler K, Vogelstein B. Lessons from hereditary colorectal cancer. *Cell* 1996; 87: 159-70.
- Kiong Y., Hannon G.J., Zhang H., Casso D., Kobayashi R and Beach. p21 i a universal inhibitor of cyclin kinases. *Nature* 1993; 366, 701-704.

- Kirsten WH, Mayer LA. Malignant lymphomas of extrathymic origin induced in rats by murine erythroblastosis virus. *J Natl Cancer Inst* 1967; 39: 311-335.
- Kishida S, Yamamoto H, Ikeda S, Kishida M, Sakamoto I, Koyama S, Kikuchi A. Axin, a negative regulator of the wnt signaling pathway, directly interacts with adenomatous polyposis coli and regulates the stabilization of beta-catenin. *J Biol Chem*. 1998 May 1;273(18):10823-6.
- Knudsen KA, Soler AP, Johnson KR, Wheelock MJ. Interaction of alpha-actinin with the cadherin/catenin cell-cell adhesion complex via alpha.catenin . *J Cell Biol* 1995; 130:67-77.
- Kondo S, Shinomura Y, Miyazaki Y, Kiyohara T, Tsutsui S, Kitamura S, Nagasawa Y, Nakahara M, Kanayama S, Matsuzawa Y. Mutations of the bak gene in human gastric and colorectal cancers. *Cancer Res* 2000; 60(16):4328-30.
- Kook S, Shim SR, Choi SJ, Ahnn J, Kim JL, Eom SH, Jung YK, Paik SG, Song WK. Caspase-mediated cleavage of p130cas in etoposide-induced apoptotic Rat-1 cells. *Mol Biol Cell* 2000; 11:929-939.
- Kroemer G, Zamzami N, Susin SA. Mitochondrial control of apoptosis. *Immunol Today* 1997 Jan;18(1):44-51. Review.
- Kujubu DA, Fletcher BS, Varnum BC, Lim RW, Herschman HR. TIS10, a phorbol ester tumor promoter-inducible mRNA from Swiss 3T3 cells, encodes a novel prostaglandin synthase/cyclooxygenase homologue. *J Biol Chem* 1991 Jul 15;266(20):12866-72.
- Kundu N, Smyth MJ, Samsel L, Fulton AM. Cyclooxygenase inhibitors block cell growth, increase ceramide and inhibit cell cycle. *Breast Cancer Res Treat* 2002 Nov;76(1):57-64.
- Labayle D, Fischer D, Vielh P, Drouhin F, Pariente A, Bories C, Duhamel O, Trousselot M, Attali P. Sulindac causes regression of rectal polyps in familial adenomatous polyposis. *Gastroenterology* 1991 Sep;101(3):635-9.
- Lagna G, Hata A, Hemmati-Brivanlou A, Massagué J. Partnership between DPC4 and SMAD proteins in TGF-beta signalling pathways. *Nature* 1996; 383:832-6.
- Lai GH, Zhang Z, Sirica AE. Celecoxib acts in a cyclooxygenase-2-independent manner and in synergy with emodin to suppress rat cholangiocarcinoma growth in vitro through a mechanism involving enhanced Akt inactivation and increased activation of caspases-9 and -3. *Mol Cancer Ther* 2003 Mar;2(3):265-71.

- Lai JF, Kao SC, Jiang ST, Tang MJ, Chan PC, Chen HC. Involvement of focal adhesion kinase in hepatocyte growth factor-induced scatter of Madin-Darby canine kidney cells. *J Biol Chem* 2000; 275:7474-7480.
- Lane DP. Cancer : a death in the life of p53. *Nature* 1993; 362:786-87.
- Lark AL, Livasy CA, Calvo B, Caskey L, Moore DT, Yang X, Cance WG. Overexpression of focal adhesion kinase in primary colorectal carcinomas and colorectal liver metastases: immunohistochemistry and real-time PCR analyses. *Clin Cancer Res* 2003; 9:215-222.
- Lavin MF, Watters D, Song Q. Role of protein kinase activity in apoptosis. *Experientia* 1996; 52:979-994.
- Law SF, O'Neill GM, Fashena SJ, Einarson MB, and Golemis EA. The docking protein HEF1 is an apoptotic mediator at focal adhesion sites *Mol Cell Biol* 2000; 20:5184-5195.
- Lazebnik YA, Takahashi A, Moir RD, Goldman RD, Poirier GG, Kaufmann SH, Earnshaw WC. Studies of the lamin proteinase reveal multiple parallel biochemical pathways during apoptotic execution. *Proc Natl Acad Sci USA* 1995 Sep 26;92(20):9042-6.
- Leach FS, Nicolaides NC, Papadopoulos N et al. Mutations of a mutS homolog in hereditary nonpolyposis colorectal cancer. *Cell* 1993; 75 1215-1225.
- Lee MH, Reynisdottir I, Massagué J. Cloning of p57KIP2, a cyclin-dependent kinase inhibitor with unique domain structure and tissue distribution. *Genes Dev* 1995; 9, 639-649.
- Leist M, Jaatela M. Four deaths and a funeral: from caspases to alternative mechanisms. *Nat Rev Mol Cell Biol* 2001; 2(8):589-98.
- Leng J, Han C, Demetris AJ, Michalopoulos GK, Wu T. Cyclooxygenase-2 promotes hepatocellular carcinoma cell growth through Akt activation: evidence for Akt inhibition in celecoxib-induced apoptosis. *Hepatology* 2003 Sep;38(3):756-68.
- Lengauer C, Kinzler K, Vogelstein B. Genetic instability in colorectal cancers. *Nature* 1997; 386: 623-627.
- Leppert M, Dobbs M, Scambler P, O'Connell P, Nakamura Y, Stauffer D, Woodward S, Burt R, Hughes J, Gardner E, White R. The gene for familial polyposis coli maps to the long arm of chromosome 5. *Science* 1987; 238: 1411-1443.

- Letai A, Bassik MC, Walensky LD, Sorcinelli MD, Weiler S, Korsmeyer SJ. Distinct BH3 domains either sensitize or activate mitochondrial apoptosis, serving as prototype cancer therapeutics. *Cancer Cell* 2002; (3) :183-92.
- Levkau B, Koyama H, Raines EW, Clurman BE, Herren B, Orth K, Roberts JM, Ross R. Cleavage of p21Cip1/Waf1 and p27Kip1 mediates apoptosis in endothelial cells through activation of Cdk2: role of a caspase cascade. *Mol Cell* 1998; 1:553-563.
- Li F, Zhang Y, Wu C. Integrin-linked kinase is localized to cell-matrix focal adhesions but not cell-cell adhesions sites and the focal adhesion localization of integrin-linked kinase is regulated by the PINCH-binding ANK repeats. *J Cell Sci* 1999; 112:4589-4599.
- Li H, Yuan J. Deciphering the pathways of life and death. *Curr Opin Cell Biol* 1999; 11: 261-6.
- Li H, Zhu H, Xu CJ, Yun Y. Cleavage of BID by caspase-8 mediates the mitochondrial damage in the Fas pathway of apoptosis. *Cell* 1998; 94: 491-501.
- Li S, Ting NS, Zheng L, Chen PL, Ziv Y, Shiloh Y, Lee EY, Lee WH. Functional link of BRCA1 and ataxia telangiectasia gene product in DNA damage response. *Nature* 2000; 406: 210-215.
- Liang J, Slingerland JM. Multiple roles of the PI3K/PKB (Akt) pathway in cell cycle progression. *Cell Cycle* 2003 Jul-Aug;2(4):339-45.
- Lieberman D, Sleisenger MH. Is it time to recommend screening for colorectal cancer? *Lancet* 1996; 348: 1463-4.
- Lim JT, Piazza GA, Han EK, Delohery TM, Li H, Finn TS, Buttyan R, Yamamoto H, Sperl GJ, Brendel K, Gross PH, Pamukcu R, Weinstein IB. Sulindac derivatives inhibit growth and induce apoptosis in human prostate cancer cell lines. *Biochem Pharmacol* 1999 Oct 1;58(7):1097-107.
- Lin HY, Wang XF, Ng-Eaton E, Weinberg RA, Lodish HF. Expression cloning of the TGF-beta type II receptor, a functional transmembrane serine/threonine kinase. *Cell* 1992; 68:775-85
- Liotta LA. Tumor invasion and metastases-role of the extracellular matrix: Rhoads Memorial Award Lecture. *Cancer Res* 1986; 46(1):1-7.

