

6 REFERENZEN

- 1 Steinman, R.M., Dendritic Cells. In Paul, W.E. (Ed.) *Fundamental Immunology*. Lippincott-Raven, New York 1999, pp 547-573
- 2 Banchereau, J., Briere, F., Caux, C., Davoust, J., Lebecque, S., Liu, Y.J., Pulendran, B. and Palucka, K., Immunobiology of dendritic cells. *Annu.Rev.Immunol.* 2000. **18**: 767-811.
- 3 D'Amico, G., Bianchi, G., Bernasconi, S., Bersani, L., Piemonti, L., Sozzani, S., Mantovani, A. and Allavena, P., Adhesion, transendothelial migration, and reverse transmigration of in vitro cultured dendritic cells. *Blood* 1998. **92**: 207-214.
- 4 Randolph, G.J., Beaulieu, S., Lebecque, S., Steinman, R.M. and Muller, W.A., Differentiation of monocytes into dendritic cells in a model of transendothelial trafficking. *Science* 1998. **282**: 480-483.
- 5 Wang, B., Amerio, P. and Sauder, D.N., Role of cytokines in epidermal Langerhans cell migration. *J Leukoc Biol* 1999. **66**: 33-39.
- 6 Coyle, A.J. and Gutierrez-Ramos, J.C., The expanding B7 superfamily: increasing complexity in costimulatory signals regulating T cell function. *Nat.Immunol.* 2001. **2**: 203-209.
- 7 Flores-Romo, L., In vivo maturation and migration of dendritic cells. *Immunology* 2001. **102**: 255-262.
- 8 Kamogawa, Y., Minasi, L.A., Carding, S.R., Bottomly, K. and Flavell, R.A., The relationship of IL-4- and IFN gamma-producing T cells studied by lineage ablation of IL-4-producing cells. *Cell* 1993. **75**: 985-995.
- 9 Seder, R.A. and Paul, W.E., Acquisition of lymphokine-producing phenotype by CD4+ T cells. *Annu.Rev.Immunol.* 1994. **12**: 635-673.
- 10 Piemonti, L., Monti, P., Allavena, P., Sironi, M., Soldini, L., Leone, B.E., Socci, C. and Di, C., V, Glucocorticoids affect human dendritic cell differentiation and maturation. *J. Immunol.* 1999. **162**: 6473-6481.
- 11 Buelens, C., Willems, F., Delvaux, A., Pierard, G., Delville, J.P., Velu, T. and Goldman, M., Interleukin-10 differentially regulates B7-1 (CD80) and B7-2 (CD86) expression on human peripheral blood dendritic cells. *Eur.J.Immunol.* 1995. **25**: 2668-2672.
- 12 Caux, C., Massacrier, C., Vanbervliet, B., Barthélémy, C., Liu, Y.J. and Banchereau, J., Interleukin 10 inhibits T cell alloreaction induced by human dendritic cells. *Int.Immunol.* 1994. **6**: 1177-1185.
- 13 De Smedt, T., Van Mechelen, M., De Becker, G., Urbain, J., Leo, O. and Moser, M., Effect of interleukin-10 on dendritic cell maturation and function. *Eur.J.Immunol.* 1997. **27**: 1229-1235.

- 14 **Kalinski, P., Schuitemaker, J.H., Hilkens, C.M. and Kapsenberg, M.L.**, Prostaglandin E2 induces the final maturation of IL-12-deficient CD1a+CD83+ dendritic cells: the levels of IL-12 are determined during the final dendritic cell maturation and are resistant to further modulation. *J.Immunol.* 1998. **161**: 2804-2809.
- 15 **Liu, L., Rich, B.E., Inobe, J., Chen, W. and Weiner, H.L.**, Induction of Th2 cell differentiation in the primary immune response: dendritic cells isolated from adherent cell culture treated with IL-10 prime naive CD4+ T cells to secrete IL-4. *Int.Immunol.* 1998. **10**: 1017-1026.
- 16 **Colonna, M., Krug, A. and Cella, M.**, Interferon-producing cells: on the front line in immune responses against pathogens. *Curr.Opin.Immunol.* 2002. **14**: 373-379.
- 17 **Rissoan, M.C., Soumelis, V., Kadowaki, N., Grouard, G., Briere, F., de Waal, M. and Liu, Y.J.**, Reciprocal control of T helper cell and dendritic cell differentiation. *Science* 1999. **283**: 1183-1186.
