Bibliografia

1. Abe E, Miyaura C, Sakagami H, Takeda M, Konno K: Differentiation of mouse myeloid leukemia cells induced by1®,25-dihydroxyvitamin D3. Proc. Natl.Acad. Sci. USA 78:4990–94, 1981.
2. Abe J, Nakamura K, Takita Y, Nakano T, Irie H, Nishii Y: Prevention of immunological disorders in MRL/l mice by a new synthetic analogue of vitamin D3: 22-oxa-1®,25-dihydroxyvitamin D3. J. Nutr. Sci. Vitaminol. 36:21–31, 1990.
3. Adam R, McMaster P, O'Grady JG, Castaing D, Klempnauer JL, Jamieson N, Neuhaus P, Lerut J, Salizzoni M, Pollard S, Muhlbacher F, Rogiers X, Garcia Valdecasas JC, Berenguer J, Jaeck D, Moreno Gonzalez E: Evolution of liver transplantation in Europe: report of the European Liver Transplant Registry. Liver Transpl 9:1231, 2003.
4. Adams JS, Gacad MA : Characterization of 1®-hydroxylation of vitamin D3 sterols by cultured alveolar macrophages from patients with sarcoidosis. J. Exp. Med. 161:755–65, 1985.
5. Adorini L, Penna G, Casorati M, Davalli AM, Gregori S: Induction of transplantation tolerance by 1,25-dihydroxyvitamin D(3). Transplant Proc 33(1-2):58, 2001.
6. Alderson MR, R.J. Armitage, T.W. Tough, L. Strockbine, W.C. Fanslow and M.K. Spriggs, CD40 expression by human monocytes: regulation by cytokines and activation of monocytes by the ligand for CD40, J Exp Med 178 pp. 669–674, 1993.
7. Almerighi C, Bogdanos DP, Cholongitas V, Kraslova I, Meda F, Hussain M J, Burroughs A K, Vergani D; Immunomodulatory role of Vitamin D3 in

primary biliary cirrhosis. Presentato all'Annual Meeting del BASL, Londra, UK, 7-9 September, 2005.

8. Barnes PF, Modlin RL, Bikle DD, Adams JS: Transpleural gradient of 1,25-dihydroxyvitamin D in tuberculosis pleuritis. J. Clin. Invest. 83:1527–32, 1989.

9. Bar-Shavit Z, Noff D, Edelstein S, Meyer M, Shibolet S, Goldman R: 1,25-dihydroxyvitamin D3 and the regulation of macrophage function. Calcif. Tissue Int. 33:673–76, 1981.

10. Barrat FJ, D.J. Cua, A. Boonstra, D.F. Richards, C. Crain and H.F. Savelkoul: In vitro generation of interleukin 10-producing regulatory CD4+ T cells is induced by immunosuppressive drugs and inhibited by T Helper type 1 (Th1)-and Th2-inducing cytokines, J Exp Med 195 pp. 603–613, 2002.

11. Bharat A, R.C. Fields, E.P. Trulock, G.A. Patterson and T. Mohanakumar, Induction of IL-10 suppressors in lung transplant patients by CD4+25+ regulatory T cells through CTLA-4 signaling, J Immunol 177 pp. 5631–5638, 2006.

12. Becker BN, Hullett DA, O'Herrin JK, Malin G, Sollinger HW, DeLuca H: Vitamin D as immunomodulatory therapy for kidney transplantation. Transplantation 74(8):1204, 2002.

13. Bemiss CJ, Mahon BD, Henry A, Weaver V, Cantorna MT: Interleukin-2 is one of the targets of 1,25-dihydroxyvitamin D3 in the immune system. Arch Biochem Biophys 402(2):249, 2002.

14. Bhalla AK: Hormones and the immune response. Ann Rheum Dis 48(1):1, 1989.

15. Bhalla AK, Amento EP, Clemens TL, Holick MF, Krane SM: Specific high-affinity receptors for 1,25-dihydroxyvitamin D3 in human peripheral blood mononuclear cells: presence in monocytes and induction in T lymphocytes following activation. J. Clin. Endocrinol. Metab. 57:1308–10, 1983.
16. Bhalla AK, Amento EP, Krane SM: Differential effects of 1,25-dihydroxyvitamin D3 on human lymphocytes and monocyte/macrophages: inhibition of interleukin-2 and augmentation of interleukin-1 production. Cell Immunol 98(2):311, 1986.
17. Bhalla AK, Amento EP, Serog B, Glimcher LH: 1,25-Dihydroxyvitamin D3 inhibits antigen-induced T cell activation. J Immunol 133(4):1748, 1984.
18. Berer A, Skockl J, Majdic O, Wagner T, Kollars M: 1,25-dihydroxyvitamin D3 inhibits dendritic cell differentiation and maturation in vitro. Exp. Hematol. 28:575–83, 2000.
19. Blazar BR, P.A. Taylor, A. Panoskaltsis-Mortari, J. Buhlman, J. Xu and R.A. Flavell, Blockade of CD40 ligand-CD40 interaction impairs T cell mediated alloreactivity by inhibiting mature donor T cell expansion and function after bone marrow transplantation, J Immunol 158 pp. 29–39, 1997.
20. Bolacchi F, M. Carbone, M. Capozzi, L. Ventura, M. Cepparulo and G. Rocchi: Effect of different activation stimuli on the cytokine response of human macrophages to CD40L, Cytokine 16 pp. 121–125, 2001.
21. Boonstra A, Barrat FJ, Crain C, Heath VL, Savelkoul HF, O'Garra A: 1alpha,25-Dihydroxyvitamin D3 has a direct effect on naive CD4(+) T cells to enhance the development of Th2 cells. J Immunol 167(9):4974, 2001.
22. Bouillon R, Allewaert K, Xiang DX, Tan BK, van Baelen H: Vitamin D analogs with low affinity for the vitamin D binding protein: enhanced in vitro and decreased in vivo activity. J. Bone Mineral Res. 6:1051–57, 1991.

