

YOSEF YARDEN: LIST OF SELECTED PUBLICATIONS

(Updated 2007)

- Downward J, Yarden Y, Mayes E, Scrace G, Totty N, Stockwell P, Ullrich A, Schlessinger J, Waterfield MD: Close similarity of epidermal growth factor receptor and *v-erb-B* oncogene protein sequences. *Nature* 307: 521-527 (1984).
- Ullrich A, Coussens L, Hayflick JS, Dull TJ, Gray A, Tam AW, Lee J, Yarden Y, Libermann TA, Schlessinger J, et al.: Human epidermal growth factor receptor cDNA sequence and aberrant expression of the amplified gene in A431 epidermoid carcinoma cells. *Nature* 309: 418-25 (1984).
- Yarden Y, Harari I, Schlessinger J: Purification of an active EGF receptor kinase with monoclonal antireceptor antibodies. *J Biol Chem* 260: 315-9. (1985).
- Yarden Y, Escobedo JA, Kuang W-J, Yang-Feng TL, Daniels TO, Tremble PP, Cheng EY, Ando ME, Harkins RN, Francke U, Fried VA, Williams LT: Structure of the receptor for platelet-derived growth factor help define a family of closely related growth factor receptors. *Nature* 325: 226-232 (1986).
- Yarden Y, Rodriguez H, Wong SK-F, Brandt DR, May DC, Burnier J, Harkins RN, Chen EY, Ramachandran J, Ullrich A, Ross EM: The avian beta-adrenergic receptor: primary structure and membrane topology. *Proc. Natl. Acad. Sci. U.S.A.* 83: 6795-6799 (1986).
- Yarden Y, Kuang WJ, Yang-Feng T, Coussens L, Munemitsu S, Dull TJ, Chen E, Schlessinger J, Francke U, Ullrich A: Human proto-oncogene *c-kit*: a new cell surface receptor tyrosine kinase for an unidentified ligand. *Embo J* 6: 3341-51. (1987).
- Yarden Y, Schlessinger J: Epidermal growth factor induces rapid, reversible aggregation of purified epidermal growth factor receptors. *Biochemistry* 26: 1443-1445. (1987).
- Yarden Y, Schlessinger J: Self-phosphorylation of epidermal growth factor receptor: Evidence for a model of intermolecular allosteric activation. *Biochemistry* 26: 1434-1442. (1987).
- Yarden Y, Ullrich A: Growth factor receptor tyrosine kinases. *Ann. Rev. Biochem.* 57: 443-478. (1988).
- Yarden Y, Weinberg RA: Experimental approaches to hypothetical hormones: detection of a candidate ligand of the *neu* protooncogene. *Proc. Natl. Acad. Sci. USA* 86: 3179-3183. (1989).
- Goldman R, Levy RB, Peles E, Yarden Y: Heterodimerization of the *erbB-1* and *erbB-2* receptors in human breast carcinoma cells: a mechanism for receptor transregulation. *Biochemistry* 29: 11024-8 (1990).
- Safran A, Avivi A, Orr-Urtreger A, Neufeld G, Lonai P, Givol D, Yarden Y: The murine *flg* gene encodes a receptor for fibroblast growth factor. *Oncogene* 5: 635-43. (1990).
- Yarden Y: Agonistic antibodies stimulate the kinase encoded by the *neu* protooncogene in living cells but the oncogenic mutant is constitutively active. *Proc Natl Acad Sci U S A* 87: 2569-73. (1990).
- Stancovski I, Hurwitz E, Leitner O, Ullrich A, Yarden Y, Sela M: Mechanistic aspects of the opposing effects of monoclonal antibodies to the ERBB2 receptor on tumor growth. *Proc Natl Acad Sci U S A* 88: 8691-5. (1991).
- Ben-Levy R, Peles E, Goldman-Michael R, Yarden Y: An oncogenic point mutation confers high affinity ligand binding to the *neu* receptor. Implications for the generation of site heterogeneity. *J Biol Chem* 267: 17304-13. (1992).
- Peles E, Bacus SS, Koski RA, Lu HS, Wen D, Ogden SG, Levy RB, Yarden Y: Isolation of the *neu*/HER-2 stimulatory ligand: a 44 kd glycoprotein that induces differentiation of mammary tumor cells. *Cell* 69: 205-16. (1992).
- Wen D, Peles E, Cupples R, Suggs SV, Bacus SS, Luo Y, Trail G, Hu S, Silbiger SM, Ben-Levy R, Luo Y, Yarden Y: Neu Differentiation Factor: a transmembrane glycoprotein containing an EGF domain and an immunoglobulin homology unit. *Cell* 69: 559-572. (1992).
- Chen X, Levkowitz G, Tzahar E, Karunagaran D, Lavi S, Ben-Baruch N, Leitner O, Ratzkin BJ, Bacus SS, Yarden Y: An immunological approach reveals biological differences between the two NDF/heregin receptors, *ErbB-3* and *ErbB-4*. *J Biol Chem* 271: 7620-9. (1996).
- Karunagaran D, Tzahar E, Beerli RR, Chen X, Graus-Porta D, Ratzkin BJ, Seger R, Hynes NE, Yarden Y: *ErbB-2* is a common auxiliary subunit of NDF and EGF receptors: implications for breast cancer. *Embo J* 15: 254-64. (1996).

