

REFERENCES

2004. Finishing the euchromatic sequence of the human genome. *Nature* 431:931-945.
- Ahrens-Fath I, Politz O, Geserick C, Haendler B. 2005. Androgen receptor function is modulated by the tissue-specific AR45 variant. *Febs J* 272:74-84.
- Albers M, Blume B, Schlueter T, Wright MB, Kober I, Kremoser C, Deuschle U, Koegl M. 2006. A novel principle for partial agonism of liver X receptor ligands. Competitive recruitment of activators and repressors. *J Biol Chem* 281:4920-4930.
- Aronheim A. 1997. Improved efficiency sos recruitment system: expression of the mammalian GAP reduces isolation of Ras GTPase false positives. *Nucleic Acids Res* 25:3373-3374.
- Aronheim A, Zandi E, Hennemann H, Elledge SJ, Karin M. 1997. Isolation of an AP-1 repressor by a novel method for detecting protein-protein interactions. *Mol Cell Biol* 17:3094-3102.
- Baeuerle PA, Baltimore D. 1988a. Activation of DNA-binding activity in an apparently cytoplasmic precursor of the NF-kappa B transcription factor. *Cell* 53:211-217.
- Baeuerle PA, Baltimore D. 1988b. I kappa B: a specific inhibitor of the NF-kappa B transcription factor. *Science* 242:540-546.
- Baeuerle PA, Baltimore D. 1989. A 65-kappaD subunit of active NF-kappaB is required for inhibition of NF-kappaB by I kappaB. *Genes Dev* 3:1689-1698.
- Bailey SN, Ali SM, Carpenter AE, Higgins CO, Sabatini DM. 2006. Microarrays of lentiviruses for gene function screens in immortalized and primary cells. *Nat Methods* 3:117-122.
- Bardin CW, Brown T, Isomaa VV, Janne OA. 1983. Progestins can mimic, inhibit and potentiate the actions of androgens. *Pharmacol Ther* 23:443-459.
- Beato M, Herrlich P, Schutz G. 1995. Steroid hormone receptors: many actors in search of a plot. *Cell* 83:851-857.
- Bednarz J, Teifel M, Friedl P, Engelmann K. 2000. Immortalization of human corneal endothelial cells using electroporation protocol optimized for human corneal endothelial and human retinal pigment epithelial cells. *Acta Ophthalmol Scand* 78:130-136.
- Belandia B, Powell SM, Garcia-Pedrero JM, Walker MM, Bevan CL, Parker MG. 2005. Hey1, a mediator of notch signaling, is an androgen receptor corepressor. *Mol Cell Biol* 25:1425-1436.
- Beutler B, van Huffel C. 1994. Unraveling function in the TNF ligand and receptor families. *Science* 264:667-668.
- Bonif M, Meuwis MA, Close P, Benoit V, Heyninck K, Chapelle JP, Bours V, Merville MP, Piette J, Beyaert R, Chariot A. 2006. TNFalpha- and IKKbeta-mediated TANK/I-TRAF phosphorylation: implications for interaction with NEMO/IKKgamma and NF-kappaB activation. *Biochem J* 394:593-603.
- Bork P, Jensen LJ, von Mering C, Ramani AK, Lee I, Marcotte EM. 2004. Protein interaction networks from yeast to human. *Curr Opin Struct Biol* 14:292-299.

- Brent R, Ptashne M. 1985. A eukaryotic transcriptional activator bearing the DNA specificity of a prokaryotic repressor. *Cell* 43:729-736.
- Bronstein I, Fortin J, Stanley PE, Stewart GS, Kricka LJ. 1994. Chemiluminescent and bioluminescent reporter gene assays. *Anal Biochem* 219:169-181.
- Chang FH, Lee CH, Chen MT, Kuo CC, Chiang YL, Hang CY, Roffler S. 2004. Surefection: a new platform for transfected cell arrays. *Nucleic Acids Res* 32:e33.
- Chien CT, Bartel PL, Sternglanz R, Fields S. 1991. The two-hybrid system: a method to identify and clone genes for proteins that interact with a protein of interest. *Proc Natl Acad Sci U S A* 88:9578-9582.
- Choudhuri S. 2004. Microarrays in biology and medicine. *J Biochem Mol Toxicol* 18:171-179.
- Cockshott ID. 2004. Bicalutamide: clinical pharmacokinetics and metabolism. *Clin Pharmacokinet* 43:855-878.
- Colland F, Jacq X, Trouplin V, Mougin C, Groizeleau C, Hamburger A, Meil A, Wójcik J, Legrain P, Gauthier JM. 2004. Functional proteomics mapping of a human signaling pathway. *Genome Res* 14:1324-1332.
- Dalton S, Treisman R. 1992. Characterization of SAP-1, a protein recruited by serum response factor to the c-fos serum response element. *Cell* 68:597-612.
- Dang CV, Barrett J, Villa-Garcia M, Resar LM, Kato GJ, Fearon ER. 1991. Intracellular leucine zipper interactions suggest c-Myc hetero-oligomerization. *Mol Cell Biol* 11:954-962.
- Delehanty JB, Shaffer KM, Lin B. 2004. A comparison of microscope slide substrates for use in transfected cell microarrays. *Biosens Bioelectron* 20:773-779.
- DeRisi J, Penland L, Brown PO, Bittner ML, Meltzer PS, Ray M, Chen Y, Su YA, Trent JM. 1996. Use of a cDNA microarray to analyse gene expression patterns in human cancer. *Nat Genet* 14:457-460.
