

6 Literaturnachweis

- 1 Schöler H. Genexpression und Gene in der Maus. Münster. Max-Planck- Institut für molekulare Biomedizin: Tätigkeitsbericht, 2004
- 2 Alberts B, Bray D, Lewis J, et al. Molekularbiologie der Zelle.3. Auflage. Weinheim: VCH Verlagsgesellschaft, 1997
- 3 Gibert S. Fertilization: Beginning a New Organism. In: Developmental Biology 7th edition ed. Sunderland MA: Sinauer Associates; 2003
- 4 Thomson JA, Itskovitz-Eldor J, Shapiro SS, et al. Embryonic stem cell lines derived from human blastocysts. Science 1998; 282:1145-1147
- 5 Schöler H. Das Potential von Stammzellen. Naturwissenschaftliche Rundschau 2003; 10: 525-539
- 6 Stem Cells: Scientific Progress and Future Research Directions. Department of Health and Human Services. 2001. <http://stemcells.nih.gov/info/scireport>
- 7 Blau HM, Brazelton TR, Weimann JM. The evolving concept of a stem cell: entity or function? Cell 2001; 105:829-841
- 8 Smith JR, Pochampally R, Perry A, et al. Isolation of a highly clonogenic and multipotential subfraction of adult stem cells from bone marrow stroma. Stem Cells 2004; 22:823-831
- 9 Lagasse E, Shizuru JA, Uchida N, Tsukamoto A, Weissman IL. Toward regenerative Medicine. Immunity 2001; 14:425-436
- 10 Morrison SJ, Weissman IL. The long- term repopulating subset of hematopoietic stem cells is deterministic and isolatable by phenotype. Immunity 1994; 8:661-673
- 11 Weiss S, van der Kooy D. CNS stem cells: Where's the biology (a.k.a. Beef)? J Neurobiol 1998; 36:307-314

- 12 Gage FH. Mammalian neural stem cells. *Science* 2000; 287:1433-1438
- 13 Levison SW, Druckman SK, Young GM, Basu A. Neural stem cells in the supraventricular zone are a source of astrocytes and oligodendrocytes, but not mikroglia. *Dev Neurosci* 2003; 25:184-196
- 14 Ma DR, Yang EN, Lee SF. A review: the location, molecular characterization and multipotency of hair follicle epidermal stem cells. *Ann Acad Med Singapore* 2004; 33:784-788
- 15 Papini S, Ceccetti D, Campani D, et al. Isolation and clonal analysis of human epidermal keratinocyte stem cells in long-term culture. *Stem Cells* 2003; 21:481-491
- 16 Nakauchi H, et al. Isolation and clonal characterization of hematopoietic and liver stem cells. *Cornea* 2004; 23: S2-S7
- 17 Faris RA, Konkin T, Halpert G. Liver stem cells: a potential source of hepatocytes for the treatment of human liver disease. *Artif Organs* 2001; 25:513-521
- 18 Vessey CJ, de la Hall PM. Hepatic stem cells: a review. *Pathology* 2001; 33:130-141
- 19 Dekaney CM, Rodriguez JM, Graul MC, et al. Isolation and characterization of a putative intestinal stem cell fraction from mouse jejunum. *Gastroenterology* 2005; 129:1567-1580
- 20 Abraham EJ, Kodama S, Lin JC, et al. Human pancreatic islet-derived progenitor cell engraftment in immunocompetent mice. *Am J Pathol* 2004; 164:817-830
- 21 Blanco-Bose WE, Yao CC, Kramer RH, Blau HM. Purification of mouse primary myoblasts based on alpha 7 integrin expression. *Exp Cell Res* 2001; 265:212-220
- 22 Allessandri G, Pagano S, Bez A, et al. Isolation and culture of human muscle-derived stem cells able to differentiate into myogenic and neurogenic cell lineages. *Lancet* 2004; 364:1872-1883
- 23 Thomas T, Nowka K, Lan L, Derwahl M. Expression of endodermal stem cell markers: evidence for the presence of adult stem cells in human thyroid glands. *Thyroid* 2006; 16:537-544
- 24 Weissman IL. Translating stem and progenitor cell biology to the clinic: barriers and

opportunities. *Science* 2000; 287:1442-1446

25 Weissman IL. Stem cells: units of development, units of regeneration, and units in evolution. *Cell* 2000; 100:157-168