- 18 **Cella, M., Jarrossay, D., Facchetti, F., Alebardi, O., Nakajima, H., Lanzavecchia, A. and Colonna, M.**, Plasmacytoid monocytes migrate to inflamed lymph nodes and produce large amounts of type I interferon. *Nat.Med.* 1999. **5**: 919-923.
- 19 **Pulendran, B., Smith, J.L., Jenkins, M., Schoenborn, M., Maraskovsky, E. and Maliszewski, C.R.**, Prevention of peripheral tolerance by a dendritic cell growth factor: flt3 ligand as an adjuvant. *J.Exp.Med.* 1998. **188**: 2075-2082.
- 20 **Shimizu, Y., Guidotti, L.G., Fowler, P. and Chisari, F.V.**, Dendritic cell immunization breaks cytotoxic T lymphocyte tolerance in hepatitis B virus transgenic mice. *J Immunol* 1998. **161**: 4520-4529.
- 21 **Gong, J., Chen, D., Kashiwaba, M., Li, Y., Chen, L., Takeuchi, H., Qu, H., Rowse, G.J., Gendler, S.J. and Kufe, D.**, Reversal of tolerance to human MUC1 antigen in MUC1 transgenic mice immunized with fusions of dendritic and carcinoma cells. *Proc.Natl.Acad.Sci.USA* 1998. **95**: 6279-6283.
- 22 **Steptoe, R.J., Fu, F., Li, W., Drakes, M.L., Lu, L., Demetris, A.J., Qian, S., McKenna, H.J. and Thomson, A.W.**, Augmentation of dendritic cells in murine organ donors by Flt3 ligand alters the balance between transplant tolerance and immunity. *J.Immunol.* 1997. **159**: 5483-5491.
- 23 **Grohmann, U., Fallarino, F., Bianchi, R., Belladonna, M.L., Vacca, C., Orabona, C., Uyttenhove, C., Fioretti, M.C. and Puccetti, P.**, IL-6 inhibits the tolerogenic function of CD8 alpha+ dendritic cells expressing indoleamine 2,3-dioxygenase. *J.Immunol.* 2001. **167**: 708-714.
- 24 **Süss, G. and Shortman, K.**, A subclass of dendritic cells kills CD4 T cells via Fas/Fas-ligand-induced apoptosis. *J.Exp.Med.* 1996. **183**: 1789-1796.
- 25 **Fazekas, d.S.G.**, The evolution of self-tolerance: a new cell arises to meet the challenge of self-reactivity. *Immunol. Today* 1998. **19**: 448-454.
- 26 **Steinman, R.M., Turley, S., Mellman, I. and Inaba, K.**, The induction of tolerance by dendritic cells that have captured apoptotic cells. *J.Exp.Med.* 2000. **191**: 411-416.

- 27 **Roncarolo, M.G., Levings, M.K. and Traversari, C.**, Differentiation of T regulatory cells by immature dendritic cells. *J.Exp.Med.* 2001. **193**: F5-F9.
- 28 **Lenschow, D.J., Walunas, T.L. and Bluestone, J.A.**, CD28/B7 system of T cell costimulation. *Annu.Rev.Immunol.* 1996. **14**: 233-258.
- 29 **Aruffo, A. and Seed, B.**, Molecular cloning of a CD28 cDNA by a high-efficiency COS cell expression system. *Proc.Natl.Acad.Sci. USA* 1987. **84**: 8573-8577.
- 30 **Hara, T., Fu, S.M. and Hansen, J.A.**, Human T cell activation. II. A new activation pathway used by a major T cell population via a disulfide-bonded dimer of a 44 kilodalton polypeptide (9.3 antigen). *J.Exp.Med.* 1985. **161**: 1513-1524.
- 31 **Chambers, C.A. and Allison, J.P.**, Costimulatory regulation of T cell function. *Curr.Opin.Cell.Biol.* 1999. **11**: 203-210.
- 32 **Turka, L.A., Ledbetter, J.A., Lee, K., June, C.H. and Thompson, C.B.**, CD28 is an inducible T cell surface antigen that transduces a proliferative signal in CD3+ mature thymocytes. *J.Immunol.* 1990. **144**: 1646-1653.