- Dixon EP, Johnstone EM, Liu X, Little SP. 1997. An inverse mammalian two-hybrid system for beta secretase and other proteases. *Anal Biochem* 249:239-241.
- Doesburg P, Kuil CW, Berrevoets CA, Steketee K, Faber PW, Mulder E, Brinkmann AO, Trapman J. 1997. Functional in vivo interaction between the amino-terminal, transactivation domain and the ligand binding domain of the androgen receptor. *Biochemistry* 36:1052-1064.
- Edwards AM, Kus B, Jansen R, Greenbaum D, Greenblatt J, Gerstein M. 2002. Bridging structural biology and genomics: assessing protein interaction data with known complexes. *Trends Genet* 18:529-536.
- Ekins R, Chu F. 1992. Multianalyte microspot immunoassay. The microanalytical 'compact disk' of the future. *Ann Biol Clin (Paris)* 50:337-353.
- Ekins R, Chu F, Micallef J. 1989. High specific activity chemiluminescent and fluorescent markers: their potential application to high sensitivity and 'multi-analyte' immunoassays. *J Biolumin Chemilumin* 4:59-78.
- Ekins RP. 1989. Multi-analyte immunoassay. *J Pharm Biomed Anal* 7:155-168.
- Engvall E, Jonsson K, Perlmann P. 1971. Enzyme-linked immunosorbent assay. II. Quantitative assay of protein antigen, immunoglobulin G, by means of enzyme-labelled antigen and antibody-coated tubes. *Biochim Biophys Acta* 251:427-434.
- Engvall E, Perlmann P. 1972. Enzyme-linked immunosorbent assay, Elisa. 3. Quantitation of specific antibodies by enzyme-labeled anti-immunoglobulin in antigen-coated tubes. *J Immunol* 109:129-135.
- Erfle H, Simpson JC, Bastiaens PI, Pepperkok R. 2004. siRNA cell arrays for high-content screening microscopy. *Biotechniques* 37:454-458, 460, 462.

- Evans RM. 1988. The steroid and thyroid hormone receptor superfamily. *Science* 240:889-895.
- Eyckerman S, Lemmens I, Catteeuw D, Verhee A, Vandekerckhove J, Lievens S, Tavernier J. 2005. Reverse MAPPIT: screening for protein-protein interaction modifiers in mammalian cells. *Nat Methods* 2:427-433.
- Eyckerman S, Verhee A, der Heyden JV, Lemmens I, Ostade XV, Vandekerckhove J, Tavernier J. 2001. Design and application of a cytokine-receptor-based interaction trap. *Nat Cell Biol* 3:1114-1119.
- Fang H, Tong W, Branham WS, Moland CL, Dial SL, Hong H, Xie Q, Perkins R, Owens W, Sheehan DM. 2003. Study of 202 natural, synthetic, and environmental chemicals for binding to the androgen receptor. *Chem Res Toxicol* 16:1338-1358.
- Fang Y, Fliss AE, Robins DM, Caplan AJ. 1996. Hsp90 regulates androgen receptor hormone binding affinity in vivo. *J Biol Chem* 271:28697-28702.
- Fearon ER, Finkel T, Gillison ML, Kennedy SP, Casella JF, Tomaselli GF, Morrow JS, Van Dang C. 1992. Karyoplasmic interaction selection strategy: a general strategy to detect protein-protein interactions in mammalian cells. *Proc Natl Acad Sci U S A* 89:7958-7962.
- Feng XH, Derynck R. 2001. Mammalian two-hybrid assays. Analyzing protein-protein interactions in transforming growth factor-beta signaling pathway. *Methods Mol Biol* 177:221-239.
- Fields S, Song O. 1989. A novel genetic system to detect protein-protein interactions. *Nature* 340:245-246.
- Figeys D. 2003. Novel approaches to map protein interactions. *Curr Opin Biotechnol* 14:119-125.
- Fire A, Harrison SW, Dixon D. 1990. A modular set of lacZ fusion vectors for studying gene expression in *Caenorhabditis elegans*. *Gene* 93:189-198.
- Fischer JA, Giniger E, Maniatis T, Ptashne M. 1988. GAL4 activates transcription in *Drosophila*. *Nature* 332:853-856.
- Fodor SP, Read JL, Pirrung MC, Stryer L, Lu AT, Solas D. 1991. Light-directed, spatially addressable parallel chemical synthesis. *Science* 251:767-773.
- Fotin-Mleczek M, Rottmann M, Rehg G, Rupp S, Johannes FJ. 2000. Detection of protein-protein interactions using a green fluorescent protein-based mammalian two-hybrid system. *Biotechniques* 29:22-26.
- Gao W, Bohl CE, Dalton JT. 2005. Chemistry and structural biology of androgen receptor. *Chem Rev* 105:3352-3370.
- Gavin AC, Superti-Furga G. 2003. Protein complexes and proteome organization from yeast to man. *Curr Opin Chem Biol* 7:21-27.
- Georget V, Lobaccaro JM, Terouanne B, Mangeat P, Nicolas JC, Sultan C. 1997. Trafficking of the androgen receptor in living cells with fused green fluorescent protein-androgen receptor. *Mol Cell Endocrinol* 129:17-26.
- Ghosh S, Baltimore D. 1990. Activation in vitro of NF-kappa B by phosphorylation of its inhibitor I kappa B. *Nature* 344:678-682.
- Ghosh S, Karin M. 2002. Missing pieces in the NF-kappaB puzzle. *Cell* 109 Suppl:S81-96.
- Graham FL, Smiley J, Russell WC, Nairn R. 1977. Characteristics of a human cell line transformed by DNA from human adenovirus type 5. *J Gen Virol* 36:59-74.

