

BIBLIOGRAFIA

- 1.- J. M. Bishop. The molecular genetics of cancer. *Science*. 235 : 305, 1987.
- 2.- J. M. Bishop. Molecular themes in oncogenesis. *Cell*. 64 : 235, 1991.
- 3.- H. Land, L.F. Parada and R.A. Weinberg. Cellular oncogenes and multistep carcinogenesis. *Science*. 222 : 771, 1983.
- 4.- M.R. Greene. When the products of oncogenes and anti-oncogenes meet. *Cell*. 56 : 1, 1989.
- 5.- K. Alitalo and M. Schwab. Oncogene amplification in tumor cells. *Adv. Cancer Res.* 47 : 235, 1986.
- 6.- F.G. Haluska, Y. Tsujimoto and C.M. Croce. Oncogene activation by chromosome translocation in human malignancy. *Ann. Rev. Genetics*. 21 : 321, 1987.
- 7.- H. Zur Hausen. Viruses in Human Cancer. *Science* 254: 1167,1991.
- 8.- G. Riou, M. Favre, D. Jeannel, J. Bourhis, V. LeDoussal and G. Orth. C-myc proto-oncogen expression and prognosis in early carcinoma of the uterine cervix. *Lancet*. 2: 761, 1987.

- 9.- R. Ocadiz, R. Sauceda, M. Cruz, A. Greaf and P. Gariglio. High correlation between molecular alterations of the myc oncogene and uterine-cervix carcinoma. *Cancer Res.* 47: 4173, 1987.
- 10.- S. Sagae, N. Kuzumaki, T. Hisada, Y. Mugikura, R. Kudo and M. Hashimoto. Oncogene expression and prognosis of invasive squamous cell carcinomas of the uterine cervix. *Cancer* 63: 1577, 1989.
- 11.- S.B. Pinion, J.H. Kennedy, R.W. Miller and A.B. McLean. Oncogene expression in cervical intraepithelial neoplasia and invasive cancer of cervix. *Lancet* 337: 819, 1991.
- 12.- A.B. Mitra, V.V.V.S. Murty, M. Patrap, P. Sodhani, and R.S.K. Chaganti. erbB2 (HER/neu) oncogene is frequently amplified in squamous cell carcinoma of the uterine cervix. *Cancer Res.* 54: 637, 1994.
- 13.- C.J. Marshall. Tumor suppressor genes. *Cell.* 64 : 313, 1991.
- 14.- W.K. Cavenee, M.F. Hansen, M. Nordenskjold, E. Kock, I. Maumenne, J. Squire, R.A. Phillips and B.L. Gallie. Genetic origin of mutations predisposing to retinoblastoma. *Science.* 228 : 501, 1985.
- 15.- T.P. Dryja, S. Mukai, R. Petersen, J.M. Rapaport, D. Walton and D.W. Yandell. Parental origin of mutations of the retinoblastoma gene. *Nature.* 339 : 556, 1989. .

- 16.- J. Buchkovich, L.A. Duffy and E. Harlow. The retinoblastoma protein is phosphorylated during specific phases of the cycle. *Cell*. 58 : 1097, 1989.
- 17.- P.W. Hinds and R. A. Winberg. Tumor suppressor genes. *Curr. Opin. in Genetics and Development*. 4 : 135, 1994.
- 18.- L.H. Hartwell and M.B. Kasten. Cell cycle control and cancer. *Science*. 266 : 1821, 1994.
- 19.- D.P. Lane. p53, guardian of the genome. *Nature* 358: 15, 1992.
- 20.- D.A. Carson and A. Louis. Cancer progression and p53. *Lancet*. 346 : 1009, 1995.
- 21.- J.M. Nigro, S.J. Baker, A.C. Preisinger, J.M. Jessup, R. Hostetter, K. Cleary, S.H. Bigner, N. Davidson, S. Baylin and P. Devile. Mutations in the p53 gene occur in diverse human tumor types. *Nature*. 342 : 705, 1989.
- 22.- A.J. Livine, J. Momand and C.A. Finlay. The p53 tumor suppressor gene. *Nature*. 351 : 453, 1991.
- 23.- M. Hollstein, D. Sidransky, B. Vogelstein and C.C. Harris. P53 mutations in human cancers. *Science* 253 :49, 1991.

- 24.- M.S. Greenblatt, W.P. Bennett, M. Hollstein and C.C. Harris. Mutations in the p53 tumor suppressor gene : Clues to cancer etiology and molecular pathogenesis. *Cancer Res.* 54 : 4855, 1994.
- 25.- M. Wong and J. Gruber. Viral interactions with p53 gene in human cancer. *J. Natl. Cancer Inst.* 86 : 177, 1994.
- 26.- R. Schlegel. Papillomavirus and human cancer. *Semin. in Virol.* 1: 297, 1990.
- 27.- B.A. Werness, A.J. Levine and P.M. Howley. Association of human papillomavirus types 16 and 18 E6 protein with p53. *Science* 248: 76, 1990.
- 28.- M. Scheffner, B.A. Wernes, J.M. Huibregtse, A.J. Levine and P.M. Howley. The E6 oncoprotein encoded by the human papillomavirus types 16 and 18 promotes the degradation of p53. *Cell*. 63 : 1129, 1990.
- 29.- N. Dyson, P.M. Howley, K. Munger and E. Harlow. The huamn papillomavirus-16 E7 oncoprotein is able to bind to the retinoblastoma gene product. *Science* 243: 934. 1989.
- 30.- K. Munger, B.A. Wernes, N. Dyson, W.C. Phelps, E. Harlow and P.M. Howley. Complex formation of human papillomavirus E7 proteins with the retinoblastoma tumor suppressor gene product. *EMBO. J.* 8 : 4099, 1989.

- 31.- L. Hartwell. Defects in a cell cycle chekpoint may be responsible for the genomic instability of cancer cells. *Cell.* 71 : 543, 1992.
- 32.- M. Van Ranst, J.B. Kaplan and R.D. Burk. Phylogenetic classification of human papillomavirus : correlation with clinical manifestations. *J. Gen. Virol.* 73 : 2653, 1992.
- 33.- H. zur Hausen. Molecular pathogenesis of cancer of the cervix and its causation by specific HPV types. *Curr. Top. Microbiol. Immunol.* 186 : 131, 1994.
- 34.- H. zur Hausen and E.M. de Villiers. Human papillomavirus. *Ann. Rev. Microbiol.* 48 : 427, 1994.
- 35.- H.D.L. Birley. Human papillomavirus, cervical cancer and the developing world. *Ann. Trop. Med. Parasitol.* 89 : 453, 1995.
- 36.- L.T. Chow and T.R. Broker. Papillomavirus DNA replication. *Intervirology.* 37 : 150. 1994.
- 37.- P.G. Fuchs and H. Pfister. Transcription of papillomavirus genomes. *Intervirology.* 37 : 159. 1994.

