REFERENCES

Agarwal, L. P. (1969). Adenwalla oration-1969-Cornea the real window to the outside world. *Indian J Ophthalmol*, 17, 81-90.

Akle, C.A., Adinolfi, M., Welsh, K.I., & et al. (1981). Immunogenicity of human amniotic epithelial cell after transplantation into volunteers. *Lancet*, 2, 1003-1005.

Avila, M., Espana, M., Moreno, C., & et al. (2001). Reconstruction of ocular surface with heterologous limbal epithelium and amniotic membrane in a rabbit model. *Cornea*, 20(4), 414-420.

Balasubramanian, S., Jasty, S., Sitalakshmi, G., & et al. (2008). Influence of feeder layer on the expression of stem cell markers in cultured limbal corneal epithelial cells. *Indian J Med Res*, 128, 616-622.

Ban, Y., Cooper, L.J., Fullwood, N.J., & et al. (2003). Comparison of ultrastructure, tight junction-related protein expression and barrier function of human corneal epithelial cells cultivated on amniotic membrane with and without air-lifting. *Exp Eye Res*, 76(6), 735-743.

Bratanov, M., Neronov, A., & Nikolova, E. (2009). Limbal explants from cryopreserved cadaver human corneas. Immunofluorescence and light microscopy of epithelial cells growing in culture. *Cryo Letters*, 30(3),183-189.

Cabrita, E., Roblesb, V., Chereguinic, O., & et al. (2003). Effect of different cryoprotectants and vitrificant solutions on the hatching rate of turbot embryos (Scophthalmus maximus). *Cryobiology*, 47, 204-213.

Chen, Z., de Paiva, C.S., Luo, L., & et al. (2004). Characterization of putative stem cell phenotype in human limbal epithelia. *Stem Cells*, 22(3), 355-366.

Chen, H.C.J., Chen, H.L., Lai, J.Y., & et al. (2009). Persistence of transplanted oral mucosal epithelial cells in human cornea. *Invest Ophthalmol Vis Sci*, 50, 4660–4668.

Cotsarelis, G., Cheng, S.Z., Dong, G., & et al. (1989). Existence of slow-cycling limbal epithelial basal cells that can be preferentially stimulated to proliferate: Implications on epithelial stem cells. *Cell*, 57, 201-209.

Davanger, M., & Evenson, A. (1971). Role of the pericorneal structure in renewal of corneal epithelium. *Nature*, 229, 560–561.

Davis, J.M. (2002). *Basic cell culture (practical approach),* (2nd Ed.). New York: Oxford University Press.

Dua, H.S. (1998). The conjunctiva in corneal epithelial wound healing. *Br J Ophthalmol*, 82, 1407-1411.

Dua, H.S., & Azuara-Blanco, A. (1999). Allo-limbal transplantation in patients with limbal stem cell deficiency. *Br J Ophthalmol*, 83, 414–419.

Dua, H.S., & Azuara-Blanco, A. (2000a). Limbal stem cells of the corneal epithelium. *Surv Ophthalmol*, 44, 415-425.

Dua, H.S., & Azuara-Blanco, A. (2000b). Autologous limbal transplantation in patient with unilateral corneal stem cell deficiency. *Br J Ophthalmol*, 84, 273-278.

Frederik, P.M., & Busing, W.M. (1981). Ice crystal damage in frozen thin sections: freezing effects and their restoration. *J Microsc*, 121, 191-199.

Gipson, I.K. (1989). The epithelial basement membrane zone of the limbus. *Eye*, 3, 132–140.

Goldberg, M.F., & Bron, A.J. (1982). Limbal palisades of Vogt. *Trans Am Ophthalmol Soc*, 80, 155-171.

Hayashida, Y., Nishida, K., Yamato, M., & et al. (2005). Ocular surface reconstruction using autologous rabbit oral mucosal epithelial sheets fabricated ex vivo on a temperature-responsive culture surface. *Invest Ophthalmol Vis Sci*, 46, 1632-1639.

Holland, E.J., & Schwartz, G.S. (2000). Changing concepts in the management of severe ocular surface disease over twenty-five years. *Cornea*, 19, 688-698.

Holland, E.J., Djalilian, A.R. & Schwartz, G.S. (2003). Management of aniridic keratopathy with keratolimbal allograft: a limbal stem cell transplantation technique. *Ophthalmology*, 110, 125-130.

Huang, A.J., & Tseng, S.C. (1991). Corneal epithelial wound healing in the absence of limbal epithelium. *Invest Ophthalmol Vis Sci*, 32, 96-105.