- Gurskaya NG, Fradkov AF, Terskikh A, Matz MV, Labas YA, Martynov VI, Yanushovich YG, Lukyanov KA, Lukyanov SA. 2001. GFP-like chromoproteins as a source of far-red fluorescent proteins. *FEBS Lett* 507:16-20.
- He B, Kemppainen JA, Voegel JJ, Gronemeyer H, Wilson EM. 1999. Activation function 2 in the human androgen receptor ligand binding domain mediates interdomain communication with the NH(2)-terminal domain. *J Biol Chem* 274:37219-37225.
- He B, Kemppainen JA, Wilson EM. 2000. FXXLF and WXXLF sequences mediate the NH₂-terminal interaction with the ligand binding domain of the androgen receptor. *J Biol Chem* 275:22986-22994.
- Heinlein CA, Chang C. 2002. Androgen receptor (AR) coregulators: an overview. *Endocr Rev* 23:175-200.
- Heinlein CA, Chang C. 2004. Androgen receptor in prostate cancer. *Endocr Rev* 25:276-308.
- Heller RA, Schena M, Chai A, Shalon D, Bedilion T, Gilmore J, Woolley DE, Davis RW. 1997. Discovery and analysis of inflammatory disease-related genes using cDNA microarrays. *Proc Natl Acad Sci U S A* 94:2150-2155.
- Hobert O, Loria P. 2006. Uses of GFP in *Caenorhabditis elegans*. *Methods Biochem Anal* 47:203-226.
- Hodges E, Redelius JS, Wu W, Hoog C. 2005. Accelerated discovery of novel protein function in cultured human cells. *Mol Cell Proteomics* 4:1319-1327.
- Hoheisel JD, Ross MT, Zehetner G, Lehrach H. 1994. Relational genome analysis using reference libraries and hybridisation fingerprinting. *J Biotechnol* 35:121-134.
- How SE, Yingyongnarongkul B, Fara MA, Diaz-Mochon JJ, Mittoo S, Bradley M. 2004. Polyplexes and lipoplexes for mammalian gene delivery: from traditional to microarray screening. *Comb Chem High Throughput Screen* 7:423-430.
- Hu YH, Vanhecke D, Lehrach H, Janitz M. 2005. High-throughput subcellular protein localization using cell arrays. *Biochem Soc Trans* 33:1407-1408.
- Hu YH, Warnatz HJ, Vanhecke D, Wagner F, Fiebitz A, Thamm S, Kahlem P, Lehrach H, Yaspo ML, Janitz M. 2006. Cell array-based intracellular localization screening reveals novel functional features of human chromosome 21 proteins. *BMC Genomics* 7:155.
- Ikonen T, Palvimo JJ, Janne OA. 1997. Interaction between the amino- and carboxyl-terminal regions of the rat androgen receptor modulates transcriptional activity and is influenced by nuclear receptor coactivators. *J Biol Chem* 272:29821-29828.
- Isalan M, Santori MI, Gonzalez C, Serrano L. 2005. Localized transfection on arrays of magnetic beads coated with PCR products. *Nat Methods* 2:113-118.
- Ito T, Chiba T, Ozawa R, Yoshida M, Hattori M, Sakaki Y. 2001a. A comprehensive two-hybrid analysis to explore the yeast protein interactome. *Proc Natl Acad Sci U S A* 98:4569-4574.
- Ito T, Chiba T, Yoshida M. 2001b. Exploring the protein interactome using comprehensive two-hybrid projects. *Trends Biotechnol* 19:S23-27.
- Ito T, Tashiro K, Muta S, Ozawa R, Chiba T, Nishizawa M, Yamamoto K, Kuhara S, Sakaki Y. 2000. Toward a protein-protein interaction map of the budding yeast: A comprehensive system to examine two-hybrid interactions in all possible combinations between the yeast proteins. *Proc Natl Acad Sci U S A* 97:1143-1147.

- Jenster G, Trapman J, Brinkmann AO. 1993. Nuclear import of the human androgen receptor. *Biochem J* 293 (Pt 3):761-768.
- Jenster G, van der Korput HA, van Vroonhoven C, van der Kwast TH, Trapman J, Brinkmann AO. 1991. Domains of the human androgen receptor involved in steroid binding, transcriptional activation, and subcellular localization. *Mol Endocrinol* 5:1396-1404.
- Johnsson N, Varshavsky A. 1994a. Split ubiquitin as a sensor of protein interactions in vivo. *Proc Natl Acad Sci U S A* 91:10340-10344.
- Johnsson N, Varshavsky A. 1994b. Ubiquitin-assisted dissection of protein transport across membranes. *Embo J* 13:2686-2698.
- Kafatos FC, Jones CW, Efstratiadis A. 1979. Determination of nucleic acid sequence homologies and relative concentrations by a dot hybridization procedure. *Nucleic Acids Res* 7:1541-1552.
- Kahn CR, Young E, Lee IH, Rhim JS. 1993. Human corneal epithelial primary cultures and cell lines with extended life span: in vitro model for ocular studies. *Invest Ophthalmol Vis Sci* 34:3429-3441.
- Kato K, Umezawa K, Funeriu DP, Miyake M, Miyake J, Nagamune T. 2003. Immobilized culture of nonadherent cells on an oleyl poly(ethylene glycol) ether-modified surface. *Biotechniques* 35:1014-1018, 1020-1011.
- Keegan L, Gill G, Ptashne M. 1986. Separation of DNA binding from the transcription-activating function of a eukaryotic regulatory protein. *Science* 231:699-704.
