

Selected Publications of Current Faculty

Books:

Tozeren A and Byers SW. (2003). *New Biology for Engineers and Computer Scientists*. Pearson Prentice Hall

Journal Articles:

Ahern,G.P. (2003). Activation of TRPV1 by the satiety factor oleoylethanolamide. *J Biol Chem* 278, 30429-30434.

Aruffo,A., Stamenkovic,I., Melnick,M., Underhill,C.B., and Seed,B. (1990). CD44 is the principal cell surface receptor for hyaluronate. *Cell* 61, 1303-1313.

Avantaggiati,M.L., Carbone,M., Graessmann,A., Nakatani,Y., Howard,B., and Levine,A.S. (1996). The SV40 large T antigen and adenovirus E1a oncoproteins interact with distinct isoforms of the transcriptional co-activator, p300. *EMBO J* 15, 2236-2248.

Avantaggiati,M.L., Ogryzko,V., Gardner,K., Giordano,A., Levine,A.S., and Kelly,K. (1997). Recruitment of p300/CBP in p53-dependent signal pathways. *Cell* 89, 1175-1184.

Avila,A.H., Morgan,C.A., and Bayer,B.M. (2003). Stress-induced suppression of the immune system after withdrawal from chronic cocaine. *J Pharmacol. Exp. Ther.* 305, 290-297.

Barker,W.C. and Ledley,R.S. (1996). Not the "Dark Ages". *Science* 273, 165.

Berger,A., Rosenthal,D., and Spiegel,S. (1995). Sphingosylphosphocholine, a signaling molecule which accumulates in Niemann-Pick disease type A, stimulates DNA-binding activity of the transcription activator protein AP-1. *Proc. Natl Acad. Sci U. S. A* 92, 5885-5889.

Bokde,A.L., Tagamets,M.A., Friedman,R.B., and Horwitz,B. (2001). Functional interactions of the inferior frontal cortex during the processing of words and word-like stimuli. *Neuron* 30, 609-617.

Boujrad,N., Ogwuegbu,S.O., Garnier,M., Lee,C.H., Martin,B.M., and Papadopoulos,V. (1995). Identification of a stimulator of steroid hormone synthesis isolated from testis. *Science* 268, 1609-1612.

Bregman,B.S., Kunkel-Bagden,E., Schnell,L., Dai,H.N., Gao,D., and Schwab,M.E. (1995). Recovery from spinal cord injury mediated by antibodies to neurite growth inhibitors. *Nature* 378, 498-501.

Bregman,B.S. (1998). Regeneration in the spinal cord. *Curr. Opin. Neurobiol.* 8, 800-807.

Burbelo,P.D., Snow,D.M., Bahou,W., and Spiegel,S. (1999). MSE55, a Cdc42 effector protein, induces long cellular extensions in fibroblasts. *Proc. Natl Acad. Sci U. S. A* 96, 9083-9088.

Calderone,R.A. and Fonzi,W.A. (2001). Virulence factors of *Candida albicans*. *Trends Microbiol.* 9, 327-335.

Casey,E.S., O'Reilly,M.A., Conlon,F.L., and Smith,J.C. (1998). The T-box transcription factor Brachyury regulates expression of eFGF through binding to a non-palindromic response element. *Development* 125, 3887-3894.

Casey,J.L. (2002). RNA editing in hepatitis delta virus genotype III requires a branched double-hairpin RNA structure. *J Virol.* 76, 7385-7397.

Casimiro, M.C., Knollmann, B.C., Ebert, S.N., Vary, J.C., Jr., Greene, A.E., Franz, M.R., Grinberg, A., Huang, S.P., and Pfeifer, K. (2001). Targeted disruption of the *Kcnq1* gene produces a mouse model of Jervell and Lange-Nielsen Syndrome. *Proc. Natl Acad. Sci U. S. A* 98, 2526-2531.

Cassidy, R.M. and Gale, K. (1998). Mediodorsal thalamus plays a critical role in the development of limbic motor seizures. *J Neurosci.* 18, 9002-9009.

Chang, E.H., Pirolo, K.F., Zou, Z.Q., Cheung, H.Y., Lawler, E.L., Garner, R., White, E., Bernstein, W.B., Fraumeni, J.W., Jr., and Blattner, W.A. (1987). Oncogenes in radioresistant, noncancerous skin fibroblasts from a cancer-prone family. *Science* 237, 1036-1039.

