

6 CHAPTER 6: REFERENCES

- Adams, J.A.; and Cory, S. (1998) The Bcl-2 protein family: Arbiters of cell survival. *Science* 281, 1322-1326.
- Ashkenazi, A.; and Dixit, V.M. (1998) Death receptors: signalling and modulation. *Science* 281: 1305-1308.
- Baeye, A.C.; Berger, A.; Schlegel, R.; Veldman, T.; and Schlegel, R. (2002) Cervical epithelial cells transduced with the papillomavirus E6/E7 oncogenes maintain stable levels of oncoprotein expression but exhibit progressive, major increases in Htert gene expression and telomerase activity. *Am. J. Pathol.* 160: 1251-1257.
- Basile, J.R.; Zacny, V.; and Munger, K. (2001) The cytokines tumour necrosis factor (TNF- α) and TNF related apoptosis- inducing ligand differentially modulate proliferation and apoptotic pathways in human papillomavirus 16E7 oncoprotein. *J. Biol. Chem.* 276: 22522-22528.
- Brenna, S. M. F.; Zeferino, L.C.; Pinto, G.A.; Souza, R.A.; Andrade, L. A. L.; Vassalo, J.; Martinez, E.Z.; and Syrjanen, K.J. (2002) C-Myc protein expression

is not an independent prognostic predictor in cervical squamous cell carcinoma.

Brazilian J. Med. Biol. Med. Res. 35: 425-430.

- Burns, T.F and El-Deiry, W.S (2001) Identification of inhibitors of TRAIL-induced death (ITIDS) in TRAIL-sensitive colon cancer carcinoma cell lines SW 480 using genetic approach. *J. Biol. Chem.* 276: 37879-37886.
- Butz, K.; Denk, C.; Ullmann, A.; Scheffner, M. and Hoppe-Seyler, F. (2000). Induction of apoptosis in human papillomavirus positive cancer cells by peptide aptamers targeting the viral E6 oncoprotein. *Proc. Natl. Acad. Sci. USA* 97: 6693-6697.
- Carr, J., and Gyorfi, T. (2000) Human papillomavirus: Epidemiology, Transmission and Pathogenesis. *Clin. Lab. Med.* 20: 235-255.
- Chakrabarti, O.; and Krishna, S. (2003) Molecular interaction of ‘high risk’ human papillomaviruses E6 and E7 oncoproteins: implication for tumour progression. *J. Biosci.* 28: 337-348.

- Chandele, A.; Prasad, V.; Jagtap, J.C, Shukla, R.; and Shastry, P.R. (2004) Upregulation of surviving in G2/M cells and inhibition of caspase 9 activity enhances resistance in staurosporine-induced apoptosis. *Neoplasia* 6: 29-40.
- Chao, C.; Sairo, S.; Kang, J.; Anderson, C.W.; Appella, E.; and Xu, Y. (2000) p53 transcriptional activity is essential for p53-dependent apoptosis following DNA damage. *EMBO J.* 19: 4967-4975.
- Chen, X.S.; Garcea, R.L.; Goldberg, I.; Casini, G.; and Harrison, S.C. (2000) Structure of small virus-like particles assembled from the L1 protein of human papillomavirus 16. *Mol. Cell* 5: 557-567.
- Chene, P. (2003) Inhibiting the p53-MDM2 interaction: an important target for cancer therapy. *Nat. Rev. Cancer* 3: 102-109.
- Cheung, T.; Chung, T.K.; Lo, K.W.; Yu, M.; Krajewski, S.; Reed, M.D.; and Wong, Y. (2002) Apoptosis-related proteins in cervical intraepithelial neoplasia and squamous cell carcinoma of the cervix. *Gynecol. Oncol.* 86: 14-18.