- 33 **June, C.H., Ledbetter, J.A., Gillespie, M.M., Lindsten, T. and Thompson, C.B.**, T-cell proliferation involving the CD28 pathway is associated with cyclosporine-resistant interleukin 2 gene expression. *Mol.Cell.Biol.* 1987. **7**: 4472-4481.
- 34 **Harding, F.A., McArthur, J.G., Gross, J.A., Raulet, D.H. and Allison, J.P.**, CD28-mediated signalling co-stimulates murine T cells and prevents induction of anergy in T-cell clones. *Nature* 1992. **356**: 607-609.
- 35 **Jenkins, M.K., Taylor, P.S., Norton, S.D. and Urdahl, K.B.**, CD28 delivers a costimulatory signal involved in antigen-specific IL-2 production by human T cells. *J.Immunol.* 1991. **147**: 2461-2466.
- 36 **Lucas, P.J., Negishi, I., Nakayama, K., Fields, L.E. and Loh, D.Y.**, Naive CD28-deficient T cells can initiate but not sustain an in vitro antigen-specific immune response. *J.Immunol.* 1995. **154**: 5757-5768.
- 37 **Shahinian, A., Pfeffer, K., Lee, K.P., Kundig, T.M., Kishihara, K., Wakeham, A., Kawai, K., Ohashi, P.S., Thompson, C.B. and Mak, T.W.**, Differential T cell costimulatory requirements in CD28-deficient mice. *Science* 1993. **261**: 609-612.
- 38 **Tada, Y., Nagasawa, K., Ho, A., Morito, F., Ushiyama, O., Suzuki, N., Ohta, H. and Mak, T.W.**, CD28-deficient mice are highly resistant to collagen-induced arthritis. *J.Immunol.* 1999. **162**: 203-208.
- 39 **Girvin, A.M., Dal Canto, M.C., Rhee, L., Salomon, B., Sharpe, A., Bluestone, J.A. and Miller, S.D.**, A critical role for B7/CD28 costimulation in experimental autoimmune encephalomyelitis: a comparative study using costimulatory molecule-deficient mice and monoclonal antibody blockade. *J.Immunol.* 2000. **164**: 136-143.
- 40 **Mathur, M., Herrmann, K., Qin, Y., Gulmen, F., Li, X., Krimins, R., Weinstock, J., Elliott, D., Bluestone, J.A. and Padrid, P.**, CD28 interactions with either CD80 or CD86 are sufficient to induce allergic airway inflammation in mice. *Am.J.Respir.Cell.Mol.Biol.* 1999. **21**: 498-509.

- 41 **Brunet, J.F., Denizot, F., Luciani, M.F., Roux-Dosseto, M., Suzan, M., Mattei, M.G. and Golstein, P.**, A new member of the immunoglobulin superfamily-CTLA-4. *Nature* 1987. **328**: 267-270.
- 42 **Walunas, T.L., Lenschow, D.J., Bakker, C.Y., Linsley, P.S., Freeman, G.J., Green, J.M., Thompson, C.B. and Bluestone, J.A.**, CTLA-4 can function as a negative regulator of T cell activation. *Immunity* 1994. **1**: 405-413.
- 43 **Linsley, P.S., Greene, J.L., Tan, P., Bradshaw, J., Ledbetter, J.A., Anasetti, C. and Damle, N.K.**, Coexpression and functional cooperation of CTLA-4 and CD28 on activated T lymphocytes. *J.Exp.Med.* 1992. **176**: 1595-1604.
- 44 **Tivol, E.A., Borriello, F., Schweitzer, A.N., Lynch, W.P., Bluestone, J.A. and Sharpe, A.H.**, Loss of CTLA-4 leads to massive lymphoproliferation and fatal multiorgan tissue destruction, revealing a critical negative regulatory role of CTLA-4. *Immunity* 1995. **3**: 541-547.
- 45 **Perez, V.L., Van Parijs, L., Biuckians, A., Zheng, X.X., Strom, T.B. and Abbas, A.K.**, Induction of peripheral T cell tolerance in vivo requires CTLA-4 engagement. *Immunity* 1997. **6**: 411-417.
- 46 **Ranheim, E.A. and Kipps, T.J.**, Activated T cells induce expression of B7/BB1 on normal or leukemic B cells through a CD40-dependent signal. *J.Exp.Med.* 1993. **177**: 925-935.