- Liu C, Li Y, Semenov M, Han C, Baeg GH, Tan Y, Zhang Z, Lin X, He X. Control of beta-catenin phosphorylation/degradation by a dual-kinase mechanism. *Cell* 2002 Mar 22;108(6):837-47.
- Liu CH, Chang SH, Narko K, Trifan OC, Wu MT, Smith E, Haudenschild C, Lane TF, Hla T. Overexpression of cyclooxygenase-2 is sufficient to induce tumorigenesis in transgenic mice. *J Biol Chem* 2001; 276(21): 18563-18569.
- Liu S, Thomas SM, Woodside DG, Rose DM, Kiosses WB, Pfaff M, Ginsberg MH. Binding of paxillin to alpha4 integrins modifies integrin-dependent biological responses. *Nature* 1999 Dec 9;402(6762):676-81.
- Liu X, Kim CN, Yang J, Jemmerson R, Wang X. Induction of apoptotic program in cell-free extracts: requirement for dATP and cytochrome c. *Cell* 1996; 86: 147-157.
- Lowy DR, Willumsen BM. Function and regulation of ras. *Ann Rev Biochem* 1993; 62: 851-891.
- Lu X, Xie W, Reed D, Bradshaw WS, Simmons DL. Nonsteroidal antiinflammatory drugs cause apoptosis and induce cyclooxygenases in chicken embryo fibroblasts. *Proc Natl Acad Sci USA* 1995 Aug 15;92(17):7961-5.
- Lynch HT, de la Chapelle A. Genetic susceptibility to non-polyposis colorectal cancer. *J Med Genet* 1999; 36:801-18
- Lynch HT, de la Chapelle A. Hereditary colorectal cancer. *N Engl J Med* 2003 Mar 6;348(10):919-32. Review
- MacFall A, Ulku A, Lambert QT, Kusa A, Rogers-Graham K, Der CJ. Oncogenic ras blocks anoikis by activation of a novel effector pathway independent of phosphatidylinositol 3-kinase. *Mol Cell Biol* 2001;21:5488-5499.
- Maestro de las Casas ML, Rodríguez R. Marcadores tumorales en el cáncer de colon. *Rev Cancer* 1997; 11:13-24.
- Mahmoud NN, Kucherlapati R, Bilinski RT, Churchill MR, Chadburn A, Bertagnolli MM. Genotype-phenotype correlation in murine Apc mutation: differences in enterocyte migration and response to sulindac. *Cancer Res* 1999; 59:333-359.
- Maier TJ, Schilling K, Schmidt R, Geisslinger G, Grosch S. Cyclooxygenase-2 (COX-2)-dependent and -independent anticarcinogenic effects of celecoxib in human colon carcinoma cells. *Biochem Pharmacol* 2004 Apr 15;67(8):1469-78.

- Majno G, Joris I. Apoptosis, oncosis and necrosis. An overview of cell death. Am J Path 1995; 146:3-15.
- Makinp H, Ushijima T, Kaikuchi H, Onda M, Ito N, Sugimura T, Nagao M. Absence of p53 mutations in rat colon tumors induced by 2-amino-6-mthyldipyrido[1,2-a:3', 2'-dimidazole, 2-amino-3methylimidazo[4,5-f]quinoline, or 2-amino-1-methyl-6-phenylimidazol[4,5-b]pyridine. Jap J Cancer Res 1994; 85:510-514.
- Malumbres M, Pellicer A. RAS pathways to cell cycle control and cell transformation. Front Biosci 1998; 3:d887-912.
- Mao J, Wang J, Liu B, Pan W, Farr III GH, Flynn C, Yuan H, Takada S, Kimelman D, Li L, Wu D. Low-density lipoprotein receptor-related protein-5 binds to Axin and regulates the canonical Wnt signaling pathway. Mol Cell 2001; 7 :801-809.
- Marnett LJ, DuBois RN. COX-2: a target for colon cancer prevention. Annu Rev Pharmacol Toxicol 2002;42:55-80. Review.
- Marotta A, Tan C, Gray V, Malik S, Gallinger S, Sanghera J, Dupuis B, Owen D, Dedhar S and Salh B. Dysregulation of integrin-linked kinase(ILK) in colonic polyposis. Oncogene 2001; 20:6250-6257.
- Maser RS, DePinho RA. Connecting chromosomes, crisis, and cancer. Science 2002; 297: 565-569.
- Masferrer JL, Leathy KM, Koki AT, Zweifel BS, Settle SL, Woerner BM, Edwards DA, Flickinger AG, Moore RJ and Seibert K. Antiangiogenic and antitumor activities of cyclooxygenase-2 inhibitors. Cancer Res 2000; 60: 1306-1311.
- Mashima T, Naito M, Noguchi K, Miller DK, Nicholson DW, Tsuruo T. Actin cleavage by CPP-32/apopain during the development of apoptosis. Oncogene 1997 Mar 6;14(9):1007-12.
- Massagué J, Wotton D. Transcriptional control by the TGF-beta/Smad signaling system. EMBO J 2000; 19: 1745-54.
- Massagué J. TGF-beta signal transduction. Annu Rev. Biochem. 1998; 67:753-91.
- Massagué J, Balin SW, Lo RS. TGFbeta signaling in growth control, cancer, and heritable disorders. Cell 2000; 103:295-309
- Materson JA, Wilett CG, Sargent DJ, et al. A phase III study of adjuvant radiation therapy (RT), 5-fluorouracil (%-FU), and levamisole (LEV) vs 5-FU and LEV in

- selected patients with resected, high risk colon cancer: initial results of Int 0130. Proc Am Soc Clin Oncol 1999; 18:235.
- Matsuda M, Mayer BJ, Fukui Y, Hanafusa H. Binding of transforming protein, P47gag-crk, to a broad range of phosphotyrosine-containing proteins. Science 1990; 248:1537-1539.
 - Mayer BJ, Hanfusa H. Association of the v-crk oncogene product with phosphotyrosine-containing proteins and protein kinase activity Proc Natl Acad Sci USA 1990; 87:2638-2642.
 - Mayer BJ, Hirai H, Sakai R. Evidence that SH2 domains promote processive phosphorylation by protein-tyrosine kinases. Curr Biol 1995; 5:296-305.
 - McConnell BB, Starborg M, Brookes S, Peters G. Inhibitors of cyclin-dependent kinases induce features of replicative senescence in early passage human diploid fibroblasts. Curr Biol 1998; 8:351-354.
 - McMurray RW, Hardy KJ. Cox-2 inhibitors: today and tomorrow. Am J Med Sci 2002; 323:181-189.
 - Mendelshon K, Baselga J. Status of epidermal growth factor receptor antagonists in the biology and treatment of cancer. J Clin Oncol 2003; 21:2787-2799.
 - Mifflin RC, Powell DW. Cyclooxygenases. The Regulatory Peptide Letter. 2001 Vol VIII, Number 4: 49-55.
 - Miller TA. Protective effects of prostaglandins against gastric mucosal damage: current knowledge and proposed mechanisms. Am J Physiol 1983 Nov;245(5 Pt1):G601-23.
 - Miyamoto T, Ogino N, Yamamoto S, Hayaishi O. Purification of prostaglandin endoperoxide synthetase from bovine vesicular gland microsomes. J Biol Chem 1976 May 10;251(9):2629-36.
 - Moertel CG, Fleming TR, Macdonald JS, et al. Fluorouracil plus levamisole as effective adjuvant therapy after resection of stage III colon carcinoma: a final report. Am Intern Med 1995; 15:246-250.
 - Molina MA, Sitja-Arnau M, Lemoine MG, Frazier ML, Sinicrope FA. Increased cyclooxygenase-2 expression in human pancreatic carcinomas and cell lines: growth inhibition by nonsteroidal anti-inflammatory drugs. Cancer Res 1999 Sep 1;59(17):4356-62.