- Chinnaiyan, A.M.; and Dixit, V. M. (1996) The cell death machine. *Curr. Biol* 6: 555-562.
- Cho, N.H.; Lim, S.Y.; Kim, Y.T.; Kim, D.; Kim, Y.S.; and Kim, J.W. (2003) G2 checkpoint in uterine cervical cancer with HPV 16 E6 according to p53 polymorphism and its screening value. *Gynecol. Oncol.* 90: 15-22.
- Ciechanover, A. (1998) The ubiquitin-proteasome pathway: on protein death and cell life. *EMBO J* 24: 7151-7160.
- Dasgupta, S.; Chakraborty, B.; Roy, A.; Roychowdhury, S.; and Panda, C.K. (2003) Differential deletions of chromosome 3p are associated with the development of uterine cervical carcinoma in Indian patients. *Mol. Pathol.* 56: 263-269.
- Department of Health, Statistical Notes, Vol. 3 No.5, May 2001
- Desaintes, C.; Demeret, C.; Goyat, S.; Yaniv, M.; and Thierry, F. (1997) Expression of the papillomavirus E2 protein in Hela cells leads to apoptosis. *EMBO J.* 16: 504-514.

- Evan, G.; and Littlewood, T. (1998) A matter of life and cell death. *Science* 281: 1317-1322.
- Fang, S.; Jensen, J.P.; Ludwig, R.L.; Vousden, K.H.; and Weissman A.M (2000) MDM2 is a ring finger-dependent ubiquitin protein ligase for itself and p53. *J. Biol. Chem.* 275: 8945-8951.
- Fausch, S.C.; Da Silva, D.M.; Rudolf, M.P.; and Kast, K.W. (2002). Human papillomavirus-like particles do not activate Langerhans cells: a possible immune escape mechanism used by human papillomaviruses. *J. Immunol.* 169: 3242-3249.
- Filippova, M.; Song, H.; Connolly, J.L.; Dermody, T.S.; and Duerksen-Hughes, P.J. (2002) The human papillomavirus 16 E6 binds to tumour necrosis factor (TNF) R1 and protects cells from TNF-induced apoptosis. *J. Biol. Chem* 277: 21730-21739.
- Finzer, P.; Aguilar-Lemarroy, A.; and Rosl, F. (2002) The role of human papillomavirus oncoproteins E6 and E7 in apoptosis. *Cancer Lett.* 188: 15-24.
- Fletcher, S. (1993) Histopathology of papilloma virus infection of the cervix uteri: the history, taxonomy, nomenclature and reporting koilocytic dysplasia. *J. Clin. Pathol.* 36: 616-624.

- Funk, J.O.; Waga, S.; Harry, J.B.; Espling, E.; Stillman, B.; and Galloway, D.A. (1997) Inhibition of CDK activating and PCNA-dependent DNA replication by p21 is blocked by interaction with the HPV 16 E7 oncoprotein. *Genes Dev.* 11: 2090-2100.
- Gao, S.; Witte, M.M.; and Scott, R.E (2002) P2P-R protein localizes to the nucleolus of interphase cells and the periphery of chromosome in mitotic cells which show maximum P2P-R immunoreactivity. *J. Cell. Physiol.* 191: 145-154.
- Gao, Q.; Kumar, A.; Srinivasan, S.; Singh, L.; Mukai, H.; Ono, Y.; Wazer, D.E.; and Band, V. (2000) PKN binds and phosphorylates human papillomavirus E6 oncoprotein. *J. Biol. Chem* 275: 14824-14830.
- Golab, J.; Bauer, T.M.; Daniel, V.; and Naujokat, C. (2004) Role of ubiquitin-proteasome pathway in the diagnosis of human diseases. *Clinica Chimica Acta* 340: 27-40.
- Goodwin, E.C.; and DiMaio, D. (2001) Induced senescence in Hela cervical carcinoma cells containing elevated telomerase activity and extended telomeres. *Cell growth Differ.* 12: 525-534.

- Grace, V.M.B.; Shalini, J.V.; Lekha, T.T.S.; Devaraj, S.N.; and Devaraj, H. (2003) Co-overexpression of p53 and bcl-2 proteins in HPV-induced squamous cell carcinoma of the uterine cervix. *Gynecol. Oncol.* 91: 51-58.
- Hagensee, M.E.; Olson, N.H.; Baker, T.S.; and Galloway, D.A. (1994) Three-dimensional structure of vaccinia virus-produced human papillomavirus type 1 capsids. *J. Virol* 68: 4503-4505.
- Hietanen, S.; Lain, S.; Krauz, E.; Blattner, C.; and Lane, D.P. (2000) Activation of p53 in cervical carcinoma cells by small molecules. *Proc. Natl. Acad. Sci. USA* 97: 8510-8506.
- Horikawa, I.; and Barrett, J.C. (2003) Transcriptional regulation of the telomerase hTERT gene as a target for cellular and viral oncogenic mechanism. *Carcinogenesis* 24: 1167-1176.
- <http://www.cansa.org.za/Research/registry> 1997_cervix.asp
- Huh, J.J.; Wolf, J.K.; Fightmaster, D.L.; Lotan, R.; and Follen, M. (2003) Transduction of adenovirus mediated wild-type p53 after radiotherapy in human cervical cancer cells. *Gynecol. Oncol.* 89: 243-250.