23. Branisteanu DD, Leenaerts P, van Damme B, Bouillon R: Partial prevention of active Heymann nephritis by 1 alpha, 25 dihydroxyvitamin D3. Clin Exp Immunol 94(3):412, 1993.

24. Branisteanu DD, Mathieu C, Bouillon R: Synergism between sirolimus and 1,25-dihydroxyvitamin D3 in vitro and in vivo. J. Neuroimmunol. 79:138–47 24, 1997.

25. Branisteanu DD, Waer M, Sobis H, Marcelis, Vandeputte M, Bouillon R: Prevention of murine experimental allergic encephalomyelitis: cooperative effects of cyclosporine and 1®,25 (OH)2 D3. J. Neuroimmunol. 61:151–60, 1995.

26. Brossart P, F. Grunebach, G. Stuhler, V.L. Reichardt, R. Mohle and L. Kanz: Generation of functional human dendritic cells from adherent peripheral blood monocytes by CD40 ligation in the absence of granulocyte-macrophage colony-stimulating factor, Blood 11 pp. 4238–4247, 1998.

27. Canning MO, Grotenhuis K, de Wit H, Ruwhof C, Drexhage HA: 1®,25-dihydroxyvitamin D3 (1,25(OH)2D3) hampers the maturation of fully active immature dendritic cells from monocytes. Eur. J. Endocrinol. 145:351–57, 2001.

28. Cantorna MT: Vitamin D and autoimmunity: is vitamin D status an environmental factor affecting autoimmune disease prevalence? Proc Soc Exp Biol Med 223(3):230, 2000.

29. Cantorna MT, Hayes CE, DeLuca HF: 1,25-Dihydroxyvitamin D3 reversibly blocks the progression of relapsing encephalomyelitis, a model of multiple sclerosis. Proc Natl Acad Sci U S A 93(15):7861, 1996.

30. Cantorna MT, Hayes CE, DeLuca HF: 1,25-Dihydroxycholecalciferol inhibits the progression of arthritis in murine models of human arthritis. J Nutr 128(1):68, 1998.

31. Cantorna MT, Hullett DA, Redaelli C, Brandt CR, Humpal-Winter J, Sollinger HW, Deluca HF: 1,25-Dihydroxyvitamin D3 prolongs graft survival without compromising host resistance to infection or bone mineral density. Transplantation 66(7):828, 1998.

32. Cantorna MT, Humpal-Winter J, DeLuca HF: Dietary calcium is a major factor in 1,25-dihydroxycholecalciferol suppression of experimental autoimmune encephalomyelitis in mice. J Nutr 129(11):1966, 1999.

33. Cantorna MT, Humpal-Winter J, DeLuca HF: In vivo up-regulation of interleukin-4 is one mechanism underlying the immunoregulatory effects of 1,25-dihydroxyvitamin D(3). Arch Biochem Biophys 377(1):135, 2000.

34. Cantorna MT, Mahon BD: Mounting evidence for vitamin D as an environmental factor affecting autoimmune disease prevalence. Exp Biol Med (Maywood) 229(11):1136, 2004.

35. Cantorna MT, Munsick C, Bemiss C, Mahon BD: 1,25-Dihydroxycholecalciferol prevents and ameliorates symptoms of experimental murine inflammatory bowel disease. J Nutr 130(11):2648, 2000.

36. Cantorna MT, Woodward WD, Hayes CE, DeLuca HF: 1,25-dihydroxyvitamin D3 is a positive regulator for the two anti-encephalitogenic cytokines TGF-beta 1 and IL-4. J Immunol 160(11):5314, 1998.

37. Cantorna MT, Zhu Y, Froicu M, Wittke A: Vitamin D status, 1,25-dihydroxyvitamin D3, and the immune system. Am J Clin Nutr 80(6 Suppl):1717S, 2004.

38. Carlberg C, Polly P: Gene regulation by vitamin D3. Crit. Rev. Eukaryot. Gene Expr. 8:19–42, 1998.

39. Carrington MN, Tharp-Hiltbold B, Knoth J, Ward FE: 1,25-Dihydroxyvitamin D3 decreases expression of HLA class II molecules in a melanoma cell line. J Immunol 140(11):4013, 1988.

40. Casteels KM, Mathieu C, Waer M, Valckx D, Overbergh L:. Prevention of type I diabetes in non-obese diabetic mice by late intervention with non-hypercalcemic analogs of 1,25-dihydroxyvitamin D3 in combination with a short course of cyclosporine A. Endocrinology 139:95–102, 1998.

41. Casteels K, Waer M, Bouillon R, Depovere J, Vackx D: 1,25-dihydroxyvitamin D3 restores sensitivityto cyclophosphamide-induced apoptosis in non-obese diabetic (NOD) mice and protects against diabetes . Clin. Exp. Immunol. 112:181–87, 1998.

42. Cerny A, Chisari FV: Pathogenesis of Chrnic Hepatitis C: Immunological features of hepatic injury and viral persistence. Hepatology 30, 595-601, 1999.

43. Chang TL, C.M. Shea, S. Urioste, R.C. Thompson, W.H. Boom and A.K. Abbas, Heterogeneity of helper/inducer T lymphocytes III. Responses of IL-2- and IL-4-producing (Th1 and Th2) clones to antigens presented by different accessory cells, J Immunol 145 pp. 2803–2808, 1990.

