

## BIBLIOGRAPHY

1. *Wolff's anatomy of the eye and orbit.* 8th ed, ed. A.J. Bron, et al. 1997, London: Chapman & Hall Medical.
2. Kolb, H.F., E. Nelson, R. *Webvision: The Organisation of the Retina and Visual System.* John Moran Eye Centre, University of Utah October 2003 [cited 2009 03/02/09]; Available from: <http://webvision.med.utah.edu/sretina.html#overview>.
3. Sherwood, L., *Human physiology : from cells to systems.* 4th ed. 2001, Pacific Grove, Calif.: Brooks/Cole.
4. Campochiaro, P.A. and Hackett, S.F., *Ocular neovascularization: a valuable model system.* Oncogene, 2003. **22**(42): p. 6537-48.
5. Saint-Geniez, M. and D'Amore, P.A., *Development and pathology of the hyaloid, choroidal and retinal vasculature.* Int J Dev Biol, 2004. **48**(8-9): p. 1045-58.
6. Fruttiger, M., *Development of the mouse retinal vasculature: angiogenesis versus vasculogenesis.* Invest Ophthalmol Vis Sci, 2002. **43**(2): p. 522-7.
7. Delaey, C. and Van De Voorde, J., *Regulatory mechanisms in the retinal and choroidal circulation.* Ophthalmic Res, 2000. **32**(6): p. 249-56.
8. Arjamaa, O. and Nikinmaa, M., *Oxygen-dependent diseases in the retina: role of hypoxia-inducible factors.* Exp Eye Res, 2006. **83**(3): p. 473-83.
9. Fleck, B.W. and McIntosh, N., *Pathogenesis of retinopathy of prematurity and possible preventive strategies.* Early Hum Dev, 2008. **84**(2): p. 83-8.
10. Hughes, S., Yang, H., and Chan-Ling, T., *Vascularization of the human fetal retina: roles of vasculogenesis and angiogenesis.* Invest Ophthalmol Vis Sci, 2000. **41**(5): p. 1217-28.
11. Risau, W., *Mechanisms of angiogenesis.* Nature, 1997. **386**(6626): p. 671-4.
12. Provis, J.M., Leech, J., Diaz, C.M., Penfold, P.L., Stone, J., and Keshet, E., *Development of the human retinal vasculature: cellular relations and VEGF expression.* Exp Eye Res, 1997. **65**(4): p. 555-68.
13. Chan-Ling, T., McLeod, D.S., Hughes, S., Baxter, L., Chu, Y., Hasegawa, T., and Lutty, G.A., *Astrocyte-endothelial cell relationships during human retinal vascular development.* Invest Ophthalmol Vis Sci, 2004. **45**(6): p. 2020-32.
14. Stone, J., Itin, A., Alon, T., Pe'er, J., Gnessin, H., Chan-Ling, T., and Keshet, E., *Development of retinal vasculature is mediated by hypoxia-induced vascular endothelial growth factor (VEGF) expression by neuroglia.* J Neurosci, 1995. **15**(7 Pt 1): p. 4738-47.
15. Enge, M., Bjarnegard, M., Gerhardt, H., Gustafsson, E., Kalen, M., Asker, N., Hammes, H.P., Shani, M., Fassler, R., and Betsholtz, C., *Endothelium-specific platelet-derived growth factor-B ablation mimics diabetic retinopathy.* EMBO J, 2002. **21**(16): p. 4307-16.
16. Uemura, A., Ogawa, M., Hirashima, M., Fujiwara, T., Koyama, S., Takagi, H., Honda, Y., Wiegand, S.J., Yancopoulos, G.D., and Nishikawa, S., *Recombinant angiopoietin-1 restores higher-order*

- architecture of growing blood vessels in mice in the absence of mural cells.* J Clin Invest, 2002. **110**(11): p. 1619-28.
17. von Tell, D., Armulik, A., and Betsholtz, C., *Pericytes and vascular stability.* Exp Cell Res, 2006. **312**(5): p. 623-9.
18. Suri, C., Jones, P.F., Patan, S., Bartunkova, S., Maisonpierre, P.C., Davis, S., Sato, T.N., and Yancopoulos, G.D., *Requisite role of angiopoietin-1, a ligand for the TIE2 receptor, during embryonic angiogenesis.* Cell, 1996. **87**(7): p. 1171-80.
19. Yancopoulos, G.D., Davis, S., Gale, N.W., Rudge, J.S., Wiegand, S.J., and Holash, J., *Vascular-specific growth factors and blood vessel formation.* Nature, 2000. **407**(6801): p. 242-8.
20. Langford, K., Nicolaides, K., and Miell, J.P., *Maternal and fetal insulin-like growth factors and their binding proteins in the second and third trimesters of human pregnancy.* Hum Reprod, 1998. **13**(5): p. 1389-93.
21. Leske, D.A., Wu, J., Fautsch, M.P., Karger, R.A., Berdahl, J.P., Lanier, W.L., and Holmes, J.M., *The role of VEGF and IGF-1 in a hypercarbic oxygen-induced retinopathy rat model of ROP.* Mol Vis, 2004. **10**: p. 43-50.
22. Poulaki, V., Joussen, A.M., Mitsiades, N., Mitsiades, C.S., Iliaki, E.F., and Adamis, A.P., *Insulin-like growth factor-I plays a pathogenetic role in diabetic retinopathy.* Am J Pathol, 2004. **165**(2): p. 457-69.
23. Smith, L.E., *Pathogenesis of retinopathy of prematurity.* Growth Horm IGF Res, 2004. **14 Suppl A**: p. S140-4.
24. King, G.L., Goodman, A.D., Buzney, S., Moses, A., and Kahn, C.R., *Receptors and growth-promoting effects of insulin and insulinlike growth factors on cells from bovine retinal capillaries and aorta.* J Clin Invest, 1985. **75**(3): p. 1028-36.
25. Duh, E.J., Yang, H.S., Suzuma, I., Miyagi, M., Youngman, E., Mori, K., Katai, M., Yan, L., Suzuma, K., West, K., Davarya, S., Tong, P., Gehlbach, P., Pearlman, J., Crabb, J.W., Aiello, L.P., Campochiaro, P.A., and Zack, D.J., *Pigment epithelium-derived factor suppresses ischemia-induced retinal neovascularization and VEGF-induced migration and growth.* Invest Ophthalmol Vis Sci, 2002. **43**(3): p. 821-9.
26. Tombran-Tink, J. and Johnson, L.V., *Neuronal differentiation of retinoblastoma cells induced by medium conditioned by human RPE cells.* Invest Ophthalmol Vis Sci, 1989. **30**(8): p. 1700-7.
27. Dawson, D.W., Volpert, O.V., Gillis, P., Crawford, S.E., Xu, H., Benedict, W., and Bouck, N.P., *Pigment epithelium-derived factor: a potent inhibitor of angiogenesis.* Science, 1999. **285**(5425): p. 245-8.
28. Gao, G., Li, Y., Zhang, D., Gee, S., Crosson, C., and Ma, J., *Unbalanced expression of VEGF and PEDF in ischemia-induced retinal neovascularization.* FEBS Lett, 2001. **489**(2-3): p. 270-6.
29. Stellmach, V., Crawford, S.E., Zhou, W., and Bouck, N., *Prevention of ischemia-induced retinopathy by the natural ocular antiangiogenic agent pigment epithelium-derived factor.* Proc Natl Acad Sci U S A, 2001. **98**(5): p. 2593-7.

30. van Wijngaarden, P., Brereton, H.M., Gibbins, I.L., Coster, D.J., and Williams, K.A., *Kinetics of strain-dependent differential gene expression in oxygen-induced retinopathy in the rat*. Exp Eye Res, 2007. **85**(4): p. 508-17.
31. Chan-Ling, T., Gock, B., and Stone, J., *The effect of oxygen on vasoformative cell division. Evidence that 'physiological hypoxia' is the stimulus for normal retinal vasculogenesis*. Invest Ophthalmol Vis Sci, 1995. **36**(7): p. 1201-14.
32. He, T., Ai, M., Zhao, X.H., and Xing, Y.Q., *Inducible nitric oxide synthase mediates hypoxia-induced hypoxia-inducible factor-1 alpha activation and vascular endothelial growth factor expression in oxygen-induced retinopathy*. Pathobiology, 2007. **74**(6): p. 336-43.
33. Carmeliet, P. and Jain, R.K., *Molecular mechanisms and clinical applications of angiogenesis*. Nature, 2011. **473**(7347): p. 298-307.
34. Leung, D.W., Cachianes, G., Kuang, W.J., Goeddel, D.V., and Ferrara, N., *Vascular endothelial growth factor is a secreted angiogenic mitogen*. Science, 1989. **246**(4935): p. 1306-9.
35. Bracken, C.P., Whitelaw, M.L., and Peet, D.J., *The hypoxia-inducible factors: key transcriptional regulators of hypoxic responses*. Cell Mol Life Sci, 2003. **60**(7): p. 1376-93.
36. Wang, G.L. and Semenza, G.L., *Purification and characterization of hypoxia-inducible factor 1*. J Biol Chem, 1995. **270**(3): p. 1230-7.
37. Greijer, A.E. and van der Wall, E., *The role of hypoxia inducible factor 1 (HIF-1) in hypoxia induced apoptosis*. J Clin Pathol, 2004. **57**(10): p. 1009-14.
38. Arany, Z., Huang, L.E., Eckner, R., Bhattacharya, S., Jiang, C., Goldberg, M.A., Bunn, H.F., and Livingston, D.M., *An essential role for p300/CBP in the cellular response to hypoxia*. Proc Natl Acad Sci U S A, 1996. **93**(23): p. 12969-73.
39. Fedele, A.O., Whitelaw, M.L., and Peet, D.J., *Regulation of gene expression by the hypoxia-inducible factors*. Mol Interv, 2002. **2**(4): p. 229-43.
40. Lando, D., Peet, D.J., Gorman, J.J., Whelan, D.A., Whitelaw, M.L., and Bruick, R.K., *FIH-1 is an asparaginyl hydroxylase enzyme that regulates the transcriptional activity of hypoxia-inducible factor*. Genes Dev, 2002. **16**(12): p. 1466-71.
41. Freedman, S.J., Sun, Z.Y., Poy, F., Kung, A.L., Livingston, D.M., Wagner, G., and Eck, M.J., *Structural basis for recruitment of CBP/p300 by hypoxia-inducible factor-1 alpha*. Proc Natl Acad Sci U S A, 2002. **99**(8): p. 5367-72.
42. Dames, S.A., Martinez-Yamout, M., De Guzman, R.N., Dyson, H.J., and Wright, P.E., *Structural basis for Hif-1 alpha /CBP recognition in the cellular hypoxic response*. Proc Natl Acad Sci U S A, 2002. **99**(8): p. 5271-6.
43. Lando, D., Peet, D.J., Whelan, D.A., Gorman, J.J., and Whitelaw, M.L., *Asparagine hydroxylation of the HIF transactivation domain a hypoxic switch*. Science, 2002. **295**(5556): p. 858-61.