- Levkowitz G, Klapper LN, Tzahar E, Freywald A, Sela M, Yarden Y: Coupling of the c-Cbl protooncogene product to ErbB-1/EGF-receptor but not to other ErbB proteins. *Oncogene* 12: 1117-25. (1996).
- Pinkas-Kramarski R, Soussan L, Waterman H, Levkowitz G, Alroy I, Klapper L, Lavi S, Seger R, Ratzkin BJ, Sela M, Yarden Y: Diversification of Neu differentiation factor and epidermal growth factor signaling by combinatorial receptor interactions. *Embo J* 15: 2452-67. (1996).
- Tzahar E, Waterman H, Chen X, Levkowitz G, Karunagaran D, Lavi S, Ratzkin BJ, Yarden Y: A hierarchical network of interreceptor interactions determines signal transduction by Neu differentiation factor/neuregulin and epidermal growth factor. *Mol Cell Biol* 16: 5276-87. (1996).
- Alroy I, Yarden Y: The ErbB signaling network in embryogenesis and oncogenesis: signal diversification through combinatorial ligand-receptor interactions. *FEBS Lett* 410: 83-6. (1997).
- Klapper LN, Vaisman N, Hurwitz E, Pinkas-Kramarski R, Yarden Y, Sela M: A subclass of tumor-inhibitory monoclonal antibodies to ErbB-2/HER2 blocks crosstalk with growth factor receptors. *Oncogene* 14: 2099-109. (1997).
- Tzahar E, Pinkas-Kramarski R, Moyer JD, Klapper LN, Alroy I, Levkowitz G, Shelly M, Henis S, Eisenstein M, Ratzkin BJ, Sela M, Andrews GC, Yarden Y: Bivalence of EGF-like ligands drives the ErbB signaling network. *Embo J* 16: 4938-50. (1997).
- Levkowitz G, Waterman H, Zamir E, Kam Z, Oved S, Langdon WY, Beguinot L, Geiger B, Yarden Y: c-Cbl/Sli-1 regulates endocytic sorting and ubiquitination of the epidermal growth factor receptor. *Genes Dev* 12: 3663-74. (1998).
- Tzahar E, Moyer JD, Waterman H, Barbacci EG, Bao J, Levkowitz G, Shelly M, Strano S, Pinkas-Kramarski R, Pierce JH, Andrews GC, Yarden Y: Pathogenic poxviruses reveal viral strategies to exploit the ErbB signaling network. *Embo J* 17: 5948-63 (1998).
- Waterman H, Sabanai I, Geiger B, Yarden Y: Alternative intracellular routing of ErbB receptors may determine signaling potency. *J Biol Chem* 273: 13819-27. (1998).
- Alroy I, Soussan L, Seger R, Yarden Y: Neu differentiation factor stimulates phosphorylation and activation of the Sp1 transcription factor. *Mol Cell Biol* 19: 1961-72. (1999).
- Harari D, Tzahar E, Romano J, Shelly M, Pierce JH, Andrews GC, Yarden Y: Neuregulin-4: a novel growth factor that acts through the ErbB-4 receptor tyrosine kinase. *Oncogene* 18: 2681-9. (1999).
- Klapper LN, Glathe S, Vaisman N, Hynes NE, Andrews GC, Sela M, Yarden Y: The ErbB-2/HER2 oncoprotein of human carcinomas may function solely as a shared coreceptor for multiple stroma-derived growth factors. *Proc Natl Acad Sci U S A* 96: 4995-5000. (1999)
- Levkowitz G, Waterman H, Ettenberg SA, Katz M, Tsygankov AY, Alroy I, Lavi S, Iwai K, Reiss Y, Ciechanover A, Lipkowitz S, Yarden Y: Ubiquitin ligase activity and tyrosine phosphorylation underlie suppression of growth factor signaling by c-Cbl/Sli-1. *Mol Cell* 4: 1029-40 (1999).
- Waterman H, Alroy I, Strano S, Seger R, Yarden Y: The C-terminus of the kinase-defective neuregulin receptor ErbB-3 confers mitogenic superiority and dictates endocytic routing. *Embo J* 18: 3348-58. (1999).
- Waterman H, Levkowitz G, Alroy I, Yarden Y: The RING finger of c-Cbl mediates desensitization of the epidermal growth factor receptor. *J Biol Chem* 274: 22151-4. (1999).
- Harari D, Yarden Y: Molecular mechanisms underlying ErbB2/HER2 action in breast cancer. *Oncogene* 19: 6102-14. (2000).
- Klapper LN, Kirschbaum MH, Sela M, Yarden Y: Biochemical and clinical implications of the ErbB/HER signaling network of growth factor receptors. *Adv Cancer Res* 77: 25-79. (2000).
- Klapper LN, Waterman H, Sela M, Yarden Y: Tumor-inhibitory antibodies to HER-2/ErbB-2 may act by recruiting c-Cbl and enhancing ubiquitination of HER-2. *Cancer Res* 60: 3384-8 (2000).
- Yarden Y, Sliwkowski MX: Untangling the ErbB signalling network. *Nat Rev Mol Cell Biol* 2: 127-37. (2001).
- Citri A, Alroy I, Lavi S, Rubin C, Xu W, Grammatikakis N, Patterson C, Neckers L, Fry DW, Yarden Y: Drug-induced ubiquitylation and degradation of ErbB receptor tyrosine kinases: implications for cancer therapy. *Embo J* 21: 2407-17 (2002).
- Katz M, Shtiegman K, Tal-Or P, Yakir L, Mosesson Y, Harari D, Machluf Y, Asao H, Jovin T, Sugamura K, Yarden Y: Ligand-independent degradation of epidermal growth factor receptor involves