- Mommand J, Zambetti GP, Olson DC, George D, Levine AJ. The mdm-2 oncogene product forms a complex with the p53 protein and inhibits p53-mediated transactivation. *Cell* 1992; 2:1237-1245.
- Moon RT, Kimelman D. From cortical rotation to organizer gene expression : toward a molecular explanation of axis specification in Xenopus. *Bioessays* 1998; 20 :536-545.
- Muzio M, Stockwell BR, Stennicke HR, Salvesen GS, Dixit VM. An induced proximity model for caspase-8 activation. *J Biol Chem* 1998; 273: 2926-30.
- Myung K, Datta A, Kolodner RD. Suppression of spontaneous chromosomal rearrangements by S phase checkpoint functions in *Saccharomyces cerevisiae*. *Cell* 2001; 104: 397-408.
- Nagafuchi A, Takeichi M. Transmembrane control of cadherin-mediated cell adhesion: a 94 kDa protein functionally associated with a specific region of the cytoplasmic domain of E-cadherin. *Cell Regul* 1989 Nov;1(1):37-44.
- Nakamoto T, Sakai R, Honda H, Ogawa S, Ueno H, Suzuki T, Aizawa S, Yazaki Y and Hirai H. Requirements for localization of p130cas to focal adhesions. *Mol Cell Biol* 1997; 17:3884-3897.
- Nakamura T, Hamada F, Ishidate T, Anai K, Kawahara K, Toyoshima K, Akiyama T. Axin, an inhibitor of the Wnt signalling pathway, interacts with beta-catenin, GSK-3beta and APC and reduces the beta-catenin level. *Genes Cells*. 1998 Jun;3(6):395-403.
- Nechushtan A, Smith CL, Lamensdorf I, Yoon SH, Youle RJ. Bax and Bak coalesce into novel mitochondria-associated clusters during apoptosis. *J Cell Biol* 2001; 153(6):1256-76.
- Neufang G, Furstenberger G, Heidt M, Marks F, Mullerdecker K. Abnormal differentiation of epidermis in transgenic mice constitutively expressing cyclooxygenase-1 in skin. *Proc Natl Acad Sci USA* 2001; 98(13): 7629-7634.
- Nicholson KM, Anderson NG. The protein kinase B/Akt signalling pathway in human malignancy. *Cel.lular Signal* 2002; 14(5):381-95.
- Nicholson, DW, Thornberry, NA. Caspases: killer proteases. *Trends Biochem Sci* 1997; 22:299-306.
- Nicolaides NC, Papadopoulos N, Liu B, Wei YF, Carter KC, Ruben SM, Rosen CA, Haseltine Wam Fleishmann RD, Fraser CM, et al. Mutations of two PMS homologues in hereditary nonpolyposis colon cancer. *Nature* 1994 Sep 1; 371(6492) : 75-80.

- NIH consensus conference. Adjuvant therapy for patients with colon and rectal cancer . JAMA 1990; 264:1444-1450.
- Nikiforov MA, Hagen K, Ossovskaya VS, et al. p53 modulation of anchorage independent growth and experimental metastasis. Oncogene 1996; 13:1709-1719.
- Nishisho I, Nakamura Y, Miyoshi Y, Miki Y, Ando H, Horfi A, Koyama K, Utsunomiya J, Baba S and Hedge P, et al. Mutations of chromosome 5p21 genes in FAP and colorectal cancer patient. Science 1991; 253: 665-669.
- Nobes CD, Hall A. Rho, rac and cdc42 GTPases regulate the assembly of multimolecular focal complexes associated with actin stress fibers, lamellipodia, and filopodia. Cell 1995; 81:53-62.
- Novak A, Hsu SC, Leung-Hagesteijn C, Radeva G, Papkoff J, Montesano R, Roskelley C, Grosschedl R, Dedhar S. Cell adhesion and the integrin-linked kinase regulate the LEF-1 and beta-catenin signaling pathways. Proc Natl Acad Sci USA 1998; 95:4374-4379.
- O'Connell MJ, Mailliard JA, Kahn MJ, Macdonald JS, Haller DG, Mayer RJ, Wieand HS. Controlled trial of flourouracil and low-doses leuvocorin given for six months as postopreative adjuvan therapy for colon canrce. J.Clin. Oncol 1997; 15 (1) : 246-250.
- O'Neill GM, Golemis EA. Proteolysis of the docking protein HEF1 and implications for focal adhesion dynamics. Mol Cell Biol 2001 Aug;21(15):5094-108.
- Oshima M, Dinchuk JE, Kargman SL, Oshima H, Hancock B, Kwong E, Trzaskos JM, Evans JF, Taketo MM. Suppression of intestinal polyposis in Apc delta716 knockout mice by inhibition of cyclooxygenase 2 (COX-2). Cell 1996 Nov 29;87(5):803-9.
- Oshima M, Murai N, Kargman S, Arguello M, Luk P, Kwong E, Taketo MM, Evans JF. Chemoprevention of intestinal polyposis in the Apcdelta716 mouse by rofecoxib, a specific cyclooxygenase-2 inhibitor. Cancer Res 2001 Feb 15;61(4):1733-40.
- Owens DW, McLean GW, Wyke AW, et al. The catalytic activity of the Src family kinases is required to disrupt cadherin-dependent cell-cell contacts Mol Biol Cell 2000; 11:51-64.
- Owens LV, Xu L, Craven RJ, Dent GA, Weiner TM, Kornberg L, Liu ET, Cancer WG. Overexpression of the focal adhesion kinase (p125FAK) in invasive human tumors. Cancer Res 1995; 55:2752-2755.

- Oyama T, Kanai Y, Ochiai A, Akimoto S, Oda T, Yanagihara K, Nagafuchi A, Tsukita S, Shibamoto S, Ito F, et. Al. A truncated beta-catenin disrupts the interaction between E-cadherin and alpha-catenin: a cause of loss of intercellular adhesiveness in human cancer cell lines. *Cancer Res* 1994 Dec 1;54(23):6282-7.
- Pace-Asciak, CR, Smith WL. Enzymes in the biosynthesis and catabolism of the eicosanoids: prostaglandins, thromboxanes, leukotrienes and hydroxy fatty acids. In: *The Enzymes*, edited by P. D. Boyer. New York: Academic, 1983, pp. 543-603.
- Pantelouris EM. Absence of thymus in a mouse mutant. *Nature* 1968; 217(126): 370-1.
- Parsons JT, Parsons SJ. Src family protein tyrosine kinases: cooperating with growth factor and adhesion signaling pathways. *Curr Opin Cell Biol.* 1997 Apr;9(2):187-92.
- Paulovich AG, Hartwell LH. A checkpoint regulates the rate of progression through S phase in *S. Cerevisiae* in response to DNA damage. *Cell* 1995; 82:841.
- Pece S, Chiariello M, Murga C, Gutkind JS. Activation of the protein kinase Akt/PKB by the formation of E-cadherin-mediated cell-cell junctions. Evidence for the association of phosphatidylinositol 3-kinase with the E-cadherin adhesion complex. *J Biol Chem* 1999; 274: 19347:19351.
- Peifer M, Polakis P . Wnt signaling in oncogenesis and embryogenesis- a look inside the nucleus. *Science* 2000; 287:1606-1609.
- Peluso JJ, Pappalardo A, Fernandez G. E-cadherin-mediated cell contact prevents apoptosis of spontaneously immortalized granulosa cells by regulating akt kinase activity. *Biol Reprod* 2001; 64:1183:1190.
- Perl AK, Wilgenbus P, Dahi U, Semb H, Christofori G. A causal role for E-cadherin in the transition from adenoma to carcinoma. *Nature* 1998; 392:190-193.
- Persad SA, Troussard T, McPheeD, Mullholland D, Dedhar S. Tumor supressor PTEN inhibits beta-catenin nuclear localization and T cell/lymphoid enhancer factor 1-mediated transcriptional activation. *J Cell Biol* 2001; 153:1161-1173.
- Phillips RK, Wallace MH, Lynch PM, Hawk E, Gordon GB, Saunders BP, Wakabayashi N, Shen Y, Zimmerman S, Godio L, Rodrigues-Bigas M, Su LK, Sherman J, Kelloff G, Levin B, Steinbach G. A randomised, double blind, placebo controlled study of celecoxib, a selective cyclooxygenase 2 inhibitor, on duodenal polyposis in familial adenomatous polyposis. *Gut* 2002 Jun;50(6):857-60.