44. Tian, H., McKnight, S.L., and Russell, D.W., *Endothelial PAS domain protein 1 (EPAS1), a transcription factor selectively expressed in endothelial cells.* Genes Dev, 1997. **11**(1): p. 72-82.
45. Lisy, K. and Peet, D.J., *Turn me on: regulating HIF transcriptional activity.* Cell Death Differ, 2008. **15**(4): p. 642-9.
46. Kaelin, W.G., *Proline hydroxylation and gene expression.* Annu Rev Biochem, 2005. **74**: p. 115-28.
47. Ozaki, H., Yu, A.Y., Della, N., Ozaki, K., Luna, J.D., Yamada, H., Hackett, S.F., Okamoto, N., Zack, D.J., Semenza, G.L., and Campochiaro, P.A., *Hypoxia inducible factor-1alpha is increased in ischemic retina: temporal and spatial correlation with VEGF expression.* Invest Ophthalmol Vis Sci, 1999. **40**(1): p. 182-9.
48. Morita, M., Ohneda, O., Yamashita, T., Takahashi, S., Suzuki, N., Nakajima, O., Kawauchi, S., Ema, M., Shibahara, S., Udon, T., Tomita, K., Tamai, M., Sogawa, K., Yamamoto, M., and Fujii-Kuriyama, Y., *HLF/HIF-2alpha is a key factor in retinopathy of prematurity in association with erythropoietin.* Embo J, 2003. **22**(5): p. 1134-46.
49. Dioum, E.M., Clarke, S.L., Ding, K., Repa, J.J., and Garcia, J.A., *HIF-2alpha-haploinsufficient mice have blunted retinal neovascularization due to impaired expression of a proangiogenic gene battery.* Invest Ophthalmol Vis Sci, 2008. **49**(6): p. 2714-20.
50. Wang, G.L., Jiang, B.H., Rue, E.A., and Semenza, G.L., *Hypoxia-inducible factor 1 is a basic-helix-loop-helix-PAS heterodimer regulated by cellular O<sub>2</sub> tension.* Proc Natl Acad Sci U S A, 1995. **92**(12): p. 5510-4.
51. Lisztwan, J., Imbert, G., Wirbelauer, C., Gstaiger, M., and Krek, W., *The von Hippel-Lindau tumor suppressor protein is a component of an E3 ubiquitin-protein ligase activity.* Genes Dev, 1999. **13**(14): p. 1822-33.
52. Cockman, M.E., Masson, N., Mole, D.R., Jaakkola, P., Chang, G.W., Clifford, S.C., Maher, E.R., Pugh, C.W., Ratcliffe, P.J., and Maxwell, P.H., *Hypoxia inducible factor-alpha binding and ubiquitylation by the von Hippel-Lindau tumor suppressor protein.* J Biol Chem, 2000. **275**(33): p. 25733-41.
53. Maxwell, P.H., Wiesener, M.S., Chang, G.W., Clifford, S.C., Vaux, E.C., Cockman, M.E., Wykoff, C.C., Pugh, C.W., Maher, E.R., and Ratcliffe, P.J., *The tumour suppressor protein VHL targets hypoxia-inducible factors for oxygen-dependent proteolysis.* Nature, 1999. **399**(6733): p. 271-5.
54. Appelhoff, R.J., Tian, Y.M., Raval, R.R., Turley, H., Harris, A.L., Pugh, C.W., Ratcliffe, P.J., and Gleadle, J.M., *Differential function of the prolyl hydroxylases PHD1, PHD2, and PHD3 in the regulation of hypoxia-inducible factor.* J Biol Chem, 2004. **279**(37): p. 38458-65.
55. Vinores, S.A., Xiao, W.H., Aslam, S., Shen, J., Oshima, Y., Nambu, H., Liu, H., Carmeliet, P., and Campochiaro, P.A., *Implication of the hypoxia response element of the Vegf promoter in mouse models of retinal and choroidal neovascularization, but not retinal vascular development.* J Cell Physiol, 2006. **206**(3): p. 749-58.

56. Terry, T.L., *Extreme prematurity and fibroblastic overgrowth of persistent vascular sheath behind each crystalline lens.* Am J Ophthalmol, 1942. **25**: p. 203-4.
57. Campbell, K., *Intensive oxygen therapy as a possible cause of retrobulbar fibroplasia; a clinical approach.* Med J Aust, 1951. **2**(2): p. 48-50.
58. Chan-Ling, T. and Stone, J., *Chapter 7 Retinopathy of prematurity: Origins in the architecture of the retina.* Progress in Retinal Research, 1993. **12**: p. 155-178.
59. Ashton, N., Ward, B., and Serpell, G., *Role of oxygen in the genesis of retrobulbar fibroplasia; a preliminary report.* Br J Ophthalmol, 1953. **37**(9): p. 513-20.
60. Patz, A., *The role of oxygen in retrobulbar fibroplasia.* Trans Am Ophthalmol Soc, 1968. **66**: p. 940-85.
61. Hatfield, E.M., *Blindness in infants and young children.* Sight Sav Rev, 1972. **42**(2): p. 69-89.
62. Avery, M.E., *Recent increase in mortality from hyaline membrane disease.* J Pediatr, 1960. **57**: p. 553-9.
63. Gilbert, C. and Awan, H., *Blindness in children.* BMJ, 2003. **327**(7418): p. 760-1.
64. Holmstrom, G., el Azazi, M., Jacobson, L., and Lennerstrand, G., *A population based, prospective study of the development of ROP in prematurely born children in the Stockholm area of Sweden.* Br J Ophthalmol, 1993. **77**(7): p. 417-23.
65. Larsson, E., Carle-Petrelius, B., Cernerud, G., Ots, L., Wallin, A., and Holmstrom, G., *Incidence of ROP in two consecutive Swedish population based studies.* Br J Ophthalmol, 2002. **86**(10): p. 1122-6.
66. Fledelius, H.C. and Kjer, B., *Surveillance for retinopathy of prematurity in a Danish country. Epidemiological experience over 20 years.* Acta Ophthalmol Scand, 2004. **82**(1): p. 38-41.
67. Darlow, B.A., *Incidence of retinopathy of prematurity in New Zealand.* Arch Dis Child, 1988. **63**(9): p. 1083-6.
68. Darlow, B.A., Hutchinson, J.L., Simpson, J.M., Henderson-Smart, D.J., Donoghue, D.A., and Evans, N.J., *Variation in rates of severe retinopathy of prematurity among neonatal intensive care units in the Australian and New Zealand Neonatal Network.* Br J Ophthalmol, 2005. **89**(12): p. 1592-6.
69. Holmstrom, G., van Wijngaarden, P., Coster, D.J., and Williams, K.A., *Genetic susceptibility to retinopathy of prematurity: the evidence from clinical and experimental animal studies.* Br J Ophthalmol, 2007. **91**(12): p. 1704-8.
70. Chen, J. and Smith, L.E., *Retinopathy of prematurity.* Angiogenesis, 2007. **10**(2): p. 133-40.
71. Smith, L.E., *Pathogenesis of retinopathy of prematurity.* Acta Paediatr Suppl, 2002. **91**(437): p. 26-8.
72. Umeda, N., Ozaki, H., Hayashi, H., Miyajima-Uchida, H., and Oshima, K., *Colocalization of Tie2, angiopoietin 2 and vascular endothelial*