- 38.- F.X. Boch, M.M. Manos, N. Muñoz, M. Sherman, A.M. Jansen, J. Peto, M.H. Schiffman, V. Moreno, R. Kurman and K.V. Shah. Prevalence of human papillomavirus in cervical cancer : a worldwide perspective. *J. Natl. Cancer Inst.* 87 : 796, 1995.
- 39.- WHO. Genital human papillomavirus infections and cancer : memorandum from a WHO meeting. *Bull. WHO.* 65 : 817, 1987.
- 40.- M.H. Schiffman. Recent progress in defining the epidemiology of human papillomavirus infection and cervical neoplasia. *J. Natl. Cancer Inst.* 84 : 394, 1992.
- 41.- J.L. Benedet, G.H. Anderson and J.P. Matisic. A comprehensive program for cervical cancer detection and management. *Am. J. Obstet. Gynecol.* 166 : 1254, 1992.
- 42.- W. Jr. Winkelstein. Smoking and cervical cancer- current status : a review. *Am. J. Epidemiol.* 131 : 945, 1990.
- 43.- F. Parazzini, C. LaVecchia and E. Negri. Risk factors for cervical intraepithelial neoplasia. *Cancer.* 69 : 2276, 1992.
- 44.- R.J. Kurman, G.D.Jr. Malkasian and A. Sedis. From papanicolau to Bethesda : The rational for a new cervical cytologic classification. *Obstet. Gynecol.* 77 : 779, 1991.

- 45.- N.M. Lonky, G.L. Navarre and S, Saunders. Low-grade papanicolau smears and the bethesda system : a prospective cytohistopathologic analysis. 85 : 716, 1995.
- 46.- H.M. Shingleton, R.L. Patrick, W.W. Johnston and R.A. Smith. The current status of the papanicolaou smear. CA Cancer J. Clin. 45 : 305, 1995.
- 47.- W.T. Creasman. New gynecologic cancer staging. Gynecol. Oncol. 58 : 157, 1995.
- 48.- J.A. Giles, E. Hudson and J. Crow. Colposcopic assesment of th accuracy of cervical cytology screening. Br. Med. J. 296 : 1099, 1988.
- 49.- V.I. Kesic, W.P. Soutter and V. Solovic. A comparison of cytology and cervicography in cervical screening. Int. J. Gynecol. Cancer. 3 : 395, 1993.
- 50.- S.A. Cannistra and J.M. Niloff. Cancer of the uterine cervix. New. Engl. J. Med. 334 : 1030, 1996.
- 51.- G. A. Omura. Chemotherapy of cervix cancer. Semin. Oncol. 21 : 54, 1994.
- 52.- H. zur Hausen. Papillomavirus in human cancer. Mol. Carcinog. 1 : 147, 1988.

- 53.- H.D.L. Birley, C.A.Hart and S.N. Stacey. Human papillomavirus and genital tract : old virus, new developments. *J. Med. Virol.* 43 : 81, 1995.
- 54.- M.H. Schiffman. Recent progress in defining the epidemiology of human papillomavirus infection and cervical cancer. *J. Natl. Cancer Inst.* 84 : 394, 1992.
- 55.- M.H. Schiffman, H.M. Bauer and R.N. Hoveer. Epidemiological evidence showing that human papillomavirus infection causes most cervical intraepithelial neoplasia. *J. Natl. Cancer Inst.* 85: 958, 1993.
- 56.- H. zur Hausen. Papillomavirus in anogenital cancer as a model to understand the role of the virus in human cancer. *Cancer Res.* 49 : 4677, 1989.
- 57.- K.H. Vouden. Human papillomavirus transforming genes. *Semin. Virol.* 2 : 307, 1991.
- 58.- S.M. Pickseley and D.P. Lane. P53 and Rb, their cellular roles. *Curr. Opin. Cell. Biol.* 6 : 853, 1994.
- 59.- E. Withe. P53 guardian of Rb. *Nature (Lond.)* 371 : 21, 1994.
- 60.- J.R. Nevins. E2F : a link between the Rb tumor suppressor protein and viral oncproteins. *Science.* 258 : 424, 1992. .

- 61.- Z. Gu, D. Pin, S. Labreque, L. Banks and G. Matlashewski. DNA damage induced p53-mediated transcription is inhibited by human papillomavirus type 18 E6. *Oncogene*. 9 : 629, 1994.
- 62.- H. Zur Hausen. Disrupted dichotomous intracellular control of human papillomavirus infection in cancer of the cervix. *Lancet*. 343: 955, 1994.
- 63.- D.H. Davies. Cancer of the cervix: prospects for immunological control. *Int. J.Exp. Pathol.* 72: 239, 1991.
- 64.- J. Dillner. Immunobiology of papillomavirus. Prospects for vaccination. *Cancer. J.* 5 : 181, 1992.
- 65.- C.P. Crum, B. Shannon and J.K. Roche. Pathobiology of papillomavirus-related cervical disease: Prospects for Immunodiagnosis. *Clin. Microbiol. Rev.* 4: 270, 1991.
- 66.- I. Jochmus-Kudielka, A. Schneider, R. Braun, R. Kimmig, U. Koldovsky, K.E. Schneweis, K. Seedorf and L. Gissmann. Antibodies against the human papillomavirus type 16 early proteins in human sera : correlation of anti-E7 reactivity with cervical cancer. *J. Natl. Cancer Inst.* 81: 1698, 1989.
- 67.- J. Dillner, L. Dillner, J. Robb, J. Willems, I. Jones, W. Lancaster, R. Smith and R. Lerner. A synthetic peptide defines a serologic IgA response to a human papillomavirus-encoded nuclear antigen expressed in virus-carrying cervical neoplasia. *Proc. Natl. Acad. Sci. USA*. 86 : 3838, 1989.

- 68.- J. Dillner, L. Dillner, G. Utter, C. Eklund, A. Rotoloa, S. Costa and D. Diluca. Mapping of linear epitopes of humn papillomavirus type 16: The L1 and L2 open reading frames. *Int. J. Cancer.* 45: 529, 1990.
- 69.- J. Dillner. Mapping of linear epitopes of human papillomavirus type 16: The E1, E2 ,E4, E5, E6 and E7 open reading frames. *Int. J. Cancer.* 46: 703, 1990.
- 70.- M.F. Baay, J.M. Duk and M.P. Burger. Follow-up of antibody responses to human papillomavirus type 16 E7 in patients treated for cervical carcinoma. *J. Med. Virol.* 45 : 342, 1995.
- 71.- S.A. Comerford, D.J. Mccance, G. Dougan and J.P. Tite. Identification of T-and B cell epitopes of the E7 protein of human papillomavirus type 16. *J. Virol.* 65: 4681, 1991.
- 72.- A.K. Gosh, N.K. Smith and S.N. Stacey. Serological response to HPV 16 in cervical dysplasia and neoplasia : correlation of antibodies to E6 with cervical cancer. *Int. J. Cancer.* 53 : 591, 1993.
- 73.- M. Mueller, R.P. Viscide and Y. Sun. Antibodies to HPV 16 E6 and E7 proteins as markers for HPV 16-associated invasive cervical carcinoma. *Virology* 187 : 508, 1992.