- Piazza GA, Rahm AL, Krutzsch M, Sperl G, Paranka NS, Gross PH, Brendel K, Burt RW, Alberts DS, Pamukcu R, et al. Antineoplastic drugs sulindac sulfide and sulfone inhibit cell growth by inducing apoptosis. *Cancer Res* 1995 Jul 15;55(14):3110-6.
- Pignolo RJ, Totenberg MO, Cristofalo VJ. Alterations in contact and density-dependent arrest state in senescent WI-38 cells. *In Vitro Cell Dev Biol* 1994; 30^a:471-476.
- Pines J. Cyclins: wheels within wheels. *Cell Growth Differ* 1991; 2:305.
- Pinson KI, Brenan J, Monkley S, Avery BJ, Skarnes WC. An LDL-receptor-related protein mediates Wnt signalling in mice. *Nature* 2000; 407:535-538.
- Plé PA, Green TP, Hennequin LF, Curwen J, Fennell M, Allen J, Brempt CL, Costello G. Discovery of a new class of anilinoquinazoline inhibitors with high affinity and specificity for the tyrosine kinase domain of c-src. *J Med Chem* 2004; 47:871-887.
- Plummer SM, Holloway KA, Manson MM, Munks RJ, Kaptein A, Farrow S, Howells L. Inhibition of cyclo-oxygenase 2 expression in colon cells by the chemopreventive agent curcumin involves inhibition of NF-kappaB activation via the NIK/IKK signalling complex. *Oncogene* 1999 Oct 28;18(44):6013-20.
- Pocard M, Tsukui H, Salmon RJ, Dutrillaux B, Poupon MF. Efficiency of orthotopic xenograft models for human colon cancers. *In Vivo* 1996; 10(5): 463.
- Polakis P. Wnt signaling and cancer. *Genes Dev.* 2000 Aug 1;14(15):1837-51.
- Poligone B, Baldwin AS. Positive and negative regulation of NF-kappaB by COX-2: roles of different prostaglandins. *J Biol Chem* 2001;276:38658-38664.
- Polte TR, Hanks SK. Interaction between focal adhesion kinase and Crk-associated tyrosine kinase substrate p130cas. *Proc Natl Acad Sci USA* 1995; 92:10678-10682.
- Polyak K, Waldman T, He TC, Kinzler KW, Vogelstein B. Genetic determinants of p53-induced apoptosis and growth arrest. *Genes Dev* 1996; 10:1945-1952.
- Polyak K, Kato JY, Solomon MJ, Sherr CJ, Massagué J, Roberts JM, Koff A. p27Kip1, a cyclin-Cdk inhibitor, links transforming growth factor-beta and contact inhibition to cell cycle arrest. *Genes Dev* 1994; 8 , 9-22.
- Pomerantz J, Shreiber-Agus N, Liegeois NJ, Silverman A, Alland L, Chin L, Potes J, Chen K, Orlow I, DePinho RA. The INKa4 tumor-suppressor gene product, p19Arf, interacts with MDM2 and neutralizes MDM2's inhibition of p53. *Cell* 1998; 92: 713-723.

- Prabhu S, Ignatova A, Park ST, Sun XH. Regulation of the expression of cyclin-dependent kinase inhibitor p21 by E2A and Id proteins. *Mol Cell Biol* 1997 Oct;17(10):5888-96.
- Presciuttini S, Bertario L, Sala P, Rossetti C, Lewontin RC. Correlation between relatives for colorectal cancer mortality in familial adenomatous polyposis. *Ann Hum Genet*. 1993 May;57 (Pt 2):105-15.
- Provost E, Rimn DL. Controversies at the cytoplasmic face of the cadherin-based adhesion complex. *Curr Opin* 1999; 11:567-572.
- Pullan S, Wilson J, Metcalfe A, et al. Requirement of basement membrane for the suppression of programmed cell death in mammary epithelium. *J Cell Sci* 1996; 109:631-642.
- Pyo H, Choy H, Amorino GP, Kim JS, Cao Q, Hercules SK, DuBois RN. A selective cyclooxygenase-2 inhibitor, NS-398, enhances the effect of radiation in vitro and in vivo preferentially on the cells that express cyclooxygenase-2. *Clin Cancer Res* 2001 Oct;7(10):2998-3005.
- Qiu RG, Chen J, Kirn D, McCormik F, Symons M. An essential role for Rac in Ras transformation. *Nature* 1995; 374: 457-459.
- Raff MC. Social controls on cell survival and cell death. *Nature* 1992; 356:397.
- Rampino Y, Yamamoto H, Ionov Y, Li Y, Sawai H, Reed JC, Perucho M. Somatic frameshift mutations in the BAX gene in colon cancers of the microsatellite mutator phenotype. *Science* 1997; 275(5302):967-9.
- Rao CV, Rivenson A, Simi B, Zang E, Kellof G, Steele V, Reddy BS. Chemoprevention of colon carcinogenesis by sulindac, a nonsteroidal anti-inflammatory agent. *Cancer Res* 1995; 53: 1464-1472.
- Rathmell JC, Thompson CB. The central effectors of cell death in the immune system. *Annu Rev Immunol* 1999;17:781-828.
- Reddy BS, Hirose Y, Lubet R, Steele V, Kelloff G, Paulson S, Seibert K, Rao CV. Chemoprevention of colon cancer by specific cyclooxygenase-2 inhibitor, celecoxib, administered during different stages of carcinogenesis. *Cancer Res* 2000; 60:293-297.
- Reddy BS, Rao CV, Seibert K. Evaluation of cyclooxygenase-2 inhibitor for potentail chemopreventive properties in colon carcinogenesis. *Cancer Res* 1996; 56:4506-4569.

- Reddy BS, Rao CV, Rivenson A, Kellof G. Inhibitory effect of aspirin on azoxymethane-induced colon carcinogenesis in F344 rats. *Carcinogenesis* 1993; 14(8):1493-1497.
- Reddy BS, Tokumo K, Kulkarni N, Aligia C, Kellof G. Inhibition of colon carcinogenesis by prostaglandin synthesis inhibitors and related compounds. *Carcinogenesis* 1992; 13(6):1019-1023.
- Reed JC. Dysregulation of apoptosis in cancer. *J Clin Oncol* 1999; 17(9):2941-53.
- Reichsman F, Smith L, Cumberledge S. Glycosaminoglycans can modulate extracellular localization of the wingless protein and promote signal transduction. *J Cell Biol* 1996, 135: 819-827.
- Reiske HR, Zhao J, Han DC, Cooper LA, Guan JL. Analysis of FAK-associated signalling pathways in the regulation of cell cycle progression. *FEBS Lett* 2000; 486:275-280.
- Reynisdottir I, Polyak K, Iavarone A, Massagué J. Kip/Cip and Ink4 Cdk inhibitors cooperate to induce cell cycle arrest in response to TGF-beta. *Genes Dev* 1995; 9:1831:1845.
- Rheaume E, Cohen LY, Uhlmann F, Lazure C, Alam A, Hurwitz J, Sekaly RP, Denis F. The large subunit of replication factor C is a substrate for caspase-3 in vitro and is cleaved by a caspase-3-like protease during Fas-mediated apoptosis. *EMBO J* 1997 Nov 3;16(21):6346-54.
- Richter M, Weiss M, Weinberger I, Furstenberger G, Marian B. Growth inhibition and induction of apoptosis in colorectal tumor cells by cyclooxygenase inhibitors. *Carcinogenesis* 2001; 22:17-25.
- Ried T, Heselmeyer-Haddad K, Blegen H, Schrock E, Auer G. Genomic changes defining the genesis, progression, and malignancy potential in solid human tumors: A phenotype/genotype correlation. *Genes, chromosomes, and cancer* 1999; 25:195-204.
- Rigas B, Shiff SJ. Is inhibition of cyclooxygenase required for the chemopreventive effect of NSAIDs in colon cancer? A model reconciling the current contradiction. *Med Hypotheses* 2000; 54:210-215.
- Rimm DL, Koslov ER, Kebriaei P, Cianci CD, Morrow JS. Alpha 1(E)-catenin is an actin-binding and -bundling protein mediating the attachment of F-actin to the membrane adhesion complex. *Proc. Natl. Acad. Sci USA* 1995; 92:8813-8817.