- growth factor in fibrovascular membrane from patients with retinopathy of prematurity.* Ophthalmic Res, 2003. **35**(4): p. 217-23.
73. *An international classification of retinopathy of prematurity. The Committee for the Classification of Retinopathy of Prematurity.* Arch Ophthalmol, 1984. **102**(8): p. 1130-4.
74. *The International Classification of Retinopathy of Prematurity revisited.* Arch Ophthalmol, 2005. **123**(7): p. 991-9.
75. Early Treatment For Retinopathy Of Prematurity Cooperative, G., *Revised indications for the treatment of retinopathy of prematurity: results of the early treatment for retinopathy of prematurity randomized trial.* Arch Ophthalmol, 2003. **121**(12): p. 1684-94.
76. Csak, K., Szabo, V., Szabo, A., and Vannay, A., *Pathogenesis and genetic basis for retinopathy of prematurity.* Front Biosci, 2006. **11**: p. 908-20.
77. Clark, D. and Mandal, K., *Treatment of retinopathy of prematurity.* Early Hum Dev, 2008. **84**(2): p. 95-9.
78. Wheatley, C.M., Dickinson, J.L., Mackey, D.A., Craig, J.E., and Sale, M.M., *Retinopathy of prematurity: recent advances in our understanding.* Arch Dis Child Fetal Neonatal Ed, 2002. **87**(2): p. F78-82.
79. Saunders, R.A., Donahue, M.L., Christmann, L.M., Pakalnis, A.V., Tung, B., Hardy, R.J., and Phelps, D.L., *Racial variation in retinopathy of prematurity. The Cryotherapy for Retinopathy of Prematurity Cooperative Group.* Arch Ophthalmol, 1997. **115**(5): p. 604-8.
80. Ng, Y.K., Fielder, A.R., Shaw, D.E., and Levene, M.I., *Epidemiology of retinopathy of prematurity.* Lancet, 1988. **2**(8622): p. 1235-8.
81. Lang, D.M., Blackledge, J., and Arnold, R.W., *Is Pacific race a retinopathy of prematurity risk factor?* Arch Pediatr Adolesc Med, 2005. **159**(8): p. 771-3.
82. Cooke, R.W., Drury, J.A., Mountford, R., and Clark, D., *Genetic polymorphisms and retinopathy of prematurity.* Invest Ophthalmol Vis Sci, 2004. **45**(6): p. 1712-5.
83. Vannay, A., Dunai, G., Banyasz, I., Szabo, M., Vamos, R., Treszl, A., Hajdu, J., Tulassay, T., and Vasarhelyi, B., *Association of genetic polymorphisms of vascular endothelial growth factor and risk for proliferative retinopathy of prematurity.* Pediatr Res, 2005. **57**(3): p. 396-8.
84. Shastry, B.S. and Qu, X., *Lack of association of the VEGF gene promoter (-634 G->C and -460 C->T) polymorphism and the risk of advanced retinopathy of prematurity.* Graefes Arch Clin Exp Ophthalmol, 2007. **245**(5): p. 741-3.
85. Dunai, G., Vasarhelyi, B., Szabo, M., Hajdu, J., Meszaros, G., Tulassay, T., and Treszl, A., *Published genetic variants in retinopathy of prematurity: random forest analysis suggests a negligible contribution to risk and severity.* Curr Eye Res, 2008. **33**(5): p. 501-5.
86. Kim, J.H., Yu, Y.S., Kim, J., and Park, S.S., *Mutations of the Norrie gene in Korean ROP infants.* Korean J Ophthalmol, 2002. **16**(2): p. 93-6.
87. Haider, M.Z., Devarajan, L.V., Al-Essa, M., and Kumar, H., *A C597->A polymorphism in the Norrie disease gene is associated with advanced*

- retinopathy of prematurity in premature Kuwaiti infants.* J Biomed Sci, 2002. **9**(4): p. 365-70.
88. Hutcheson, K.A., Paluru, P.C., Bernstein, S.L., Koh, J., Rappaport, E.F., Leach, R.A., and Young, T.L., *Norrie disease gene sequence variants in an ethnically diverse population with retinopathy of prematurity.* Mol Vis, 2005. **11**: p. 501-8.
89. Dickinson, J.L., Sale, M.M., Passmore, A., FitzGerald, L.M., Wheatley, C.M., Burdon, K.P., Craig, J.E., Tengtrisorn, S., Carden, S.M., Maclean, H., and Mackey, D.A., *Mutations in the NDP gene: contribution to Norrie disease, familial exudative vitreoretinopathy and retinopathy of prematurity.* Clin Experiment Ophthalmol, 2006. **34**(7): p. 682-8.
90. Hiraoka, M., Berinstein, D.M., Trese, M.T., and Shastry, B.S., *Insertion and deletion mutations in the dinucleotide repeat region of the Norrie disease gene in patients with advanced retinopathy of prematurity.* J Hum Genet, 2001. **46**(4): p. 178-81.
91. Shastry, B.S., Pendergast, S.D., Hartzer, M.K., Liu, X., and Trese, M.T., *Identification of missense mutations in the Norrie disease gene associated with advanced retinopathy of prematurity.* Arch Ophthalmol, 1997. **115**(5): p. 651-5.
92. Talks, S.J., Ebenezer, N., Hykin, P., Adams, G., Yang, F., Schulenberg, E., Gregory-Evans, K., and Gregory-Evans, C.Y., *De novo mutations in the 5' regulatory region of the Norrie disease gene in retinopathy of prematurity.* J Med Genet, 2001. **38**(12): p. E46.
93. Ricci, B., *Oxygen-induced retinopathy in the rat model.* Doc Ophthalmol, 1990. **74**(3): p. 171-7.
94. Madan, A. and Penn, J.S., *Animal models of oxygen-induced retinopathy.* Front Biosci, 2003. **8**: p. d1030-43.
95. Penn, J.S., Tolman, B.L., and Henry, M.M., *Oxygen-induced retinopathy in the rat: relationship of retinal nonperfusion to subsequent neovascularization.* Invest Ophthalmol Vis Sci, 1994. **35**(9): p. 3429-35.
96. van Wijngaarden, P., Coster, D.J., Brereton, H.M., Gibbins, I.L., and Williams, K.A., *Strain-dependent differences in oxygen-induced retinopathy in the inbred rat.* Invest Ophthalmol Vis Sci, 2005. **46**(4): p. 1445-52.
97. Francis, P.J., Appukuttan, B., Simmons, E., Landauer, N., Stoddard, J., Hamon, S., Ott, J., Ferguson, B., Klein, M., Stout, J.T., and Neuringer, M., *Rhesus monkeys and humans share common susceptibility genes for age-related macular disease.* Hum Mol Genet, 2008. **17**(17): p. 2673-80.
98. Gao, G., Li, Y., Fant, J., Crosson, C.E., Becerra, S.P., and Ma, J.X., *Difference in ischemic regulation of vascular endothelial growth factor and pigment epithelium-derived factor in brown norway and sprague dawley rats contributing to different susceptibilities to retinal neovascularization.* Diabetes, 2002. **51**(4): p. 1218-25.
99. Chan, C.K., Pham, L.N., Zhou, J., Spee, C., Ryan, S.J., and Hinton, D.R., *Differential expression of pro- and antiangiogenic factors in mouse strain-dependent hypoxia-induced retinal neovascularization.* Lab Invest, 2005. **85**(6): p. 721-33.

100. Floyd, B.N., Leske, D.A., Wren, S.M., Mookadam, M., Fautsch, M.P., and Holmes, J.M., *Differences between rat strains in models of retinopathy of prematurity*. Mol Vis, 2005. **11**: p. 524-30.
101. Lee, R.C., Feinbaum, R.L., and Ambros, V., *The C. elegans heterochronic gene lin-4 encodes small RNAs with antisense complementarity to lin-14*. Cell, 1993. **75**(5): p. 843-54.
102. Meister, G., Landthaler, M., Patkaniowska, A., Dorsett, Y., Teng, G., and Tuschl, T., *Human Argonaute2 mediates RNA cleavage targeted by miRNAs and siRNAs*. Mol Cell, 2004. **15**(2): p. 185-97.
103. Elbashir, S.M., Lendeckel, W., and Tuschl, T., *RNA interference is mediated by 21- and 22-nucleotide RNAs*. Genes Dev, 2001. **15**(2): p. 188-200.
104. Yang, M. and Mattes, J., *Discovery, biology and therapeutic potential of RNA interference, microRNA and antagonists*. Pharmacol Ther, 2008. **117**(1): p. 94-104.
105. Olsen, P.H. and Ambros, V., *The lin-4 regulatory RNA controls developmental timing in Caenorhabditis elegans by blocking LIN-14 protein synthesis after the initiation of translation*. Dev Biol, 1999. **216**(2): p. 671-80.
106. Lewis, B.P., Shih, I.H., Jones-Rhoades, M.W., Bartel, D.P., and Burge, C.B., *Prediction of mammalian microRNA targets*. Cell, 2003. **115**(7): p. 787-98.
107. Reinhart, B.J., Slack, F.J., Basson, M., Pasquinelli, A.E., Bettinger, J.C., Rougvie, A.E., Horvitz, H.R., and Ruvkun, G., *The 21-nucleotide let-7 RNA regulates developmental timing in Caenorhabditis elegans*. Nature, 2000. **403**(6772): p. 901-6.
108. Pasquinelli, A.E., Reinhart, B.J., Slack, F., Martindale, M.Q., Kuroda, M.I., Maller, B., Hayward, D.C., Ball, E.E., Degnan, B., Muller, P., Spring, J., Srinivasan, A., Fishman, M., Finnerty, J., Corbo, J., Levine, M., Leahy, P., Davidson, E., and Ruvkun, G., *Conservation of the sequence and temporal expression of let-7 heterochronic regulatory RNA*. Nature, 2000. **408**(6808): p. 86-9.
109. Lagos-Quintana, M., Rauhut, R., Meyer, J., Borkhardt, A., and Tuschl, T., *New microRNAs from mouse and human*. RNA, 2003. **9**(2): p. 175-9.
110. Bartel, D.P., *MicroRNAs: genomics, biogenesis, mechanism, and function*. Cell, 2004. **116**(2): p. 281-97.
111. Lau, N.C., Lim, L.P., Weinstein, E.G., and Bartel, D.P., *An abundant class of tiny RNAs with probable regulatory roles in Caenorhabditis elegans*. Science, 2001. **294**(5543): p. 858-62.
112. Lagos-Quintana, M., Rauhut, R., Lendeckel, W., and Tuschl, T., *Identification of novel genes coding for small expressed RNAs*. Science, 2001. **294**(5543): p. 853-8.
113. Lee, Y., Jeon, K., Lee, J.T., Kim, S., and Kim, V.N., *MicroRNA maturation: stepwise processing and subcellular localization*. EMBO J, 2002. **21**(17): p. 4663-70.