- receptor ubiquitylation and Hgs, an adaptor whose ubiquitin-interacting motif targets ubiquitylation by Nedd4. *Traffic* 3: 740-51. (2002).
- Oved S, Yarden Y: Signal transduction: molecular ticket to enter cells. *Nature* 416: 133-6. (2002).
 - Waterman H, Katz M, Rubin C, Shtiegman K, Lavi S, Elson A, Jovin T, Yarden Y: A mutant EGF-receptor defective in ubiquitylation and endocytosis unveils a role for Grb2 in negative signaling. *Embo J* 21: 303-13. (2002).
 - Citri A, Skaria KB, Yarden Y: The deaf and the dumb: the biology of ErbB-2 and ErbB-3. *Exp Cell Res* 284: 54-65. (2003).
 - Shelly M, Mosesson Y, Citri A, Lavi S, Zwang Y, Melamed-Book N, Aroeti B, Yarden Y: Polar expression of ErbB-2/HER2 in epithelia. Bimodal regulation by Lin-7. *Dev Cell* 5: 475-86. (2003).
 - Amit I, Yakir L, Katz M, Zwang Y, Marmor MD, Citri A, Shtiegman K, Alroy I, Tuvia S, Reiss Y, Roubini E, Cohen M, Wides R, Bacharach E, Schubert U, Yarden Y: Tal, a Tsg101-specific E3 ubiquitin ligase, regulates receptor endocytosis and retrovirus budding. *Genes Dev* 18: 1737-52. (2004).
 - Ben-Baruch N, Yarden Y: ErbB/HER family of growth factor receptors. In: DeVita VY, Hellman S, Rosenberg SA (eds) *Progree in Oncology*. Jones and Bartlet, New Haven. (2004).
 - Citri A, Gan J, Mosesson Y, Vereb G, Szollosi J, Yarden Y: Hsp90 restrains ErbB-2/HER2 signalling by limiting heterodimer formation. *EMBO Rep* 5: 1165-70. (2004).
 - Citri A, Kochupurakkal BS, Yarden Y: The achilles heel of ErbB-2/HER2: regulation by the Hsp90 chaperone machine and potential for pharmacological intervention. *Cell Cycle* 3: 51-60. (2004).
 - Gur G, Rubin C, Katz M, Amit I, Citri A, Nilsson J, Amariglio N, Henriksson R, Rechavi G, Hedman H, Wides R, Yarden Y: LRIG1 restricts growth factor signaling by enhancing receptor ubiquitylation and degradation. *Embo J* 23: 3270-81. (2004).
 - Gur G, Yarden Y: Enlightened receptor dynamics. *Nature Biotech.* 22: 169-170. (2004).
 - Marmor MD, Yarden Y: Role of protein ubiquitylation in regulating endocytosis of receptor tyrosine kinases. *Oncogene* 23: 2057-70. (2004).
 - Yarden Y, Baselga J, Miles D: Molecular approach to breast cancer treatment. *Semin Oncol* 31: 6-13. (2004).
 - Friedman LM, Rinon A, Schechter B, Lyass L, Lavi S, Bacus SS, Sela M, Yarden Y: Synergistic down-regulation of receptor tyrosine kinases by combinations of mAbs: implications for cancer immunotherapy. *Proc Natl Acad Sci U S A* 102: 1915-20. (2005).
 - Citri A, Harari D, Shochat G, Ramakrishnan P, Gan J, Lavi S, Eisenstein M, Kimchi A, Wallach D, Pietrovovski S, and Yarden Y. Hsp90 recognizes a common motif on the surface of client kinases. *J Biol Chem* 281: 14361-14369. (2006).
 - Citri A, and Yarden Y. EGF-ERBB signalling: towards the systems level. *Nat Rev Mol Cell Biol* 7: 505-516. (2006).
 - Oved S, Mosesson Y, Zwang Y, Santonico E, Shtiegman K, Marmor MD, Kochupurakkal B. S, Katz M, Lavi S, Cesareni G, and Yarden Y. Conjugation to Nedd8 instigates ubiquitylation and down-regulation of activated receptor tyrosine kinases. *J Biol Chem* 281: 21640–21651. (2006).
 - Zwang Y, and Yarden Y. p38 MAP kinase mediates stress-induced internalization of EGFR: implications for cancer chemotherapy. *EMBO J.* 25: 4195-206. (2006).