44. Chaussabel D, F. Jacobs, J. de Jonge, M. de Veerman, Y. Carlier and K. Thielemans, CD40 ligation prevents trypanosoma cruzi infection through interleukin-12 upregulation, Infect Immun 67 pp. 1929–1934, 1999.

45. Chollet-Martin S, Depoix JP, Hvass U, Pansard Y, Vissuzaine C, Gougerot-Pocidalo MA: Raised plasma levels of tumor necrosis factor in heart allograft rejection. Transplant Proc 22:283, 1990.

46. Cippitelli M, Santoni A: Vitamin D3: a transcriptional modulator of the interferon-gamma gene. Eur. J. Immunol. 28: 3017–30, 1998.

47. Cippitelli M, Fionda C, Di Bona D, Di Rosa F, Lupo A, Piccoli M, Frati L, Santoni A: Negative regulation of CD95 ligand gene expression by vitamin D3 in T lymphocytes. J Immunol 168(3):1154, 2002.

48. Clavreul A, C.L. D'hellencourt, C. Montero-Menei, G. Potron and D. Couez, Vitamin D differentially regulates B7.1 and B7.2 expression on human peripheral blood monocytes, Immunology 95 (2) pp. 272–277, 1998.

49. Connor RI, Rigby WF: 1 alpha,25-dihydroxyvitamin D3 inhibits productive infection of human monocytes by HIV-1. Biochem Biophys Res Commun 176(2):852, 1991.

50. Dam TN, Kang S, Nickoloff BJ, Voorhees JJ: 1alpha,25-dihydroxycholecalciferol and cyclosporine suppress induction and promote resolution of psoriasis in human skin grafts transplanted on to SCID mice. J Invest Dermatol 113(6):1082, 1999.

51. D'Ambrosio D, Cipitelli M, Cocciolo G, Mazzeo D, Di Lucia P: Inhibition of IL-12 production by 1,25-dihydroxyvitaminD3: involvement of NF-B downregulation in transcriptional repression of the p40 gene. J. Clin. Invest. 101:252–62, 1998.

52. Delafuente JC: Immunosenescence. Clinical and pharmacologic considerations. Med Clin North Am 69(3):475, 1985.

53. De Luca HF, Cantorna MT: Vitamin D: its role and uses in immunology. Faseb J 15(14):2579, 2001.

54. Elst EF, Van Suijlekom-Smit LW, Oranje AP: Treatment of linear scleroderma with oral 1,25-dihydroxyvitamin D3 (calcitriol) in seven children. Pediatr Dermatol 16(1):53, 1999.

55. The EURODIAB substudy 2 study group: Vitamin D supplement in early childhood and risk for type I (insulindependent) diabetes mellitus. Diabetologia 42:51–54, 1999.

56. Fournier C, Gepner P, Sadouk M, Charreire J: In vivo beneficial effects of cyclosporin A and 1,25-dihydroxyvitamin D3 on the induction of experimental autoimmune thyroiditis. Clin Immunol Immunopathol 54(1):53, 1990.

57. Froicu M, Weaver V, Wynn TA, McDowell MA, Welsh JE, Cantorna MT: A crucial role for the vitamin D receptor in experimental inflammatory bowel diseases. Mol Endocrinol 17(12):2386, 2003.

58. Foy TM, A. Aruffo, J. Bajorath, J.E. Buhlmann and R.J. Noelle, Immune regulation by CD40 and its ligand gp39, Annu Rev Immunol 14 pp. 591–617, 1996.

59. Gajewski TF, M. Pinnas, T. Wong and F.W. Fitch, Murine Th1 and Th2 clones proliferate optimally in response to distinct antigen-presenting cell populations, J Immunol 146 pp. 1750–1758, 1991.

60. Golshayan D, Buhler L, Lechler RI, Pascual M From current immunosuppressive strategies to clinical tolerance of allografts. Transpl Int 20:12, 2007.

61. Gorczynski RM, Adams RB, Levy GA, Chung SW: Correlation of peripheral blood lymphocyte and intragraft cytokine mRNA expression with rejection in orthotopic liver transplantation. Surgery 120:496, 1996.

62. Goules A, A.G. Tzioufas, M.N. Manousakis, K.A. Kirou, M.K. Crow and J.G.E. Routsias, Levated levels of soluble CD40 ligand (sCD40L) in serum of patients with systemic autoimmune diseases, J Autoimmun 26 pp. 165–171, 2006.

63. Gregori S, Casorati M, Amuchastegui S, Smiroldo S, Davalli A, Adorini L: Transplantation tolerance by 1,25-dihydroxyvitamin D(3)-induced costimulation blockade. Transplant Proc 33(1-2):219, 2001.

64. Gregori S, Casorati M, Amuchastegui S, Smiroldo S, Davalli AM, Adorini L: Regulatory T cells induced by 1 alpha,25-dihydroxyvitamin D3 and mycophenolate mofetil treatment mediate transplantation tolerance. J Immunol 167(4):1945, 2001.

65. Gregori S, Giarratana N, Smiroldo S, Uskokovic M, Adorini L: A 1alpha,25-dihydroxyvitamin D(3) analog enhances regulatory T-cells and arrests autoimmune diabetes in NOD mice. Diabetes 51(5):1367, 2002.

66. Grewal IS and R.A. Flavell, The CD40 ligand: at the centre of the immune universe?, Immunol Res 16, pp. 59–70, 1997.

67. Griffin MD, Lutz W, Phan VA, Bachman LA, McKean DJ, Kumar R: Potent inhibition of dendritic cell differentiation and maturation by vitamin D analogs. Biochem. Biophys. Res. Comm. 270:701–8, 2000.