- 47 **Roy, M., Aruffo, A., Ledbetter, J., Linsley, P., Kehry, M. and Noelle, R.**, Studies on the interdependence of gp39 and B7 expression and function during antigen-specific immune responses. *Eur.J.Immunol.* 1995. **25**: 596-603.
- 48 **Henry, J., Ribouchon, M., Depetris, D., Mattei, M., Offer, C., Tazi-Ahnini, R. and Pontarotti, P.**, Cloning, structural analysis, and mapping of the B30 and B7 multigenic families to the major histocompatibility complex (MHC) and other chromosomal regions. *Immunogenetics* 1997. **46**: 383-395.
- 49 **Ikemizu, S., Gilbert, R.J., Fennelly, J.A., Collins, A.V., Harlos, K., Jones, E.Y., Stuart, D.I. and Davis, S.J.**, Structure and dimerization of a soluble form of B7-1. *Immunity* 2000. **12**: 51-60.
- 50 **Yokochi, T., Holly, R.D. and Clark, E.A.**, B lymphoblast antigen (BB-1) expressed on Epstein-Barr virus-activated B cell blasts, B lymphoblastoid cell lines, and Burkitt's lymphomas. *J.Immunol.* 1982. **128**: 823-827.
- 51 **Freedman, A.S., Freeman, G., Horowitz, J.C., Daley, J. and Nadler, L.M.**, B7, a B-cell-restricted antigen that identifies preactivated B cells. *J.Immunol.* 1987. **139**: 3260-3267.
- 52 **Freeman, G.J., Borriello, F., Hodes, R.J., Reiser, H., Hathcock, K.S., Laszlo, G., McKnight, A.J., Kim, J., Du, L. and Lombard, D.B.**, Uncovering of functional alternative CTLA-4 counter-receptor in B7-deficient mice. *Science* 1993. **262**: 907-909.
- 53 **Yoshinaga, S.K., Whoriskey, J.S., Khare, S.D., Sarmiento, U., Guo, J., Horan, T., Shih, G., Zhang, M., Coccia, M.A., Kohno, T., Tafuri-Bladt, A., Brankow, D., Campbell, P., Chang, D., Chiu, L., Dai, T., Duncan, G., Elliott, G.S., Hui, A., McCabe, S.M., Scully, S.,**

- Shahinian, A., Shaklee, C.L., Van, G. and Mak, T.W., Senaldi, G.**, T-cell co-stimulation through B7RP-1 and ICOS. *Nature* 1999. **402**: 827-832.
- 54 **Aicher, A., Hayden-Ledbetter, M., Brady, W.A., Pezzutto, A., Richter, G., Magaletti, D., Buckwalter, S., Ledbetter, J.A. and Clark, E.A.**, Characterization of human inducible costimulator ligand expression and function. *J.Immunol.* 2000. **164**: 4689-4696.
- 55 **Yoshinaga, S.K., Zhang, M., Pistillo, J., Horan, T., Khare, S.D., Miner, K., Sonnenberg, M., Boone, T., Brankow, D., Dai, T., Delaney, J., Han, H., Hui, A., Kohno, T., Manoukian, R., Whoriskey, J.S. and Coccia, M.A.**, Characterization of a new human B7-related protein: B7RP-1 is the ligand to the co-stimulatory protein ICOS. *Int.Immunol.* 2000. **12**: 1439-1447.
- 56 **Mages, H.W., Hutloff, A., Heuck, C., Büchner, K., Himmelbauer, H., Oliveri, F. and Kroczeck, R.A.**, Molecular cloning and characterization of murine ICOS and identification of B7h as ICOS ligand. *Eur.J.Immunol.* 2000. **30**: 1040-1047.
- 57 **Swallow, M.M., Wallin, J.J. and Sha, W.C.**, B7h, a novel costimulatory homolog of B7.1 and B7.2, is induced by TNFalpha. *Immunity* 1999. **11**: 423-432.
- 58 **Ling, V., Wu, P.W., Finnerty, H.F., Bean, K.M., Spaulding, V., Fouser, L.A., Leonard, J.P., Hunter, S.E., Zollner, R., Thomas, J.L., Miyashiro, J.S., Jacobs, K.A. and Collins, M.**, Cutting edge: identification of GL50, a novel B7-like protein that functionally binds to ICOS receptor. *J.Immunol.* 2000. **164**: 1653-1657.