74.- J. Dillner, F. Wiklund and P. Lenner. Antibodies against linear and conformational epitopes of human papillomavirus type 16 that independently associate strongly with cervical cancer. *Int. J. Cancer.* 60 : 377, 1995.

75.- K.N. Gaarenstroom, G.G. Kenter and J.M.G. Bonfer. Pronostic significance of serum antibodies to human papillomavirus 16 E4 and E7 peptides in cervical cancer. *Cancer.* 74 : 2307, 1994.

76.- A. Wikstrom, G.J.J. van Doornum and R. Kirnbauer. A prospective study on the development of antibodies against human papillomavirus type 6 among patients with condyloma acuminata or new asymptomatic infection. *J. Med. Virol.* 46 : 368, 1995.

77.- J.J. Carter, G.C. Wipf and M.E. Hagensee. Use of human papillomavirus type 6 capsids to detect antibodies in people with genital warts. *J. Infect. Dis.* 172 : 11, 1995.

78.- G.L. Smith. Virus strategies for evasion of the host response to infection. *Trends. Microbiol.* 2 : 81, 1994.

79.- T. Boon, J.C. Cerrotini, B. van den Eynde and P. van der Bruggen. Tumor antigens recognized by T lymphocytes. *Ann. Rev. Immunol.* 12 : 337, 1994.

- 80.- H. Tagami, M. Tarigawa, A. Ogino, S. Tinamura and S. Ofuji. Spontaneous regression of plane warts after inflammation : Clinical and histologic studies in 25 cases. Arch. Dermatol. 113 : 1209, 1977.
- 81.- S. Aiba, M. Rokugo and H. Tagami. Immunohistologic analysis of the phenomenon of spontaneous regression of numerous flat warts. Cancer. 58 : 1246, 1986.
- 82.- H.H.B. Morris, K.C. Gatter, H. Stein and D.Y. Mason. Langerhans cells in human cervical epithelium : An immunohistological study. Br. J. Obstet. Gynecol. 90 : 400, 1983.
- 83.- J.R. Van Nagell, E.S. Donalson, E.G. Wood and J.C.P. Parker. The significance of vascular invasion and lymphocytic infiltration in invasion cervical cancer. Cancer 41: 228, 1978.
- 84.- K.J. Syrjanen. Immunocompetent cells in uterine cervical lesions of human papillomavirus origin. Gynecol. Obstet. Invest. 16: 327, 1983.
- 85.- Y. Chardonnet, J. Viac, M.J. Staquet and J. Trivolet. Cell-mediated immunity to human papillomavirus. Clin. Dermatol. 3: 156, 1985.
- 86.- R. Cauda, S.K. Tyring, C.E. Grossi, A.B. Tilden, K.D. Hatch, W.M. Sams, S. Baron and R.J. Witheley. Patients with condyloma acuminatum exhibit decreased interleukin-2 and interferon-gamma production and depressed natural killer activity. J. Clin. Immunol. 7: 304, 1987.

- 87.- T. Nakano, K.Oka, T. Arai, S. Morita and H. Tsunemoto. Pronostic significance of langerhans cell infiltration in radiation therapy for squamous cell carcinoma of the uterine cervix. Arch. Pathol. Lab. Med. 113 : 507, 1989.
- 88.- T. Nakano, K. Oka, T. Takahashi, S. Morita and T Arai. Roles of langerhans cells and T-lymphocytes infiltarting cancer tissues in patients treated by radiation therapy for cervical cancer. Cancer. 70 : 2839, 1992.
- 89.- M. Vayrynen. Langerhan's cells in human papillomavirus (HPV) lesions of the uterine-cervix identified by the monoclonal antibody OKT6. Int. J. Gynecol. 22:22, 1984.
- 90.- J.P. McArdle and H.K. Muller. Quantitative assesment of langerhans cells in human cervical intraepithelial neoplasia and wart virus infection. Am. J. Obstet. Gynecol. 154 : 509, 1986.
- 91.- M. Vayrnen, K. Syrjanen, R. Mantyrarvy, O. Castren and S. Saarikoski. Immunophenotypes of lymphocyte in prospectively followed up human papillomavirus lesions of the cervix. Genitourin. Med. 61 : 190, 1985.
- 92.- S. K. Tay, D. Jenkins, P. Maddox and A. Singer. Lymphocyte phenotypes in cervical intraepithelial neoplasia and human papillomavirus infection. Br. J. Obstet. Gynecol. 94 : 16, 1987.
- 93.- A.K. Ghosh and M. Moore. Tumour-infiltrating lymphocytes in cervical carcinoma. Eur. J. Cancer. 11 : 1910, 1992.

94.- D.R. Brown, J.T. Bryan, K.Wools, M. Rodriguez and S. Tyring. Detection of human papillomavirus L1 protein in condylomata acuminata from adults with defects in cell-mediated immunity. *J. Med. Virol.* 41: 79, 1993.

94.- U. Elsasser-Beile, S. von Kleist, W. Sauther, H. Gallati and S. Monting. Impaired cytokine production in whole blood cell cultures of patients with gynecological carcinomas in different clinicas stages. *Br. J. Cancer* 68:32, 1993.

95.- T.K. Park Cell-mediated immunity in invasive cervical carcinoma associated with human papillomavirus types 16 and 18 infection. *Int. J. Gynecol. Obstet.* 46: 67, 1994.

96.- R. Halpert, R.G. Fruchter, A. Sedlis, K. Butt, J.G. Boyse and F.H. Sillman. Human papillomavirus and lower genital neoplasia in renal transplant patients. *Obst. Gynecol.* 68: 251-258, 1986.

97.- A Schafer, W. Friedman, M. Mielke, B. The increased frecuency of cervical dysplasia neoplasia in women infected with the human immunodeficiency virus is related to the degree of immunosupression. *Am. J. Obstet. and Gynecol.* 164: 593, 1991.

98.- F.H. Sillman and A. Sedlis. Anogenital papillomavirus infection and neoplasia in immunodeficient women: An update. *Dermatol. Clin.* 9: 353, 1991.