114. Lee, Y., Kim, M., Han, J., Yeom, K.H., Lee, S., Baek, S.H., and Kim, V.N., *MicroRNA genes are transcribed by RNA polymerase II*. EMBO J, 2004. **23**(20): p. 4051-60.
115. Cai, X., Hagedorn, C.H., and Cullen, B.R., *Human microRNAs are processed from capped, polyadenylated transcripts that can also function as mRNAs*. RNA, 2004. **10**(12): p. 1957-66.
116. Kim, V.N., *MicroRNA biogenesis: coordinated cropping and dicing*. Nat Rev Mol Cell Biol, 2005. **6**(5): p. 376-85.
117. Lee, Y., Ahn, C., Han, J., Choi, H., Kim, J., Yim, J., Lee, J., Provost, P., Radmark, O., Kim, S., and Kim, V.N., *The nuclear RNase III Drosha initiates microRNA processing*. Nature, 2003. **425**(6956): p. 415-9.
118. He, L. and Hannon, G.J., *MicroRNAs: small RNAs with a big role in gene regulation*. Nat Rev Genet, 2004. **5**(7): p. 522-31.
119. Yi, R., Qin, Y., Macara, I.G., and Cullen, B.R., *Exportin-5 mediates the nuclear export of pre-microRNAs and short hairpin RNAs*. Genes Dev, 2003. **17**(24): p. 3011-6.
120. Kim, V.N., *MicroRNA precursors in motion: exportin-5 mediates their nuclear export*. Trends Cell Biol, 2004. **14**(4): p. 156-9.
121. Ketting, R.F., Fischer, S.E., Bernstein, E., Sijen, T., Hannon, G.J., and Plasterk, R.H., *Dicer functions in RNA interference and in synthesis of small RNA involved in developmental timing in C. elegans*. Genes Dev, 2001. **15**(20): p. 2654-9.
122. Bernstein, E., Caudy, A.A., Hammond, S.M., and Hannon, G.J., *Role for a bidentate ribonuclease in the initiation step of RNA interference*. Nature, 2001. **409**(6818): p. 363-6.
123. Hammond, S.M., Bernstein, E., Beach, D., and Hannon, G.J., *An RNA-directed nuclease mediates post-transcriptional gene silencing in Drosophila cells*. Nature, 2000. **404**(6775): p. 293-6.
124. Lai, E.C., *Micro RNAs are complementary to 3' UTR sequence motifs that mediate negative post-transcriptional regulation*. Nat Genet, 2002. **30**(4): p. 363-4.
125. Chendrimada, T.P., Gregory, R.I., Kumaraswamy, E., Norman, J., Cooch, N., Nishikura, K., and Shiekhattar, R., *TRBP recruits the Dicer complex to Ago2 for microRNA processing and gene silencing*. Nature, 2005. **436**(7051): p. 740-4.
126. Szabo, A., Perou, C.M., Karaca, M., Perreard, L., Palais, R., Quackenbush, J.F., and Bernard, P.S., *Statistical modeling for selecting housekeeper genes*. Genome Biol, 2004. **5**(8): p. R59.
127. Humphreys, D.T., Westman, B.J., Martin, D.I., and Preiss, T., *MicroRNAs control translation initiation by inhibiting eukaryotic initiation factor 4E/cap and poly(A) tail function*. Proc Natl Acad Sci U S A, 2005. **102**(47): p. 16961-6.
128. Beilharz, T.H., Humphreys, D.T., Clancy, J.L., Thermann, R., Martin, D.I., Hentze, M.W., and Preiss, T., *microRNA-mediated messenger RNA deadenylation contributes to translational repression in mammalian cells*. PLoS One, 2009. **4**(8): p. e6783.

129. Hipfner, D.R., Weigmann, K., and Cohen, S.M., *The bantam gene regulates Drosophila growth*. Genetics, 2002. **161**(4): p. 1527-37.
130. Brennecke, J., Hipfner, D.R., Stark, A., Russell, R.B., and Cohen, S.M., *bantam encodes a developmentally regulated microRNA that controls cell proliferation and regulates the proapoptotic gene hid in Drosophila*. Cell, 2003. **113**(1): p. 25-36.
131. Makarev, E., Spence, J.R., Del Rio-Tsonis, K., and Tsonis, P.A., *Identification of microRNAs and other small RNAs from the adult newt eye*. Mol Vis, 2006. **12**: p. 1386-91.
132. Wienholds, E. and Plasterk, R.H., *MicroRNA function in animal development*. FEBS Lett, 2005. **579**(26): p. 5911-22.
133. Arora, A., McKay, G.J., and Simpson, D.A., *Prediction and verification of miRNA expression in human and rat retinas*. Invest Ophthalmol Vis Sci, 2007. **48**(9): p. 3962-7.
134. Karali, M., Peluso, I., Marigo, V., and Banfi, S., *Identification and characterization of microRNAs expressed in the mouse eye*. Invest Ophthalmol Vis Sci, 2007. **48**(2): p. 509-15.
135. Ryan, D.G., Oliveira-Fernandes, M., and Lavker, R.M., *MicroRNAs of the mammalian eye display distinct and overlapping tissue specificity*. Mol Vis, 2006. **12**: p. 1175-84.
136. Shen, J., Yang, X., Xie, B., Chen, Y., Swaim, M., Hackett, S.F., and Campochiaro, P.A., *MicroRNAs Regulate Ocular Neovascularization*. Mol Ther, 2008. **16**(7): p. 1208-16.
137. Xu, S., Witmer, P.D., Lumayag, S., Kovacs, B., and Valle, D., *MicroRNA (miRNA) transcriptome of mouse retina and identification of a sensory organ-specific miRNA cluster*. J Biol Chem, 2007. **282**(34): p. 25053-66.
138. Solda, G., Robusto, M., Primignani, P., Castorina, P., Benzonì, E., Cesarani, A., Ambrosetti, U., Asselta, R., and Duga, S., *A novel mutation within the MIR96 gene causes non-syndromic inherited hearing loss in an Italian family by altering pre-miRNA processing*. Hum Mol Genet, 2012. **21**(3): p. 577-85.
139. Bai, Y., Bai, X., Wang, Z., Zhang, X., Ruan, C., and Miao, J., *MicroRNA-126 inhibits ischemia-induced retinal neovascularization via regulating angiogenic growth factors*. Exp Mol Pathol, 2011. **91**(1): p. 471-7.
140. Venturini, L., Battmer, K., Castoldi, M., Schultheis, B., Hochhaus, A., Muckenthaler, M.U., Ganser, A., Eder, M., and Scherr, M., *Expression of the miR-17-92 polycistron in chronic myeloid leukemia (CML) CD34+ cells*. Blood, 2007. **109**(10): p. 4399-405.
141. Semenza, G.L., *Hydroxylation of HIF-1: oxygen sensing at the molecular level*. Physiology (Bethesda), 2004. **19**: p. 176-82.
142. Maxwell, P.H., Dachs, G.U., Gleadle, J.M., Nicholls, L.G., Harris, A.L., Stratford, I.J., Hankinson, O., Pugh, C.W., and Ratcliffe, P.J., *Hypoxia-inducible factor-1 modulates gene expression in solid tumors and influences both angiogenesis and tumor growth*. Proc Natl Acad Sci U S A, 1997. **94**(15): p. 8104-9.
143. Taguchi, A., Yanagisawa, K., Tanaka, M., Cao, K., Matsuyama, Y., Goto, H., and Takahashi, T., *Identification of hypoxia-inducible factor-1*

- alpha as a novel target for miR-17-92 microRNA cluster.* Cancer Res, 2008. **68**(14): p. 5540-5.
144. Hua, Z., Lv, Q., Ye, W., Wong, C.K., Cai, G., Gu, D., Ji, Y., Zhao, C., Wang, J., Yang, B.B., and Zhang, Y., *MiRNA-directed regulation of VEGF and other angiogenic factors under hypoxia.* PLoS ONE, 2006. **1**: p. e116.
145. Kulshreshtha, R., Ferracin, M., Wojcik, S.E., Garzon, R., Alder, H., Agosto-Perez, F.J., Davuluri, R., Liu, C.G., Croce, C.M., Negrini, M., Calin, G.A., and Ivan, M., *A microRNA signature of hypoxia.* Mol Cell Biol, 2007. **27**(5): p. 1859-67.
146. Suarez, Y., Fernandez-Hernando, C., Pober, J.S., and Sessa, W.C., *Dicer dependent microRNAs regulate gene expression and functions in human endothelial cells.* Circ Res, 2007. **100**(8): p. 1164-73.
147. Fasanaro, P., D'Alessandra, Y., Di Stefano, V., Melchionna, R., Romani, S., Pompilio, G., Capogrossi, M.C., and Martelli, F., *MicroRNA-210 modulates endothelial cell response to hypoxia and inhibits the receptor tyrosine-kinase ligand Ephrin-A3.* J Biol Chem, 2008. **283**(23): p. 15878-83.
148. Urbich, C., Kuehbacher, A., and Dimmeler, S., *Role of microRNAs in vascular diseases, inflammation, and angiogenesis.* Cardiovasc Res, 2008. **79**(4): p. 581-8.
149. Gregory, P.A., Bert, A.G., Paterson, E.L., Barry, S.C., Tsykin, A., Farshid, G., Vadas, M.A., Khew-Goodall, Y., and Goodall, G.J., *The miR-200 family and miR-205 regulate epithelial to mesenchymal transition by targeting ZEB1 and SIP1.* Nat Cell Biol, 2008. **10**(5): p. 593-601.
150. Gregory, P.A., Bracken, C.P., Smith, E., Bert, A.G., Wright, J.A., Roslan, S., Morris, M., Wyatt, L., Farshid, G., Lim, Y.Y., Lindeman, G.J., Shannon, M.F., Drew, P.A., Khew-Goodall, Y., and Goodall, G.J., *An autocrine TGF-beta/ZEB/miR-200 signaling network regulates establishment and maintenance of epithelial-mesenchymal transition.* Mol Biol Cell, 2011. **22**(10): p. 1686-98.
151. Kuehbacher, A., Urbich, C., Zeiher, A.M., and Dimmeler, S., *Role of Dicer and Drosha for endothelial microRNA expression and angiogenesis.* Circ Res, 2007. **101**(1): p. 59-68.
152. Suarez, Y., Fernandez-Hernando, C., Yu, J., Gerber, S.A., Harrison, K.D., Pober, J.S., Iruela-Arispe, M.L., Merkenschlager, M., and Sessa, W.C., *Dicer-dependent endothelial microRNAs are necessary for postnatal angiogenesis.* Proc Natl Acad Sci U S A, 2008. **105**(37): p. 14082-7.
153. Wang, B., Komers, R., Carew, R., Winbanks, C.E., Xu, B., Herman-Edelstein, M., Koh, P., Thomas, M., Jandeleit-Dahm, K., Gregorevic, P., Cooper, M.E., and Kantharidis, P., *Suppression of microRNA-29 Expression by TGF-beta1 Promotes Collagen Expression and Renal Fibrosis.* J Am Soc Nephrol, 2011.
154. Wu, J.H., Gao, Y., Ren, A.J., Zhao, S.H., Zhong, M., Peng, Y.J., Shen, W., Jing, M., and Liu, L., *Altered MicroRNA Expression Profiles in Retinas with Diabetic Retinopathy.* Ophthalmic Res, 2011. **47**(4): p. 195-201.