Cleemann, L., Wang, W., and Morad, M. (1998). Two-dimensional confocal images of organization, density, and gating of focal Ca^{2+} release sites in rat cardiac myocytes. *Proc. Natl Acad. Sci U. S. A* 95, 10984-10989.

Cleemann, L., Wang, W., and Morad, M. (1998). Two-dimensional confocal images of organization, density, and gating of focal Ca^{2+} release sites in rat cardiac myocytes. *Proc. Natl Acad. Sci U. S. A* 95, 10984-10989.

Colangelo, A.M., Johnson, P.F., and Mocchetti, I. (1998). beta-adrenergic receptor-induced activation of nerve growth factor gene transcription in rat cerebral cortex involves CCAAT/enhancer-binding protein delta. *Proc. Natl Acad. Sci U. S. A* 95, 10920-10925.

Coopman, P.J., Do, M.T., Barth, M., Bowden, E.T., Hayes, A.J., Basyuk, E., Blancato, J.K., Vezza, P.R., McLeskey, S.W., Mangeat, P.H., and Mueller, S.C. (2000). The Syk tyrosine kinase suppresses malignant growth of human breast cancer cells. *Nature* 406, 742-747.

Crooke, E., Guthrie, B., Lecker, S., Lill, R., and Wickner, W. (1988). ProOmpA is stabilized for membrane translocation by either purified *E. coli* trigger factor or canine signal recognition particle. *Cell* 54, 1003-1011.

Culty, M., Nguyen, H.A., and Underhill, C.B. (1992). The hyaluronan receptor (CD44) participates in the uptake and degradation of hyaluronan. *J Cell Biol* 116, 1055-1062.

de Caestecker, M.P., Parks, W.T., Frank, C.J., Castagnino, P., Bottaro, D.P., Roberts, A.B., and Lechleider, R.J. (1998). Smad2 transduces common signals from receptor serine-threonine and tyrosine kinases. *Genes Dev.* 12, 1587-1592.

Dickson, R.B. and Stancel, G.M. (2000). Estrogen receptor-mediated processes in normal and cancer cells. *J Natl Cancer Inst Monogr* 135-145.

Easwaran, V., Pishvaian, M., Salimuddin, and Byers, S. (1999). Cross-regulation of beta-catenin-LEF/TCF and retinoid signaling pathways. *Curr. Biol* 9, 1415-1418.

Eden, G.F., VanMeter, J.W., Rumsey, J.M., Maisog, J.M., Woods, R.P., and Zeffiro, T.A. (1996). Abnormal processing of visual motion in dyslexia revealed by functional brain imaging. *Nature* 382, 66-69.

Esser, K.H., Condon, C.J., Suga, N., and Kanwal, J.S. (1997). Syntax processing by auditory cortical neurons in the FM-FM area of the mustached bat *Pteronotus parnellii*. *Proc. Natl Acad. Sci U. S. A* 94, 14019-14024.

Ewald, D., Li, M., Efrat, S., Auer, G., Wall, R.J., Furth, P.A., and Hennighausen, L. (1996). Time-sensitive reversal of hyperplasia in transgenic mice expressing SV40 T antigen. *Science* 273, 1384-1386.

Faden, A.I. (2002). Neuroprotection and traumatic brain injury: theoretical option or realistic

proposition. *Curr. Opin. Neurol.* **15**, 707-712.

Fan, S., Ma, Y.X., Gao, M., Yuan, R.Q., Meng, Q., Goldberg, I.D., and Rosen, E.M. (2001). The multisubstrate adapter Gab1 regulates hepatocyte growth factor (scatter factor)-c-Met signaling for cell survival and DNA repair. *Mol. Cell Biol* **21**, 4968-4984.

Feng, L.X., Chen, Y., Dettin, L., Pera, R.A., Herr, J.C., Goldberg, E., and Dym, M. (2002). Generation and in vitro differentiation of a spermatogonial cell line. *Science* **297**, 392-395.

Frazer, A., Maayani, S., and Wolfe, B.B. (1990). Subtypes of receptors for serotonin. *Annu. Rev Pharmacol. Toxicol.* **30**, 307-348.