- 99.- J.C. Johnson, A.F. Burnett, G.D. Willet, M.A. Young and J. Doniger. High frequency of latent and clinical human papillomavirus cervical infections in immunocompromised human immunodeficiency virus-infected women. *Obstet. and Gynecol.* 79: 321, 1992.
- 100.- G. Strang, J.K. Hickling, G.A.J. McIndoe, K. Howland, D. Wilkinson, H. Ikeda and J.B. Rothbard. Human T-cell responses to human papillomavirus type 16 L1 and E6 synthetic peptides : identification of T-cell determinants, HLA-DR restriction and virus type specificity. *J.Gen. Virol.* 71 : 423, 1990.
- 101.- R.W. Tindle, G.J.P. Fernando, J.C. Sterling and I.H. Frazer. A "public" T-helper cell epitope of the E7 transforming protein of human papillomavirus type 16 provides cognate help for several E7 B-cell epitopes from cervical cancer-associated human papillomavirus genotypes. *Proc. Natl. Acad. Sci. USA.* 88 : 5887, 1991.
- 102.- S.A. Comerford, D.J. McCance, G. Dougan and J.P. Tite. Identification of T- and B-cell epitopes of the E7 protein of human papillomavirus type 16. *J. Virol.* 65 : 4681, 1991.
- 103.- Chen ,L., Thomas, E, K., Hu, S-L., Hellström, I., and Hellström,K.E. Human papilomavirus type 16 nucleoprotein E7 is a tumor rejection antigen. *Proc. Natl. Acad. Sci. USA.* 88: 110, 1991.

- 104.- Chen ,Lieping., Mizuno, M.T., Singhal, M.C., Hu, S-L., Galloway, D.A., Hellström, I., and Helström, K.E. Induction of cytotoxic T lymphocytes specific for a syngeneic tumor expressing the E6 oncoprotein of human papillomavirus type 16. *J. Immunol.* 148: 2617, 1992.
- 105.-Meneguzzi, G., Cerni, C., Kieny, M. P., and Lathe, R. Immunization agaist human papillomavirus type 16 tumor cells with recombinant vaccinia expressing E6 and E7. *Virology* 181: 62, 1991.
- 106.- Kadish, A.S., Romney,S.L., Ledwidge, R., Tindle, R., Fernando G.J.P.., zee, S.Y. VanRanst, M.A. and Burk, R.D. Cell-mediated immune response to E7 peptides of human papillomavirus (HPV) type 16 are dependent of the HPV type infecting the cervix whereas serological reactivity is not type-specific. *J. Gen. Virol.* 75:2277, 1994.
- 107.- H.J. Stauss,H. Davies, E. Sadovnikova, B. Chain, N. Horowitz and C. Sinclair. Induction of cytotoxic T- lymphocytes with peptides in vitro: identification of candidate T-cell epitopes in human papillomavirus. *Proc. Natl. Acad. Sci. USA.* 89:7871, 1992.
- 108.- Tarpey, I., Stacey, S., Hickling, J., Birley, H:D:L:, Renton, A., McIndoe, A., and Davies, D.H. Human cytotoxic T lymphocytes stimulated by endogenously processed human papillomavirus type 11 E7 recognize a peptide containg a HLA-A2 (A-0201) motif. *Immunology*. 81: 222, 1994.

109.- E. Sadovnikova. Limitation of preductive motifs revealed by cytotoxic T lymphocyte epitope mapping of the human papillomavirus E7 protein. *Int. Immun.* 6: 289, 1994.

110.- J. Cason, S.A. Kan and J.M. Best. Towards vaccines against human papillomavirus type-16 genital infections. *Vaccine*. 11 : 603, 1993.

111.- B.E. Huber, Therapeutic opportunities involving cellular oncogenes: novel approaches fostered by biotechnology. *FASEB J.* 3: 5, 1989.

112.- K.E. Hellström and I Hellström. Oncogen-associated tumor antigens as targets for immunotherapy. *FASEB J.* 3: 1715, 1989.

113.- J.K. Roche and C. P. Crum. Local immunity and the uterine cervix : Implications for cancer associated virus. *Cancer Immunol. Immunother.* 33 : 203, 1991.

114.- T. Wu. Immunology of the human papilloma virus in relation to cancer. *Curr. Opin. Immunol.* 6 : 746, 1994.

115.- M.E. Connor, P.L. Stern. Loss of MHC-class-I expression in cervical carcinomas. *Int. J. Cancer* 46: 1029, 1990.

116.- S.S. Glew, M. Duggan-Keen, T. Cabrera and P.L. Stern. HLA class II antigen expression in human papillomavirus-associated cervical cancer. *Cancer Res.* 52: 4009, 1992.

117.- N. Coleman and M.A. Stanley. Analysis of HLA-DR expression on keratinocytes in cervical neoplasia. *Int. J. Cancer* 556: 314, 1994.

118.- F.V. Cromme, P.J.F. Snijders, A.J.C. van den Brule, P. Kenemans, C.J.L.M. Meijer and J.M.M. Walboomers. MHC class I expression in HPV 16 positive cervical carcinomas is post-transcriptionally controlled and independent from c-myc overexpression. *Oncogene* 8: 2969, 1993.

119.- F.V. Cromme, J. Airey, M.-T. Heemels, H.L. Ploegh, P.J. Keating, P.L. Stern, C.J.L.M. Meijer and J.M.M. Walboomers. Loss of transporter protein, encoded by the TAP-1 gene is highly correlated with loss of HLA expression in cervical carcinoma. *J. Exp. Med.* 179: 335, 1994.

120.- I. Konishi. Expression of transforming growth factor-alfa in the normal cervix and in benign and malignant lesion of uterine cervix. *British J. Obstet. Gynecol.* 101: 325, 1994.

121.- E. Tartour, A. Gey, X. Sastre-Garau, C. Pannetier, V. Mossery, P. Kourilsky and W.H. Fridman. Analysis of interleukin 6 gene expression in cervical neoplasia using a quantitative polymerase chain reaction assay: Evidence for enhanced interleukin 6 gene expression in invasive carcinoma. *Cancer Res.* 54: 6243, 1994.

122.- S.Kyo, M. Inoue, N. Hayasaka, T. Inoue, M. Yutsudo, O. Tanizawa and A. Hakura. Regulation of early gene expression of human papillomavirus type 16 by inflammatory cytokines. *Virology*. 200: 130, 1994.

123.- F. Rosl, M. Lengert, J. Albretch, K. Kleine, R. Zawatzky, B. Schraven and H. zur Hausen. Differential regulation of the JE Gene encoding the monocyte chemoattractant protein (MCP-1) in cervical carcinoma cells and derived hybrids. *J. Virol.* 68: 2142, 1994.

124.- A. Nawa, Y. Nishiyama, N. Yamamoto, K. Maeno, S. Goto and Y. Tomoda. Selective suppression of human papillomavirus type 18 mRNA level in HeLa cells by interferon. *Biochem. and Biophys. Res. Commun.* 170: 793, 1990.

125.- C.D. Woodworth, V. Notario and J.A. DiPaolo. Transforming growth factor beta 1 and 2 transcriptionally regulate human papillomavirus (HPV) type 16 early gene expression in HPV- immortalized human genital epithelial cells. *J. Virol.* 64: 4767, 1990.

126.- S. Yasumoto, A. Taniguchi and K. Sohma. Epidermal growth factor (EGF) elicits down-regulation of human papillomavirus type 16 E6/E7 mRNA at the transcriptional level in an EGF-stimulated human keratinocyte cell line: Functional role of EGF-responsive silencer in the HPV- 16 long control region . *J. Virol.* 65: 2000, 1991.