26 Nilsson M, Perfilieva E, Johansson U, Orwar O, Eriksson PS. Enriched environment increases neurogenesis in the adult rat dentate gyrus and improves spatial memory. *J Neurobiol* 1999; 39:569-578

27 Hall PA, Watt FM. Stem cells: the generation and maintenance of cell diversity. *Development* 1989; 106:619-633

28 Watt FM, Hogan BL. Out of Eden: stem cells and their niches. *Science* 2000; 287:1427-1430

29 Nussey SS, Whitehead SA, 2001 *Endocrinology: An integrated approach*. BIOS Scientific Publishers Ltd

30 Stryer L. *Biochemie*. 4.Auflage. Heidelberg, Berlin, Oxford: Akademischer Verlag GmbH, 1996

31 Bidey SP, Tomlinson S. The regulation and integration of thyroid follicular differentiation and function. *Clin Endocrinol* 1988; 28:423-444

32 De Felice M, Di Lauro R. Thyroid development and its disorders: genetics and molecular mechanisms. *Endocr Rev* 2004; 25:722-746

33 Hill M, 2005 UNSW Embryology Vers. 4.9 0 73342108 3

34 Larsen JW. *Human Embryology*. 3D Edition. New York: Churchill Livingstone, 2001

35 Appendix E: Markers commonly used to identify stem cells and to characterize differentiated cell types. aus *Stem Cells: Scientific Progress and Future Research Directions*. Department of Health and Human Services. 2001. <http://stemcells.nih.gov/info/scireport>

36 Scholer H, Ruppert S, Suzuki N, Chowdhury K, Gruss P. New type of POU domain in germ line-specific protein Oct4. *Nature* 1990; 344:435-439

- 37 Schöler HR, Pesce M. Oct-4: Gatekeeper in the Beginnings of mammalian development. *Stem Cells* 2001; 19:271-278
- 38 Ryan AK, Rosenfeld MG. POU domain family values: flexibility, partnerships, and developmental codes. *Genes Dev* 1997; 11:1207-1225
- 39 Gidekel S, Pizov G, Bergman Y et al. Oct-3/4 is a dose-dependent oncogenic fate determinant. *Cancer Cell* 2003; 4:361-370
- 40 Nichols J, Zevnik B, Anastassiadis K, Niwa H, Klewe-Nebenius D, Chambers I, Scholer H, Smith H. Formation of pluripotent stem cells in the mammalian embryo depends on the POU transcription factor Oct4. *Cell* 1998; 95:379-391
- 41 Niwa H, Miyazaki J, Smith AG. Quantitative expression of Oct-3/4 defines differentiation, dedifferentiation or self renewal of ES cells. *Nat Genet* 2000; 24:372-376
- 42 Lin RY, Kubo A, Keller GM, Davies TF. Committing embryonic stem cells to differentiate into thyrocyte-like cells in vitro. *Endocr* 2003; 144:2644-2649
- 43 Monk M, Holding C. Human embryonic genes re-expressed in cancer cells. *Oncogene* 2001; 20:8085-8091
- 44 Cheng L, Thomas A, Roth LM, et al. Oct4: a novel biomarker for dysgerminoma of the ovary. *Am J Surg Pathol* 2004; 28:1341-1346
- 45 Clark AT, Bodnar MS, Fox M, et al. Spontaneous differentiation of germ cells from human embryonic stem cells in vitro. *Hum Mol Genet* 2004; 13:727-739
- 46 Jin T, Branch DR, Zhang X, et al. Examination of POU homeobox gene expression in human breast cancer cells. *Int J Cancer* 1999; 81:104-112
- 47 Wang P, Branch DR, Bali M, et al. The POU homeodomain protein OCT3 as a potential transcriptional activator for fibroblast growth factor-4 (FGF-4) in human breast cancer cells. *Biochem J* 2003; 375:199-205