155. Dews, M., Homayouni, A., Yu, D., Murphy, D., Sevignani, C., Wentzel, E., Furth, E.E., Lee, W.M., Enders, G.H., Mendell, J.T., and Thomas-Tikhonenko, A., *Augmentation of tumor angiogenesis by a Myc-activated microRNA cluster*. Nat Genet, 2006. **38**(9): p. 1060-5.
156. Ngo, C.V., Gee, M., Akhtar, N., Yu, D., Volpert, O., Auerbach, R., and Thomas-Tikhonenko, A., *An in vivo function for the transforming Myc protein: elicitation of the angiogenic phenotype*. Cell Growth Differ, 2000. **11**(4): p. 201-10.
157. Poliseno, L., Tuccoli, A., Mariani, L., Evangelista, M., Citti, L., Woods, K., Mercatanti, A., Hammond, S., and Rainaldi, G., *MicroRNAs modulate the angiogenic properties of HUVECs*. Blood, 2006. **108**(9): p. 3068-71.
158. Matsui, J., Wakabayashi, T., Asada, M., Yoshimatsu, K., and Okada, M., *Stem cell factor/c-kit signaling promotes the survival, migration, and capillary tube formation of human umbilical vein endothelial cells*. J Biol Chem, 2004. **279**(18): p. 18600-7.
159. Bryant, R.J., Pawlowski, T., Catto, J.W., Marsden, G., Vessella, R.L., Rhees, B., Kuslich, C., Visakorpi, T., and Hamdy, F.C., *Changes in circulating microRNA levels associated with prostate cancer*. Br J Cancer, 2012.
160. Xu, Y., Brenn, T., Brown, E.R., Doherty, V., and Melton, D.W., *Differential expression of microRNAs during melanoma progression: miR-200c, miR-205 and miR-211 are downregulated in melanoma and act as tumour suppressors*. Br J Cancer, 2012.
161. Liu, R., Chen, X., Du, Y., Yao, W., Shen, L., Wang, C., Hu, Z., Zhuang, R., Ning, G., Zhang, C., Yuan, Y., Li, Z., Zen, K., Ba, Y., and Zhang, C.Y., *Serum MicroRNA Expression Profile as a Biomarker in the Diagnosis and Prognosis of Pancreatic Cancer*. Clin Chem, 2011.
162. Camps, C., Buffa, F.M., Colella, S., Moore, J., Sotiriou, C., Sheldon, H., Harris, A.L., Gleadle, J.M., and Ragoussis, J., *hsa-miR-210 Is induced by hypoxia and is an independent prognostic factor in breast cancer*. Clin Cancer Res, 2008. **14**(5): p. 1340-8.
163. Kasinski, A.L. and Slack, F.J., *Epigenetics and genetics. MicroRNAs en route to the clinic: progress in validating and targeting microRNAs for cancer therapy*. Nat Rev Cancer, 2011. **11**(12): p. 849-64.
164. Gambari, R., Fabbri, E., Borgatti, M., Lampronti, I., Finotti, A., Brognara, E., Bianchi, N., Manicardi, A., Marchelli, R., and Corradini, R., *Targeting microRNAs involved in human diseases: a novel approach for modification of gene expression and drug development*. Biochem Pharmacol, 2011. **82**(10): p. 1416-29.
165. Phalon, C., Rao, D.D., and Nemunaitis, J., *Potential use of RNA interference in cancer therapy*. Expert Rev Mol Med, 2010. **12**: p. e26.
166. Miyagishi, M. and Taira, K., *Development and application of siRNA expression vector*. Nucleic Acids Res Suppl, 2002(2): p. 113-4.
167. Gee, H.E., Buffa, F.M., Camps, C., Ramachandran, A., Leek, R., Taylor, M., Patil, M., Sheldon, H., Betts, G., Homer, J., West, C., Ragoussis, J.,

- and Harris, A.L., *The small-nucleolar RNAs commonly used for microRNA normalisation correlate with tumour pathology and prognosis*. Br J Cancer, 2011. **104**(7): p. 1168-77.
168. Obad, S., dos Santos, C.O., Petri, A., Heidenblad, M., Broom, O., Ruse, C., Fu, C., Lindow, M., Stenvang, J., Straarup, E.M., Hansen, H.F., Koch, T., Pappin, D., Hannon, G.J., and Kauppinen, S., *Silencing of microRNA families by seed-targeting tiny LNAs*. Nat Genet, 2011. **43**(4): p. 371-8.
169. Norman, K.L. and Sarnow, P., *Hepatitis C virus' Achilles' heel--dependence on liver-specific microRNA miR-122*. Cell Res, 2010. **20**(3): p. 247-9.
170. Lanford, R.E., Hildebrandt-Eriksen, E.S., Petri, A., Persson, R., Lindow, M., Munk, M.E., Kauppinen, S., and Orum, H., *Therapeutic silencing of microRNA-122 in primates with chronic hepatitis C virus infection*. Science, 2010. **327**(5962): p. 198-201.
171. *Statement for the Use of Animals in Ophthalmic and Visual Research*. The Association for Research in Vision and Ophthalmology. [cited 2010 October 24]; Available from: <http://www.arvo.org/eweb/dynamicpage.aspx?site=arvo2&webcode=AnimalsResearch>.
172. *Australian code of practice for the care and use of animals for scientific purposes*. The National Health and Medical Research Council of Australia. 2004 [cited 2010 24 October]; 7th Edition:[Available from: <http://www.nhmrc.gov.au/guidelines/publications/ea16>.
173. Reynaud, X. and Dorey, C.K., *Extraretinal neovascularization induced by hypoxic episodes in the neonatal rat*. Invest Ophthalmol Vis Sci, 1994. **35**(8): p. 3169-77.
174. Penn, J.S., Henry, M.M., Wall, P.T., and Tolman, B.L., *The range of PaO<sub>2</sub> variation determines the severity of oxygen-induced retinopathy in newborn rats*. Invest Ophthalmol Vis Sci, 1995. **36**(10): p. 2063-70.
175. Penn, J.S., Tolman, B.L., and Lowery, L.A., *Variable oxygen exposure causes preretinal neovascularization in the newborn rat*. Invest Ophthalmol Vis Sci, 1993. **34**(3): p. 576-85.
176. Ventresca, M.R., Gonder, J.R., and Tanswell, A.K., *Oxygen-induced proliferative retinopathy in the newborn rat*. Can J Ophthalmol, 1990. **25**(4): p. 186-9.
177. Stone, J., *The whole mount handbook: a guide to the preparation of retinal whole mounts*. 1981, Sydney: Maitland Publications.
178. Chan-Ling, T., *Glial, vascular, and neuronal cyogenesis in whole-mounted cat retina*. Microsc Res Tech, 1997. **36**(1): p. 1-16.
179. Hayes, C.E. and Goldstein, I.J., *An alpha-D-galactosyl-binding lectin from Bandeiraea simplicifolia seeds. Isolation by affinity chromatography and characterization*. J Biol Chem, 1974. **249**(6): p. 1904-14.
180. Cunningham, S., McColm, J.R., Wade, J., Sedowofia, K., McIntosh, N., and Fleck, B., *A novel model of retinopathy of prematurity simulating*