68. Griffin MD, Lutz W, Phan VA, Bachman LA, McKean DJ, Kumar R: Dendritic cell modulation by 1®,25 dihydroxyvitamin D3 and its analogs: a vitamin D receptor-dependent pathway that promotes a persistent state of immaturity in vitro and in vivo. Proc. Natl. Acad. Sci. USA 98:6800–5, . 2001.

69. Guerkov RE, Targoni OS, Kreher CR, Boehm BO, Herrera MT, Tary-Lehmann M, Lehmann PV, Schwander SK: Detection of low-frequency

antigen-specific IL-10-producing CD4(+) T cells via ELISPOT in PBMC: cognate vs. nonspecific production of the cytokine. J Immunol Methods 279(1-2):111, 2003.

70. Guillonneau C, V. Aubry, K. Renaudin, C. Séveno, C. Usal and K. Tezuka, Inhibition of chronic rejection and development of tolerogenic T cells after ICOS-ICOSL and CD40-CD40L co-stimulation blockade, Transplantation 80 pp. 546–554, 2005.

71. Gysemans C, Van Etten E, Overbergh L, Verstuyf A, Waer M: Treatment of autoimmune diabetes recurrencecin non-obese diabetic mice by mouse interferon-β in combination with an analogue of 1®,25-dihydroxyvitamin D3. Clin. Exp. Immunol. 128:213–20, 2002.

72. Heath WR, Kurts C, Miller JFAP, Carbone FR: Cross-tolerance: a pathway for inducing tolerance to peripheral tissue antigens. J. Exp. Med. 187:1549–53, 1998.

73. Hollenbaugh D, H.D. Ochs, R.J. Noelle, J.A. Ledbetter and A. Aruffo, The role of CD40 and its ligand in the regulation of the immune response, Immunol Rev 138 pp. 23–37, 1994.

74. Hullett DA, Cantorna MT, Redaelli C, Humpal-Winter J, Hayes CE, Sollinger HW, Deluca HF: Prolongation of allograft survival by 1,25-dihydroxyvitamin D3. Transplantation 66(7):824, 1998.

75. Hypponen E, Laara E, Reunanen A, Jarvelin MR, Virtanen SM: Intake of vitamin D and risk of type 1 diabetes: a birth-cohort study. Lancet 358:1500, 2001.

76. Iho S, Takahashi T, Kura F, Sugiyama H, Hoshino T: The effect of 1,25-dihydroxyvitamin D3 on in vitro immunoglobulin production in human B cells. J Immunol 136(12):4427, 1986.

77. Imagawa DK, Millis JM, Olthoff KM, Derus LJ, Chia D, Sugich LR, Ozawa M, Dempsey RA, Iwaki Y, Levy PJ: The role of tumor necrosis factor in allograft rejection. I. Evidence that elevated levels of tumor necrosis factor-alpha predict rejection following orthotopic liver transplantation. Transplantation 50:219, 1990.

78. Jensen J, M. Krakauer and F. Sellebjerg, Increased T cell expression of CD154 (CD40-ligand) in multiple sclerosis, Eur J Neurol 8 pp. 321–328, 2001.

79. Johnsson C, Binderup L, Tufveson G: Vitamin D analogues for immunosuppression: a comparison between various routes of administration. Transplant Proc 27(6):3538, 1995.

80. Johnsson C, Binderup L, Tufveson G: The effects of combined treatment with the novel vitamin D analogue MC 1288 and cyclosporine A on cardiac allograft survival. Transpl Immunol 3(3):245, 1995.

81. Johnsson C, Tufveson G: MC 1288a vitamin D analogue with immunosuppressive effects on heart and small bowel grafts. Transpl Int 7(6):392, 1994.

82. Jonuleit H, E. Schmitt, G. Schuler, J. Knop and A.H. Enk, Induction of interleukin 10-producing, nonproliferating CD4+ T cells with regulatory properties by repetitive stimulation with allogenic immature human dendritic cells, J Exp Med 192 pp. 1213–1222, 2000.

83. Jordan SC, Lemire JM, Sakai RS, Toyoda M, Adams JS: Exogenous interleukin-2 does not reverse the immunoinhibitory effects of 1,25-dihydroxyvitamin D3 on human peripheral blood lymphocyte immunoglobulin production. Mol Immunol 27(1):95, 1990.

84. Kang S, Yi S, Griffiths CE, Fancher L, Hamilton TA, Choi JH: Calcipotriene-induced improvement in psoriasis is associated with reduced interleukin-8 and increased interleukin-10 levels within lesions. Br J Dermatol 138(1):77, 1998.

85. Kato K, E. Santana-Sahagun, L.Z. Rassenti, M.H. Weisman, N. Tamura and S. Kobayashi: The soluble CD40 ligand sCD154 in systemic lupus erythematosus, J Clin Invest 104 pp. 947–995, 1999.

86. Kiener P.A., P. Moran-Davis, B.M. Rankin, A.F. Wahl, A. Aruffo and D. Hollenbaugh, Stimulation of CD40 with purified soluble gp 39 induces proinflammatory responses in human monocytes, J Immunol 155 pp. 4917–4925, 1995.

87. Komori T, Nakano T, Ohsugi Y, Sugawara Y: The effect of 1 alpha-hydroxyvitamin D3 on primary antibody formation in mice. Immunopharmacology 9(3):141, 1985.

88. Koshy M, D. Berger and M.K. Crow, Increased expression of CD40 ligand on systemic lupus erythematosus lymphocytes, J Clin Invest 98 pp. 826–837, 1996.