127.- C.D. Woodworth, U. Lichti, S. Simpson, C.H. Evans and J.A. DiPaolo. Leukoregulin and γ -interferon inhibit human papillomavirus-immortalized human cervical cells. *Cancer Res.* 52: 456, 1992.

- 128.- M..A. Knan, W.H. Tolleson, J.D. Gangemi and L. Pirisi. Inhibition of growth, transformation and expression of human papillomavirus type 16 E7 in human keratinocytes type alpha interferons. *J. Virol.* 67: 3396, 1993.
- 129.- R.W. Tindle. Human papillomavirus vaccines for cervical cancer. *Curr. Opin. Immunol.* 8 : 643, 1996.
- 130.- Jung S. and Hermann J. Schluesener. Human T lymphocytes recognize a peptide of single point-mutated, oncogenic ras proteins. *J. Exp. Med.* 13: 273, 1991.
- 131.- Peace, D.J.. Smith, J.W., Chen, W., You S.G., Cosand,W.L., Blake, J., and Cheever, M. Lysis of ras oncogene-transformed cells by specific cytotoxic T lymphocytes elicited by primary immunization with mutated ras peptide. *J Exp. Med.* 179:473, 1994.
- 132.- Yanuck,M.. Carbone,D.P., Pendleton, C.D., Tsukui, T., Winter, S.F., Minna, J.D., and Berzofsky, J.A. A mutant p53 tumor suppressor protein is a target for peptide-induced CD8+ cytotoxic T-cells. *Cancer Res.* 53:3257, 1994.
- 133.- Labrecque, S.. Naor, N., Thomson, D., and Matlshevki, G. Analysis of the anti-p53 antibody response in cancer patients. *Cancer Res.* 53: 3468, 1993.

134.- Disis, M.L., Calenoff, E., McLaughlin, G., Murphy, A.E., Chen , W., Groner, B., Jeschke, M., Lydon,N., McGlynn., Livingston, R.B., Moe,R., and Cheever M.A. Existence T cell and antibody immunity toHER-2/neu protein in patients with breast cancer. Casncer Res. 54: 16, 1994.

135.- Disis, M.L., Smith , J.W.,Murphy ,A. E., Chen, W., and Cheever, M. In vitro generation of human cytolytic T-cells specific for peptides derived from the HER-2/neu protooncogene protein. Cancer Res 54: 1071, 1994.

136.-H.W. Nijman, S.H. van der Burg, M.P.M. Vierboom, J.G.A. Houbiers, W.M. Kast, C.J.M. Melief. P53, a potential target for tumor-directed T cell. Immunol. Lett. 40 :171, 1994.

137.- S.R. Riddell and Greenberg, P. D. Principles for adoptive T cells therapy of human viral diseases . Annu. Rev. Immunol. 13: 545, 1995.

138.- M.C.W. Felkamp, G.R. Vreugdenhil, M.P.M. Vierboom, E. Ras, S.H. van der Burg. J. ter Schegget, C.J.M. Melief and W.M. Kast. Cytotoxic T lymphocytes raised against a subdominant epitope offered as a synthetic peptide eradicate human papillomavirus type 16-induced tumors. Eur. J. Immunol. 25 : 2638, 1995.

139.- V.H. Koszinowsk, M.J. Reddehase and S. Jonjic. The role of CD4 and CD8 T cells in viral infections. Curr. Opin. Immunol. 3:471, 1991.

- 140.- P.D. Greenberg, K. Watanabe, M. Gilbert, B. Nelson and S.R. Riddell. Restoration of viral immunity in immunodeficient humans by the adoptive transfer of T cells clones. *J. Cell.* 17(suppl 1) : 99, 1993.
- 141.- S.R. Riddell and P.D. Greenberg. Therapeutic reconstitution of human viral immunity by adoptive transfer of CTL clones. *Curr. Topics. Microbiol. Immunol.* 189: 9, 1994.
- 142.- F.R. Carbone, M. W. More, J.M. Sheil and M.J. Bevan. Induction of cytotoxic T lymphocytes by primary in vitro estimation with peptides. *J. Exp. Med.* 167: 1767, 1988.
- 143.- P.H. Aichele, R.M. Hengartner, R. Zinkernagel, and M. Schutz. Antiviral cytotoxic T cells response induced in vivo priming with a free synthetic peptide. *J. Exp. Med.* 171:1815, 1990.
- 144.- F.Brown. The potential of peptides as vaccines. *Semin. Virol.* 1: 67, 1990.
- 145.- C.J.M. Melief, R. Offringa, R.E.M. Toes and W.M. Kast. Peptide-based cancer vaccines. *Curr. Opin. Immunol.* 8 : 651, 1996.
- 146.- L.L. Lau, B.D. Jamieson, T. Somasundaram and R. Ahmed. Cytotoxic T cells memory without antigen. *Nature* 369:648, 1994.

147.- A. Mullbacher. The long-term maintenance of cytotoxic T cell memory does not require persistence of antigen. *J. Exp. Med.* 179:317, 1994.

148.- W.M. Kast, R.M.P. Brandt, J. Sidney, J.W. Drijfhout, R.T. Kubo, H.M. Grey, C.J.M. Melief and A. Sette. Role of HLA-A motifs in identification of potential CTL epitopes in human papillomavirus type 16 E6 and E7 proteins. *J. Immunol.* 152 : 3904, 1994.

149.- I. Tarpey, S. Stacey, J. Hickling, H.D.L. Birley, A. Renton, A. McIndoe and D.H. Davies. Human cytotoxic T lymphocytes stimulated by endogenously processed human papillomavirus type 11 E7 recognize a peptide containing a HLA-A2 (A*0201) motif. *Immunology* 81 : 222, 1994.

150.- M.E. Ressing, A. Sette, R.M.T. Brand, J. Ruppert, P.A. Wentworth, M. Hartman, C. Oseroff, H.M.Grey, C.J.M. Melief and W. M. Kast. Human CTL epitopes encoded by human papillomavirus type 16 E6 and E7 identified through in vivo and in vitro immunogenicity studies of HLA-A*0201-binding peptides. *J. Immunol.* 154 : 5934, 1995.

151.- M.A. Ossevoort, M.C.W. Feltkamp, K.J.H. van Veen, C.J.M. Melief and W.M. Kast. Dendritic cells as carriers for a cytotoxic T lymphocyte epitope-based peptide vaccine in protection against a human papillomavirus type 16- induced tumor. *J. Immunother.* 18 : 86, 1995.

152.- J.R.M. Ellis, P.J. Keating, J. Baird, E.F. Hounsell, D.V. Renouf, M. Rowe, D. Hopkins, M.F. Duggan-Keen, J.S. Bartolomew, L.S. Young and P.L. Stern. The association of an HPV 16 oncogene variant with HLA-B7 has implications for vaccine design in cervical cancer. *Nat. Med.* 1: 464, 1995.