- 48 Steingart RA, Heldenberg E, Pinhasov A, et al. A vasoactive intestinal peptide receptor analog alters the expression of homeobox genes. *Life Sci* 2002; 71:2543-2552
- 49 Looijenga LH, Stoop H, de Leeuw HP, et al. POU5F1 (Oct3/4) identifies cells with pluripotent potential in human germ cell tumors. *Cancer Res* 2003; 63:2244-2250
- 50 Tai MH, Chang CC, Olson LK, Trosko JE. Oct4 expression in adult human stem cells: evidence in support of the stem cell theory of carcinogenesis. *Carcinogenesis* 2005; 26:495-502
- 51 Hochedlinger K, Yamada Y, Beard C, Jaenisch R. Ectopic expression of Oct-4 blocks progenitor-cell differentiation and causes dysplasia in epithelial tissues. *Cell* 2005; 121:465-477
- 52 Trosko JE, Chang CC, Upham BL, Tai MH. Ignored Hallmarks of Carcinogenesis: Stem Cells and Cell-Cell Communication. *Ann. N.Y. Acad. Sci.* 2004; 1028:192-201
- 53 Yang A, Kaghad M, Caput D, McKeon F. On the shoulders of giants: p63, p73 and the rise of p53. *Trends Genet* 2002; 18:90-95
- 54 McKeon F. p63 and the epithelial stem cell: more than status quo?. *Genes and Development* 2004; 18:465-469
- 55 Yang A, kaghad M, Wang Y, et al. p63, a p53 homolog at 3q27-29, encodes multiple products with transactivating, death-inducing, and dominant-negative activities. *Mol Cell* 1998, 2:305-316
- 56 Reis-Filho FS, Schmitt FC. Taking advantage of basic research: p63 is a reliable myoepithelial and stem cell marker. *Adv Anat Pathol* 2002; 9:280-289
- 57 Mills AA, Zheng B, Wang XJ, et al. P63 is a p53 homologue required for limb and epidermal morphogenesis. *Nature* 1999; 398:708-713
- 58 Yang A, Schweitzer R, sun D, et al. P63 is essential for regenerative proliferation in limb, craniofacial and epithelial development. *Nature* 1999; 398:714-718
- 59 Pellegrini G, Dellambra E, Golisano O, et al. P63 identifies keratinocyte stem cells. *Proc*

Natl Acad Sci U S A 2001; 98:3156-3161

60 Di Como CJ, Urist MJ, Babayan I, Drobnjak M, Hedvat CV, Teruya-Feldstein J, et al. P63 expression profiles in human normal and tumor tissues. *Clin Cancer Res* 2002; 8:494-501

61 Rheis-Filho JS, Preto A, Soares P, et al. P63 expression in solid cell nests of the thyroid: further evidence for a stem cell origin. *Mod Pathol* 2003; 16:43-48

62 Getzowa S. Ueber die Glandula parathyreoidea, intrathyreoidale Zellhaufen derselben und Reste des postbranchialen Körpers. *Virchows Arch A Pathol Anat Histopathol* 1907; 188:181-234

63 Harach HR. Solid cell nests of the thyroid. *J Pathol* 1988; 155:191-200

64 Cameselle-Teijeiro J, Varela-Duran J, Sambade C, Villanueva JP, Varela-Nunez R, Sobrinho-Simoes M. Solid cell nests of the thyroid: light microscopy and immunohistochemical profile. *Hum Pathol* 1994; 25:684-693

65 Preto A, Cameselle-Teijero J, Moldes-Boullosa J, et al. Telomerase expression and proliferative activity suggest a stem cell role for thyroid solid cell nests. *Mod Pathol* 2004; 17:819-826

66 Preto A, Rheis-Filho JS, Ricardo S, et al. P63 expression in papillary and anaplastic carcinomas of the thyroid gland : lack of an oncogenetic role in tumorigenesis and progression. *Pathol Res Pract* 2002; 198:449-454