- 59 **Wang, S., Zhu, G., Chapoval, A.I., Dong, H., Tamada, K., Ni, J. and Chen, L.**, Costimulation of T cells by B7-H2, a B7-like molecule that binds ICOS. *Blood* 2000. **96**: 2808-2813.
- 60 **Brodie, D., Collins, A.V., Iaboni, A., Fennelly, J.A., Sparks, L.M., Xu, X.N., van der Merwe, P.A. and Davis, S.J.**, LICOS, a primordial costimulatory ligand? *Curr.Biol.* 2000. **10**: 333-336.
- 61 **Latchman, Y., Wood, C.R., Chernova, T., Chaudhary, D., Borde, M., Chernova, I., Iwai, Y., Long, A.J., Brown, J.A., Nunes, R., Greenfield, E.A., Bourque, K., Boussiotis, V.A., Carter, L.L., Carreno, B.M., Malenkovich, N., Nishimura, H., Okazaki, T., Honjo, T., Sharpe, A.H. and Freeman, G.J.**, PD-L2 is a second ligand for PD-1 and inhibits T cell activation. *Nat.Immunol.* 2001. **2**: 261-268.
- 62 **Chapoval, A.I., Ni, J., Lau, J.S., Wilcox, R.A., Flies, D.B., Liu, D., Dong, H., Sica, G.L., Zhu, G., Tamada, K. and Chen, L.**, B7-H3: a costimulatory molecule for T cell activation and IFN-gamma production. *Nat.Immunol.* 2001. **2**: 269-274.
- 63 **Hutloff, A., Dittrich, A.M., Beier, K.C., Eljaschewitsch, B., Kraft, R., Anagnostopoulos, I. and Kroczeck, R.A.**, ICOS is an inducible T-cell co-stimulator structurally and functionally related to CD28. *Nature* 1999. **397**: 263-266.
- 64 **Coyle, A.J., Lehar, S., Lloyd, C., Tian, J., Delaney, T., Manning, S., Nguyen, T., Burwell, T., Schneider, H., Gonzalo, J.A., Gosselin, M., Owen, L.R., Rudd, C.E. and Gutierrez-Ramos, J.C.**, The CD28-related molecule ICOS is required for effective T cell-dependent immune responses. *Immunity* 2000. **13** : 95-105.

- 65 **Beier, K.C., Hutloff, A., Dittrich, A.M., Heuck, C., Rauch, A., Büchner, K., Ludewig, B., Ochs, H.D., Mages, H.W. and Kroczeck, R.A.**, Induction, binding specificity and function of human ICOS. *Eur.J.Immunol.* 2000. **30**: 3707-3717.
- 66 **Cella, M., Sallusto, F. and Lanzavecchia, A.**, Origin, maturation and antigen presenting function of dendritic cells. *Curr.Opin.Immunol.* 1997. **9**: 10-16.
- 67 **Coligan, JE, Kruisbeek, AM, Margulies, DH, Shevach, EM, and Strober, W** (Eds.) *Current protocols in immunology*. John Wiley & Sons, Inc., New York 1994.
- 68 **Wallny, H.**, Production of soluble MHC class II molecules in *Drosophila melanogaster* Schneider cells. *Immunology Methods Manual* 1997. 51-59.
- 69 **Karasuyama, H., Tohyama, N. and Tada, T.**, Autocrine growth and tumorigenicity of interleukin 2-dependent helper T cells transfected with IL-2 gene. *J.Exp.Med.* 1989. **169**: 13-25.
- 70 **Eisen, S.A., Wedner, H.J. and Parker, C.W.**, Isolation of pure human peripheral blood T-lymphocytes using nylon wool columns. *Immunol.Commun.* 1972. **1**: 571-577.
- 71 **Miltenyi, S., Müller, W., Weichel, W. and Radbruch, A.**, High gradient magnetic cell separation with MACS. *Cytometry* 1990. **11**: 231-238.
- 72 **Schlossman, SF, Boumsell, L, Gilks, W, Harlan, JM, Kishimoto, T, Morimoto, CH, Ritz, J, Shaw, S, Silverstein, R, Springer, T, Tedder, TF, and Todd, RF** (Eds.) *Leucocyte Typing V*. Oxford University Press, Oxford; New York; Tokyo 1995.
- 73 **Smith, S.H., Brown, M.H., Rowe, D., Callard, R.E. and Beverley, P.C.**, Functional subsets of human helper-inducer cells defined by a new monoclonal antibody, UCHL1. *Immunology* 1986. **58**: 63-70.