153.- M.E. Hagensee, N. Yaegashi and D. Galloway. Self-assembly of human papillomavirus type 1 capsids by expression of the L1 protein alone or by coexpression of the L1 and L2 capsid protein. *J. Virol.* 67: 315, 1993.

154.- R. Kirnbauer, F. Booy, N. Cheng, D.R. Lowy and J.T. Schiller. Papillomavirus L1 major capsid protein self-assembles into virus-like particles that are highly immunogenic. *Proc. Natl. Acad. Sci. USA.* 89: 12180, 1992.

155.- R. Kirnbauer, J. Taub, H. Greenstone, R. Roden, M. Durst, L. Gissmann, D.R. Lowy and J.T. Schiller. Efficient self-assembly of human papillomavirus type 16 L1 and L1-L2 into virus-like particles. *J. Virol.* 67: 6929, 1993.

156.- J. Zhou, X. Y. Sun, D.J. Stenzel and I.H. Frazer. Expression of vaccinia recombinant HPV16 L1 and L2 ORF proteins in epithelial cells is sufficient for assembly of HPV virion-like particles. *Virology.* 185: 251, 1991.

157.- N. Muñoz, L.Crawford, and P. Coursaget. HPV vaccines and their potential use in the prevention and treatment of cervical neoplasia. *Papillomavirus. Rep.* 6: 54, 1995.

- 158.- R.W. Tindle and I.H. Frazer. Human papillomavirus infection, genital warts and cervical cancer: prospects for prophylactic and therapeutic vaccines. *Exp. Opin. Invest. Drugs.* 9 : 783, 1995.
- 159.- P. Lee Cann, A. Touze, N. Enogat, D. Leboutleoux, C. Mougin, M.C. Legrand, C. Calvet, J.M. Afoutou and P. Couraagef. Detection of antibodies against human papillomavirus (HPV) type 16 virions by enzyme-linked immunosorbent assay using recombinant HPV 16 L1 capsid produced by recombinant baculovirus. *J. Clin. Microbiol.* 33 : 1380, 1995.
- 160.- K.J. Holman, M.P. Neeper, H.Z. Markus, D.R. Braun, M. Muller and K.U. Jansen. Sequence conservation within the major capsid protein of human papillomavirus (HPV) type 18 and formation of HPV-18 virus-like particles in *Saccharomyces cerevisiae*. *J. Gen. Virol.* 77 : 485, 1996.
- 161.- P. Heine, J. Dillner and S. Schwartz. Human papillomavirus type 16 capsid protein produced from recombinant semliki forest virus assemble into virus-like particles. *Virology.* 214, 349, 1995.
- 162.- S.J. Ghim, R. Young and A.B. Jenson. Antigenicity of bovine papillomavirus type 1 (BPV-1) virus-like particles compared with that of intact BPV-1 virions. *J. Gen. Virol.* 77 : 183, 1996.

163.- N.D. Cristensen, C.A. Raad, N.M. Cladel, R. Han. and J.W. Kreider. Immunization with virus like particles induces long-term protection of rabbits against challenge with cottontail rabbits papillomavirus. *J. Virol.* 70 : 960, 1996.

164.- F. Breitburd, R. Kirnbauer, N.L. Hubbert, B. Nonnenmacher, C. Trindinh-Deamarquel, G. Orth, J.T. Schiller and D.R. Lowly. Immunization with virus-like particles from cottontail rabbit papillomavirus (CRVP) can protect against experimental CRVP infection. *J. Virol.* 69 : 3959, 1995.

165.- J.A. Suzich, S.J. Ghim, F.J. Palmer-Hill, W.I. Withe, J.K. Tamura, J.A. Bell, J.A. Newsome, A.B. Jenson, R. Schiegel. Systemic immunization with papillomavirus L1 protein completely prevents the development of viral mucosal papillomas. *Proc. Natl. Acad. Sci. USA* . 92 : 11553, 1995.

166.- J.F. Hines, S. Ghim, N.D. Christensen, T.W. Kreider, W.A. Barnes, R. Schiegel and A.B. Jenson. The expressed L1 proteins of HPV-1, HPV-6 and HPV-11 display type specific epitopes with native conformation and reactivity with neutralising and non-neutralising antibodies. *Pathobiology*. 62 : 165, 1994.

167.- J.J. Donelly, D. Martinez, K.V. Jansen, R.W. Ellis, D.L. Montgomery and M.A. Liu. Protection against papillomavirus with a polynucleotide vaccine. *J. Infec. Dis.* 713 : 314, 1996.

.

168.- M.E. Ressing, W.J. van Driel, E. Celis, A. Sette, R.M.P. Brandt, M.Hartman, J.D.H. Anhlot, G.M.T. Schreuder, W.B. ter Harmsel, G.J.F. Fleuren, B.J. Trimbos, W.M. Kast and C.J.M. Melif. Occasional memory cytotoxic T-cell responses of patients with human papillomavirus type 16-positive cervical lesions against a human leucocyte antigen-A*0201-restricted E7-encoded epitope. *Cancer Res.* 56 : 582, 1996.

169.- G. Dranoff, E. Jaffee, A. Lazenby, P. Golubek, H. Levitsky, K. Brose, V. Jacson, H. Hamada and D. Pardoll. Vaccination with irradiated tumor cells engineered to secrete GM-CSF stimulates potent, specific, and long-lasting anti-tumor immunity. *Proc. Natl. Acad. Sci. USA.* 90 : 3539, 1993.

170.- R.I. Tepper and J.J. Mule. Experimental and clinical studies of cytokine gene-modified tumor cells. *Hum. Gene Ther.* 5 : 153, 1994.

171.- C.J.M. Melief. Tumor eradication by adoptive transfer of cytotoxic T lymphocytes. *Adv. Cancer Res.* 58 : 143, 1992.

172.- R. Mertelsmann, A. Lindenmann and T. Boehm. Pilot study for the evaluation of T-cell-mediated immunotherapy by cytokine gene transfer in patients with malignant tumors. *J. Mol. Med.* 73 : 205, 1995.

173.- K.Y. Lin, F.G. Guamieri, K.F. Staveley-O'Carroll, H. Levitsky, D.M. Pardoll and T.C. Wu. Treatment of established tumors with a novel vaccine that enhances major histocompatibility class II presentation of tumor antigen. *Cancer Res.* 56 : 21, 1995.

174.- L.K. Borysiewicz, A. Flander, M. Nimako, S. Men, G.W. Wilkinson, D. Weslmoreland, A. Evans, M. Adams, S.N. Stacey and M.E.G. Boursnell. A recombinant vaccine virus encoding human papillomavirus types 16 and 18, E6 and E7 proteins as immunotherapy for cervical cancer. Lancet. 347 : 1523, 1996.

175.- P. Chomczynski. A reagent for the single-step simultaneous isolation of RNA, DNA and proteins from cell and tissue samples. Biotechniques. 51 : 532, 1993.