67 Orkin SH. GATA-binding transcription factors in hematopoietic cells. *Blood* 1992; 80:575-581

68 Evans T. Regulation of cardiac gene expression by GATA-4/5/6. *Trends Cardiovasc Med* 1997; 7:75-83

69 Tsai FY, Keller G, Kuo FC, et al. An early hematopoietic defect in mice lacking the transcription factor GATA-2. *Nature* 1994; 371:221-226

70 Ting CN, Olson MC, Barton KP, Leiden JM. Transcription factor GATA-3 is required for development of the T-cell lineage. *Nature* 1996; 384:474-478

- 71 Laverriere AC, MacNeill C, Muellerr C, Poelman RE, Burch JBE, Evans T. GATA4/5/6, a subfamily of three transcription factors transcribed in developing heart and gut. *J Biol chem* 1994; 269:23177-23184
- 72 Kuo CT, Morrissey EE, Anandappa R, et al. GATA4 transcription factor is required for ventral morphogenesis and heart tube formation. *Genes Dev* 1997; 11:1048-1060
- 73 Molkenhuth JD, Lin Q, Duncan SA, et al. Requirement of the transcription factor GATA4 for heart tube formation and ventral morphogenesis. *Genes Dev* 1997; 11:1061-1072
- 74 Kiiveri S, Liu J, Westerholm-Ormio M, et al. Differential expression of GATA-4 and GATA-6 in fetal and adult mouse and human adrenal tissue. *Endocrinology* 2002; 143:3136-3143
- 75 Heikinheimo M, Ermolaeva M, Bielinska M, et al. Expression and hormonal regulation of transcription factors GATA-4 and GATA-6 in the mouse ovary. *Endocrinology* 1997; 138:3505-3514
- 76 Ketola I, Pentikainen V, Vaskivuo T, et al. Expression of transcription factor GATA-4 during human testicular development and disease. *J Clin Endocrinol Metab* 2000; 85:3925-3931
- 77 Laitinen MP, Anttonen M, Ketola I, et al. Transcription factors GATA-4 and GATA-6 and a GATA family cofactor, FOG-2, are expressed in human ovary and sex cord-derived ovarian tumors. *J Clin Endocrinol Metab* 2000; 85:3476-3483
- 78 Siltanen S, Anttonen M, Heikkila P, et al. Transcription factor GATA-4 is expressed in pediatric yolk sac tumors. *Am J Pathol* 1999; 155:1823-1829
- 79 Ryffel GU. Mutations in the human genes encoding the transcription factors of the hepatocyte nuclear factor (HNF) and HNF4 families: functional and pathological consequences. *J Mol Endocrinol* 2001; 27:11-29
- 80 Chen WS, Manova K, Weinstein DC, et al. Disruption of the HNF-4 gene, expressed in visceral endoderm, leads to cell death in embryonic ectoderm and impaired gastrulation of mouse embryos. *Genes Dev* 1994; 8:2466-2477

- 81 Taraviras S, Monaghan AP, Schutz G, Kelsey G. Characterization of the mouse HNF-4 gene and its expression during mouse embryogenesis. *Mech Dev* 1994; 48:67-79
- 82 Soudais C, Bielinska M, Heikinheimo M, MacArthur CA, Narita Nm Saffitz JE, Simon M, Leiden JM, Wilson DB. Targeted mutagenesis of the transcription factor GATA-4 gene in mouse embryonic stem cells disrupts visceral endoderm differentiation in vitro. *Development* 1995; 121:3877-3888
- 83 Duncan SA, Nagy A, Chan W. Murine gastrulation requires HNF-4 regulated gene expression in the visceral endoderm: tetraploid rescue of Hnf ^{-/-} embryos. *Development* 1997; 124:279-287
- 84 Duncan SA, Manova K, Chan WS, et al. Expression of transcription factor HNF-4 in the extraembryonic endoderm, gut and nephrogenic tissue of the developing mouse embryo: HNF-4 is a marker for primary endoderm in the implanting blastocyst. *Proc Natl Acad Sci U S A* 1994; 91:7598-7602
- 85 Sladek FM. Orphan receptor HNF-4 and liver-specific gene expression. *Receptor* 1993; 3:223-232
- 86 Trosko JE, Ruch JR. Cell-cell communication in carcinogenesis. *Front Biosci* 1998; 3:208-236
- 87 Musil LS, Goodenogh DA. Biochemical analysis of connexin43 intracellular transport, phosphorylation and assembly into gap junctional plaques. *J Cell Biol* 1991; 115:1357-1374
- 88 Musil LS, Goodenogh DA. Multisubunit assembly of an integral plasma membrane channel protein, gap junction connexin43, occurs after exit from the ER. *Cell* 1993; 74:1065-1077
- 89 Tai MH, Olson LK, Madhukar BV, Linning KD, vanCamp L, Tsao MS, Trosko JE. Characterization of gap junctional intercellular communication in immortalized human pancreatic ductal epithelial cells with stem cell characteristics. *Pancreas* 2003, 26:e18-e26
- 90 Warn-Cramer BJ, Cottrell GT, Burt JM, Lau AF. Regulation of connexin-43 gap junctional intercellular communication by mitogen-activated protein kinase. *J Biol Chem* 1998; 273:9188-