- Kelce WR, Monosson E, Gamcsik MP, Laws SC, Gray LE, Jr. 1994. Environmental hormone disruptors: evidence that vinclozolin developmental toxicity is mediated by antiandrogenic metabolites. *Toxicol Appl Pharmacol* 126:276-285.
- Kelce WR, Wilson EM. 1997. Environmental antiandrogens: developmental effects, molecular mechanisms, and clinical implications. *J Mol Med* 75:198-207.
- Kemppainen JA, Langley E, Wong CI, Bobseine K, Kelce WR, Wilson EM. 1999. Distinguishing androgen receptor agonists and antagonists: distinct mechanisms of activation by medroxyprogesterone acetate and dihydrotestosterone. *Mol Endocrinol* 13:440-454.
- Kumar R, Conklin DS, Mittal V. 2003. High-throughput selection of effective RNAi probes for gene silencing. *Genome Res* 13:2333-2340.
- Kumar R, Johnson BH, Thompson EB. 2004. Overview of the structural basis for transcription regulation by nuclear hormone receptors. *Essays Biochem* 40:27-39.
- Lander ES, Linton LM, Birren B, Nusbaum C, Zody MC, Baldwin J, Devon K, Dewar K, Doyle M, FitzHugh W, Funke R, Gage D, Harris K, Heaford A, Howland J, Kann L, Lehoczky J, LeVine R, McEwan P, McKernan K, Melldrim J, Mesirov JP, Miranda C, Morris W, Naylor J, Raymond C, Rosetti M, Santos R, Sheridan A, Sougnez C, Stange-Thomann N, Stojanovic N, Subramanian A, Wyman D, Rogers J, Sulston J, Ainscough R, Beck S, Bentley D, Burton J, Clee C, Carter N, Coulson A, Deadman R, Deloukas P, Dunham A, Dunham I, Durbin R, French L, Grafham D, Gregory S, Hubbard T, Humphray S, Hunt A, Jones M, Lloyd C, McMurray A, Matthews L, Mercer S, Milne S, Mullikin JC, Mungall A, Plumb R, Ross M, Shownkeen R, Sims S, Waterston RH, Wilson RK, Hillier LW, McPherson JD, Marra MA, Mardis ER, Fulton LA, Chinwalla AT, Pepin KH, Gish WR, Chissoe SL, Wendl MC, Delehaunty KD, Miner TL, Delehaunty A, Kramer JB, Cook LL, Fulton RS,

- Johnson DL, Minx PJ, Clifton SW, Hawkins T, Branscomb E, Predki P, Richardson P, Wenning S, Slezak T, Doggett N, Cheng JF, Olsen A, Lucas S, Elkin C, Uberbacher E, Frazier M, Gibbs RA, Muzny DM, Scherer SE, Bouck JB, Sodergren EJ, Worley KC, Rives CM, Gorrell JH, Metzker ML, Naylor SL, Kucherlapati RS, Nelson DL, Weinstock GM, Sakaki Y, Fujiyama A, Hattori M, Yada T, Toyoda A, Itoh T, Kawagoe C, Watanabe H, Totoki Y, Taylor T, Weissenbach J, Heilig R, Saurin W, Artiguenave F, Brottier P, Bruls T, Pelletier E, Robert C, Wincker P, Smith DR, Doucette-Stamm L, Rubenfield M, Weinstock K, Lee HM, Dubois J, Rosenthal A, Platzer M, Nyakatura G, Taudien S, Rump A, Yang H, Yu J, Wang J, Huang G, Gu J, Hood L, Rowen L, Madan A, Qin S, Davis RW, Federspiel NA, Abola AP, Proctor MJ, Myers RM, Schmutz J, Dickson M, Grimwood J, Cox DR, Olson MV, Kaul R, Raymond C, Shimizu N, Kawasaki K, Minoshima S, Evans GA, Athanasiou M, Schultz R, Roe BA, Chen F, Pan H, Ramser J, Lehrach H, Reinhardt R, McCombie WR, de la Bastide M, Dedhia N, Blocker H, Hornischer K, Nordiek G, Agarwala R, Aravind L, Bailey JA, Bateman A, Batzoglou S, Birney E, Bork P, Brown DG, Burge CB, Cerutti L, Chen HC, Church D, Clamp M, Copley RR, Doerks T, Eddy SR, Eichler EE, Furey TS, Galagan J, Gilbert JG, Harmon C, Hayashizaki Y, Haussler D, Hermjakob H, Hokamp K, Jang W, Johnson LS, Jones TA, Kasif S, Kaspryzk A, Kennedy S, Kent WJ, Kitts P, Koonin EV, Korf I, Kulp D, Lancet D, Lowe TM, McLysaght A, Mikkelsen T, Moran JV, Mulder N, Pollara VJ, Ponting CP, Schuler G, Schultz J, Slater G, Smit AF, Stupka E, Szustakowski J, Thierry-Mieg D, Thierry-Mieg J, Wagner L, Wallis J, Wheeler R, Williams A, Wolf YI, Wolfe KH, Yang SP, Yeh RF, Collins F, Guyer MS, Peterson J, Felsenfeld A, Wetterstrand KA, Patrinos A, Morgan MJ, de Jong P, Catanese JJ, Osoegawa K, Shizuya H, Choi S, Chen YJ. 2001. Initial sequencing and analysis of the human genome. *Nature* 409:860-921.
- Lane DP, Crawford LV. 1979. T antigen is bound to a host protein in SV40-transformed cells. *Nature* 278:261-263.