- Robert A. Cytoprotection of the gastrointestinal mucosa. *Adv Intern Med* 1983; 28:325-37.
- Roberts AB, Sporn MB. In : Sporn MB., Roberts A.B., editors. *Peptide growth factors and their receptors*. Heidelberg: Springer-Verlag 1990 p.419-72.
- Robles SJ, Adami GR. Agents that cause DNA double strand breaks lead to p16INK4a enrichment and the premature senescence of normal fibroblasts. *Oncogene* 1998; 16:113-1123.
- Rodriguez J, Lazebnik Y. Caspase-9 and APAF-1 form an active holoenzyme. *Genes Dev* 1999 Dec 15;13(24):3179-84.
- Rodriguez-Bigas MA, Boland CR, Hamilton SR, et al. A National Cancer Institute workshop on hereditary nonpolyposis colorectal cancer syndrome: meeting highlights and Bethesda Guidelines. *J Natl Cancer Inst* 1997;89:1758–1762.
- Roninson IB. Tumor senescence as a determinant of drug response in vivo. *Drug Resist Updat* 2002 Oct;5(5):204-8. Review.
- Rooney P, Murray G, Stevenson D, Haites N, Cassidy J, McLedo H. Comparative genomic hybridization and chromosomal instability in solid tumors. *British Journal of Cancer* 1999; 80: 862-873.
- Roose J, Molenaar M, Peterson J, Hurenkamp J, Brantjes H, Moerer P, van de Wetering M, Destree O, Clevers H. The Xenopus Wnt effector XTcf-3 interacts with Groucho-related transcriptional repressors. *Nature* 1998 Oct 8;395(6702):608-12.
- Rosin-Arbesfeld R, Townsley F, Bienz M. The APC tumour suppressor has a nuclear export function. *Nature* 2000 Aug 31;406(6799):1009-12.
- Roth J, Dobbeltstein M, Freedman DA, Shenk T, Levine AJ. Nucleo-cytoplasmic shuttling of the Mdm2 oncoprotein regulates the levels of the p53 protein via a pathway used by the human immunodeficiency virus rev protein. *EMBO J* 1998; 2:554-564.
- Rothermel J, Wartmann M, Chen T, Hohneker J. EPO906 (epothilone B): A promising novel microtubule stabilizer. *Semin Oncol* 2003 Jun;30(3 Suppl 6):88-92.
- Rous P. A sarcoma of the fowl transmissible by an agent separable from the tumor cells. *J Exp Med* 1911; 13:397-411.
- Rozic JG, Chakraborty C, Lala PK. Cyclooxygenase inhibitors retard murine mammary tumor progression by reducing tumor cell migration, invasiveness and angiogenesis. *Int J Cancer* 2001 Aug 15;93(4):497-506.

- Ruas M, Peters G. The p16INK4a/CDKN2A tumor suppressor and its relatives. *Biochim Biophys Acta* 1998; 1378: F115-117.
- Ruoslahti E, Reed JC. Anchorage dependence, integrins, and apoptosis. *Cell* 1994; 77:477-478.
- Saikumar P, Dong Z, Mikhailov V, Denton M, Weinberg JM, Ventachalam MA. Apoptosis: definition, mechanisms and relevance to disease. *Am J Med* 1999; 107:489-506.
- Sakai R, Iwamatsu A, Hirano N, Ogawa S, Tanaka T, Mano H, Yazaki Y, Hirai H. A novel signaling molecule, p130, forms stable complexes in vivo with v-Crk and v-Src in a tyrosine phosphorylation-dependent manner. *EMBO J* 1994 Aug 15;13(16):3748-56.
- Sanders EJ, Wride MA. Programmed cell death in development. *Int Rev Cytol* 1995; 163:105-173.
- Sano H, Kawahito Y, Wilder RL, Hashiramoto A, Mukai S, Asai K, et al. Expression of cyclooxygenase-1 and –2 in human colorectal cancer. *Cancer Res* 1995; 55:3785-9.
- Sattler M, Salgia R, Shrikhande G, Verma S, Uemura N, Law SF, Golemis EA, Griffin JD. Differential signalling after beta1 integrin ligation is mediated through binding of CRKL to p120CBL and p110HEF1. *J Biol Chem* 1997; 272:14320-14326.
- Schaller MD, Parsons JT. pp125FAK-dependent tyrosine phosphorylation of paxillin creates a high-affinity binding site for Crk. *Mol Cell Biol* 1995; 15:2635-45.
- Schaller MD, Borgman CA, Cobb BS, Vines RR, Reynolds AB, Parsons JT. pp125FAK a structurally distinctive protein-tyrosine kinase associated with focal adhesions. *Proc Natl Acad Sci USA*. 1992 Jun 1;89(11):5192-6.
- Schaller MD, Hildebrand JD, Shannon JD, Fox JW, Vines RR, Parsons JT. Autophosphorylation of the focal adhesion kinase, pp125FAK, directs SH2-dependent binding of pp60src. *Mol Cell Biol* 1994 Mar;14(3):1680-8.
- Schaller MD, Otey CA, Hildebrand JD and Parsons JT. Focal adhesion kinase and paxillin bind to peptides mimicking beta integrin cytoplasmic domains. *J Cell Biol* 1995; 130:1181-1187.
- Schaller MD. Biochemical signals and biological responses elicited by the focal adhesion kinase. *Biochim Biophys Acta*. 2001 Jul 25;1540(1):1-21.

- Scheele JS, Rhee JM, Boss GR. Determination of absolute amounts of GDP and GTP bound to Ras in mammalian cells : comparison of parental and Ras-overproducing NIH3T3 fibroblasts. *Proc Natl Acad Sci USA* 1995; 92: 1097-100.
- Schlaepfer DD, Hanks SK, Hunter T, van der Geer P. Integrin-mediated signal transduction linked to Ras pathway by GRB2 binding to focal adhesion kinase. *Nature*. 1994 Dec 22-29;372(6508):786-91.
- Schlaepfer DD, Hunter T. Integrin signalling and tyrosine phosphorylation: just the FAKs? *Trends Cell Biol* 1998 Apr;8(4):151-7.
- Schon O, Friedler A, Brycroft M, Freund SM, Fersht AR. Molecular mechanism of the interaction between MDM2 and p53. *J Mol Biol* 2002; 323(3) : 491-501
- Schwab BL, Leist M, Knippers R, Nicotera P. Selective proteolysis of the nuclear replication factor MCM3 in apoptosis. *Exp Cell Res* 1998; 238, 415-421.
- Serrano M, Lin AW, McCurrach ME, Beach D and Lowe SW. Oncogenic ras provokes premature cell senescence associated with accumulation of p53 and p16INK4a. *Cell* 1997; 88:593-602.
- Serrano M, Hannon GJ, Beach D. A new regulatory motif in cell.cycle control causing especific inhibition of cyclin D/CDK4. *Nature* 1993; 366, 704-707.
- Shamsuddin AK, Trump BF. Colon epithelium. II. In vivo studies of colon carcinogenesis. Light microscopic, histochemical, and ultrastructural studies of histogenesis of azoxymethane-induced colon carcinomas in Fischer 344 rats. *J Natl Cancer Inst* 1981; 66(2): 389-401.
- Sharma M, Chuang WW, Sun Z. Phosphatidylinositol 3-kinase/Akt stimulates androgen pathway through GSK3beta inhibition and nuclear beta-catenin accumulation. *J Biol Chem* 2002 Aug 23;277(34):30935-41.
- Shen T, Schneider G, Cloutier JF, Veillette A, Schaller MD Direct association of protein-tyrosine phosphatase PTP-PEST with paxillin. *J Biol Chem* 1998; 273:6474-6481.
- Sheng H, Shao J, Kirkland SC, Isaakson P, Coffey RJ, Morrow J, et al. Inhibition of human colon cancer cell growth by selective inhibition of cyclooxygenase-2. *J Clin Invest* 1997; 99:2254-9.