- Huibregtse, J.M.; and Beaudenon, S.L. (1996) Mechanism of HPV E6 proteins in cellular transformation. *Seminar in cancer Biol* 7: 317-326.
- Isaacson, C.; Keiss, T.D.; and Hedrick, L. (1996) Both cell proliferation and apoptosis increase with lesion grade in cervical neoplasia but doesn't correlate with HPV type. *Cancer Res* 56: 669-674.
- Israels, L. G.; and Israels, E.D. (1999) Apoptosis. *Stem cells* 17, 306-313.
- Janicek, M.F.; and Averet, H.E. (2001) Cervical cancer: prevention, diagnosis and therapeutics. *CA Cancer J. Clin.* 51: 92-114.
- Kabsch, K.; and Alonso, A. (2002) The human papillomavirus type 16 E5 protein impairs TRAIL- and FasL-mediated apoptosis in HaCaT cells by different mechanisms. *J. Virol.* 76: 12162-12172.
- Kase, H.; Aoki, Y.; and Tanaka, K. (2003) Fas ligand expression in cervical adenocarcinoma relevance to lymph node metastasis and tumour progression. *Gynecol. Oncol.* 90: 70-74.

- Kehmeier, E.; Rühl, H.; Volland, B.; Stöppler, C.M.; Androphy, E.; and Stöppler, H. (2002) Cellular steady-state levels of 'High Risk' but now 'Low Risk' Human papillomavirus (HPV) E6 proteins are increased by inhibition of proteasome-dependent degradation independent of their p53 and E6-AP binding capabilities. *Virology* 299: 72-87.
- Kiechle, F. L.; and Zhang, X. (1998) Apoptosis: a brief review. *J. Clin. Ligand Assay* 21: 58-61.
- Kiechle, F. L.; and Zhang, X. (2002) Apoptosis: biochemical aspects and clinical implications. *Clin. Chim. Acta* 326: 27-45.
- Kim, K.Y.; Seol, J.Y.; Jeon, G.; and Nam, M.J. (2003) The combined treatment of aspirin and radiation induces apoptosis by the regulation of Bcl-2 and caspase-3 in human cervical cancer cells. *Cancer lett.* 189: 157-166.
- Ko, J.; Ryu, K.S.; Lee, Y.H.; Na, D.S.; Kim, Y.S.; Oh, Y.M; and Kim, J.W. (2002) Human secreted frizzled-related protein is downregulated and induces apoptosis in human cervical cancer. *Exp. Cell. Res.* 280: 280-287.

- Kokawa, K.; Shikone, T.; Otani, T.; and Nakawo, R. (1999) Apoptosis and the expression of Bax and Bcl-2 in squamous cell carcinoma and adenocarcinoma of uterine cervix. *American Cancer Society* 85, 1799-1809.
- Ledwaba, T.; Dlamini, Z.; Naicker, S.; and Bhoola, K.; (2004) Molecular genetics of human cervical cancer: role of papillomavirus and the apoptotic cascade. *Biol. Chem.* 385: 671-682.
- Lee, D.; Kim, H.Z.; Jeong, K.W.; Shim, Y.S.; Horikawa, L.; Barrett, J.C.; and Choe, J. (2002) Human papillomavirus E2 down-regulates the human telomerase reverse transcriptase promoter. *J. Biol. Chem.* 277: 27748-27756.
- Ma, Y.Y.; Wei, S.J.; Lin, Y.C.; Lung, J.C.; Chang, T.C.; Whang-Peng, J.; Liu, J.M.; Yang, D.M.; Yang, W.K.; and Shen, C.Y. (2000) PIKC3A as an oncogene in cervical cancer. *Oncogene* 19: 2739-2744.
- Makin, G.; and Dive, C. (2001) Apoptosis and cancer chemotherapy. *Trends Cell Biol.* 11: S22-26.
- Mantovani, F.; and Banks, L. (1999) The interaction between p53 and papillomaviruses. *Semin. Cancer Biol.* 9: 387-395.