- Langley E, Kemppainen JA, Wilson EM. 1998. Intermolecular NH₂-/carboxyl-terminal interactions in androgen receptor dimerization revealed by mutations that cause androgen insensitivity. *J Biol Chem* 273:92-101.
- Langley E, Zhou ZX, Wilson EM. 1995. Evidence for an anti-parallel orientation of the ligand-activated human androgen receptor dimer. *J Biol Chem* 270:29983-29990.
- Lee HJ, Chang C. 2003. Recent advances in androgen receptor action. *Cell Mol Life Sci* 60:1613-1622.
- Lennon GG, Lehrach H. 1991. Hybridization analyses of arrayed cDNA libraries. *Trends Genet* 7:314-317.
- Leonhardt SA, Altmann M, Edwards DP. 1998. Agonist and antagonists induce homodimerization and mixed ligand heterodimerization of human progesterone receptors in vivo by a mammalian two-hybrid assay. *Mol Endocrinol* 12:1914-1930.
- Li B, Fields S. 1993. Identification of mutations in p53 that affect its binding to SV40 large T antigen by using the yeast two-hybrid system. *Faseb J* 7:957-963.
- Licitra EJ, Liu JO. 1996. A three-hybrid system for detecting small ligand-protein receptor interactions. *Proc Natl Acad Sci U S A* 93:12817-12821.

- Liebel U, Starkuviene V, Erfle H, Simpson JC, Poustka A, Wiemann S, Pepperkok R. 2003. A microscope-based screening platform for large-scale functional protein analysis in intact cells. *FEBS Lett* 554:394-398.
- Liman J, Ganesan S, Dohm CP, Krajewski S, Reed JC, Bahr M, Wouters FS, Kermér P. 2005. Interaction of BAG1 and Hsp70 mediates neuroprotectivity and increases chaperone activity. *Mol Cell Biol* 25:3715-3725.
- Luo Y, Batalao A, Zhou H, Zhu L. 1997. Mammalian two-hybrid system: a complementary approach to the yeast two-hybrid system. *Biotechniques* 22:350-352.
- Ma J, Przibilla E, Hu J, Bogorad L, Ptashne M. 1988. Yeast activators stimulate plant gene expression. *Nature* 334:631-633.
- Ma J, Ptashne M. 1987. A new class of yeast transcriptional activators. *Cell* 51:113-119.
- Mangelsdorf DJ, Thummel C, Beato M, Herrlich P, Schütz G, Umesono K, Blumberg B, Kastner P, Mark M, Chambon P, Evans RM. 1995. The nuclear receptor superfamily: the second decade. *Cell* 83:835-839.
- McKenna NJ, Lanz RB, O'Malley BW. 1999. Nuclear receptor coregulators: cellular and molecular biology. *Endocr Rev* 20:321-344.
- Meier-Ewert S, Maier E, Ahmadi A, Curtis J, Lehrach H. 1993. An automated approach to generating expressed sequence catalogues. *Nature* 361:375-376.
- Mishina YM, Wilson CJ, Bruett L, Smith JJ, Stoop-Myer C, Jong S, Amaral LP, Pedersen R, Lyman SK, Myer VE, Kreider BL, Thompson CM. 2004. Multiplex GPCR assay in reverse transfection cell microarrays. *J Biomol Screen* 9:196-207.
- Mousses S, Caplen NJ, Cornelison R, Weaver D, Basik M, Hautaniemi S, Elkahloun AG, Lotufo RA, Choudary A, Dougherty ER, Suh E, Kallioniemi O. 2003. RNAi microarray analysis in cultured mammalian cells. *Genome Res* 13:2341-2347.
- Mowszowicz I, Bieber DE, Chung KW, Bullock LP, Bardin CW. 1974. Synandrogenic and antiandrogenic effect of progestins: comparison with nonprogestational antiandrogens. *Endocrinology* 95:1589-1599.
- Murakami Y, Fukazawa H, Kobatake T, Yamagoe S, Takebe Y, Tobiume M, Matsuda M, Uehara Y. 2002. A mammalian two-hybrid screening system for inhibitors of interaction between HIV Nef and the cellular tyrosine kinase Hck. *Antiviral Res* 55:161-168.
- Murphy D. 2002. Gene expression studies using microarrays: principles, problems, and prospects. *Adv Physiol Educ* 26:256-270.
- Nolan GP, Ghosh S, Liou HC, Tempst P, Baltimore D. 1991. DNA binding and I kappa B inhibition of the cloned p65 subunit of NF-kappa B, a rel-related polypeptide. *Cell* 64:961-969.
- Palmer E, Freeman T. 2005. Cell-based microarrays: current progress, future prospects. *Pharmacogenomics* 6:527-534.
- Pawson T, Nash P. 2003. Assembly of cell regulatory systems through protein interaction domains. *Science* 300:445-452.
- Pease AC, Solas D, Sullivan EJ, Cronin MT, Holmes CP, Fodor SP. 1994. Light-generated oligonucleotide arrays for rapid DNA sequence analysis. *Proc Natl Acad Sci U S A* 91:5022-5026.