Gallicano, G.I., Kouklis, P., Bauer, C., Yin, M., Vasioukhin, V., Degenstein, L., and Fuchs, E. (1998). Desmoplakin is required early in development for assembly of desmosomes and cytoskeletal linkage. *J Cell Biol* **143**, 2009-2022.

Gallicano, G.I., Bauer, C., and Fuchs, E. (2001). Rescuing desmoplakin function in extra-embryonic ectoderm reveals the importance of this protein in embryonic heart, neuroepithelium, skin and vasculature. *Development* **128**, 929-941.

Gelmann, E.P. (2002). Molecular biology of the androgen receptor. *J Clin Oncol* **20**, 3001-3015.

Goodhill, G.J. (2000). Dating behavior of the retinal ganglion cell. *Neuron* **25**, 501-503.

Hilakivi-Clarke, L., Clarke, R., Onojafe, I., Raygada, M., Cho, E., and Lippman, M. (1997). A maternal diet high in n - 6 polyunsaturated fats alters mammary gland development, puberty onset, and breast cancer risk among female rat offspring. *Proc. Natl Acad. Sci U. S. A* **94**, 9372-9377.

Hilakivi-Clarke, L. (2000). Estrogens, BRCA1, and breast cancer. *Cancer Res* **60**, 4993-5001.

Huntsman, M.M., Porcello, D.M., Homanics, G.E., DeLorey, T.M., and Huguenard, J.R. (1999). Reciprocal inhibitory connections and network synchrony in the mammalian thalamus. *Science* **283**, 541-543.

Johnson, M.D., Kenney, N., Stoica, A., Hilakivi-Clarke, L., Singh, B., Chepko, G., Clarke, R., Sholler, P.F., Lirio, A.A., Foss, C., Reiter, R., Trock, B., Paik, S., and Martin, M.B. (2003). Cadmium mimics the in vivo effects of estrogen in the uterus and mammary gland. *Nat. Med* **9**, 1081-1084.

Jones, J.M. and Nakai, H. (1997). The phiX174-type primosome promotes replisome assembly at the site of recombination in bacteriophage Mu transposition. *EMBO J* **16**, 6886-6895.

Kagan, B.L., Henke, R.T., Cabal-Manzano, R., Stoica, G.E., Nguyen, Q., Wellstein, A., and Riegel, A.T. (2003). Complex regulation of the fibroblast growth factor-binding protein in MDA-MB-468 breast cancer cells by CCAAT/enhancer-binding protein beta. *Cancer Res* **63**, 1696-1705.

Kasid, U., Suy, S., Dent, P., Ray, S., Whiteside, T.L., and Sturgill, T.W. (1996). Activation of Raf by ionizing radiation. *Nature* **382**, 813-816.

Katayama, T., Kubota, T., Kurokawa, K., Crooke, E., and Sekimizu, K. (1998). The initiator function of DnaA protein is negatively regulated by the sliding clamp of the E. coli chromosomal replicase. *Cell* **94**, 61-71.

Kleinman, H.K., Philp, D., and Hoffman, M.P. (2003). Role of the extracellular matrix in morphogenesis. *Curr. Opin. Biotechnol.* **14**, 526-532.

Kromer, L.F. (1987). Nerve growth factor treatment after brain injury prevents neuronal death.

Science 235, 214-216.

Lanford,P.J., Lan,Y., Jiang,R., Lindsell,C., Weinmaster,G., Gridley,T., and Kelley,M.W. (1999). Notch signalling pathway mediates hair cell development in mammalian cochlea. *Nat. Genet* 21, 289-292.

Latge,J.P. and Calderone,R. (2002). Host-microbe interactions: fungi invasive human fungal opportunistic infections. *Curr. Opin. Microbiol.* 5, 355-358.

Lee,E.W., Michalkiewicz,M., Kitlinska,J., Kalezic,I., Switalska,H., Yoo,P., Sangkharat,A., Ji,H., Li,L., Michalkiewicz,T., Ljubisavljevic,M., Johansson,H., Grant,D.S., and Zukowska,Z. (2003). Neuropeptide Y induces ischemic angiogenesis and restores function of ischemic skeletal muscles. *J Clin Invest* 111, 1853-1862.