176.- H. Yoshikawa, T. Kawana, K. Kitawa, M. Mizuno, H. Yoshikura and A. Iwamoto. Detection and typing of multiple genital human papillomavirus by DNA amplification with consensus primers. Jpn. J. Cancer Res. 82 : 524, 1991.

177.- U.K. Laemmli. Cleavage of structural proteins during the assembly of the head of bacteriophage T4. Nature. 227 : 680, 1970.

178.- H. Towbin, T. Staehelin and T. Gordon. Electrophoretic transfer of proteins from polyacrylamide gels to nitrocellulose sheets : procedures and some applications. Proc. Natl. Acad. Sci. USA. 76 : 4350, 1979.

179.- A. Ferenczy. Viral testing for genital human papillomavirus infections : recent progress and clinical potentials. Int. J. Gynecol. Cancer. 5 : 321, 1995.

180.- P.E. Gravitt and M.M. Manos. Polymerase chain reaction-based methods for the detection of human papillomavirus. In : N. Muñoz, F.X. Bosch, K. Shah and A. Meheus (eds.), The epidemiology of human papillomavirus and cervical cancer, pp. 121-133. IARC Scientific Publ. No. 119. Lyon, France : IARC, 1992.

181.- P.J. Snijders, A.J. van den Brule, H.F. Schrijnemakers, G. Snow, C.J. Meijers and J.M. Walboomers. The use of general primers in the polymerase chain reaction permits the detection of a broad spectrum of human papillomavirus genotypes. *J. Gen. Virol.* 71 : 173, 1990.

182.- R. De Franchis, N.C.P. Cross, N.S. Foulkes and T.M. Cos. A potent inhibitor of Taq polymerase copurifies with human genomic DNA. *Nucleic Acid. Res.* 16 : 10355, 1988.

183.- M.A. Innis, D. Gelfand, J.J. Sninsky and T.J. Withe. PCR protocols : Principles and Applications. Academic Press, New York, 1990.

184.- E.M. Hsu, P.J. McNicol, F.B. Guijon and M. Paraskevas. Quantitation of HPV-16 E6-E7 transcription in cervical intraepithelial neoplasia by reverse transcriptase polymerase chain reaction. *Int. J. Cancer.* 55 : 397, 1993.

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

- 186.- D.R. Lucey, M. Clerici and G.M. Shearer. Type 1 and type 2 cytokine dysregulation in human infectious, neoplastic and inflammatory diseases. Clin. Microbiol. Rev. 9 : 532, 1996.
- 187.- R.L. Modlin and T. B. Nutman. Type 2 cytokines and negative immune regulation in human infections. Curr. Opin. Immunol. 5 : 511, 1993.
- 188.- D.R. Smith, S.L. Kunkel, M.D. Burdick, C.A. Wilke, M.B. Orringer and R.I. Whyte. Production of interleukin-10 by human bronchogenic carcinoma. Am. J. Pathol. 145 : 18, 1994.
- 189.- H. Nakagomi, P. Pisa, E.K. Pisa, Y. Yamamoto, E. Halapi and K. Backlin. Lack of interleukin-2 (IL-2) expression and selective expression of IL-10 mRNA in human renal cell carcinoma. Int. J. Cancer. 63 : 366, 1995.
- 190.- J. Kim, R.L. Modlin, R.L. Moy, S.M. Dubinett, T. McHugh, B.J. Nickoloff and K. Yyemura. IL-10 production in cutaneous basal and squamous cell carcinomas. A mechanism for evading the local T cell immune response. J. Immunol. 155 : 2240, 1995.
- 191.- K.L. Bost, S.C. Bielgk and B.M. Jaffe. Lymphokine mRNA expression by transplantable murine B lymphocytic malignancies. Tumor-derived IL-10 as a possible mechanism for modulating the anti-tumor response. J. Immunol. 154 : 718, 1995.

192.- C. Huettner, W. Paulus and W. Roggendorf. Messenger RNA expression of the immunosuppressive cytokine IL-10 in human gliomas. Am. J. Pathol. 146 : 317, 1995.

193.- Q. Chen, V. Daniel, D.W. Maher and P. Hersey. Production of IL-10 by melanoma cells : examination of its role in immunosuppression mediated by melanoma. Int. J. Cancer. 56 : 755, 1994.

194.- S. Kruger-Krasagakes, K. Krasagakis, C. Garbe, E. Schmitt, C. Huls and T. Blankenstein. Expression of interleukin 10 in human melanoma. Br. J. Cancer. 70 : 1182, 1994.

195.- M. Huang, J. Wang, P. Lee, S. Sharma, J.T. Mao, H. Meissner, K. Uyemura, R. Modlin, J. Wollman and S.M. Dubinett. Human non-small cell lung cancer cells express a type 2 cytokine pattern. Cancer Res. 55 : 3847, 1995.

196.- T. Jinquan, C.G. Larsen, B. Gresser, K. Matsushima and K. Thestrup-Pedersen. Human IL-10 is a chemoattractant for CD8⁺ T lymphocytes and an inhibitor of IL-8-induced CD4⁺ T lymphocyte migration. J. Immunol. 151 : 4545, 1993.

197.- K. Taga and G. Tosato. IL-10 inhibits human T cell proliferation and IL-2 production. J. Immunol. 148 : 1143, 1992.

- 198.- S. Beissert, J. Hosoi, A. Grabbe, A. Asahina and R.D. Granstein. IL-10 inhibits tumor antigen presentation by epidermal antigen-presenting cells. *J. Immunol.* 154 : 1280, 1995.
- 199.- L. Ding, P.S. Linsley, L.Y. Huang, R.N. Germain and E.M. Shevach. IL-12 inhibits macrophage co-stimulatory activity by selectively inhibiting the upregulation of B7 expression. *J. Immunol.* 151 : 1224, 1993.
- 200.- T. Suzuki, H. Tahara, S. Narula, K.W. Moore, P.D. Robbins and M.T. Lotze. Viral interleukin 10 (IL-10), the human herpes virus 4 cellular IL-10 homologe, induces local anergy to allogeneic and syngeneic tumors. *J. Exp. Med.* 182 : 477, 1995.
- 201.- M. Matsuda, F. Salazar, M. Petersson, G. Masucci, J. Hansson, P. Pisa, Q. J. Zhang, M.G. Masucci and R. Kiessling. Interleukin-10 pretreatment protects target cells from tumor- and allo-specific cytotoxic T cells and downregulates HLA class I expression. *J. Exp. Med.* 180 : 2371, 1994.
- 202.- O. Abehsira-Amar, M. Gilbert, M. Joly, J. Theze and D.L. Jankovic. IL-4 plays a dominant role in the differential development of Th0 into Th1 and Th2. *J. Immunol.* 148 : 3820, 1992.
- 203.- D.F. Fiorentino, A. Zlotnik, P. Vieira, T.R. Mosmann, M. Howard, K.W. Moore and A. O'Garra. IL-10 acts on the antigen-presenting cell to inhibit cytokine production by Th1. *J. Immunol.* 146 : 3444, 1991.