- Peri S, Navarro JD, Amanchy R, Kristiansen TZ, Jonnalagadda CK, Surendranath V, Niraj V, Muthusamy B, Gandhi TK, Gronborg M, Ibarrola N, Deshpande N, Shanker K, Shivashankar HN, Rashmi BP, Ramya MA, Zhao Z, Chandrika KN, Padma N, Harsha HC, Yatish AJ, Kavitha MP, Menezes M,

- Choudhury DR, Suresh S, Ghosh N, Saravana R, Chandran S, Krishna S, Joy M, Anand SK, Madavan V, Joseph A, Wong GW, Schiemann WP, Constantinescu SN, Huang L, Khosravi-Far R, Steen H, Tewari M, Ghaffari S, Blobe GC, Dang CV, Garcia JG, Pevsner J, Jensen ON, Roepstorff P, Deshpande KS, Chinnaiyan AM, Hamosh A, Chakravarti A, Pandey A. 2003. Development of human protein reference database as an initial platform for approaching systems biology in humans. *Genome Res* 13:2363-2371.
- Pettersson K, Grandien K, Kuiper GG, Gustafsson JA. 1997. Mouse estrogen receptor beta forms estrogen response element-binding heterodimers with estrogen receptor alpha. *Mol Endocrinol* 11:1486-1496.
- Phizicky EM, Fields S. 1995. Protein-protein interactions: methods for detection and analysis. *Microbiol Rev* 59:94-123.
- Pollok BA, Heim R. 1999. Using GFP in FRET-based applications. *Trends Cell Biol* 9:57-60.
- Poujol N, Wurtz JM, Tahiri B, Lumbroso S, Nicolas JC, Moras D, Sultan C. 2000. Specific recognition of androgens by their nuclear receptor. A structure-function study. *J Biol Chem* 275:24022-24031.
- Prasher DC. 1995. Using GFP to see the light. *Trends Genet* 11:320-323.
- Prasher DC, Eckenrode VK, Ward WW, Prendergast FG, Cormier MJ. 1992. Primary structure of the *Aequorea victoria* green-fluorescent protein. *Gene* 111:229-233.
- Pratt WB, Toft DO. 1997. Steroid receptor interactions with heat shock protein and immunophilin chaperones. *Endocr Rev* 18:306-360.
- Privalsky ML. 2004. The role of corepressors in transcriptional regulation by nuclear hormone receptors. *Annu Rev Physiol* 66:315-360.
- Ptashne M. 1986. Gene regulation by proteins acting nearby and at a distance. *Nature* 322:697-701.
- Ptashne M. 1988. How eukaryotic transcriptional activators work. *Nature* 335:683-689.
- Ptashne M, Gann AA. 1990. Activators and targets. *Nature* 346:329-331.
- Raynaud JP, Bouton MM, Mogilewsky M, Ojasoo T, Philibert D, Beck G, Labrie F, Mornon JP. 1980. Steroid hormone receptors and pharmacology. *J Steroid Biochem* 12:143-157.
- Redmond TM, Ren X, Kubish G, Atkins S, Low S, Uhler MD. 2004. Microarray transfection analysis of transcriptional regulation by cAMP-dependent protein kinase. *Mol Cell Proteomics* 3:770-779.
- Sadowski I, Ma J, Triezenberg S, Ptashne M. 1988. GAL4-VP16 is an unusually potent transcriptional activator. *Nature* 335:563-564.
- Saito R, Suzuki H, Hayashizaki Y. 2002. Interaction generality, a measurement to assess the reliability of a protein-protein interaction. *Nucleic Acids Res* 30:1163-1168.
- Sanchez C, Lachaize C, Janody F, Bellon B, Roder L, Euzenat J, Rechenmann F, Jacq B. 1999. Grasping at molecular interactions and genetic networks in *Drosophila melanogaster* using FlyNets, an Internet database. *Nucleic Acids Res* 27:89-94.
- Schena M, Shalon D, Davis RW, Brown PO. 1995. Quantitative monitoring of gene expression patterns with a complementary DNA microarray. *Science* 270:467-470.

- Schmid MJ, Manthiram K, Grayson SM, Willson JC, Meiring JE, Bell KM, Ellington AD, Willson CG. 2006. Feature multiplexing--improving the efficiency of microarray devices. *Angew Chem Int Ed Engl* 45:3338-3341.
- SenGupta DJ, Zhang B, Kraemer B, Pochart P, Fields S, Wickens M. 1996. A three-hybrid system to detect RNA-protein interactions in vivo. *Proc Natl Acad Sci U S A* 93:8496-8501.
- Serebriiskii IG, Golemis EA. 2001. Two-hybrid system and false positives. Approaches to detection and elimination. *Methods Mol Biol* 177:123-134.
- Sharifi N, Gulley JL, Dahut WL. 2005. Androgen deprivation therapy for prostate cancer. *Jama* 294:238-244.
- Shih HM, Goldman PS, DeMaggio AJ, Hollenberg SM, Goodman RH, Hoekstra MF. 1996. A positive genetic selection for disrupting protein-protein interactions: identification of CREB mutations that prevent association with the coactivator CBP. *Proc Natl Acad Sci U S A* 93:13896-13901.
- Shioda T, Andriole S, Yahata T, Isselbacher KJ. 2000. A green fluorescent protein-reporter mammalian two-hybrid system with extrachromosomal maintenance of a prey expression plasmid: application to interaction screening. *Proc Natl Acad Sci U S A* 97:5220-5224.
- Simental JA, Sar M, Lane MV, French FS, Wilson EM. 1991. Transcriptional activation and nuclear targeting signals of the human androgen receptor. *J Biol Chem* 266:510-518.
- Stagljar I, Korostensky C, Johnsson N, te Heesen S. 1998. A genetic system based on split-ubiquitin for the analysis of interactions between membrane proteins in vivo. *Proc Natl Acad Sci U S A* 95:5187-5192.