- Sheng H, Shao J, Morrow JD, Beauchamp RD, Dubois RN. Modulation of apoptosis and Bcl-2 expression by prostaglandin E2 in human colon cancer cells. *Cancer Res* 1998; 58: 362-366.
- Sherr CJ, Robert JM. Inhibitors of mammalian G1 cyclin-dependent kinases. *Genes Dev* 1995; 9:1149.
- Shim SR, Kook S, Kim JI, Song WK. Degradation of focal adhesion proteins paxillin and p130cas by caspases or calpains in apoptotic rat-1 and L929 cells. *Biochem Biophys Res Commun* 2001; 286:601-608.
- Sirard C, de la Pompa JL, Elia A, Itie A, Mirtos C, Cheung A, Hahn S, Wakeham A, Schwartz L, Kern SE, Rossant J, Mak TW. The tumor suppressor gene Smad4/Dpc4 is required for gastrulation and later for anterior development of the mouse embryo. *Genes Dev* 1998; 12(1): 107-19.
- Slack NH, Bross ID. The influence of site of metastasis on tumour growth and response to chemotherapy. *Br J Cancer* 1975 Jul;32(1):78-86.
- Slee EA, Adrain C, Martin SJ. Serial killers: ordering caspase activation events in apoptosis. *Cell Death Differ* 1999; 6, 1067-74.
- Smith G, Carey FA, Beattie J, Wilkie MJV, Lighthfoot TJ, Coxhead J, Garner RC, Steele RJC, Wolf R. Mutations in APC, Kirsten-ras and p53-alternative genetic pathways to colorectal cancer. *Proc Natl Acad Sci USA*. 2002 July 9; 99(14):9433-9438.
- Smith JR, Pereira-Smith OM. Replicative senescence: implications for in vivo aging and tumor suppressions. *Science* 1996; 273:63-67.
- Smith ML, Chen IT, Zhan Q, Bae I, Chen CY, et al. Interaction of the p53-regulated protein Gadd45 with proliferating cell nuclear antigen. *Science* 1994; 266:1376-80.
- Somasiri A, Howarth D, Goswami D, Dedhar S and Toskelley C. Overexpression of integrin linked kinase initiates a mesenchymal transformation of mammary epithelial cells. *J Cell Sci* 2001; 114:1125-1136.
- Somasundaram K. Tumor suppressor p53: regulation and function. *Front Biosci* 2000; 5: D424-37.
- Song X, Lin HP, Johnson AJ, Tseng PH, Yang YT, Kulp SK, Chen CS. Cyclooxygenase-2, player or spectator in cyclooxygenase-2 inhibitor-induced apoptosis in prostate cancer cells. *J Natl Cancer Inst* 2002 Apr 17;94(8):585-91.

- Songyang Z. Analysis of protein kinase specificity by peptide libraries and prediction of in vivo substrates. *Meth Enzymol* 2001; 332:171-183.
- Soslow RA, Dannenberg AJ, Rush D, Woerner BM, Khan KN, Masferrer J, Koki AT. COX-2 is expressed in human pulmonary, colonic, and mammary tumors. *Cancer* 2000 Dec 15;89(12):2637-45.
- Souza RF, Shewmake K, Beer DG, Cryer B, Spechler SJ. Selective inhibition of cyclooxygenase-2 suppresses growth and induces apoptosis in human esophageal adenocarcinoma cells. *Cancer Res* 2000 Oct 15;60(20):5767-72.
- Sridhar SS, Seymour L, Shepherd FA. Inhibitors of epidermal-growth-factor receptors: a review of clinical research with a focus on nonsmall-cell lung cancer. *Lancet Oncol* 2003; 4:397-406.
- Staquet MJ, Byar DP, Green SB, Rozencweig M. Clinical predictivity of transplantable tumor systems in the selection of new drugs for solid tumors: rationale for a three-stage strategy. *Cancer Treat Rep* 1983 Sep;67(9):753-65.
- Staroselsky AN, Fan D, O'Brian CA, Bucana CD, Gupta KP, Fidler IJ. Site-dependent differences in response of the UV-2237 murine fibrosarcoma to systemic therapy with adriamycin. *Cancer Res* 1990; 50(24): 7775-80.
- Steinbach G, Lynch PM, Phillips RK, et al. Cyclooxygenase-2 overexpression and tumor formation are blocked by sulindac in a murine model of familial adenomatous polyposis. *Cancer Res* 1996; 56:2556-2560.
- Steinbach G, Lynch PM, Phillips RKS, Wallace MH, Hawk E, Gordon GB, Wakabayashi N, Saunders B, Shen Y, Fujimura T, et al. The effect of celecoxib, a cyclooxygenase-2 inhibitor, in familial adenomatous polyposis. *N Engl J Med* 2000; 342:1946-1952.
- Stichtenoth DO, Frolich JC. The second generation of COX-2 inhibitors : what advantages do the newest offer ? *Drugs* 2003; 63:33-45.
- Stoehlmacher J, Lenz HJ. Cyclooxygenase-2 inhibitors in colorectal cancer. *Semin Oncol* 2003 Jun;30(3 Suppl 6):88-92.
- Su LK, Kinzler KW, Vogelstein B, Preisinger AC, Moser AR, Luongo C, Gould KA, Dove WF. Multiple intestinal neoplasia caused by a mutation in the murine homolog of the APC gene. *Science* 1992; 256(5057): 668-70.

- Tachibana K, Urano T, Fujita H, Oshashi Y, Kamiguchi K, Iwata S, Hirai H, Morimoto C. Tyrosine phosphorylation of Crk-associated substrates by focal adhesion kinase. A putative mechanism for the integrin-mediated tyrosine phosphorylation of Crk-associated substrates. *J Biol Chem* 1997; 272:29083-29090.
- Tahara E. Growth factors and oncogenes in human gastrointestinal carcinomas. *J Cancer Res Clin Oncol* 1990;116(2):121-31.
- Takaku K, Oshima M, Miyoshi H, Matsui M, Seldin M, Taketa M. Intestinal tumorigenesis in compound mutant mice of both Dpc4(Smad4) and Apc genes. *Cell* 1998; 92:645-56.
- Takayama T, Shiozaki H, Doki Y, Oka H, Inoue M, Yamamoto M, Tamura S, Shibamoto S, Ito F, Monden M. Aberrant expression and phosphorylation of beta-catenin in human colorectal cancer. *Br J Cancer* 1998; 77, 605-613.
- Takeguchi C, Sih CJ. A rapid spectrophotometric assay for prostaglandin synthetase: application to the study of non-steroidal antiinflammatory agents. *Prostaglandins* 1972 Sep;2(3):169-84.
- Takeichi M. Cadherin cell adhesion receptors as a morphogenetic regulator. *Science* 1991; 251, :1451-1455.
- Taketo MM. Cyclooxygenase-2 inhibitors in tumorigenesis (Part I). *J Natl Cancer Inst* 1998; 90:1529-36.
- Takimoto CH, Arbuck SG. Topoisomerase I targetting agents : the camptothecins. In: Cabner DLBA, ed. *Cancer Chemotherapy and Biotherapy*. Philadelphia: Lippincot Williams and Wilkins, 2001: 579:646.
- Talamonti MS, Roth MS, Curley SA, Gallick GE. Increase activity and level of pp60c-src in progressive stages of human colorectal cancer. *Clin Invest* 1993; 91:53-60.
- Tamai K, Semenov M, Kato Y, Spokony R, Liu C, Katsuyama Y, Hess F, Saint-Jeannet J-P, He X. LDL-receptor-related proteins in Wnt signal transduction. *Nature* 2000; 407:530-535.
- Tan CP, Costello J, Sanghera D, Dominguez A, Garcia de Herreros, Dedhar S. Inhibition of integrin linked kinase (ILK) suppresses beta-catenin-Lef/Tcf-dependent transcription and expression of the E-cadherin suppressor, snail in APC -/- human colon carcinoma cells. *Oncogene* 2001; 20:133-140.