- preterm oxygen variability in the rat.* Invest Ophthalmol Vis Sci, 2000. **41**(13): p. 4275-80.
181. Van Wijngaarden, P., *Heritable influences in Oxygen-Induced Retinopathy.* 2006, Department of Ophthalmology, Flinders University: Adelaide.
182. Rozen, S. and Skaletsky, H., *Primer3 on the WWW for general users and for biologist programmers.* Methods Mol Biol, 2000. **132**: p. 365-86.
183. Bustin, S.A., *Absolute quantification of mRNA using real-time reverse transcription polymerase chain reaction assays.* J Mol Endocrinol, 2000. **25**(2): p. 169-93.
184. Meijerink, J., Mandigers, C., van de Locht, L., Tonnissen, E., Goodsaid, F., and Raemaekers, J., *A novel method to compensate for different amplification efficiencies between patient DNA samples in quantitative real-time PCR.* J Mol Diagn, 2001. **3**(2): p. 55-61.
185. Bustin, S.A., Benes, V., Garson, J.A., Hellemans, J., Huggett, J., Kubista, M., Mueller, R., Nolan, T., Pfaffl, M.W., Shipley, G.L., Vandesompele, J., and Wittwer, C.T., *The MIQE guidelines: minimum information for publication of quantitative real-time PCR experiments.* Clin Chem, 2009. **55**(4): p. 611-22.
186. Livak, K.J. and Schmittgen, T.D., *Analysis of relative gene expression data using real-time quantitative PCR and the 2(-Delta Delta C(T)) Method.* Methods, 2001. **25**(4): p. 402-8.
187. Vandesompele, J., De Preter, K., Pattyn, F., Poppe, B., Van Roy, N., De Paepe, A., and Speleman, F., *Accurate normalization of real-time quantitative RT-PCR data by geometric averaging of multiple internal control genes.* Genome Biol, 2002. **3**(7): p. RESEARCH0034.1-11.
188. van Wijngaarden, P., Brereton, H.M., Coster, D.J., and Williams, K.A., *Stability of housekeeping gene expression in the rat retina during exposure to cyclic hyperoxia.* Mol Vis, 2007. **13**: p. 1508-15.
189. Neal, C.S., Michael, M.Z., Rawlings, L.H., Van der Hoek, M.B., and Gleadle, J.M., *The VHL-dependent regulation of microRNAs in renal cancer.* BMC Med, 2010. **8**: p. 64.
190. Griffiths-Jones, S., *The microRNA Registry.* Nucleic Acids Res, 2004. **32**(Database issue): p. D109-11.
191. Bravo, V., Rosero, S., Ricordi, C., and Pastori, R.L., *Instability of miRNA and cDNAs derivatives in RNA preparations.* Biochem Biophys Res Commun, 2007. **353**(4): p. 1052-5.
192. Simon, P., *Q-Gene: processing quantitative real-time RT-PCR data.* Bioinformatics, 2003. **19**(11): p. 1439-40.
193. Roa, W., Brunet, B., Guo, L., Amanie, J., Fairchild, A., Gabos, Z., Nijjar, T., Scrimger, R., Yee, D., and Xing, J., *Identification of a new microRNA expression profile as a potential cancer screening tool.* Clin Invest Med, 2010. **33**(2): p. E124.
194. Muller, P.Y., Janovjak, H., Miserez, A.R., and Dobbie, Z., *Processing of gene expression data generated by quantitative real-time RT-PCR.* Biotechniques, 2002. **32**(6): p. 1372-4, 1376, 1378-9.

195. Griffiths-Jones, S., Grocock, R.J., van Dongen, S., Bateman, A., and Enright, A.J., *miRBase: microRNA sequences, targets and gene nomenclature*. Nucleic Acids Res, 2006. **34**(Database issue): p. D140-4.
196. Griffiths-Jones, S., Saini, H.K., van Dongen, S., and Enright, A.J., *miRBase: tools for microRNA genomics*. Nucleic Acids Res, 2008. **36**(Database issue): p. D154-8.
197. Megraw, M., Sethupathy, P., Corda, B., and Hatzigeorgiou, A.G., *miRGen: a database for the study of animal microRNA genomic organization and function*. Nucleic Acids Res, 2007. **35**(Database issue): p. D149-55.
198. Sethupathy, P., Corda, B., and Hatzigeorgiou, A.G., *TarBase: A comprehensive database of experimentally supported animal microRNA targets*. RNA, 2006. **12**(2): p. 192-7.
199. Griffiths-Jones, S., *miRBase: the microRNA sequence database*. Methods Mol Biol, 2006. **342**: p. 129-38.
200. Benjamini Y, H.Y., *Controlling the false discovery rate: a practical and powerful approach to multiple testing*. J. R. Statist. Soc. B. , 1995. **57**: p. 289-300.
201. Smyth, G.K., *Linear models and empirical bayes methods for assessing differential expression in microarray experiments*. Stat Appl Genet Mol Biol, 2004. **3**: p. Article3.
202. Hartnett, M.E., Martiniuk, D., Byfield, G., Geisen, P., Zeng, G., and Bautch, V.L., *Neutralizing VEGF decreases tortuosity and alters endothelial cell division orientation in arterioles and veins in a rat model of ROP: relevance to plus disease*. Invest Ophthalmol Vis Sci, 2008. **49**(7): p. 3107-14.
203. van Wijngaarden, P., Brereton, H.M., Coster, D.J., and Williams, K.A., *Genetic influences on susceptibility to oxygen-induced retinopathy*. Invest Ophthalmol Vis Sci, 2007. **48**(4): p. 1761-6.
204. Dorfman, A.L., Polosa, A., Joly, S., Chemtob, S., and Lachapelle, P., *Functional and structural changes resulting from strain differences in the rat model of oxygen-induced retinopathy*. Invest Ophthalmol Vis Sci, 2009. **50**(5): p. 2436-50.
205. van Wijngaarden, P., Brereton, H.M., Coster, D.J., and Williams, K.A., *Hereditary influences in oxygen-induced retinopathy in the rat*. Doc Ophthalmol, 2009.
206. Almasy, L., *The complex hunt for genes influencing complex disease*. J Thromb Haemost, 2004. **2**(6): p. 866-7.
207. Nadeau, J.H., *Modifier genes in mice and humans*. Nat Rev Genet, 2001. **2**(3): p. 165-74.
208. Sankaran, V.G., Lettre, G., Orkin, S.H., and Hirschhorn, J.N., *Modifier genes in Mendelian disorders: the example of hemoglobin disorders*. Ann N Y Acad Sci, 2010. **1214**: p. 47-56.
209. Lu, K., Zhou, Y., Kaufman, K., Mott, R., and Ma, J.X., *Rat strain-dependent susceptibility to ischemia-induced retinopathy associated with retinal vascular endothelial growth factor regulation*. J Mol Endocrinol, 2007. **38**(4): p. 423-32.

210. Darlow, B.A., Hutchinson, J.L., Henderson-Smart, D.J., Donoghue, D.A., Simpson, J.M., and Evans, N.J., *Prenatal risk factors for severe retinopathy of prematurity among very preterm infants of the Australian and New Zealand Neonatal Network*. Pediatrics, 2005. **115**(4): p. 990-6.
211. Tombran-Tink, J. and Barnstable, C.J., *PEDF: a multifaceted neurotrophic factor*. Nat Rev Neurosci, 2003. **4**(8): p. 628-36.
212. Huang, Q., Wang, S., Sorenson, C.M., and Sheibani, N., *PEDF-deficient mice exhibit an enhanced rate of retinal vascular expansion and are more sensitive to hyperoxia-mediated vessel obliteration*. Exp Eye Res, 2008. **87**(3): p. 226-41.
213. Hartmann, J.S., Thompson, H., Wang, H., Kanekar, S., Huang, W., Budd, S.J., and Hartnett, M.E., *Expression of vascular endothelial growth factor and pigment epithelial-derived factor in a rat model of retinopathy of prematurity*. Mol Vis, 2011. **17**: p. 1577-87.
214. Jeffery, G., *The albino retina: an abnormality that provides insight into normal retinal development*. Trends Neurosci, 1997. **20**(4): p. 165-9.
215. Ilia, M. and Jeffery, G., *Retinal mitosis is regulated by dopa, a melanin precursor that may influence the time at which cells exit the cell cycle: analysis of patterns of cell production in pigmented and albino retinae*. J Comp Neurol, 1999. **405**(3): p. 394-405.
216. Lavado, A., Jeffery, G., Tovar, V., de la Villa, P., and Montoliu, L., *Ectopic expression of tyrosine hydroxylase in the pigmented epithelium rescues the retinal abnormalities and visual function common in albinos in the absence of melanin*. J Neurochem, 2006. **96**(4): p. 1201-11.
217. Blaszczyk, W.M., Arning, L., Hoffmann, K.P., and Epplen, J.T., *A Tyrosinase missense mutation causes albinism in the Wistar rat*. Pigment Cell Res, 2005. **18**(2): p. 144-5.
218. Blaszczyk, W.M., Distler, C., Dekomien, G., Arning, L., Hoffmann, K.P., and Epplen, J.T., *Identification of a tyrosinase (TYR) exon 4 deletion in albino ferrets (Mustela putorius furo)*. Anim Genet, 2007. **38**(4): p. 421-3.
219. Akeo, K., Ebenstein, D.B., and Dorey, C.K., *Dopa and oxygen inhibit proliferation of retinal pigment epithelial cells, fibroblasts and endothelial cells in vitro*. Exp Eye Res, 1989. **49**(3): p. 335-46.
220. Akeo, K., Tanaka, Y., and Okisaka, S., *A comparison between melanotic and amelanotic retinal pigment epithelial cells in vitro concerning the effects of L-dopa and oxygen on cell cycle*. Pigment Cell Res, 1994. **7**(3): p. 145-51.
221. Semo, M., Bryce, J., and Jeffery, G., *Oxygen modulates cell death in the proliferating retina*. Eur J Neurosci, 2001. **13**(6): p. 1257-60.
222. Yang, X.M., Yafai, Y., Wiedemann, P., Kuhrt, H., Wang, Y.S., Reichenbach, A., and Eichler, W., *Hypoxia-induced upregulation of pigment epithelium-derived factor by retinal glial (Muller) cells*. J Neurosci Res, 2012. **90**(1): p. 257-66.
223. O'Connor, T.P. and Crystal, R.G., *Genetic medicines: treatment strategies for hereditary disorders*. Nat Rev Genet, 2006. **7**(4): p. 261-76.
224. Hellstrom, A., Carlsson, B., Niklasson, A., Segnestam, K., Boguszewski, M., de Lacerda, L., Savage, M., Svensson, E., Smith, L.,