Li,H., Yao,Z., Degenhardt,B., Teper,G., and Papadopoulos,V. (2001). Cholesterol binding at the cholesterol recognition/ interaction amino acid consensus (CRAC) of the peripheral-type benzodiazepine receptor and inhibition of steroidogenesis by an HIV TAT-CRAC peptide. *Proc. Natl Acad. Sci U. S. A* 98, 1267-1272.

Li,M., Liu,X., Robinson,G., Bar-Peled,U., Wagner,K.U., Young,W.S., Hennighausen,L., and Furth,P.A. (1997). Mammary-derived signals activate programmed cell death during the first stage of mammary gland involution. *Proc. Natl Acad. Sci U. S. A* 94, 3425-3430.

Livsey,C.T. and Vicini,S. (1992). Slower spontaneous excitatory postsynaptic currents in spiny versus aspiny hilar neurons. *Neuron* 8, 745-755.

Martinez,E.D. and Danielsen,M. (2002). Loss of androgen receptor transcriptional activity at the G(1)/S transition. *J Biol Chem* 277, 29719-29729.

Mulroney,S.E., McDonnell,K.J., Pert,C.B., Ruff,M.R., Resch,Z., Samson,W.K., and Lumpkin,M.D. (1998). HIV gp120 inhibits the somatotrophic axis: a possible GH-releasing hormone receptor mechanism for the pathogenesis of AIDS wasting. *Proc. Natl Acad. Sci U. S. A* 95, 1927-1932.

Nakai,H., Doseeva,V., and Jones,J.M. (2001). Handoff from recombinase to replisome: insights from transposition. *Proc. Natl Acad. Sci U. S. A* 98, 8247-8254.

Nan,F., Bzdega,T., Pshenichkin,S., Wroblewski,J.T., Wroblewska,B., Neale,J.H., and Kozikowski,A.P. (2000). Dual function glutamate-related ligands: discovery of a novel, potent inhibitor of glutamate carboxypeptidase II possessing mGluR3 agonist activity. *J Med Chem* 43, 772-774.

Nanda,N.K. and Sercarz,E.E. (1995). Induction of anti-self-immunity to cure cancer. *Cell* 82, 13-17.

Nevalainen,M.T., Xie,J., Bubendorf,L., Wagner,K.U., and Rui,H. (2002). Basal activation of transcription factor signal transducer and activator of transcription (Stat5) in nonpregnant mouse and human breast epithelium. *Mol. Endocrinol.* 16, 1108-1124.

Orford,K., Orford,C.C., and Byers,S.W. (1999). Exogenous expression of beta-catenin regulates contact inhibition, anchorage-independent growth, anoikis, and radiation-induced cell cycle arrest. *J Cell Biol* 146, 855-868.

Pirollo,K.F., Rait,A., Sleer,L.S., and Chang,E.H. (2003). Antisense therapeutics: from theory to clinical practice. *Pharmacol. Ther.* 99, 55-77.

Pirone,D.M., Carter,D.E., and Burbelo,P.D. (2001). Evolutionary expansion of CRIB-containing Cdc42 effector proteins. *Trends Genet* 17, 370-373.

Premkumar,L.S. and Ahern,G.P. (2000). Induction of vanilloid receptor channel activity by protein kinase C. *Nature* 408, 985-990.

Qiu,J., Cai,D., Dai,H., McAtee,M., Hoffman,P.N., Bregman,B.S., and Filbin,M.T. (2002). Spinal axon regeneration induced by elevation of cyclic AMP. *Neuron* 34, 895-903.

Raczkowski,V.F., Hernandez,Y.M., Erzouki,H.K., Abrahams,T.P., Mandal,A.K., Hamosh,P., Friedman,E., Quest,J.A., Dretchen,K.L., and Gillis,R.A. (1991). Cocaine acts in the central nervous system to inhibit sympathetic neural activity. *J Pharmacol. Exp. Ther.* 257, 511-519.

Rauschecker,J.P. and Shannon,R.V. (2002). Sending sound to the brain. *Science* 295, 1025-1029.

Riesenhuber,M. and Poggio,T. (1999). Hierarchical models of object recognition in cortex. *Nat. Neurosci.* 2, 1019-1025.

Riesenhuber,M. and Poggio,T. (2000). Models of object recognition. *Nat. Neurosci.* 3 *Suppl*, 1199-1204.