- Tegeder I, Pfeilschifter J, Geisslinger G. Cyclooxygenase- independent actions of cyclooxygenase inhibitors. *FASEB J* 2001; 15:2057-2072.
- Tetsu O, McCormick F. Beta-catenin regulates expression of cyclin D1 in colon carcinoma cells. *Nature* 1999 Apr 1;398(6726):422-6.
- Thomas AL, Morgan B, Drevs J, Unger C, Wiedenmann B, Vanhoefer U, Laurent D, Dugan M, Steward WP. Vascular endothelial growth factor receptor tyrosine kinase inhibitors: PTK787/ZK 222584. *Semin Oncol* 2003 Jun;30(3 Suppl 6):88-92.
- Thomas SM, Brugge JS. Cellular functions regulated by Src family kinases. *Annu Rev Cell Dev Biol* 1997; 13:513-609.
- Thornberry NA, Lazebnik Y. Caspases: enemies within. *Science* 1998; 281:1312-6.
- Thun MJ, Henkeley SJ, Patrono C. Nonsteroidal anti-inflammatory drugs as anticancer agents : mechanistic, pharmacologic, and clinical issues. *J Natl Cancer Inst* 2002; 94:252-266.
- Thun MJ, Namboodiri MM, Calle EE, Flanders WD, Heath CW Jr. Aspirin use and risk of fatal cancer. *Cancer Res* 1993 Mar 15;53(6):1322-7.
- Thun MJ, Namboodiri MM, Heath CW Jr. Aspirin use and reduced risk of fatal colon cancer. *N Engl J Med* 1991 Dec 5;325(23):1593-6.
- Thun MJ. NSAID use and decreased risk of gastrointestinal cancers. *Gastroenterol Clin North Am* 1996 Jun;25(2):333-48.
- Tian H, Wittmack EK, Jorgensen TJ. *Cancer Res* 2000; 60: 679-684.
- Tolis C, Peters GJ, Ferreira CG, Pinedo HM, Giaccone G. Cell cycle disturbances and apoptosis induced by topotecan and gemcitabine on human lung cancer cell lines. *Eur J Cancer* 1999 May;35(5):796-807.
- Tran NL, Adams DG, Vaillancourt RR, Heimark RL. Signal transduction from N-cadherin increases Bcl-2. *J Biol Chem* 2002; 277(36): 32905-32914.
- Travis A, Amsterdam A, Belanger C, Grosschedl R. LEF-1, a gene encoding a lymphoid-specific protein with an HMG domain, regulates T-cell receptor alpha enhancer function. *Genes Dev* 1991 May;5(5):880-94.
- Trock B, Lanza E, Greenwald P. Dietary fiber, vegetables, and colon cancer : critical review and meta-analyses of the epidemiologic evidence. *J Natl Cancer Inst* 1990; 82(8) :650-61.

- Tsuji M, Dubois RN. Alterations in cellular adhesion and apoptosis in epithelial cells overexpressing prostaglandin endoperoxide synthase 2. *Cell* 1995; 83: 493-501.
- Tsuji M, Kawano S, Dubois RN. Cyclooxygenae-2 expression in human colon cancer cells increases metastatic potential. *Proc Natl Acad Sci USA* 1997; 94: 3336-3340.
- Tsujimoto Y, Shimizu S. VDAC regulation of the Bcl-2 family of proteins. *Cell Death Differ* 2000; 7(12):1174-81.
- Tsukazaki T, Chiang TA, Davison AF, Attisano L, Wrana JL. SARA, a FYVE domain protein that recruits Smad2 to the TGFbeta receptor. *Cell* 1998; 95:779-91.
- Tu Y, Haung Y, Zhang Z, Hua Y, Wu C. A new focal adhesions protein that interacts with integrin-linked kinase and regulates cell adhesion and spreading. *J Cell Biol* 2001; 153:585-598.
- Ubeda M, Habener JF. The large subunit of the DNA replication complex C (DSEB/RF-C140) cleaved and inactivated by caspase-3 (CPP32/YAMA) during Fas-induced apoptosis. *J Biol Chem* 1997 Aug 1;272(31):19562-8.
- Vainio H, Morgan G, Kleihues P. An international evaluation of the cancer-preventive potential of nonsteroidal anti-inflammatory drugs. *Cancer Epidemiol Biomarkers Prev* 1997 Sep;6(9):749-53.
- Van Cruchten S, Van den Broeck W. Morphological and Biochemical Aspects of Apoptosis, Oncosis and Necrosis. *Anat. Histol. Embryol* 2002; 31:214-223.
- Van de Wetering M, Oosterwegel M, Dooijes D, Clevers H. Identification and cloning of TCF-1, a T lymphocyte-specific transcription factor containing a sequence-specific HMG box. *EMBO J* 1991 Jan;10(1):123-32.
- Van der Flier S, Brinkman A, Look MP, Kok EM, Meijervan Gelder ME, Klijn JG, Dorssers LC, Foekens JA. Bcar1/p130Cas protein and primary breast cancer: prognosis and response to tamoxifen treatment. *J Natl Cancer Inst* 2000; 92:120-127.
- Van Noort M, van de Wetering M, Clevers H. Identification of two novel regulated serines in the N terminus of beta-catenin. *Exp Cell Res.* 2002 Jun 10;276(2):264-72.
- Vane JR. Inhibition of prostaglandin synthesis as a mechanism of action for aspirin-like drugs. *Nat New Biol* 1971 Jun 23;231(25):232-5.
- Vasen HFA, Mecklin J-P, Meera Khan P, Lynch HT. The International Collaborative Group on Hereditary Nonpolyposis Colorectal Cancer (ICG-HNPCC). *Dis Colon Rectum* 1991;34:424-425.

- Vasen HFA, Watson P, Mecklin J-P, Lynch HT. ICG-HNPCC New clinical criteria for hereditary nonpolyposis colorectal cancer (HNPCC, Lynch syndrome) proposed by the International Collaborative Group on HNPCC. *Gastroenterology* 1999;116:1453–1456.
- Velcich A, Corner G, Palumbo L, Augenlicht L. Alterde phenotype of HT29 colonic adenocarcinoma cells following expression of the DCC gene. *Oncogene* 1999; 18(16): 2599-606.
- Vermeulen K, Van Bockstaele DR, Berneman ZN. The cell cycle: a review of regulation, deregulation and therapeutic targets in cancer. *Cell Prolif* 2003; 36:131-149.
- Viñes JJ, Ardanaz E, Arrazola A, Gaminde I. Epidemiología poblacional de cáncer colorrectal: revisión de la causalidad. *Anales Sis San Navarra* 2003; 26(1): 79-97.
- Vogelstein B, Fearon ER, Hamilton SR, Kern SE, Preisinger AC, et al. Genetic alterations during colorectal-tumor development. *N Engl. J. Med* 1988; 319:525-32.
- Vogelstein B., Fearon ER, Kern SE, Hamilton SR, Preisinger AC, et al. Allelotyping of colorectal carcinomas. *Sicence* 1989; 244:207-11.
- Von Kries JP, Winbeck G, Asbrand C, Schwarz-Romond T, Sochnikova N, Dell'Oro A, Behrens J, Birchmeier W. Hot spots in beta-catenin for interactions with LEF-1, conductin and APC. *Nat Struct Biol.* 2000 Sep;7(9):800-7.
- Vousden KH, Lu X. Live or let die: the cell's response to p53. *Nat Rev Cancer* 2002; 2(8):594-604.
- Waddell WR, Loughry RW . Sulindac for polyposis of the colon. *J Surg Oncol* 1983; 24:83-87.
- Waldman T, Zhang Y, Dillehay L, Yu J, Kinzler K, Vogelstein B, Williams J. Cell-cycle arrest versus cell death in cancer therapy. *Nat Med* 1997; 3:1034-1036.
- Waldmand T, Lengauer C, Kinzler KW, Vogelstein B. Uncoupling of S phase and mitosis induced by anticancer agents in cells lacking p21. *Nature* 1996; 381: 713-716.
- Waskewich C, Blumenthal RD, Li H, Stein R, Goldenberg DM, Burton J. Celecoxib exhibits the greatest potency amongst cyclooxygenase (COX) inhibitors for growth inhibition of COX-2-negative hematopoietic and epithelial cell lines. *Cancer Res* 2002 Apr 1;62(7):2029-33.
- Watson P., Lynch HT. The tumor spectrum in HNPCC. *Anticancer Res* 1994; 14: 1635-9.