Iaffaldano, N., Di Iorio, M., & Rosato, M.P. (2012). The cryoprotectant used, its concentration, and the equilibration time are critical for the successful cryopreservation of rabbit sperm: DIMETHylacetamide versus dimethylsulfoxide. *Theriogenology*, 78(6), 1381-1389.

Juhl, M., Reibel, J. & Stoltze, K. (1989). Immunohistochemical distribution of keratin proteins in clinically healthy human gingival epithelia. *Scand J Dent Re*, 97, 159-170.

Kanayama, S., Nishida, K., Yamato, M., & et al. (2007). Analysis of angiogenesis induced by cultured corneal and oral mucosal epithelial cell sheets in vitro. *Exp Eye Res*, 85, 772-781.

Kartberg, A.J., Hambiliki, F., Arvidsson, T., & et al. (2008). Vitrification with DMSO protects embryo membrane integrity better than solutions without DMSO, *Reprod Biomed Online*, 17, 378-384.

Kaufman, H.E., Escapini, H., Capella, J.A., & et al. (1966). Living preservation of corneal tissue for penetrating keratoplasty. *Arch Ophthalmol*, 76, 471-476.

Kawasaki, S., Tanioka, H., Yamasaki, K., & et al. (2006). Clusters of corneal epithelial cells reside ectopically in human conjunctival epithelium. *Invest Ophthal Vis Sci*, 47, 1359-1367.

Kenyon, K.R., & Tseng, S.C. (1989). Limbal autograft transplantation for ocular surface disorders. *Ophthalmology*, 96, 709-723.

Kierszenbaum, A.L., & Tres, L.L. (2011). Histology and Cell Biology: An Introduction to Pathology. 3 rd ed. New York: Mosby.

Kim, J.C., & Tseng, S.C. (1995). Transplantation of preserved human amniotic membrane for surface reconstruction in severely damaged rabbit corneas. *Cornea*, 14, 473-484.

Kito, K., Kagami, H., Kobayashi, C., & et al. (2005). Effects of cryopreservation on histology and viability of cultured corneal epithelial cell sheets in rabbit. *Cornea*, 24(6), 735-741.

Koizumi, N., Inatomi, T., Quantock, A.J., & et al. (2000a). Amniotic membrane as a substrate for cultivating limbal corneal epithelial cells for autologous transplantation in rabbits. *Cornea*, 19, 65-71.

Koizumi, N., Fulwood, N.J., Bairaktaris, G., & et al. (2000b). Cultivation of corneal epithelial cells on intact and denuded human amniotic membrane. *Invest Ophthal Vis Sci*, 41, 2506-2513.

Koizumi, N., Inatomi, T., Suzuki, T., & et al. (2001). Cultivated corneal epithelial stem cell transplantation in ocular surface disorders. *Ophthalmology*, 108, 1569-1574.

Koizumi, N., Cooper, L.J., Fullwood, N.J., & et al. (2002). An evaluation of cultivated corneal limbal epithelial cells, using cell-suspension culture. *Invest Ophthalmol Vis Sci*, 43, 2114-2121.

Kolibianakis, E.M., Venetis, C.A., & Tarlatzis, B.C. (2009). Cryopreservation of human embryos by vitrification or slow freezing: which one is better?. *Curr Opin Obstet Gynecol*, 1(3), 270-274.

Kruse, F.E. (1994). Stem cells and corneal epithelial regeneration. *Eye*, 8, 170-183.

Kumar, N., & Gilula, N. (1996). The gap junction communication channel. *Cell*, 84, 381- 388.

Lauweryns, B., van den Oord, J.J., & Missotten, L. (1993). The transitional zone between limbus and peripheral cornea. An immunohistochemical study. *Invest Ophthalmol Vis Sci*, 34, 1991-1999.

Lee, S.H., & Tseng, S.C. (1997). Amniotic membrane transplantation for persistent epithelial defects with ulceration. *Am J Ophthalmol*, 123, 303-312.

Li, W., Hayashida, Y., Chen, Y.T., & et al. (2007). Niche regulation of corneal epithelial stem cells at the limbus. *Cell Res*, 17, 26-36.

Liang, L., Sheha, H., & Tseng, S.C. (2009). Long-term outcomes of keratolimbal allograft for total limbal stem cell deficiency using combined immunosuppressive

agents and correction of ocular surface deficits. *Arch Ophthalmol*, 127(11), 1428–1434.