- Weinberger, D., Albertsson Wikland, K., and Laron, Z., *IGF-I is critical for normal vascularization of the human retina*. J Clin Endocrinol Metab, 2002. **87**(7): p. 3413-6.
225. Wildsmith, S.E. and Elcock, F.J., *Microarrays under the microscope*. Mol Pathol, 2001. **54**(1): p. 8-16.
226. Russo, G., Zegar, C., and Giordano, A., *Advantages and limitations of microarray technology in human cancer*. Oncogene, 2003. **22**(42): p. 6497-507.
227. Pfaffl, M.W., *Quantification strategies in real-time PCR*. A-Z of quantitative PCR, ed. S.A. Bustin. 2004, International University Line: La Jolla, CA.
228. Chen, L., Borozan, I., Feld, J., Sun, J., Tannis, L.L., Coltescu, C., Heathcote, J., Edwards, A.M., and McGilvray, I.D., *Hepatic gene expression discriminates responders and nonresponders in treatment of chronic hepatitis C viral infection*. Gastroenterology, 2005. **128**(5): p. 1437-44.
229. Chen, L., Borozan, I., Milkiewicz, P., Sun, J., Meng, X., Coltescu, C., Edwards, A.M., Ostrowski, M.A., Guindi, M., Heathcote, E.J., and McGilvray, I.D., *Gene expression profiling of early primary biliary cirrhosis: possible insights into the mechanism of action of ursodeoxycholic acid*. Liver Int, 2008. **28**(7): p. 997-1010.
230. Borozan, I., Chen, L., Sun, J., Tannis, L.L., Guindi, M., Rotstein, O.D., Heathcote, J., Edwards, A.M., Grant, D., and McGilvray, I.D., *Gene expression profiling of acute liver stress during living donor liver transplantation*. Am J Transplant, 2006. **6**(4): p. 806-24.
231. Dennis, G., Jr., Sherman, B.T., Hosack, D.A., Yang, J., Gao, W., Lane, H.C., and Lempicki, R.A., *DAVID: Database for Annotation, Visualization, and Integrated Discovery*. Genome Biol, 2003. **4**(5): p. P3.
232. Huang da, W., Sherman, B.T., and Lempicki, R.A., *Systematic and integrative analysis of large gene lists using DAVID bioinformatics resources*. Nat Protoc, 2009. **4**(1): p. 44-57.
233. Schofield, C.J. and Ratcliffe, P.J., *Oxygen sensing by HIF hydroxylases*. Nat Rev Mol Cell Biol, 2004. **5**(5): p. 343-54.
234. Strasser, A., *The role of BH3-only proteins in the immune system*. Nat Rev Immunol, 2005. **5**(3): p. 189-200.
235. Olbryt, M., Jarzab, M., Jazowiecka-Rakus, J., Simek, K., Szala, S., and Sochanik, A., *Gene expression profile of B 16(F10) murine melanoma cells exposed to hypoxic conditions in vitro*. Gene Expr, 2006. **13**(3): p. 191-203.
236. Lofqvist, C., Chen, J., Connor, K.M., Smith, A.C., Aderman, C.M., Liu, N., Pintar, J.E., Ludwig, T., Hellstrom, A., and Smith, L.E., *IGFBP3 suppresses retinopathy through suppression of oxygen-induced vessel loss and promotion of vascular regrowth*. Proc Natl Acad Sci U S A, 2007. **104**(25): p. 10589-94.
237. Pfaffl, M.W., *A new mathematical model for relative quantification in real-time RT-PCR*. Nucleic Acids Res, 2001. **29**(9): p. e45.

238. Bustin, S.A., *Quantification of mRNA using real-time reverse transcription PCR (RT-PCR): trends and problems*. J Mol Endocrinol, 2002. **29**(1): p. 23-39.
239. Bergersen, L., Johannsson, E., Veruki, M.L., Nagelhus, E.A., Halestrap, A., Sejersted, O.M., and Ottersen, O.P., *Cellular and subcellular expression of monocarboxylate transporters in the pigment epithelium and retina of the rat*. Neuroscience, 1999. **90**(1): p. 319-31.
240. Philp, N.J., Ochrierton, J.D., Rudoy, C., Muramatsu, T., and Linser, P.J., *Loss of MCT1, MCT3, and MCT4 expression in the retinal pigment epithelium and neural retina of the 5A11/basigin-null mouse*. Invest Ophthalmol Vis Sci, 2003. **44**(3): p. 1305-11.
241. Peltier, H.J. and Latham, G.J., *Normalization of microRNA expression levels in quantitative RT-PCR assays: identification of suitable reference RNA targets in normal and cancerous human solid tissues*. RNA, 2008. **14**(5): p. 844-52.
242. Feng, X., Liu, X., Zhang, W., and Xiao, W., *p53 directly suppresses BNIP3 expression to protect against hypoxia-induced cell death*. EMBO J, 2011. **30**(16): p. 3397-415.
243. Kothari, S., Cizeau, J., McMillan-Ward, E., Israels, S.J., Bailes, M., Ens, K., Kirshenbaum, L.A., and Gibson, S.B., *BNIP3 plays a role in hypoxic cell death in human epithelial cells that is inhibited by growth factors EGF and IGF*. Oncogene, 2003. **22**(30): p. 4734-44.
244. Tang, N., Wang, L., Esko, J., Giordano, F.J., Huang, Y., Gerber, H.P., Ferrara, N., and Johnson, R.S., *Loss of HIF-1alpha in endothelial cells disrupts a hypoxia-driven VEGF autocrine loop necessary for tumorigenesis*. Cancer Cell, 2004. **6**(5): p. 485-95.
245. Pescador, N., Cuevas, Y., Naranjo, S., Alcaide, M., Villar, D., Landazuri, M.O., and Del Peso, L., *Identification of a functional hypoxia-responsive element that regulates the expression of the egl nine homologue 3 (egln3/phd3) gene*. Biochem J, 2005. **390**(Pt 1): p. 189-97.
246. Metzen, E., Stiehl, D.P., Doege, K., Marxsen, J.H., Hellwig-Burgel, T., and Jelkmann, W., *Regulation of the prolyl hydroxylase domain protein 2 (phd2/egln-1) gene: identification of a functional hypoxia-responsive element*. Biochem J, 2005. **387**(Pt 3): p. 711-7.
247. Marxsen, J.H., Stengel, P., Doege, K., Heikkinen, P., Jokilehto, T., Wagner, T., Jelkmann, W., Jaakkola, P., and Metzen, E., *Hypoxia-inducible factor-1 (HIF-1) promotes its degradation by induction of HIF-alpha-prolyl-4-hydroxylases*. Biochem J, 2004. **381**(Pt 3): p. 761-7.
248. Huang, L.E., Arany, Z., Livingston, D.M., and Bunn, H.F., *Activation of hypoxia-inducible transcription factor depends primarily upon redox-sensitive stabilization of its alpha subunit*. J Biol Chem, 1996. **271**(50): p. 32253-9.
249. Yu, A.Y., Frid, M.G., Shimoda, L.A., Wiener, C.M., Stenmark, K., and Semenza, G.L., *Temporal, spatial, and oxygen-regulated expression of hypoxia-inducible factor-1 in the lung*. Am J Physiol, 1998. **275**(4 Pt 1): p. L818-26.

250. Hellstrom, A., Perruzzi, C., Ju, M., Engstrom, E., Hard, A.L., Liu, J.L., Albertsson-Wikland, K., Carlsson, B., Niklasson, A., Sjodell, L., LeRoith, D., Senger, D.R., and Smith, L.E., *Low IGF-I suppresses VEGF-survival signaling in retinal endothelial cells: direct correlation with clinical retinopathy of prematurity*. Proc Natl Acad Sci U S A, 2001. **98**(10): p. 5804-8.
251. Treins, C., Giorgetti-Peraldi, S., Murdaca, J., Monthouel-Kartmann, M.N., and Van Obberghen, E., *Regulation of hypoxia-inducible factor (HIF)-1 activity and expression of HIF hydroxylases in response to insulin-like growth factor I*. Mol Endocrinol, 2005. **19**(5): p. 1304-17.
252. Smith, L.E., Shen, W., Perruzzi, C., Soker, S., Kinose, F., Xu, X., Robinson, G., Driver, S., Bischoff, J., Zhang, B., Schaeffer, J.M., and Senger, D.R., *Regulation of vascular endothelial growth factor-dependent retinal neovascularization by insulin-like growth factor-1 receptor*. Nat Med, 1999. **5**(12): p. 1390-5.
253. Firth, S.M. and Baxter, R.C., *Cellular actions of the insulin-like growth factor binding proteins*. Endocr Rev, 2002. **23**(6): p. 824-54.
254. Mohan, S. and Baylink, D.J., *IGF-binding proteins are multifunctional and act via IGF-dependent and -independent mechanisms*. J Endocrinol, 2002. **175**(1): p. 19-31.
255. Wolf, E., Lahm, H., Wu, M., Wanke, R., and Hoeflich, A., *Effects of IGFBP-2 overexpression in vitro and in vivo*. Pediatr Nephrol, 2000. **14**(7): p. 572-8.
256. Hoeflich, A., Reisinger, R., Lahm, H., Kiess, W., Blum, W.F., Kolb, H.J., Weber, M.M., and Wolf, E., *Insulin-like growth factor-binding protein 2 in tumorigenesis: protector or promoter?* Cancer Res, 2001. **61**(24): p. 8601-10.
257. Lofqvist, C., Willett, K.L., Aspegren, O., Smith, A.C., Aderman, C.M., Connor, K.M., Chen, J., Hellstrom, A., and Smith, L.E., *Quantification and localization of the IGF/insulin system expression in retinal blood vessels and neurons during oxygen-induced retinopathy in mice*. Invest Ophthalmol Vis Sci, 2009. **50**(4): p. 1831-7.
258. Lofqvist, C., Hansen-Pupp, I., Andersson, E., Holm, K., Smith, L.E., Ley, D., and Hellstrom, A., *Validation of a new retinopathy of prematurity screening method monitoring longitudinal postnatal weight and insulinlike growth factor I*. Arch Ophthalmol, 2009. **127**(5): p. 622-7.
259. Radonic, A., Thulke, S., Mackay, I.M., Landt, O., Siegert, W., and Nitsche, A., *Guideline to reference gene selection for quantitative real-time PCR*. Biochem Biophys Res Commun, 2004. **313**(4): p. 856-62.
260. Chang, T.C., Yu, D., Lee, Y.S., Wentzel, E.A., Arking, D.E., West, K.M., Dang, C.V., Thomas-Tikhonenko, A., and Mendell, J.T., *Widespread microRNA repression by Myc contributes to tumorigenesis*. Nat Genet, 2008. **40**(1): p. 43-50.
261. Ohlsson Teague, E.M., Van der Hoek, K.H., Van der Hoek, M.B., Perry, N., Wagaarachchi, P., Robertson, S.A., Print, C.G., and Hull,