- Stelzl U, Worm U, Lalowski M, Haenig C, Brembeck FH, Goehler H, Stroedicke M, Zenkner M, Schoenherr A, Koeppen S, Timm J, Mintzlaff S, Abraham C, Bock N, Kietzmann S, Goedde A, Toksoz E, Droege A, Krobitsch S, Korn B, Birchmeier W, Lehrach H, Wanker EE. 2005. A human protein-protein interaction network: a resource for annotating the proteome. *Cell* 122:957-968.
- Suzuki H, Fukunishi Y, Kagawa I, Saito R, Oda H, Endo T, Kondo S, Bono H, Okazaki Y, Hayashizaki Y. 2001. Protein-protein interaction panel using mouse full-length cDNAs. *Genome Res* 11:1758-1765.
- Tirode F, Malaguti C, Romero F, Attar R, Camonis J, Egly JM. 1997. A conditionally expressed third partner stabilizes or prevents the formation of a transcriptional activator in a three-hybrid system. *J Biol Chem* 272:22995-22999.
- Torchia J, Glass C, Rosenfeld MG. 1998. Co-activators and co-repressors in the integration of transcriptional responses. *Curr Opin Cell Biol* 10:373-383.
- Tracey KJ, Cerami A. 1993. Tumor necrosis factor, other cytokines and disease. *Annu Rev Cell Biol* 9:317-343.
- Triebenberg SJ, Kingsbury RC, McKnight SL. 1988. Functional dissection of VP16, the trans-activator of herpes simplex virus immediate early gene expression. *Genes Dev* 2:718-729.
- Truong K, Ikura M. 2001. The use of FRET imaging microscopy to detect protein-protein interactions and protein conformational changes in vivo. *Curr Opin Struct Biol* 11:573-578.
- Tsai MJ, O'Malley BW. 1994. Molecular mechanisms of action of steroid/thyroid receptor superfamily members. *Annu Rev Biochem* 63:451-486.
- Uetz P. 2002. Two-hybrid arrays. *Curr Opin Chem Biol* 6:57-62.
- Uetz P, Giot L, Cagney G, Mansfield TA, Judson RS, Knight JR, Lockshon D, Narayan V, Srinivasan M, Pochart P, Qureshi-Emili A, Li Y, Godwin B, Conover

- D, Kalbfleisch T, Vijayadamodar G, Yang M, Johnston M, Fields S, Rothberg JM. 2000. A comprehensive analysis of protein-protein interactions in *Saccharomyces cerevisiae*. *Nature* 403:623-627.
- Vanhecke D, Janitz M. 2004. High-throughput gene silencing using cell arrays. *Oncogene* 23:8353-8358.
- Vanhecke D, Janitz M. 2005. Functional genomics using high-throughput RNA interference. *Drug Discov Today* 10:205-212.
- Vasavada HA, Ganguly S, Germino FJ, Wang ZX, Weissman SM. 1991. A contingent replication assay for the detection of protein-protein interactions in animal cells. *Proc Natl Acad Sci U S A* 88:10686-10690.
- Venter JC, Adams MD, Myers EW, Li PW, Mural RJ, Sutton GG, Smith HO, Yandell M, Evans CA, Holt RA, Gocayne JD, Amanatides P, Ballew RM, Huson DH, Wortman JR, Zhang Q, Kodira CD, Zheng XH, Chen L, Skupski M, Subramanian G, Thomas PD, Zhang J, Gabor Miklos GL, Nelson C, Broder S, Clark AG, Nadeau J, McKusick VA, Zinder N, Levine AJ, Roberts RJ, Simon M, Slayman C, Hunkapiller M, Bolanos R, Delcher A, Dew I, Fasulo D, Flanigan M, Florea L, Halpern A, Hannenhalli S, Kravitz S, Levy S, Mobarry C, Reinert K, Remington K, Abu-Threideh J, Beasley E, Biddick K, Bonazzi V, Brandon R, Cargill M, Chandramouliswaran I, Charlab R, Chaturvedi K, Deng Z, Di Francesco V, Dunn P, Eilbeck K, Evangelista C, Gabrielian AE, Gan W, Ge W, Gong F, Gu Z, Guan P, Heiman TJ, Higgins ME, Ji RR, Ke Z, Ketchum KA, Lai Z, Lei Y, Li Z, Li J, Liang Y, Lin X, Lu F, Merkulov GV, Milshina N, Moore HM, Naik AK, Narayan VA, Neelam B, Nusskern D, Rusch DB, Salzberg S, Shao W, Shue B, Sun J, Wang Z, Wang A, Wang X, Wang J, Wei M, Wides R, Xiao C, Yan C, Yao A, Ye J, Zhan M, Zhang W, Zhang H, Zhao Q, Zheng L, Zhong F, Zhong W, Zhu S, Zhao S, Gilbert D, Baumhueter S, Spier G, Carter C, Cravchik A, Woodage T, Ali F, An H, Awe A, Baldwin D, Baden H, Barnstead M, Barrow I, Beeson K, Busam D, Carver A, Center A, Cheng ML, Curry L, Danaher S, Davenport L, Desilets R, Dietz S, Dodson K, Doup L, Ferriera S, Garg N, Gluecksmann A, Hart B, Haynes J, Haynes C, Heiner C, Hladun S, Hostin D, Houck J, Howland T, Ibegwam C, Johnson J, Kalush F, Kline L, Koduru S, Love A, Mann F, May D, McCawley S, McIntosh T, McMullen I, Moy M, Moy L, Murphy B, Nelson K, Pfannkoch C, Pratts E, Puri V, Qureshi H, Reardon M, Rodriguez R, Rogers YH, Romblad D, Ruhfel B, Scott R, Sitter C, Smallwood M, Stewart E, Strong R, Suh E, Thomas R, Tint NN, Tse S, Vech C, Wang G, Wetter J, Williams S, Williams M, Windsor S, Winn-Deen E, Wolfe K, Zaveri J, Zaveri K, Abril JF, Guigo R, Campbell MJ, Sjolander KV, Karlak B, Kejariwal A, Mi H, Lazareva B, Hatton T, Narechania A, Diemer K, Muruganujan A, Guo N, Sato S, Bafna V, Istrail S, Lippert R, Schwartz R, Walenz B, Yoosheph S, Allen D, Basu A, Baxendale J, Blick L, Caminha M, Carnes-Stine J, Caulk P, Chiang YH, Coyne M, Dahlke C, Mays A, Dombroski M, Donnelly M, Ely D, Esparham S, Fosler C, Gire H, Glanowski S, Glasser K, Glodek A, Gorokhov M, Graham K, Gropman B, Harris M, Heil J, Henderson S, Hoover J, Jennings D, Jordan C, Jordan J, Kasha J, Kagan L, Kraft C, Levitsky A, Lewis M, Liu X, Lopez J, Ma D, Majoros W, McDaniel J, Murphy S, Newman M, Nguyen T, Nguyen N, Nodell M, Pan S, Peck J, Peterson M, Rowe W, Sanders R, Scott J, Simpson M, Smith T, Sprague A, Stockwell T, Turner R, Venter E, Wang M, Wen M, Wu D, Wu M, Xia A, Zandieh A, Zhu X. 2001. The sequence of the human genome. *Science* 291:1304-1351.