- 204.- S.L. Swain, A.D. Weinberg, M. English and G. Huston. IL-4 directs the development of Th2-like helper effectors. *J. Immunol.* 145 : 3796, 1990.
- 205.- S.L. Swain, G. Huston, S. Tonkonogy and A. Weinberg. Transforming growth factor- β and IL-4 cause helper T cell precursors to develop into distinct effector helper cells that differ in lymphokine secretion pattern and cell surface phenotype. *J. Immunol.* 147 : 2991, 1991.
- 206.- I.P. Oswald, R.T. Gazzinelli, A. Sher and L. James. IL-10 synergizes with IL-4 and transforming growth factor- β to inhibit macrophage cytotoxic activity. *J. Immunol.* 148 : 3578, 1992.
- 207.- T.H. Inge, S.K. Hoover, B.M. Susskind, S.K. Barrett and H.D. Bear. Inhibition of tumor-specific cytotoxic T-lymphocyte responses by transforming growth factor β -1. *Cancer Res.* 52 : 1386, 1992.
- 208.- A. Fontana, K. Frei, S. Bodmer, E. Hofer, M.H. Schreier, M.A. Palladino and R.M. Zinkernagel. Transforming growth factor β inhibits the generation of cytotoxic T cells in virus-infected mice. *J. Immunol.* 143 : 3230, 1989.
- 209.- J.H. Kehrl, A.B. Roberts, L.M. Wkenfield, S. Jakowlew, M.B. Sporn and A.S. Fauci. Transforming growth factor β is an important immunomodulatory protein for human B lymphocytes. *J. Immunol.* 137 : 3855, 1986.

- 210.- S. Tsunawaki, M. Sporn and C.F. Nathan. Deactivation of macrophages by transforming growth factor- β . *Nature*. 334 : 260, 1989.
- 211.- D. Chantry, M. Turner, E. Abney and M. Feldman. Modulation of cytokine production by transforming growth factor- β . *J. Immunol.* 142 : 4295, 1989.
- 212.- C.W. Czarniecki, H.H. Chiu, G.H.W. Wong, S.M. McCabe and M.A. Palladino. Transforming growth factor β 1 modulates the expression of class II histocompatibility antigens on humans cells. *J. Immunol.* 140 : 4217, 1988.
- 213.- M.R.I. Young, M.A. Wright, M. Coogan, M.E. Young and J. Bagash. Tumor-derived cytokines induce bone marrow suppressor cells that mediate immunosuppression through transforming growth factor β . *Cancer Immunol. Immunother.* 35 : 14, 1992.
- 214.- T. Tada, S. Ohzeki, K. Utsumi, H. Takiuchi, M. Muramatsu, X.F. Li, J. Shimizu, H. Fijigara and T. Hamaoka. Transforming growth factor β -induced inhibition of T cell fuction. Susceptibility difference in T cells of various phenotypes and fuctions and its relevance to immunosuppression in the tumor-bearing state. *J. Immunol.* 146 : 1077, 1991.
- 215.- T. Tsukui, A. Hildesheim, M.H. Sciffman, J. Lucci III, D. Contois, P. Lawler, B.B. Rush, A.T. Lorincz, A. Corrigan, R.D. Burk, W. Qe, M.A. Marshall, D. Mann, M. Carrington, M. Clerici, G.M. Shearer, D.P. Carbone, D.R. Scott, R.A. Houghthen and J.A. Berzofsky. Interleukin 2 production in

vitro by peripheral lymphocytes in response to human papillomavirus-derived peptides : correlation with cervical pathology. *Cancer Res.* 56 : 3967, 1996.

216.- M. Clerici, M. Merola, E. Ferrario, D. Trabattoni, M.L. Villa, B. Stefanon, D.J. Venzon, G.M. Shearer, G. DePalo and E. Clerici. Cytokine production patterns in cervical intraepithelial neoplasia : Association with human papillomavirus infection. *J. Natl. Cancer Inst.* 89 : 245, 1997.

217.- C.D. Woodworth and S. Simpson. Comparative lymphokine secretion by cultured normal human cervical keratinocytes, papillomavirus-immortalized, and carcinoma cell lines. *Am. J. Pathol.* 142 : 1544, 1993.

218.- J. Malejczyk, M. Malejczyk, A. Kock, A. Urbanski, S. Jablonska, G. Orth and T.A. Luger. Constitutive release of IL-6 by human papillomavirus type 16 (HPV 16)-harboring keratinocytes : A mechanism augmenting the NK-cell-mediated lysis of HPV-bearing neoplastic cells. *Cell. Immunol.* 136 : 155, 1991.

219.- D.R. Lucey, M. Clerici and G.M. Shearer. Type 1/type 2 cytokines in human infectious, neoplastic and inflammatory disease. *Clin. Microbiol. Rev.* 9 : 532, 1996.

220.- M. Clerici, D.R. Lucey, J.A. Berzofsky, L.A. Pinto, T.A. Wynn and S.P. Blatt. Restoration of HIV-specific cell-mediated immune responses by interleukin-12 *in vitro*. *Science* 262 : 1721, 1993.

- 221.- F.P. Heinzel, D.S. Schoenhaut, R.M. Rerko, L.E. Rosser and M.K. Gately. Recombinant interleukin 12 cures mice infected with Leishmania major. *J.Exp. Med.* 177 : 1505, 1993.
- 222.- P.A. Sieling, X.H. Wang, M.K. Gately, J.L. Oliveros, T. McHugh, P.F. Barnes, S.F. Wolf, L.Golkar, M. Yamamura, Y. Yogi, K. Uyemura, T.H. Rea and R.L. Modlin. IL-12 regulates T helper type 1 cytokine responses in human infectious diseases. *J. Immunol.* 153 : 3639, 1994.
- 223.- M.J. Brunda, L. Luistro, R.R. Warrier, R.B. Wright, B.R. Hubbard, M. Murphy, S.F. Wolf and M.K. Gately. Antitumor and antimetastatic activity of interleukin 12 against murine tumors. *J. Exp. Med.* 178 : 1223, 1993.
- 224.- H. Tahara, H.J. Zeh, W.J. Storkus, I. Pappo, S.C. Watkins, U. Gubler, S.F. Wolf, P.D. Robbins and M.T. Lotze. Fibroblasts genetically engineered to secrete interleukin 12 can suppress tumor growth and induce antitumor immunity to a murine melanoma in vivo. *Cancer Res.* 54 : 182, 1994.
- 225.- Y.W. Tang and B.S. Graham. Interleukin 12 treatment during immunization elicits a Th1-like immune response in mice challenged with respiratory syncytial virus and improves vaccine immunogenicity. *J. Infect. Dis.* 172 : 734, 1995.

.