Roman,B.L., Pham,V.N., Lawson,N.D., Kulik,M., Childs,S., Lekven,A.C., Garrity,D.M., Moon,R.T., Fishman,M.C., Lechleider,R.J., and Weinstein,B.M. (2002). Disruption of *acvr1* increases endothelial cell number in zebrafish cranial vessels. *Development* 129, 3009-3019.

Sham,J.S., Cleemann,L., and Morad,M. (1992). Gating of the cardiac Ca²⁺ release channel: the role of Na⁺ current and Na⁽⁺⁾-Ca²⁺ exchange. *Science* 255, 850-853.

Sheen,J.H. and Dickson,R.B. (2002). Overexpression of c-Myc alters G(1)/S arrest following ionizing radiation. *Mol. Cell Biol* 22, 1819-1833.

Simbulan-Rosenthal,C.M., Haddad,B.R., Rosenthal,D.S., Weaver,Z., Coleman,A., Luo,R., Young,H.M., Wang,Z.Q., Ried,T., and Smulson,M.E. (1999). Chromosomal aberrations in PARP(-/-) mice: genome stabilization in immortalized cells by reintroduction of poly(ADP-ribose) polymerase cDNA. *Proc. Natl Acad. Sci U. S. A* 96, 13191-13196.

Simbulan-Rosenthal,C.M., Ly,D.H., Rosenthal,D.S., Konopka,G., Luo,R., Wang,Z.Q., Schultz,P.G., and Smulson,M.E. (2000). Misregulation of gene expression in primary fibroblasts lacking poly(ADP-ribose) polymerase. *Proc. Natl Acad. Sci U. S. A* 97, 11274-11279.

Simmen,M.W., Goodhill,G.J., and Willshaw,D.J. (1994). Scaling and brain connectivity. *Nature* 369, 448-450.

Song,L.N., Herrell,R., Byers,S., Shah,S., Wilson,E.M., and Gelmann,E.P. (2003). Beta-catenin binds to the activation function 2 region of the androgen receptor and modulates the effects of the N-terminal domain and TIF2 on ligand-dependent transcription. *Mol. Cell Biol* 23, 1674-1687.

Sparkowski,J., Anders,J., and Schlegel,R. (1995). E5 oncoprotein retained in the endoplasmic reticulum/cis Golgi still induces PDGF receptor autophosphorylation but does not transform cells. *EMBO J* 14, 3055-3063.

Srivastava,S., Zou,Z.Q., Pirolo,K., Blattner,W., and Chang,E.H. (1990). Germ-line transmission of a mutated p53 gene in a cancer-prone family with Li-Fraumeni syndrome. *Nature* 348, 747-749.

Tcherkasskaya,O., Davidson,E.A., and Uversky,V.N. (2003). Biophysical constraints for protein structure prediction. *J Proteome. Res* 2, 37-42.

Tian,B., Reser,D., Durham,A., Kustov,A., and Rauschecker,J.P. (2001). Functional specialization

in rhesus monkey auditory cortex. *Science* 292, 290-293.

Toretsky, J.A., Neckers, L., and Wexler, L.H. (1995). Detection of (11;22)(q24;q12) translocation-bearing cells in peripheral blood progenitor cells of patients with Ewing's sarcoma family of tumors. *J Natl Cancer Inst* 87, 385-386.

Turkeltaub, P.E., Gareau, L., Flowers, D.L., Zeffiro, T.A., and Eden, G.F. (2003). Development of neural mechanisms for reading. *Nat. Neurosci.* 6, 767-773.

Ullman, M.T. (2001). A neurocognitive perspective on language: the declarative/procedural model. *Nat. Rev Neurosci.* 2, 717-726.

Uruno, T., Liu, J., Zhang, P., Fan, Y., Egile, C., Li, R., Mueller, S.C., and Zhan, X. (2001). Activation of Arp2/3 complex-mediated actin polymerization by cortactin. *Nat. Cell Biol* 3, 259-266.

Vaidya, C.J., Austin, G., Kirkorian, G., Riddlehuber, H.W., Desmond, J.E., Glover, G.H., and Gabrieli, J.D. (1998). Selective effects of methylphenidate in attention deficit hyperactivity disorder: a functional magnetic resonance study. *Proc. Natl Acad. Sci U. S. A* 95, 14494-14499.