- Vidal M, Brachmann RK, Fattaey A, Harlow E, Boeke JD. 1996. Reverse two-hybrid and one-hybrid systems to detect dissociation of protein-protein and DNA-protein interactions. *Proc Natl Acad Sci U S A* 93:10315-10320.
- Vojtek AB, Hollenberg SM, Cooper JA. 1993. Mammalian Ras interacts directly with the serine/threonine kinase Raf. *Cell* 74:205-214.
- von Mering C, Krause R, Snel B, Cornell M, Oliver SG, Fields S, Bork P. 2002. Comparative assessment of large-scale data sets of protein-protein interactions. *Nature* 417:399-403.
- Wakeling AE, Furr BJ, Glen AT, Hughes LR. 1981. Receptor binding and biological activity of steroid and nonsteroidal antiandrogens. *J Steroid Biochem* 15:355-359.
- Walsh DA, Wharton J. 2005. Autoradiography of enzymes, second messenger systems, and ion channels. *Methods Mol Biol* 306:139-154.
- Wang MM, Reed RR. 1993. Molecular cloning of the olfactory neuronal transcription factor Olf-1 by genetic selection in yeast. *Nature* 364:121-126.
- Webb BL, Diaz B, Martin GS, Lai F. 2003. A reporter system for reverse transfection cell arrays. *J Biomol Screen* 8:620-623.
- Wheeler DB, Bailey SN, Guertin DA, Carpenter AE, Higgins CO, Sabatini DM. 2004. RNAi living-cell microarrays for loss-of-function screens in *Drosophila melanogaster* cells. *Nat Methods* 1:127-132.
- Wheeler DB, Carpenter AE, Sabatini DM. 2005. Cell microarrays and RNA interference chip away at gene function. *Nat Genet* 37 Suppl:S25-30.
- Wilbert DM, Griffin JE, Wilson JD. 1983. Characterization of the cytosol androgen receptor of the human prostate. *J Clin Endocrinol Metab* 56:113-120.
- Xu Y, Piston DW, Johnson CH. 1999. A bioluminescence resonance energy transfer (BRET) system: application to interacting circadian clock proteins. *Proc Natl Acad Sci U S A* 96:151-156.
- Yamabe Y, Hoshino A, Imura N, Suzuki T, Himeno S. 2000. Enhancement of androgen-dependent transcription and cell proliferation by tributyltin and triphenyltin in human prostate cancer cells. *Toxicol Appl Pharmacol* 169:177-184.
- Yamauchi F, Kato K, Iwata H. 2004. Micropatterned, self-assembled monolayers for fabrication of transfected cell microarrays. *Biochim Biophys Acta* 1672:138-147.
- Yoshikawa T, Uchimura E, Kishi M, Funeriu DP, Miyake M, Miyake J. 2004. Transfection microarray of human mesenchymal stem cells and on-chip siRNA gene knockdown. *J Control Release* 96:227-232.
- Zervos AS, Gyuris J, Brent R. 1993. Mxi1, a protein that specifically interacts with Max to bind Myc-Max recognition sites. *Cell* 72:223-232.
- Zhang J, Lautar S. 1996. A yeast three-hybrid method to clone ternary protein complex components. *Anal Biochem* 242:68-72.
- Zhao HF, Kiyota T, Chowdhury S, Purisima E, Banville D, Konishi Y, Shen SH. 2004. A mammalian genetic system to screen for small molecules capable of disrupting protein-protein interactions. *Anal Chem* 76:2922-2927.
- Zhou ZX, Lane MV, Kemppainen JA, French FS, Wilson EM. 1995. Specificity of ligand-dependent androgen receptor stabilization: receptor domain interactions influence ligand dissociation and receptor stability. *Mol Endocrinol* 9:208-218.
- Zhu H, Bilgin M, Snyder M. 2003. Proteomics. *Annu Rev Biochem* 72:783-812.

- Ziauddin J, Sabatini DM. 2001. Microarrays of cells expressing defined cDNAs. *Nature* 411:107-110.