89. Kreher CR, Dittrich MT, Guerkov R, Boehm BO, Tary-Lehmann M: CD4+ and CD8+ cells in cryopreserved human PBMC maintain full functionality in cytokine ELISPOT assays. J Immunol Methods 278(1-2):79, 2003.

90. Koizumi T, NakaoY, Matsui T, Nakagawa T, Matsuda S: Effects of corticosteroid and 1,24R-dihydroxy-vitamin D3 administration on lymphoproliferation and autoimmune disease in MRL/MPlpr/lpr mice. Int. Arch. Allergy Appl. Immunol. 77:396–404, 1985.

91. Lederer SR, N. Friedrich, R. Gruber, R. Landgraf, M. Toepfer and T. Sitter, Reduced CD40L expression on ex vivo activated CD4+ T lymphocytes from

patients with excellent renal allograft function measured with a rapid whole blood flow cytometry procedure, Int Arch Allergy Immunol 133 pp. 276–284, 2004.

92. Lemire J: 1,25-Dihydroxyvitamin D3--a hormone with immunomodulatory properties. Z Rheumatol 59 Suppl 1:24, 2000.

93. Lemire JM: Immunomodulatory role of 1,25-dihydroxyvitamin D3. J Cell Biochem 49(1):26, 1992.

94. Lemire JM: Immunomodulatory actions of 1,25-dihydroxyvitamin D3. J Steroid Biochem Mol Biol 53(1-6):599, 1995.

95. Lemire JM, Adams JS: 1,25-Dihydroxyvitamin D3 inhibits the passive transfer of cellular immunity by a myelin basic protein-specific T cell clone. J Bone Miner Res 7(2):171, 1992.

96. Lemire JM, Adams JS, Kermani-Arab V, Bakke AC, Sakai R, Jordan SC: 1,25-Dihydroxyvitamin D3 suppresses human T helper/inducer lymphocyte activity in vitro. J Immunol 134(5):3032, 1985.

97. Lemire JM, Adams JS, Sakai R, Jordan SC: 1 alpha,25-dihydroxyvitamin D3 suppresses proliferation and immunoglobulin production by normal human peripheral blood mononuclear cells. J Clin Invest 74(2):657, 1984.

98. Lemire JM, Archer DC, Khulkarni A, Ince A, Uskokovic MR, Stepkowski S: Prolongation of the survival of murine cardiac allografts by the vitamin D3 analogue 1,25-dihydroxy-delta 16-cholecalciferol. Transplantation 54(4):762, 1992.

99. Lemire JM, Ince A, Takashima M: 1,25-Dihydroxyvitamin D3 attenuates the expression of experimental murine lupus of MRL/l mice. Autoimmunity 12(2):143, 1992.

100. Lemire JM, Archer DC, Reddy GS: 1,25-Dihydroxy-24-OXO-16ene-vitamin D3, a renal metabolite of the vitamin D analog 1,25-dihydroxy-16ene-vitamin D3, exerts immunosuppressive activity equal to its parent without causing hypercalcemia in vivo. Endocrinology 135(6):2818, 1994.

101. Lemire JM, Archer DC, Beck L, Spiegelberg HL: Immunosuppressive actions of 1,25-dihydroxyvitamin D3: preferential inhibition of Th1 functions. J Nutr 125(6 Suppl):1704S, 1995.

102. Lewin E, Olgaard K: The in vivo effect of a new, in vitro, extremely potent vitamin D3 analog KH1060 on the suppression of renal allograft rejection in the rat. Calcif Tissue Int 54(2):150, 1994.

103. Lillevang ST, Rosenkvist J, Andersen CB, Larsen S, Kemp E, Kristensen T: Single and combined effects of the vitamin D analogue KH1060 and cyclosporin A on mercuric-chloride-induced autoimmune disease in the BN rat. Clin. Exp. Immunol. 88:301–6, 1992.

104. Liossis SN and P.P. Sfikakis, Costimulation blockade in the treatment of rheumatic diseases, BioDrugs 18 pp. 95–102, 2004.

105. Liu MF, S.C. Chao, C.R. Wang and H.Y. Lei, Expression of CD40 and CD40 ligand among cell populations within rheumatoid synovial compartment, Autoimmunity 34 pp. 107–113, 2001.

106. Lu I, Gilleaudeau P, McLane JA, Heftler N, Kamber M, Gottlieb S, Krueger JG, Gottlieb AB: Modulation of epidermal differentiation, tissue inflammation, and T-lymphocyte infilitration in psoriatic plaques by topical calcitriol. J Cutan Pathol 23(5):419, 1996.

107. Luscinskas FW, Cybulsky MI, Kiely JM, Peckins CS, Davis VM, Gimbrone MA, Jr.: Cytokine-activated human endothelial monolayers support enhanced neutrophil transmigration via a mechanism involving both

endothelial-leukocyte adhesion molecule-1 and intercellular adhesion molecule-1. J Immunol 146:1617, 1991.

108. Mahon BD, Gordon SA, Cruz J, Cosman F, Cantorna MT: Cytokine profile in patients with multiple sclerosis following vitamin D supplementation. J Neuroimmunol 134(1-2):128, 2003.

109. Mahon BD, Wittke A, Weaver V, Cantorna MT: The targets of vitamin D depend on the differentiation and activation status of CD4 positive T cells. J Cell Biochem 89(5):922, 2003.

110. Mahon BD, Gordon SA, Cruz J, Cosman F, Cantorna MT: Cytokine profile in patients with multiple sclerosis following vitamin D supplementation. J Neurol 134: 128-132, 2003.

111. Manga DF, G. Welch and S. Walml, Lipopolysaccharide, tumor necrosis factor-α, and IL-1 prevent programmed cell death (apoptosis) in human peripheral blood monocytes, J Immunol 146 pp. 1541–1546, 1991.