- Matthews, C.P.; Shera, K.A.; and McDougall, J.K. (2000) Genomic changes and HPV type in cervical carcinoma. *Proc. Soc. Exp. Biol. Med.* 223: 316-321.
- Melino, G. (2001) The siren's song. *Nature* 412: 23.
- Nagata, S. (1997). Apoptosis by death factor. *Cell* 88, 355-365.
- Nair, P.; Nair, K.; Jayaprokash, G.P.; and Pillai, M.R. (1999) Decreased programmed cell death in the uterine cervix associated with high risk human papillomavirus infection. *Pathol. Oncol. Res.* 5: 95-103.
- Oh, S.T.; Kyo, S.; and Laimins, L.A. (2001) Telomerase activation by human papillomavirus type 16 E6 protein: induction of human telomerase reverse transcriptase expression through c-myc and GC rich Sp1m binding sites. *J. Virology* 75: 5559-5566.
- Park, I.K.; Morrison, S.J.; and Clarke, M.F. (2004). Bmi1, stem cells, and senescence regulation. *J. Clin. Invest.* 113: 175-179.

- Park, J.; Boyer, S.; Mitchell, K.; Gilfor, D.; Birrer, M.; Darlington, G.; El Deiry, W.; Firestone, G.L.; Munger, K.; Band, V.; Fisher, P.B.; and Dent, P. (2000a). Expression of human papillomavirus E7 protein causes apoptosis and inhibits DNA synthesis in primary hepatocytes via increased expression of p21. *J. Biol. Chem.* 275: 18-28.
- Park, J.; Kim, E.J.; Kwon, H.; Hwang, E.S.; Namkoony, S.E.; and Um, S. (2000b) Inactivation of interferon regulatory factor-1 tumour suppressor protein by HPV E7 oncoprotein. *J. Biol. Chem.* 275: 6764-6769.
- Patel, D.; Huang, S.; Baglia, L.A.; and McCance, D.J. (1999) The E6 protein of human papillomavirus type 16 binds to and inhibits co-activation by CBP and p300. *EMBO J.* 18: 5061-5072.
- Pelicci, P.G. (2004) Do tumour-suppressive mechanisms contribute to organism aging by inducing stem cell senescence? *J. Clin. Invest.* 113: 4-7.
- Preston, S.L.; Alison, M.R.; Forbes, S.J.; Direkze, N.C.; Poulsom, R.; and Wright, N.A. (2003) The new stem biology: something for everyone. *Mol. Pathol.* 56: 86-96.

- Robinson, P.A.; and Ardley, H.C. (2004) Ubiquitin-protein ligases. *J. Cell. Sci.* 117:5191-5194.
- Sadat, L.A.; Grube-Olipitz, M.; Felizardo, M.; Slavic, I.; and Lubec, G. (2004) Expression of proteasomal proteins in ten different tumour cell lines. *Amino Acids* 27: 129-140.
- Sakai, Y.; Saijo, M.; Coelho, K.; Kishino, T.; Niikawa, N.; and Taya, Y. (1995) cDNA sequence and chromosomal localization of a novel human protein, RBQ-1 (RBBP6), that binds to the retinoblastoma gene product. *Genomics* 30: 98-101.
- Scott, R.E.; Giannakouros, T.; Gao, S.; and Peidis, P. (2003) Functional potential of P2P-R: a role in the cell cycle differentiation related to its interactions with proteins that bind to matrix associated regions of DNA? *J. Cell Biochem.* 90: 6-12.
- Scheffner, M.; and Whitaker, N.J. (2003) Human papillomavirus-induced carcinogenesis and the ubiquitin-proteasome system. *Semin Cancer Biol.* 13: 59-67.