9166

91 Statuto M, Audebet C, Tonoli H, Selmy-Ruby S, Rousset B, Munari-Silem Y. Restoration of cell-to-cell communication in thyroid cell line by transfection with an stable expression of the connexin-32 gene. *J Biol Chem* 1997; 272:24710-24716

92 Trosko JE, Chang CC, Upham BL, Tai MH. Ignored hallmarks of carcinogenesis: stem cells and cell-cell communication. *Ann NY Acad Sci* 2004; 1028:192-201

93 Lee S, Gilula NB, Warner AE. Gap junctional communication and compaction during preimplantation stages of mouse development. *Cell* 1987; 51:851-860

94 Chang CC, Trosko JE, El-Fouly MH, et al. Contact intensivity of a subpopulation of normal human fetal kidney epithelial cells and of human carcinoma cell lines. *Cancer Res* 1987; 47:1634-1645

95 Kao CY, Nemata K, Oakley CS, et al. Two types of normal human breast epithelial cells derived from reduction mammoplasty: phenotype characterization and response to SV 40 transfection. *Carcinogenesis* 1995; 16:531-538

96 Matie M, Petrov IN, Chen S, et al. Stem cells of the corneal epithelium lack connexins and metabolite transfer capacity. *Differentiation* 1997; 61:251-260

97 Dowling-Warriner CV, Trosko JE. Induction of gap junctional intercellular communication, connexin43 expression, and subsequent differentiation in human fetal neuronal cells by stimulation of the cycle AMP pathway. *Neurosciences* 2000; 95:859-868

98 Matie M, Evans WH, Brink PR, et al. Epidermal stem cells do not communicate through gap junctions. *J Invest Dermatol* 2002;118:110-116

99 Sheen IS, Jeng KS, Wang PC, Shih SH, Chang WH, Wang Hy, Chen CC, Shyung LR. Are gap junction gene connexins 26,32 and 43 of prognostic values in hepatocellular carcinoma? A prospective study. *World J Gastroenterolog* 2004; 10:2785-2790

100 King TJ, Fukushima LH, Donlon TA, et al. Correlation between growth contol, neoplastic potential and endogenous connexin43 expression in HeLa cell lines : implications for tumor progression. *Carcinogenesis* 2000; 21:311-315