112. Mangan DF and S. Wahl, Differential regulation of human monocyte programmed cell death (apoptosis) by chemotactic factors and pro-inflammatory cytokines, J Immunol 147 pp. 3408–3412, 1991.

113. Manolagas SC, Provvedini DM, Murray EJ, Tsoukas CD, Deftos LJ: The antiproliferative effect of calcitriol on human peripheral blood mononuclear cells. J Clin Endocrinol Metab 63(2):394, 1986.

114. Manolagas SC, Provvedini DM, Tsoukas CD: Interactions of 1,25-dihydroxyvitamin D3 and the immune system. Mol Cell Endocrinol 43(2-3):113, 1985.

115. Manolagas SC, Werntz DA, Tsoukas CD, Provvedini DM, Vaughan JH: 1,25- dihydroxyvitamin D3 receptors in lymphocytes from patients with rheumatoid arthritis . J. Lab. Clin. Med. 108:596–600, 1986.

116. Martinez OM, Krams SM, Sterneck M, Villanueva JC, Falco DA, Ferrell LD, Lake J, Roberts JP, Ascher NL: Intragraft cytokine profile during human liver allograft rejection. Transplantation 53:449, 1992.

117. Mathieu C, Laureys J, Sobis H, Vandeputte M, Waer M, Bouillon R. 1,25-dihydroxyvitamin D3 prevents insulitis in NOD mice. Diabetes 41:1491–95, 1992.

118. Mathieu C,Van Etten E, Gysemans C, Decallonne B, Kato S: In vitro and in vivo analysis of the immune system of vitamin D receptor knockout mice. J. Bone Mineral Res. 16:2057–65, 2001.

119. Mattner F, Smiroldo S, Galbiati F, Muller M, Di Lucia P, Poliani PL, Martino G, Panina-Bordignon P, Adorini L: Inhibition of Th1 development and treatment of chronic-relapsing experimental allergic encephalomyelitis by a non-hypercalcemic analogue of 1,25-dihydroxyvitamin D(3). Eur J Immunol 30(2):498, 2000.

120. Mc Callum E.V. J Biol Chem 53: 293, 1922.

121. Meehan TF, DeLuca HF: CD8+ T cells are not necessary for 1®,25-dihydroxyvitamin D3 to suppress experimental autoimmune encephalomyelitis in mice. Proc. Natl. Acad. Sci. USA 99: 5557–60, 2002.

122. Meehan MA, Kerman RH, Lemire JM: 1,25-Dihydroxyvitamin D3 enhances the generation of nonspecific suppressor cells while inhibiting the induction of cytotoxic cells in a human MLR. Cell Immunol 140(2):400, 1992.

123. Mellman I, SteinmanRM: Dendritic cells: specialized and regulated antigen processing machines. Cell 106:255–58, 2001.

124. Merino F, Alvarez-Mon M, de la Hera A, Ales JE, Bonilla F, Durantez A: Regulation of natural killer cytotoxicity by 1,25-dihydroxyvitamin D3. Cell Immunol 118(2):328, 1989.

125. Merlino LA, J. Curtis, T.R. Mikuls, J.R. Cerhan, L.A. Criswell and K.G. Saag, Iowa Women's Health Study. Vitamin D intake is inversely associated with rheumatoid arthritis: results from the Iowa Women's Health Study, Arthritis Rheumatol 50 pp. 72–77, 2004.

126. Mosmann TR, Sad S: The expanding universe of T-cell subsets: Th1, Th2 and more. Immunol Today 17:138, 1996.

127. Muller K, Gram J, Bollerslev J, Diamant M, Barington T, Hansen MB, Bendtzen K: Down-regulation of monocyte functions by treatment of healthy adults with 1 alpha,25 dihydroxyvitamin D3. Int J Immunopharmacol 13(5):525, 1991.

128. Müller K, P.M. Haahr, M. Diamant, K. Rieneck, A. Kharazmi and K. Bendtzen: 1,25-Dihydroxyvitamin D3 inhibits cytokine production by human blood monocytes at the post-transcriptional level, Cytokine 4, pp. 506–512, 1992.

129. Munger KL, S.M. Zhang, E. O'Reilly, M.A. Hernán, M.J. Olek and W.C. Willett: Vitamin D intake and incidence of multiple sclerosis, Neurology 62 pp. 60–65, 2004.

130. Nashold FE, Miller DJ, Hayes CE: 1,25-dihydroxyvitamin D3 treatment decreases macrophage accumulation in the CNS of mice with experimental autoimmune encephalomyelitis. J Neuroimmunol 103(2):171, 2000.

131. O'Herrin JK, Hullett DA, Heisey DM, Sollinger HW, Becker BN: A retrospective evaluation of 1,25-dihydroxyvitamin D(3) and its potential effects on renal allograft function. Am J Nephrol 22(5-6):515, 2002.

132. Overbergh L, Decallonne B, Valckx D, Verstuyf A, Depovere J: Identification and immune regulation of 25-hydroxyvitamin D-1-®-hydroxylase in murine macrophages. Clin. Exp. Immunol.120:139–46, 2000.

133. Overbergh L, Decallonne B, Waer M, Rutgeerts O, Valckx D: 1®,25-dihydroxyvitamin D3 induces an autoantigen-specific T-helper 1/T-helper 2 immune shift in NOD mice immunized with GAD65 (p524-542). Diabetes 49:1301–7, 2000.

134. Penna G, Adorini L: 1®,25-dihydroxyvitamin D3 inhibits differentiation, maturation, activation, and survival of dendritic cells leading to impaired alloreactive T cell activation. J. Immunol. 164:2405–11, 2000.