- L.M., *MicroRNA-regulated pathways associated with endometriosis*. Mol Endocrinol, 2009. **23**(2): p. 265-75.
262. Hummel, R., Hussey, D.J., Michael, M.Z., Haier, J., Bruewer, M., Senninger, N., and Watson, D.I., *MiRNAs and their association with locoregional staging and survival following surgery for esophageal carcinoma*. Ann Surg Oncol, 2011. **18**(1): p. 253-60.
263. Xu, Y., Li, F., Zhang, B., Zhang, K., Zhang, F., Huang, X., Sun, N., Ren, Y., Sui, M., and Liu, P., *MicroRNAs and target site screening reveals a pre-microRNA-30e variant associated with schizophrenia*. Schizophr Res, 2010. **119**(1-3): p. 219-27.
264. Xu, Y., Liu, H., Li, F., Sun, N., Ren, Y., Liu, Z., Cao, X., Wang, Y., Liu, P., and Zhang, K., *A polymorphism in the microRNA-30e precursor associated with major depressive disorder risk and P300 waveform*. J Affect Disord, 2010. **127**(1-3): p. 332-6.
265. Ragusa, M., Majorana, A., Banelli, B., Barbagallo, D., Statello, L., Casciano, I., Guglielmino, M.R., Duro, L.R., Scalia, M., Magro, G., Di Pietro, C., Romani, M., and Purrello, M., *MIR152, MIR200B, and MIR338, human positional and functional neuroblastoma candidates, are involved in neuroblast differentiation and apoptosis*. J Mol Med (Berl), 2010. **88**(10): p. 1041-53.
266. Barik, S., *An intronic microRNA silences genes that are functionally antagonistic to its host gene*. Nucleic Acids Res, 2008. **36**(16): p. 5232-41.
267. Huang, X., Ding, L., Bennewith, K.L., Tong, R.T., Welford, S.M., Ang, K.K., Story, M., Le, Q.T., and Giaccia, A.J., *Hypoxia-inducible mir-210 regulates normoxic gene expression involved in tumor initiation*. Mol Cell, 2009. **35**(6): p. 856-67.
268. Zhang, Z., Sun, H., Dai, H., Walsh, R.M., Imakura, M., Schelter, J., Burchard, J., Dai, X., Chang, A.N., Diaz, R.L., Marszalek, J.R., Bartz, S.R., Carleton, M., Cleary, M.A., Linsley, P.S., and Grandori, C., *MicroRNA miR-210 modulates cellular response to hypoxia through the MYC antagonist MNT*. Cell Cycle, 2009. **8**(17): p. 2756-68.
269. Kuijper, S., Turner, C.J., and Adams, R.H., *Regulation of angiogenesis by Eph-ephrin interactions*. Trends Cardiovasc Med, 2007. **17**(5): p. 145-51.
270. Kuehbacher, A., Urbich, C., and Dimmeler, S., *Targeting microRNA expression to regulate angiogenesis*. Trends Pharmacol Sci, 2008. **29**(1): p. 12-5.
271. Wijnhoven, B.P., Michael, M.Z., and Watson, D.I., *MicroRNAs and cancer*. Br J Surg, 2007. **94**(1): p. 23-30.
272. Good, W.V. and Gendron, R.L., *Genomics and proteomics of retinopathy of prematurity: DNA-based prevention and treatment*. Br J Ophthalmol, 2007. **91**(12): p. 1577.
273. Gu, X., El-Remessy, A.B., Brooks, S.E., Al-Shabrawey, M., Tsai, N.T., and Caldwell, R.B., *Hyperoxia induces retinal vascular endothelial cell apoptosis through formation of peroxynitrite*. Am J Physiol Cell Physiol, 2003. **285**(3): p. C546-54.

274. Uno, K., Merges, C.A., Grebe, R., Lutty, G.A., and Prow, T.W., *Hyperoxia inhibits several critical aspects of vascular development*. Dev Dyn, 2007. **236**(4): p. 981-90.
275. Lange, C., Ehlken, C., Stahl, A., Martin, G., Hansen, L., and Agostini, H.T., *Kinetics of retinal vaso-obliteration and neovascularisation in the oxygen-induced retinopathy (OIR) mouse model*. Graefes Arch Clin Exp Ophthalmol, 2009. **247**(9): p. 1205-11.
276. Sears, J.E., Hoppe, G., Ebrahem, Q., and Anand-Apte, B., *Prolyl hydroxylase inhibition during hyperoxia prevents oxygen-induced retinopathy*. Proc Natl Acad Sci U S A, 2008. **105**(50): p. 19898-903.
277. Aguilar, E., Dorrell, M.I., Friedlander, D., Jacobson, R.A., Johnson, A., Marchetti, V., Moreno, S.K., Ritter, M.R., and Friedlander, M., *Chapter 6. Ocular models of angiogenesis*. Methods Enzymol, 2008. **444**: p. 115-58.
278. Stahl, A., Connor, K.M., Sapieha, P., Chen, J., Dennison, R.J., Krah, N.M., Seaward, M.R., Willett, K.L., Aderman, C.M., Guerin, K.I., Hua, J., Lofqvist, C., Hellstrom, A., and Smith, L.E., *The mouse retina as an angiogenesis model*. Invest Ophthalmol Vis Sci, 2010. **51**(6): p. 2813-26.
279. Duan, L.J., Takeda, K., and Fong, G.H., *Prolyl hydroxylase domain protein 2 (PHD2) mediates oxygen-induced retinopathy in neonatal mice*. Am J Pathol, 2011. **178**(4): p. 1881-90.
280. Huang, H., Van de Veire, S., Dalal, M., Parlier, R., Semba, R.D., Carmeliet, P., and Vinore, S.A., *Reduced retinal neovascularization, vascular permeability, and apoptosis in ischemic retinopathy in the absence of prolyl hydroxylase-1 due to the prevention of hyperoxia-induced vascular obliteration*. Invest Ophthalmol Vis Sci, 2011. **52**(10): p. 7565-73.
281. Lee, N.E., Park, Y.J., Chung, I.Y., Seo, S.W., Park, J.M., Yoo, J.M., and Song, J.K., *Gene expression changes in a rat model of oxygen-induced retinopathy*. Korean J Ophthalmol, 2011. **25**(1): p. 42-7.
282. Tea, M., Fogarty, R., Brereton, H.M., Michael, M.Z., Van der Hoek, M.B., Tsykin, A., Coster, D.J., and Williams, K.A., *Gene expression microarray analysis of early oxygen-induced retinopathy in the rat*. J Ocul Biol Dis Infor, 2009. **2**(4): p. 190-201.
283. Recchia, F.M., Xu, L., Penn, J.S., Boone, B., and Dexheimer, P., *Identification of genes and pathways involved in retinal neovascularization by microarray analysis of two animal models of retinal angiogenesis*. Invest Ophthalmol Vis Sci, 2009.
284. Alon, T., Hemo, I., Itin, A., Pe'er, J., Stone, J., and Keshet, E., *Vascular endothelial growth factor acts as a survival factor for newly formed retinal vessels and has implications for retinopathy of prematurity*. Nat Med, 1995. **1**(10): p. 1024-8.
285. Pierce, E.A., Foley, E.D., and Smith, L.E., *Regulation of vascular endothelial growth factor by oxygen in a model of retinopathy of prematurity*. Arch Ophthalmol, 1996. **114**(10): p. 1219-28.
286. Micieli, J.A., Surkont, M., and Smith, A.F., *A systematic analysis of the off-label use of bevacizumab for severe retinopathy of prematurity*. Am J Ophthalmol, 2009. **148**(4): p. 536-543 e2.

287. Mintz-Hittner, H.A., Kennedy, K.A., and Chuang, A.Z., *Efficacy of intravitreal bevacizumab for stage 3+ retinopathy of prematurity*. N Engl J Med, 2011. **364**(7): p. 603-15.
288. Darlow, B.A., Ells, A.L., Gilbert, C.E., Gole, G.A., and Quinn, G.E., *Are we there yet? Bevacizumab therapy for retinopathy of prematurity*. Arch Dis Child Fetal Neonatal Ed, 2011.
289. Mintz-Hittner, H.A. and Best, L.M., *Antivascular endothelial growth factor for retinopathy of prematurity*. Curr Opin Pediatr, 2009. **21**(2): p. 182-7.
290. Sears, J.E., *Anti-vascular endothelial growth factor and retinopathy of prematurity*. Br J Ophthalmol, 2008. **92**(11): p. 1437-8.
291. Hard, A.L. and Hellstrom, A., *On the use of antiangiogenetic medications for retinopathy of prematurity*. Acta Paediatr, 2011. **100**(8): p. 1063-5.