- 101 Momiyama M, Omori Y, Ishizaki Y, et al. Connexin26-mediated gap junctional communication reverses the malignant phenotype of MCF-7 breast cancer cells. *Cancer Sci* 2003; 94:501-507
- 102 Sherley JL. Asymmetric cell kinetics genes: the key to expansion of adult stem cells in culture. *Stem Cells* 2002; 20:561-572
- 103 Potten CS, Morris RJ. Epithelial stem cells in vivo. *J Cell Sci Suppl* 1988; 10:45-62
- 104 Liu Y, Bohn SA, Sherley JL. Inosine 5'-monophosphatase dehydrogenase is a rate determining factor for p53-dependent growth regulation. *Mol Biol Cell* 1998; 9:15-28
- 105 Sherley JL, Stadler PB, Johnson DR. Expression of the wild-type p53 antioncogene induces guanine nucleotide-dependent stem cell division kinetics. *Proc Natl Acad Sci USA* 1995; 92:136-140
- 106 Merok JR, Sherley JL. Breaching the kinetic barrier to in vitro somatic stem cell propagation. *J Biomed Biotech* 2001; 1:24-26
- 107 Rambhatla L, Bohn SA, Stadler PB, Boyd Jt, Coss RA, Sherley JL. Cellular senescence: ex vivo p53-dependent asymmetric cell kinetics. *J Biomed Biotech* 2001; 1:27-36
- 108 Lee HS, Crane GG, Merok JR, et al. Clonal expansion of adult rat hepatic stem cell lines by suppression of asymmetric cell kinetics (SACK). *Biotechnol Bioeng* 2003; 83:760-771
- 109 Baker ME. Evolution of adrenal and sex steroid action in vertebrates: a ligand-based mechanism for complexity. *Bioessays* 2003; 25:396-400
- 110 Clark OH, Gerend PL, Davis M, Goretzki PE, Hoffmann Jr PG. Estrogen and thyroid-stimulating hormone (TSH) receptors in neoplastic and nonneoplastic human thyroid tissue. *J Surg Res* 1985; 38:89-96
- 111 Manole D, Schildknecht B, Gosnell B, Adams E, Derwahl M. Estrogen promotes growth of human thyroid tumor cells by different molecular mechanisms. *J Clin Endocrinol Metab* 2001; 86:1072-1077

- 112 Foster JS, Wimalasena J. Estrogen regulates activity of cyclin-dependent kinases and retinoblastoma protein phosphorylation in breast cancer cells. *Mol Endocrinol* 1996; 10:488-498
- 113 Farid NR. Molecular pathogenesis of thyroid cancer: the significance of oncogenes, tumor suppressor genes, and genomic instability. *Exp Clin Endocrinol Diabetes* 1996; 104: 1-12
- 114 Sung JH, Yoon HS, Lee JS, Kim CG, Kim MK, Yoon YD. Differentiation and apoptosis of the mammalian embryo and embryonic stem cells (ESC): Establishment of mouse ESC and induction of differentiation by reproductive hormones. *Dev Reprod* 2002; 6:55-66
- 115 Seok HH, Hee YN, Young JL, Ji WL, Jong HP, Sun JK, Jung BL, Hyun SY, Chung HK. Expression of estrogen receptor- α and - β , glucocorticoid receptor, and progesterone receptor genes in human embryonic stem cells and embryoid bodies. *Mol Cells* 2004; 18:320-325
- 116 Brannvall K, Korhonen L, Lindholm D. Estrogen-receptor-dependent regulation of neural stem cell proliferation and differentiation
- 117 Goodell MA, Brose K, Paradis G, Conner AS, Mulligan RC. Isolation and functional properties of murine hematopoietic stem cells that are replicating in vivo. *J Exp med* 1996; 183:1797-1806
- 118 Jackson KA, Majka SM, Wang H, Hartley CJ, Majeski MW, Entman ML, Michael LH, Hirschi KK, Goodell MA. Regeneration of ischemic cardiac muscle and vascular endothelium by adult stem cells. *J Clin Invest* 2001; 107:1395-1402
- 119 Goodell MA, Rosenzweig M, Kim H, Marks DF, DeMaria M, Paradis G, Grupp SA, Sieff CA, Mulligan RC, Johnson RP. Dye efflux studies suggest that hematopoietic stem cells expressing low or undetectable levels of CD34 antigen exist in multiple species. *Nat Med* 1997; 3:1337-1345
- 120 Oyama K, Nakagawa H, Harada H, Andl C, Takaoka M, Rustgi AK. Murine oral-epithelial cells have a subpopulation of potential stem cells. *Gastroenterology* 2003; 124:123-134
- 121 Aakure A, Seale P, Girgis-Gabardo A, Rudnicki MA. Myogenic specification of side population cells in skeletal muscle. *J Cell Biol* 2002; 159:123-134