135. Penna G, S. Amuchastegui, N. Giarratana, K.C. Daniel, M. Vulcano and S. Sozzani: 1,25-Dihydroxyvitamin D3 selectively modulates tolerogenic properties in myeloid but not plasmacytoid dendritic cells, J Immunol 178 pp. 145–153, 2007.

136. Piemonti L, Monti P, Sironi M, Fraticelli P, Leono BE: Vitamin D3 affects differentiation, maturation, and function of human monocyte-derived dendritic cells. J. Immunol. 164:4443–51, 2000.

137. Platz KP, Mueller AR, Rossaint R, Steinmuller T, Lemmens HP, Lobeck H, Neuhaus P: Cytokine pattern during rejection and infection after liver transplantation--improvements in postoperative monitoring? Transplantation 62:1441, 1996.

138. Provvedini DM, Tsoukas CD, Deftos LJ, Manolagas SC: 1,25-dihydroxyvitamin D3 receptors in human leukocytes. Science 221:1181–83, 1983.

139. Provvedini DM, Tsoukas CD, Deftos LJ, Manolagas SC: 1 alpha,25-Dihydroxyvitamin D3-binding macromolecules in human B lymphocytes: effects on immunoglobulin production. J Immunol 136(8):2734, 1986.

140. Provvedini DM, Manolagas SC: 1®,25-dihydroxyvitamin D3 receptor distribution effects subpopulations of normal human T lymphocytes. J. Clin. Endocrinol. Metab. 68:774–79, . 1989.

141. Redaelli CA, Wagner M, Gunter-Duwe D, Tian YH, Stahel PF, Mazzucchelli L, Schmid RA, Schilling MK: 1alpha,25-dihydroxyvitamin D3 shows strong and additive immunomodulatory effects with cyclosporine A in rat renal allotransplants. Kidney Int 61(1):288, 2002.

142. Redaelli CA, Wagner M, Tien YH, Mazzucchelli L, Stahel PF, Schilling MK, Dufour JF: 1 alpha,25-Dihydroxycholecalciferol reduces rejection and improves survival in rat liver allografts. Hepatology 34(5):926, 2001.

143. Reinhardt TA, Horst RL, Littledike ET, Beitz DC: 1,25-dihydroxyvitamin D3 in bovine thymus gland. Biochem. Biophys. Res. Comm. 106:1012–18, 1982.

144. Reichel H, Koeffler HP, Tobler A, Norman AW: 1®,25-dihydroxyvitamin D3 inhibits γ-interferon synthesis by normal human peripheral blood lymphocytes. Proc. Natl. Acad. Sci. USA 84:3385–89, 1987.

145. Rigby WF: The immunobiology of vitamin D. Immunol Today 9(2):54, 1988.

146. Rigby WF, Denome S, Fanger MW: Regulation of lymphokine production and human T lymphocyte activation by 1,25-dihydroxyvitamin D3. Specific inhibition at the level of messenger RNA. J Clin Invest 79(6):1659, 1987.

147. Rigby WF, Hamilton BJ, Waugh MG: 1,25-Dihydroxyvitamin D3 modulates the effects of interleukin 2 independent of IL-2 receptor binding. Cell Immunol 125(2):396, 1990.

148. Rigby WF, Noelle RJ, Krause K, Fanger MW: The effects of 1,25-dihydroxyvitamin D3 on human T lymphocyte activation and proliferation: a cell cycle analysis. J Immunol 135(4):2279, 1985.

149. Rigby WF, Shen L, Ball ED, Guyre PM, Fanger MW: Differentiation of a human monocytic cell line by 1,25-dihydroxyvitamin D3 (calcitriol): a morphologic, phenotypic, and functional analysis. Blood 64(5):1110, 1984.

150. Rigby WF, Stacy T, Fanger MW: Inhibition of T lymphocyte mitogenesis by 1,25-dihydroxyvitamin D3 (calcitriol). J Clin Invest 74(4):1451, 1984.

151. Rigby WF, Waugh M, Graziano RF: Regulation of human monocyte HLA-DR and CD4 antigen expression, and antigen presentation by 1,25-dihydroxyvitamin D3. Blood 76(1):189, 1990.

152. Rigby WF, Waugh MG: Decreased accessory cell function and costimulatory activity by 1,25-dihydroxyvitamin D3-treated monocytes. Arthritis Rheum 35(1):110, 1992.

153. Rigby WF, Yirinec B, Oldershaw RL, Fanger MW: Comparison of the effects of 1,25-dihydroxyvitamin D3 on T lymphocyte subpopulations. Eur J Immunol 17(4):563, 1987.

154. Saggese G, Federico G, Balestri M, Toniolo A: Calcitriol inhibits the PHA-induced production of IL-2 and IFN-gamma and the proliferation of human peripheral blood leukocytes while enhancing the surface expression of HLA class II molecules. J Endocrinol Invest 12(5):329, 1989.

155. Schirren CA, Jung M, Worzfeld T, Mamin M, Baretton GB, Gruener NH, Gerlach JT, Diepolder HM, Zachoval R, Pape GR: Cytokine profile of liver- and blood-derived nonspecific T cells after liver transplantation: T helper cells type 1/0 lymphokines dominate in recurrent hepatitis C virus infection and rejection. Liver Transpl 6:222, 2000.

156. Schleithoff S, Zittermann A, Tenderich G, Berthold H, Stehle P, Koerfer R: Vitamin D supplementation improves cytokine profiles in patients with congestive heart failure: a double blind, randomized, placebo-controlled trial. Am J Clin Nutr 83: 754-759, 2006.