- 74 **Flavell, D.J., Flavell, S.U., Boehm, D.A., Emery, L., Noss, A., Ling, N.R., Richardson, P.R., Hardie, D. and Wright, D.H.**, Preclinical studies with the anti-CD19-saporin immunotoxin BU12-SAPORIN for the treatment of human-B-cell tumours. *Br.J.Cancer* 1995. **72**: 1373-1379.
- 75 **Khayyamian, S., Hutloff A., Büchner, K., Gräfe, M., Henn, V., Kroczeck, R.A., and H.W. Mages**, ICOS-ligand, expressed on human endothelial cells, costimulates Th1 and Th2 cytokine secretion by memory CD4⁺ T cells. *Proc.Natl.Acad.Sci.USA* 2002. **99**:6198-6201
- 76 **Alt, F., Rosenberg, N., Lewis, S., Thomas, E. and Baltimore, D.**, Organization and reorganization of immunoglobulin genes in A-MULV-transformed cells: rearrangement of heavy but not light chain genes. *Cell* 1981. **27**: 381-390.
- 77 **Szer, I.S., Burmester, G.R., Irani, A. and Winchester, R.J.**, Two novel surface membrane antigens on the helper T cell population. *Clin.Res.* 1982. **30**: 696
- 78 **Perussia, B., Starr, S., Abraham, S., Fanning, V. and Trinchieri, G.**, Human natural killer cells analyzed by B73.1, a monoclonal antibody blocking Fc receptor functions. I. Characterization of the lymphocyte subset reactive with B73.1. *J.Immunol.* 1983. **130**: 2133-2141.

- 79 **Witsch, E.J., Peiser, M., Hutloff, A., Büchner, K., Dorner, B.G., Jonuleit, H., Mages, H.W. and Kroczek, R.A.**, ICOS and CD28 reversely regulate IL-10 on re-activation of human effector T cells with mature dendritic cells. *Eur.J.Immunol.* 2002. in press.
- 80 **Meager, A.**, Antibodies against interferons-characterization of interferons and immunoassays. In **Clemens MJ, Morris AG and Gearing AJH** (Eds.) *Lymphokines and Interferon: A practical approach*. IRL Press, Oxford 1987, pp 105-127
- 81 **Meager, A., Parti, S., Barwick, S., Spragg, J. and O'Hagan, K.**, Detection of hybridomas secreting monoclonal antibodies to human gamma interferon using a rapid screening technique and specificity of certain monoclonal antibodies to gamma interferon. *J.Interferon.Res.* 1984. **4**: 619-625.
- 82 **Kroczek, R.A. and Siebert, E.**, Optimization of northern analysis by vacuum-blotting, RNA-transfer visualization, and ultraviolet fixation. *Anal.Biochem.* 1990. **184**: 90-95.
- 83 **Jonuleit, H., Kuhn, U., Muller, G., Steinbrink, K., Paragnik, L., Schmitt, E., Knop, J. and Enk, A.H.**, Pro-inflammatory cytokines and prostaglandins induce maturation of potent immunostimulatory dendritic cells under fetal calf serum-free conditions. *Eur.J.Immunol.* 1997. **27**: 3135-3142.
- 84 **Sozzani, S., Allavena, P., Vecchi, A. and Mantovani, A.**, The role of chemokines in the regulation of dendritic cell trafficking. *J.Leukoc.Biol.* 1999. **66**: 1-9.
- 85 **Porcelli, S.A. and Modlin, R.L.**, The CD1 system: antigen-presenting molecules for T cell recognition of lipids and glycolipids. *Annu.Rev.Immunol.* 1999. **17**: 297-329.
- 86 **Vieira, P.L., de Jong, E.C., Wierenga, E.A., Kapsenberg, M.L. and Kalinski, P.**, Development of Th1-inducing capacity in myeloid dendritic cells requires environmental instruction. *J.Immunol.* 2000. **164**: 4507-4512.
- 87 **Rieser, C., Bock, G., Klocker, H., Bartsch, G. and Thurnher, M.**, Prostaglandin E2 and tumor necrosis factor alpha cooperate to activate human dendritic cells: synergistic activation of interleukin 12 production. *J.Exp.Med.* 1997. **186**: 1603-1608.