Liu, J., Sheha, H., Fu, Y., & et al. (2011). Oral mucosal graft with amniotic membrane transplantation for total limbal stem cell deficiency. *Am J Ophthalmol*, 152, 739-747.

Ma, D.H., Kuo, M.T., Tsai, Y.J., & et al. (2009). Transplantation of cultivated oral mucosal epithelial cells for severe corneal burn. *Eye*, 23, 1442-1450.

Matic, M., Petrov, I.N., Chen, S., & et al. (1997). Stem cells of the corneal epithelium lack connexins and metabolite transfer capacity. *Differentiation*, 61, 251–260.

Mills, A.A., Zheng, B., Wang, X.J., & et al. (1999). p63 is a p53 homologue required for limb and epidermal morphogenesis. *Nature*, 398(6729), 708–713.

Monica, C.W., Serena, B., & David, E.P. (1997). Cryopreservation of rabbit corneas in dimethyl sulfoxide. *Invest Ophthalmol Vis Sci*, 38, 1934-1943.

Morrison, S.J., Shah, N.M., & Anderson, D.J. (1997). Regulatory mechanisms in stem cell biology. *Cell*, 88, 287-298.

Muzar, P. (1984). Freezing of living cells: Mechanisms and implications. *Am J Physiol*, 247, C125- C142.

Nakamura, T., Endo, K., Cooper, L.J., & et al. (2003). The successful culture and autologous transplantation of rabbit oral mucosal epithelial cells on amniotic membrane. *Invest Ophthalmol Vis Sci*, 44, 106-116.

Nakamura, T., Inatomi, T., Sotozono, C., & et al. (2004). Transplantation of cultivated autologous oral mucosal epithelial cells in patients with severe ocular surface disorders. *Br J Ophthalmol*, 88(10), 1280–1284.

Nakamura, T., Inatomi, T., Cooper, L.J., & et al. (2007). Phenotypic investigation of human eyes with transplanted autologous cultivated oral mucosal epithelial sheets for severe ocular surface diseases. *Ophthalmology*, 114, 1080-1088.

Nishida, K. (2003). Tissue engineering of the cornea. *Cornea*, 22, 28-34.

Nowshari, M.A., Nayudu, P.L., & Hodges, J.K. (1994). Effect of cryoprotectant concentration, equilibration time and thawing procedure on survival and development of rapid frozen-thawed mature mouse oocytes. *Theriogenology*, 42, 1193–1204.

Oh, J.Y., Kim, M.K., Shin, K.S., & et al. (2007). Efficient cryopreservative conditions for cultivated limbal and conjunctival epithelial cells. *Cornea*, 26(7), 840-846.

Ozkavukcu, S., & Erdemli, E. (2002). Cryopreservation: basic knowledge and biophysical effects. *J Ankara Medical School*, 24, 187-196.

Pegg, D.E. (2002). The history and principles of cryopreservation. *Semin Reprod Med*, 20, 5-13.

Pellegrini, G., Traverso, C.E., Franzi, A.T., & et al. (1997). Long-term restoration of damaged corneal surfaces with autologous cultivated corneal epithelium. *Lancet*, 349, 990-993.

Pellegrini, G., Dellambra, E., Golisano, O., & et al. (2001). P63 identifies keratinocyte stem cells. *Proc Natl Acad Sci USA*, 98(6), 3156–3161.

Presland, R.B., & Dale, B.A. (2000). Epithelial structural proteins of the skin and oral cavity: function in health and disease. *Crit Rev Oral Biol Med*, 11, 383-408.

Presland, R.B., & Jurevic, R.J. (2002). Making sense of the epithelial barrier: what molecular biology and genetics tell us about the functions of oral mucosal and epidermal tissues. *J Dent Educ*, 66, 564–574.

Priya, C.G., Arpitha, P., Vaishali, S., & et al. (2011). Adult human buccal epithelial stem cells: identification, ex-vivo expansion, and transplantation for corneal surface reconstruction. *Eye (Lond)*, 25(12), 1641-1649.

Puangsricharern, V., & Tseng, S.C. (1995). Cytologic evidence of corneal disease with limbal stem cell deficiency. *Ophthalmology*, 102, 1476-1485.

Qu, L., Yang, X.Y., Wang, X., & et al. (2009). Reconstruction of corneal epithelium with cryopreserved corneal limbal stem cells in a rabbit model. *Vet J*, 179, 392-400.