157. Simmons JD, Mullighan C, Welsh KI, Jewell DP: Vitamin D receptor gene polymorphism: association with Crohn's disease susceptibility. Gut 47:211–14, . 2000.

158. Staeva-Vieira TP, Freedman LP: 1,25-dihydroxyvitamin D3 inhibits IFN-gamma and IL-4 levels during in vitro polarization of primary murine CD4+ T cells. J Immunol 168(3):1181, 2002.

159. Stein M, A. Keshav, N. Harris and S. Gordon, Interleukin 4 potently enhances murine macrophage mannose receptor activity: a marker of alternative immunologic macrophage activation, J Exp Med 176 pp. 287–292, 1992.

160. Stio M, Treves C, Celli A, Tarantino O, d'Albasio G, Bonanomi AG: Synergistic inhibitory effect of cyclosporin A and vitamin D derivatives on T-lymphocyte proliferation in active ulcerative colitis. Am J Gastroenterol 97(3):679, 2002.

161. Takeuchi A, Reddy GS, Kobayashi T, Okano T, Park J, Sharma S: Nuclear factor of activated T cells (NFAT) as a molecular target for 1alpha,25-dihydroxyvitamin D3-mediated effects. J Immunol 160(1):209, 1998.

162. Tamura N, S. Kobayashi, K. Kato, H. Bando, K. Haruta and M. Oyanagi: Soluble CD154 in rheumatoid arthritis: elevated plasma levels in cases with vasculitis, J Rheumatol 228 pp. 2583–2590, 2001.

163. Thomasset M: [Vitamin D and the immune system]. Pathol Biol (Paris) 42:163, 1994.

164. Toss G, Symreng T: Delayed hypersensitivity response and vitamin D deficiency. Int. J. Vitam. Nutr. Res. 53:27–31, 1983.

165. Tsoukas CD, Provvedini DM, Manolagas SC: 1,25-dihydroxyvitamin D3: a novel immunoregulatory hormone. Science 224(4656):1438, 1984.

166. Tsoukas CD, D. Watry, S.S. Escobar, D.M. Provvedini, C.A. Dinarello and F.G. Hustmyer: Inhibition of interleukin-1 production by 1,25-dihydroxyvitamin D3, J Clin Endocrinol Metab 69, pp. 127–133, 1989.

167. Vanham G, Ceuppens JL, Bouillon R: T lymphocytes and their CD4 subset are direct targets for the inhibitory effect of calcitriol. Cell Immunol 124:320, 1989.

168. Van Etten E, Branisteanu DD, Verstuyf A, Waer M, Bouillon R, Mathieu C: Analogs of 1,25-dihydroxyvitamin D3 as dose-reducing agents for classical immunosuppressants. Transplantation 69(9):1932, 2000.

169. Van Halteren AG, van Etten E, de Jong EC, Bouillon R, Roep BO, Mathieu C: Redirection of human autoreactive T-cells upon interaction with dendritic cells modulated by TX527, an analog of 1,25 dihydroxyvitamin D3. Diabetes 51:2119–25, 2002.

170. Veldman CM, Cantorna MT, DeLuca HF: Expression of 1,25-dihydroxyvitamin D(3) receptor in the immune system. Arch Biochem Biophys 374(2):334, 2000.

171. Veyron P, Pamphile R, Binderup L, Touraine JL: Two novel vitamin D analogues, KH 1060 and CB 966, prolong skin allograft survival in mice. Transpl Immunol 1(1):72, 1993.

172. Walunas TL, C.Y. Bakker and J.A. Bluestone, CTLA-4 ligation blocks CD28-dependent T cell activation, J Exp Med 183 pp. 2541–2550, 1996.

173. Wittke A, Weaver V, Mahon BD, August A, Cantorna MT: Vitamin D receptor-deficient mice fail to develop experimental allergic asthma. J Immunol 173(5):3432, 2004.

174. Xu H, A. Soruri, R.K.H. Gieseler and J.H. Peters, 1,25-Dihydroxyvitamin D3 exerts opposing effects to IL-4 on MHC-class II antigen expression, accessory activity and phagocytosis of human monocytes, Scand J Immunol 38 pp. 535–540, 1993.

175. Yang S, Smith C, Prahl JM, Luo X, DeLuca HF: Vitamin D deficiency suppresses cell-mediated immunity in vivo. Arch. Biochem. Biophys. 303:98–106, 993.

176. Yang S, Smith C, DeLuca HF: 1®,25-dihydroxyvitamin D3 and 19-nordihydroxyvitamin D2 suppress immunoglobulin production and thymic lymphocyte proliferation in vivo. Biochem. Biophys. Acta 1158:279–86, 1993.

177. Yu X-P, Bellido T, Manolagas SC: Down-regulation of NF-·B protein levels in activated human lymphocytes by 1,25-dihydroxyvitamin D3. Proc. Natl. Acad. Sci. USA 92:10990–94, 1995.

178. Zarrabeitia MT, Riancho JA, de Francisco AL, Gonzalez-Macias J: Effect of physiological concentrations of calcitriol on lymphocyte proliferation in normal subjects and in patients with renal failure. Nephron 55(2):110, 1990.

179. Zhu K, Gl¨aser R, Mrowietz U: Vitamin D3 and analogues modulate the expression of CSF-1 and its receptor in human dendritic cells. Biochem. Biophys. Res. Comm. 297:1211–17, 2002.

180. Zhu Y, Mahon BD, Froicu M, Cantorna MT: Calcium and 1 alpha,25-dihydroxyvitamin D3 target the TNF-alpha pathway to suppress experimental inflammatory bowel disease. Eur J Immunol 35(1):217, 2005.