- 88 **Verdijk, R.M., Mutis, T., Esendam, B., Kamp, J., Melief, C.J., Brand, A. and Goulmy, E.**, Polyriboinosinic polyribocytidyl acid (poly(I:C)) induces stable maturation of functionally active human dendritic cells. *J.Immunol.* 1999. **163**: 57-61.
- 89 **Gagliardi, M.C., Sallusto, F., Marinaro, M., Langenkamp, A., Lanzavecchia, A. and De Magistris, M.T.**, Cholera toxin induces maturation of human dendritic cells and licences them for Th2 priming. *Eur.J.Immunol.* 2000. **30**: 2394-2403.
- 90 **Young, J.L., Ramage, J.M., Gaston, J.S. and Beverley, P.C.**, In vitro responses of human CD45R0brightRA- and CD45R0-RAbright T cell subsets and their relationship to memory and naive T cells. *Eur.J.Immunol.* 1997. **27**: 2383-2390.
- 91 **Assenmacher, M., Lohning, M., Scheffold, A., Manz, R.A., Schmitz, J. and Radbruch, A.**, Sequential production of IL-2, IFN-gamma and IL-10 by individual staphylococcal enterotoxin B-activated T helper lymphocytes. *Eur.J.Immunol.* 1998. **28**: 1534-1543.

- 92 **Lederer, J.A., Perez, V.L., DesRoches, L., Kim, S.M., Abbas, A.K. and Lichtman, A.H.**, Cytokine transcriptional events during helper T cell subset differentiation. *J.Exp.Med.* 1996. **184**: 397-406.
- 93 **Moore, K.W., de Waal, M., Coffman, R.L. and O'Garra, A.**, Interleukin-10 and the interleukin-10 receptor. *Annu.Rev.Immunol.* 1992. **19**: 683-765.
- 94 **Constant, S.L. and Bottomly, K.**, Induction of Th1 and Th2 CD4+ T cell responses: the alternative approaches. *Annu.Rev.Immunol.* 1997. **15**: 297-322.
- 95 **Cella, M., Salio, M., Sakakibara, Y., Langen, H., Julkunen, I. and Lanzavecchia, A.**, Maturation, activation, and protection of dendritic cells induced by double-stranded RNA. *J.Exp.Med.* 1999. **189**: 821-829.
- 96 **Zhou, L.J. and Tedder, T.F.**, CD14+ blood monocytes can differentiate into functionally mature CD83+ dendritic cells. *Proc.Natl.Acad.Sci. USA* 1996. **93**: 2588-2592.
- 97 **Liang, L., Porter, E.M. and Sha, W.C.**, Constitutive expression of the B7h ligand for inducible costimulator on naive B cells is extinguished after activation by distinct B cell receptor and interleukin 4 receptor-mediated pathways and can be rescued by CD40 signaling. *J.Exp.Med.* 2002. **196**: 97-108.
- 98 **Graf, D., Muller, S., Korthauer, U., van Kooten, C., Weise, C. and Kroczeck, R.A.**, A soluble form of TRAP (CD40 ligand) is rapidly released after T cell activation. *Eur.J.Immunol.* 1995. **25**: 1749-1754.
- 99 **Ludewig, B., Henn, V., Schroder, J.M., Graf, D. and Kroczeck, R.A.**, Induction, regulation, and function of soluble TRAP (CD40 ligand) during interaction of primary CD4+ CD45RA+ T cells with dendritic cells. *Eur.J.Immunol.* 1996. **26**: 3137-3143.
- 100 **Zhang, Y. and Allison, J.P.**, Interaction of CTLA-4 with AP50, a clathrin-coated pit adaptor protein. *Proc.Natl.Acad.Sci. USA* 1997. **94**: 9273-9278.
- 101 **Shiratori, T., Miyatake, S., Ohno, H., Nakaseko, C., Isono, K., Bonifacino, J.S. and Saito, T.**, Tyrosine phosphorylation controls internalization of CTLA-4 by regulating its interaction with clathrin-associated adaptor complex AP-2. *Immunity* 1997. **6**: 583-589.
- 102 **Linsley, P.S., Bradshaw, J., Greene, J., Peach, R., Bennett, K.L. and Mittler, R.S.**, Intracellular trafficking of CTLA-4 and focal localization towards sites of TCR engagement. *Immunity* 1996. **4**: 535-543.