Veldman, T., Liu, X., Yuan, H., and Schlegel, R. (2003). Human papillomavirus E6 and Myc proteins associate in vivo and bind to and cooperatively activate the telomerase reverse transcriptase promoter. *Proc. Natl Acad. Sci U. S. A* 100, 8211-8216.

Verbalis, J.G. (2003). Diabetes insipidus. *Rev Endocr. Metab Disord.* 4, 177-185.

Waldman, T., Lengauer, C., Kinzler, K.W., and Vogelstein, B. (1996). Uncoupling of S phase and mitosis induced by anticancer agents in cells lacking p21. *Nature* 381, 713-716.

Waldman, T., Zhang, Y., Dillehay, L., Yu, J., Kinzler, K., Vogelstein, B., and Williams, J. (1997). Cell-cycle arrest versus cell death in cancer therapy. *Nat. Med* 3, 1034-1036.

Wang, C., Pattabiraman, N., Zhou, J.N., Fu, M., Sakamaki, T., Albanese, C., Li, Z., Wu, K., Hulit, J., Neumeister, P., Novikoff, P.M., Brownlee, M., Scherer, P.E., Jones, J.G., Whitney, K.D., Donehower, L.A., Harris, E.L., Rohan, T., Johns, D.C., and Pestell, R.G. (2003). Cyclin D1 repression of peroxisome proliferator-activated receptor gamma expression and transactivation. *Mol. Cell Biol* 23, 6159-6173.

Wang, X., Lee, S.R., Arai, K., Lee, S.R., Tsuji, K., Rebeck, G.W., and Lo, E.H. (2003). Lipoprotein receptor-mediated induction of matrix metalloproteinase by tissue plasminogen activator. *Nat. Med* 9, 1313-1317.

Wrathall, J.R. (2003). Muscles flex, axons die. *Nat. Med* 9, 1347-1348.

Wu, C.H., Yeh, L.S., Huang, H., Arminski, L., Castro-Alvear, J., Chen, Y., Hu, Z., Kourtesis, P., Ledley, R.S., Suzek, B.E., Vinayaka, C.R., Zhang, J., and Barker, W.C. (2003). The Protein Information Resource. *Nucleic Acids Res* 31, 345-347.

Xie, Z., Zeng, X., Waldman, T., and Glazer, R.I. (2003). Transformation of mammary epithelial cells by 3-phosphoinositide-dependent protein kinase-1 activates beta-catenin and c-Myc, and down-regulates caveolin-1. *Cancer Res* 63, 5370-5375.

Xiong, J., Fan, S., Meng, Q., Schramm, L., Wang, C., Bouzahza, B., Zhou, J., Zafonte, B., Goldberg, I.D., Haddad, B.R., Pestell, R.G., and Rosen, E.M. (2003). BRCA1 inhibition of telomerase activity in cultured cells. *Mol. Cell Biol* 23, 8668-8690.

Xu, X., Qiao, W., Linke, S.P., Cao, L., Li, W.M., Furth, P.A., Harris, C.C., and Deng, C.X. (2001). Genetic interactions between tumor suppressors Brca1 and p53 in apoptosis, cell cycle and

tumorigenesis. *Nat. Genet* 28, 266-271.

Yakovlev,A.G., Ota,K., Wang,G., Movsesyan,V., Bao,W.L., Yoshihara,K., and Faden,A.I. (2001). Differential expression of apoptotic protease-activating factor-1 and caspase-3 genes and susceptibility to apoptosis during brain development and after traumatic brain injury. *J Neurosci.* 21 , 7439-7446.

Yao,Z.X. and Papadopoulos,V. (2002). Function of beta-amyloid in cholesterol transport: a lead to neurotoxicity. *FASEB J* 16, 1677-1679.

Zasloff,M. (2002). Trypsin, for the defense. *Nat. Immunol.* 3, 508-510.

Zasloff,M. (2002). Antimicrobial peptides of multicellular organisms. *Nature* 415, 389-395.

Zheng,W., Li,Z., Skarstad,K., and Crooke,E. (2001). Mutations in DnaA protein suppress the growth arrest of acidic phospholipid-deficient *Escherichia coli* cells. *EMBO J* 20, 1164-1172.