- Wechter WJ, Kantoci D, Murray ED Jr, Quiggle DD, Leipold DD, Gibson KM, McCracken JD. R-flurbiprofen chemoprevention and treatment of intestinal adenomas in the APC(Min)/+ mouse model: implications for prophylaxis and treatment of colon cancer. *Cancer Res* 1997 Oct 1;57(19):4316-24.
- Wehrli M, Dougan ST, Caldwell K, O'Keefe L, Schwartz S, Vaizel-Ohayon D, Schejter E, Tomlinson A, DiNardo S. Arrow encodes an LDL-receptor-related protein essential for Wingless signalling. *Nature* 2000; 407:527-530.
- Wei L, Yang Yu, Zhang X, Yu Qiang. Cleavage of p130cas in Anoikis. *J Cell Biochem* 2004; 91:325-335.
- Weiner TM, Liu ET, Craven RJ, Cance WG. Expression of focal adhesion kinase gene and invasive cancer. *Lancet* 1993; 342:1024-1025.
- Weng LP, Wang X, Yu Q. Transmembrane tyrosine phosphatase LAR induces apoptosis by dephosphorylating and destabilizing p130Cas. *Genes Cells* 1999 Mar;4(3):185-96.
- Weyant MJ, Carothers AM, Bertagnolli ME, Bertagnolli MM. Colon cancer chemopreventive drugs modulate integrin-mediated signaling pathways. *Clin Cancer Res* 2000 Mar;6(3):949-56.
- Whelton A. Nephrotoxicity of nonsteroidal anti-inflammatory drugs: physiologic foundations and clinical implications. *Am J Med* 1999 May 31;106(5B):13S-24S.
- Widlak P. The DFF40/CAD endonuclease and its role in apoptosis. *Acta Biochim Pol.* 2000;47(4):1037-44. Review.
- Williams CS, Luongo C, Radhika A, Zhang T, Lamps LW, Nanney LB, et al. Elevated cyclooxygenase-2 levels in Min mouse adenomas. *Gastroenterology* 1996; 111:1134-40.
- Williams CS, Watson AJM, Sheng H, Helou R, Shao J, Dubois RN. Celecoxib prevents tumor growth in vivo without toxicity to normal gut: lack of correlation between in vitro and in vivo models. *Cancer Res* 2000; 60: 6045-6051.
- Wilmanns C, Fan D, O'Brian CA, Bucana CD, Fidler IJ. Orthotopic and ectopic organ environments differentially influence the sensitivity of murine colon carcinoma cells to doxorubicin and 5-fluorouracil. *Int J Cancer* 1992; 52(1): 98-104.
- Wodarz A, Nusse R. Mechanisms of Wnt signalling in development. *Annu Rev Cell Dev Biol* 1998; 14: 59-88.

- Wolf D, Rodova M, Miska EA, Calvet JP, Kouzarides T. Acetylation of beta-catenin by CREB-binding protein (CBP). *J Biol Chem.* 2002 Jul 12;277(28):25562-7.
- Wolmark N, Rockette H, Fisher B, Wickerham DL, Redmond C, Fisher ER, Jones J, Mamounas EP, Ore L, Petrelli NJ. The benefit of leucovorin -modulated fluorouracil as postoperative adjuvant therapy for primary colon cancer:results from NSABP C-03. *J Clin Oncol* 1993;11:1879-1887.
- Wong NA, Pignatelli M. Beta-catenin a linchpin in colorectal carcinogenesis? *Am J Pathol.* 2002 Feb;160(2):389-401.
- Wrana JL, Attisano L, Wieser R, Ventura F, Massagué J. Mechanism of activation of the TGF-beta receptor *Nature* 1994; 370: 341-7.
- Wu C, Dedhar S. Integrin-linked kinase (ILK) and its interactors: a new paradigm for the coupling of extracellular matrix to actin cytoskeleton and signaling complexes. *J Cell Biol* 2001; 55(4): 505-510.
- Wu GS, Zou SQ, Liu ZR, Tang ZH, Wang JH. Celecoxib inhibits proliferation and induces apoptosis via prostaglandin E2 pathway in human cholangiocarcinoma cell lines. *World J Gastroenterol* 2003 Jun;9(6):1302-6.
- Wu T, Leng J, Han C, Demetris AJ. The cyclooxygenase-2 inhibitor celecoxib blocks phosphorylation of Akt and induces apoptosis in human cholangiocarcinoma cells. *Mol Cancer Ther* 2004 Mar;3(3):299-307.
- Wu X, Pandolfi PP. Mouse models for multistep tumorigenesis. *Trends Cell Biol* 2001; 11(11): S2-9.
- Wu Y, Mehew JW, Heckman CA, Arcinas M, Boxer LM. Negative regulation of bcl-2 expression by p53 in hematopoietic cells. *Oncogene* 2001; 20(2):240-51.
- Wyndford-Thomas D. Cellular senescence and cancer. *J Pathol* 1999; 187:100-111.
- Xiuyuan M, Xu XC. Induction of apoptosis by cyclooxygenase-2 inhibitor NS398 through a cytochrome c-dependent pathway in esophageal cancer cells. *Int J Cancer* 2001; 93: 218-223.
- Xu LH, Owens LV, Sturge GC, Yang X, Liu ET, Craven RJ, Cance WG.. Attenuation of the expressionof the focal adhesion kinase induces apoptosis in tumor cells. *Cell Growth Differ* 1996; 4:413-418.
- Xu W, Harrison SC, Eck MJ. Three-dimensional structure of the tyrosine kinase c-Src. *Nature* 1997; 385:595-602.

- Yamakita Y, Totsukawa G, Yamashiro S, Fry D, Zhang XO, Hanks SK, Matsumura FJ. Dissociation of FAK/p130(CAS)/c-Src complex during mitosis: role of mitosis-specific serine phosphorylation of FAK. *Cell Biol* 1999; 144:315-324.
- Yamamoto H, Kishida S, Kishida M, Ikeda S, Takada S, Kikuchi A. Phosphorylation of axin, a Wnt signal negative regulator, by glycogen synthase kinase-3beta regulates its stability. *J Biol Chem* 1999 Apr 16;274(16):10681-4.
- Yamazaki R, Kusunoki N, Matsuzaki T, Hashimoto S, Kawai S. Selective cyclooxygenase-2 inhibitors show a differential ability to inhibit proliferation and induce apoptosis of colon adenocarcinoma cells. *FEBS Lett* 2002 Nov 6;531(2):278-84.
- Yanagawa S, van Leeuwen F, Wodarz A, Klingensmith J, Nusse R. The dishevelled protein is modified by wingless signaling in *Drosophila*. *Genes Dev* 1995 May 1;9(9):1087-97.
- Yang Snyder J, Miller JR, Brown JD, Lai CJ, Moon RT. A frizzled homolog functions in a vertebrate Wnt signalling pathway. *Curr Biol* 1996; 6: 1302-1306.
- Yoganathan N, Yee A, Zhang Z, Leung D, Yan J, Fazli L, Kojic DL, Costello PC, Jabali M, Dedhar S, Sanghera J. Integrin-linked kinase, a promising cancer therapeutic target: biochemical and biological properties. *Pharmacol Ther* 2002 Feb-Mar;93(2-3):233-42.
- Yuan J. Molecular control of life and death. *Curr Opin Cell Biol* 1995 Apr;7(2):211-4. Review.
- Zhang L, Yu J, Park BH, Kinzler KW, Vogelstein B. Role of BAX in the apoptotic response to anticancer agents. *Science* 2000; 290(5493): 989-992.
- Zhang Z, Lai GH, Sirica AE. Celecoxib-induced apoptosis in rat cholangiocarcinoma cells mediated by Akt inactivation and Bax translocation. *Hepatology* 2004 Apr;39(4):1028-37.
- Zhao JH, Guan JL. Role of focal adhesion kinase in signalling by the extracellular matrix. *Prog Mol Subcell Biol* 2000; 25:37-55.
- Zhao JH, Reiske H, Guan JL. Regulation of the cell cycle by focal adhesion kinase. *J Cell Biol* 1998; 143:1997-2008.

- Zhu J, Song X, Lin HP, Young DC, Yan S, Marquez VE, Chen CS. Using cyclooxygenase-2 inhibitors as molecular platforms to develop a new class of apoptosis-inducing agents. *J Natl Cancer Inst.* 2002 Dec 4;94(23):1745-57.
- Zhu Z, Sanchez-Sweatman O, Huang X, et al. Anoikis and metastatic potential of cloudman S91 melanoma cells. *Cancer Res* 2001; 61:1707-1716.
- Zou H, Henzel WJ, Liu X, Lutschg A, Wang X. Apaf-1, a human protein homologous to *C. elegans* CED-4, participates in cytochrome c-dependent activation of caspase-3. *Cell* 1997 Aug 8;90(3):405-13.
- Zou H, Li Y, Liu X, Wang X. An APAF-1.cytochrome c multimeric complex is a functional apoptosome that activates procaspase-9. *J Biol Chem* 1999 Apr 23;274(17):11549-56.