- 103 **McAdam, A.J., Chang, T.T., Lumelsky, A.E., Greenfield, E.A., Boussiotis, V.A., Duke-Cohan, J.S., Chernova, T., Malenkovich, N., Jabs, C., Kuchroo, V.K., Ling, V., Collins, M., Sharpe, A.H. and Freeman, G.J.**, Mouse inducible costimulatory molecule (ICOS) expression is enhanced by CD28 costimulation and regulates differentiation of CD4+ T cells. *J.Immunol.* 2000. **165**: 5035-5040.
- 104 **Sharpe, A.H. and Freeman, G.J.**, The B7-CD28 superfamily. *Nature Rev.Immunol.* 2002. **2**: 116-126.
- 105 **Tzachanis, D., Berezovskaya, A., Nadler, L.M. and Boussiotis, V.A.**, Blockade of B7/CD28 in mixed lymphocyte reaction cultures results in the generation of alternatively activated macrophages, which suppress T-cell responses. *Blood* 2002. **99**: 1465-1473.

- 106 **Van Gool, S.W., Vermeiren, J., Rafiq, K., Lorr, K., de Boer, M. and Ceuppens, J.L.**, Blocking CD40 - CD154 and CD80/CD86 - CD28 interactions during primary allogeneic stimulation results in T cell anergy and high IL-10 production. *Eur.J.Immunol.* 1999. **29**: 2367-2375.
- 107 **Dong, C., Juedes, A.E., Temann, U.A., Shresta, S., Allison, J.P., Ruddle, N.H. and Flavell, R.A.**, ICOS co-stimulatory receptor is essential for T-cell activation and function. *Nature* 2001. **409**: 97-101.
- 108 **Steinbrink, K., Wolf, M., Jonuleit, H., Knop, J. and Enk, A.H.**, Induction of tolerance by IL-10-treated dendritic cells. *J.Immunol.* 1997. **159**: 4772-4780.
- 109 **McAdam, A.J., Greenwald, R.J., Levin, M.A., Chernova, T., Malenkovich, N., Ling, V., Freeman, G.J. and Sharpe, A.H.**, ICOS is critical for CD40-mediated antibody class switching. *Nature* 2001. **409**: 102-105.
- 110 **Tafuri, A., Shahinian, A., Bladt, F., Yoshinaga, S.K., Jordana, M., Wakeham, A., Boucher, L.M., Bouchard, D., Chan, V.S., Duncan, G., Odermatt, B., Ho, A., Itie, A., Horan, T., Whoriskey, J.S., Pawson, T., Penninger, J.M., Ohashi, P.S. and Mak, T.W.**, ICOS is essential for effective T-helper-cell responses. *Nature* 2001. **409**: 105-109.
- 111 **Corinti, S., Albanesi, C., la Sala, A., Pastore, S. and Girolomoni, G.**, Regulatory activity of autocrine IL-10 on dendritic cell functions. *J.Immunol.* 2001. **166**: 4312-4318.
- 112 **Rottman, J.B., Smith, T., Tonra, J.R., Ganley, K., Bloom, T., Silva, R., Pierce, B., Gutierrez-Ramos, J.C., Özkaynak, E. and Coyle, A.J.**, The costimulatory molecule ICOS plays an important role in the immunopathogenesis of EAE. *Nat.Immunol.* 2001. **2**: 605-611.
- 113 **Özkaynak, E., Gao, W., Shemmeri, N., Wang, C., Gutierrez-Ramos, J.C., Amaral, J., Qin, S., Rottman, J.B., Coyle, A.J. and Hancock, W.W.**, Importance of ICOS-B7RP-1 costimulation in acute and chronic allograft rejection. *Nat.Immunol.* 2001. **2**: 591-596.
- 114 **Sperling, A.I. and Bluestone, J.A.**, ICOS costimulation: It's not just for TH2 cells anymore. *Nat.Immunol.* 2001. **2**: 573-574.
- 115 **Green, J.M., Noel, P.J., Sperling, A.I., Walunas, T.L., Gray, G.S., Bluestone, J.A. and Thompson, C.B.**, Absence of B7-dependent responses in CD28-deficient mice. *Immunity* 1994. **1**: 501-508.
- 116 **Najafian, N. and Sayegh, M.H.**, CTLA4-Ig: a novel immunosuppressive agent. *Expert.Opin.Investig.Drugs.* 2000. **9**: 2147-2157.