Rama, P., Bonini, S., Lambiase, A., & et al. (2001). Autologous fibrin-cultured limbal stem cells permanently restore the corneal surface of patients with total limbal stem cell deficiency. *Transplantation*, 72, 1478-1485.

Rao, S.K., Rajagopal, R., Sitalakshmi, G., & Padmanabhan, P. (1999). Limbal allografting from related live donors for corneal surface reconstruction. *Ophthalmology*, 106, 822-828.

Rheinwald, J.G., & Green, H. (1975). Serial cultivation of strains of human epidermal keratinicytes: the formation of keratinizing colonies from single cells. *Cell*, 6, 331-344.

Rich, S.J., & Armitage, W.J. (1990). Propane-1, 2-diol as a potential component of a vitrification solution for corneas. *Cryobiology*, 27, 42–54.

Sangwan, V.S., Vemuganti, G.K., Singh, S., & et al. (2002). Early results of ocular surface reconstruction in unilateral severe limbal stem cell deficiency using autologous cultured limbal and conjunctival stem cells. *Invest Ophthalmol Vis Sci*, 43, S 2992.

Schermer, A., Galvin, S., & Sun, T.T. (1986). Differentiation-related expression of a major 64K corneal keratin in vivo and in culture suggests limbal location of corneal epithelial stem cells. *J Cell Biol*, 103, 49–62.

Schwartz, O. (1986). Cryopreservation as long-term storage of teeth for transplantation or replantation. *Int J Oral Max Surg*, 15, 30-32.

Sekiyama, E., Nakamura, T., Kawasaki, S., & et al. (2006). Different expression of angiogenesis-related factors between human cultivated corneal and oral epithelial sheets. *Exp Eye Res*, 83, 741-746.

Shimazaki, J., Aiba, M., Goto, E., & et al. (2002). Transplantation of human limbal epithelium cultivated on amniotic membrane for the treatment of severe ocular surface disorders. *Ophthalmology*, 109, 1285-1290.

Shortt, A.J., Secker, G.A., Munro, P.M., & et al. (2007). Characterisation of the limbal epithelial stem cell niche: novel imaging techniques permit in-vivo observation and targeted biopsy of limbal epithelial stem cells. *Stem Cells*, 5, 1402–1409.

Sudha, B., Sitalakshmi, G., Iyer, G.K., & Krishnakumar, S. (2008). Putative stem cell markers in limbal epithelial cells cultured on intact & denuded human amniotic membrane. *Indian J Med Res*, 128(2), 149-156.

Tavassoli, M., Javadi, S., Naem, S., & et al. (2009). Effects of different concentrations of DMSO and glycerol on cryopreservation of Trichomonas gallinae. *Int J Vet Res*, 3(2), 83-86.

Temmerman, L., Dermaut, L.R., De Mil, M., & et al. (2008). Influence of cryopreservation on human periodontal ligament cells in vitro, *Cell Tissue Bank*, 9, 11-18.

Tsai, R.J., Li, L.M., & Chen, J.K. (2000). Reconstruction of damaged corneas by transplantation of autologous limbal epithelial cells. *N Engl J Med*, 343, 86-93.

Tseng, S.C., Prabhasawat, P., Barton, K., & et al. (1998). Amniotic membrane transplantation with or without limbal allografts for cornea surface reconstruction in patients with limbal stem cell deficiency. *Arch Ophthalmol*, 116, 431-441.

Tsubota, K., Toda, I., Saito, H., & et al. (1995). Reconstruction of the corneal epithelium by limbal allograft transplantation for severe ocular surface disorders. *Ophthalmology*, 102, 1486-1496.

Twlford, J.D., & Trelford, S.M. (1979). The amnion in surgery, past and present. *Am J Obstet Gynecol*, 134, 833-845.

Vajta, G., Nagy, Z.P., Cobo, A., & et al. (2009). Vitrification in assisted reproduction: myths, mistakes, disbeliefs and confusion. *Reprod Biomed Online*, 19(3), 1-7.

William, K.O., & Patrick, C.N. (2008). *Netter's essential histology*. Philadelphia: Saunders.

Yeh, H.J., Yao, C.L., Chen, H.I., & et al. (2008). Cryopreservation of human limbal stem cells ex vivo expanded on amniotic membrane. *Cornea*, 27, 327–333.

Zieske, J.D., & Wasson, M. (1993). Regional variation in distribution of EGF receptor in developing and adult corneal epithelium. *J cell Sci*, 106, 145-152.