 - Amit, I, Citri, A, Shay, T, Lu, Y, Katz, M, Zhang, F, Tarcic, G, Siwak, D, Lahad, J, Jacob-Hirsch, J, Amariglio, N, Vaisman, N, Segal, E, Rechavi, G, Alon, U, Mills, GB, Domany, E, and Yarden, Y. A module of negative feedback regulators defines growth factor signaling. *Nature Genetics* 39: 503-512. (2007)
 - Bublil, EM and Yarden, Y. The EGF receptor family: spearheading a merger of signaling and therapeutics. *Curr Opin Cell Biol.* 19:124-34. (2007)
 - Katz M, Amit I and Yarden Y. Regulation of MAPKs by growth factors and receptor tyrosine kinases. *Biochim Biophys Acta.* (Epub ahead of print) (2007)
 - Ben-Kasus, T., Schechter, B., Sela, M. and Yarden, Y. Cancer Therapeuticvs come of age: Targeting miniimal residual disease. *Molecular Oncology* 1: 42-54. (2007)
 - Shtiegman K, Kochupurakkal BS, Zwang Y, Pines G, Starr A, Vexler A, Citri A, Katz M, Lavi S, Ben-Basat Y, Benjamin S, Corso S, Gan J, Yosef RB, Giordano S, Yarden Y. Defective ubiquitylation of EGFR mutants of lung cancer confers prolonged signaling. *Oncogene* (in press). (2007).

- Katz, M, Amit, I, Citri A, Shay T, Carvalho S, Lavi S, Milanezi F, Lyass L, Amariglio N, Jacob-Hirsch J, Ben-Chetrit N, Tarcic G, Lindzen M, Avraham R, Liao Y-L, Trusk P, Lyass A, Rechavi G, Spector NL, Lo SH, Schmitt F, Bacus, SS and Yarden Y. A reciprocal tensin3-cten switch mediates EGF-driven mammary cell migration. *Nature Cell Biology* **9**, 961-969 (2007)