- Schiffman, M.; and Castle, P.E. (2003) Human papillomavirus: Epidemiology and public health. *Arch. Pathol. Lab. Med.* 127: 930-934.
- Sharpless, N.E.; and DePinho, R.A. (2004) Telomeres, stem cells, senescence, and cancer. *J. Clin. Invest.* 113: 160-168.
- Shoji, Y.; Saegusa, M.; and Takano, Y.; (1996) Correlation of apoptosis with tumour cell differentiation, progression and HPV infection in cervical carcinoma. *J. Clin. Pathol.* 49:134-138.
- Simons, A.; Melamed-Bessudo, C.; Wolkowicz, R.; Sperling, R.; Eisenbach, L.; and Rotter, V. (1997) PACT: Cloning and characterization of a cellular p53 binding protein that interacts with Rb. *Oncogene* 14: 145-155.
- Singh, B.; Reddy, P.G.; Goberdhan, A.; Walsh, C.; Dao, S.; Ngai, I.; Chou, T.C.; O-Charoenrat, P.; Levine, A.J.; Rao, P.H.; and Stoffel, A. (2002) p53 regulates cell survival by inhibiting PIK3CA in squamous cell carcinoma. *Genes and Dev.* 16: 984-993.

- Thompson, D.A.; Zacny, V.; Belinsky, G.S.; Classon, M.; Jones, D.L.; Schlegel, R.; and Munger, K. (2001) The HPV E7 oncoprotein inhibits tumour necrosis factor alpha-mediated apoptosis in normal human fibroblasts. *Oncogene* 20: 3629-3640.
- Tsai, R.Y. (2004) A molecular view of stem cell and cancer self-renewal. *Int. J. Biochem. Cell Biol.* 36: 684-694.
- Tsujimoto, Y. (1997) Apoptosis and necrosis: intracellular ATP level as a determinant for cell death modes. *Cell Death and Differentiation* 4: 429-434.
- Veldman, T.; Horikawa, I.; Barrett, C.J.; and Schlegel, R. (2001) Transcriptional activation of the telomerase hTERT gene by human papillomavirus type 16 E6 oncoprotein. *J. Virol* 75: 4467-4472.
- Vo, L.T.; Minet, M.; Schmitter, J.M.; Lacroute, F., and Wyers, F. (2001) Mpe1, a zinc knuckle protein, is an essential component of yeast cleavage and polyadenylation factor required for the cleavage and polyadenylation of mRNA. *Mol. Cell Biol.* 21: 8346-8356.

- Witte, M.M.; and Robert, E.S. (1997) The proliferation potential protein-related (P2P-R) gene with domains encoding heterogenous nuclear ribonucleoprotein association and Rb1 binding shows repressed expression during terminal differentiation. *Proc. Natl. Acad. Sci.* 94: 1212-1217.
- Wong, F.W. (1994) Immunohistochemical detection of proliferating tumour cells in cervical cancer using monoclonal antibody ki67. *Gynecol. Obstet. Invest* 37: 123-126.
- Yamasaki, L.; and Pagano, M. (2004) Cell-cycle, proteolysis and cancer. *Curr. Opin. Cell Biol.* 16: 623-628.
- Yang, J.; Liu, X.; Bhalla, K.; Kim, C.N.; Ibrado, A.M.; Cai, J.; Peng, J.L.; Jones, D.P.; and Wang, X. (1997) Prevention of apoptosis by Bcl-2: release of cytochrome c from mitochondria blocked. *Science* 275: 1129-1132.
- Yue, T.; Ohlstein, E.H.; and Ruffolo, R.R. (1999) Apoptosis: a potential target for discovering novel therapies for cardiovascular diseases. *Curr. Opin. In Chem. Biol.* 3: 474-480.

- Zanotti, S.; Fisseler-Eckhoff, A.; and Mannherz, H.G. (2003) Changes in the topological expression of markers of differentiation and apoptosis in defined stages of human cervical dysplasia and carcinoma. *Gynecol. Oncol.* 89: 376-384.
- Zhang, H.G.; Wang, J.; Yang, X.; Hsu, H.S.; and Mountz, J.D. (2004) Regulation of apoptosis proteins in cancer cells by ubiquitin. *Oncogene* 23: 2009-15.