- 122 Oh H, Bradfute SB, Gallardo TD, Nakamura T, Gaussin V, Mishina Y, Pocius J, Michael LH, Behringer RR, Garry DJ, Entman ML, Schneider MD. Cardiac progenitor cells from adult myocardium: homing, differentiation, and fusion after infarction. *Proc Natl Acad Sci U S A* 2003; 100:12313-12318
- 123 Alvi AJ, Clayton H, Joshi C, Enver T, Ashworth A, Vivanco MM, Dale TC, Smalley MJ. Functional and molecular characterisation of mammary side population cells. *Breast Cancer Res* 2003; 5:R1-R8
- 124 Shimano K, Satake M, Okaya A, Kitanaka J, Kitanaka N, Takemura M, Sakagami M, Terada N, Tsujimura T. Hepatic oval cells have the side population phenotype defined by expression of ATP-binding cassette transporter ABCG2/BCRP1. *Am J Pathol* 2003;163:3-9
- 125 Summer R, Kotton DN, Sun X, Ma B, Fitzsimmons K, Fine A. Side population cells and BCRP1 expression in lung. *Am J Physiol Lung Cell Mol Physiol* 2003; 285:L97-L104
- 126 Zhang L, Hu J, Hong TP, Liu YL, Wu YH, Li LS. Monoclonal side population progenitors isolated from human fetal pancreas. *Biochem Biophys Res Commun* 2005; 333:603-608
- 127 Dekaney CM, Rodriguez JM, Graul MC, Henning SJ. Isolation and characterization of a putative intestinal stem cell fraction from mouse jejunum. *Gastroenterology* 2005; 129:1567-1580
- 128 Zhou S, Schuetz JD, Bunting KD, Colapietro AM, Sampath J, Morris JJ, Lagutina I, Grosveld GC, Osawa M, Nakauchi H, Sorrentino BP. The ABC transporter Bcrp1/ABCG2 is expressed in a wide variety of stem cells and is a molecular determinant of the side-population phenotype. *Nat Med* 2001; 7:1028-1034
- 129 Kim M, Turnquist H, Jackson J, Sgagias M, Yan Y, Gong M, Dean M, Sharp JG, Cowan K. The multidrug resistance transporter ABCG2 (Breast cancer resistance protein 1) effluxes Hoechst 33342 and is overexpressed in hematopoietic stem cells. *Clin Cancer Res* 2002; 8:22-28
- 130 Matsuzaki Y, Kinjo K, Mulligan RC, et al. Unexpectedly efficient homing capacity of purified murine hematopoietic stem cells. *Immunity* 2004; 20:87-93

- 131 Bunting KD, Zhou S, Lu T, Sorrentino BP. Enforced P-glycoprotein pump function in murine bone marrow cells results in expansion of side population stem cells in vitro and repopulating cells in vivo. *Blood* 2000; 96:902-909
- 132 Welm BE, Tepera SB, Venezia T, Graubert TA, Rosen JM, Goodell JA. Sca-1(pos) cells in the mouse mammary gland represent an enriched progenitor cell population. *Dev Biol* 2002; 245:42-56
- 133 Rapoport B, Filetti S, Takai N, et al. Studies on the cyclic AMP response to thyroid stimulating immunoglobulin (TSI) and thyrotropin (TSH) in human thyroid cell monolayers. *Metabolism* 1982; 31:1159-1167
- 134 Derwahl M, Manole D, Sobke A, et al. Pathogenesis of toxic thyroid adenomas and nodules: relevance of activating mutations in the TSH-receptor and Gs-alpha gene, the possible role of iodine deficiency and secondary and TSH-independent molecular mechanisms. *Exp Clin Endocrinol Diabetes* 1998; 106:S6-S9
- 135 Derwahl M, Seto P, Rapoport B. Complete nucleotide sequence of cDNA for thyroid peroxidase in FRTL5 rat thyroid cells. *Nucleic Acids Res* 1989; 17:8380
- 136 Derwahl M, Seto P, Rapoport B. An abnormal splice donor site in one allele of the thyroid peroxidase gene in FRTL5 rat thyroid cells introduces a premature stop codon: association with the absence of functional enzymatic activity. *Mol Endocrinol* 1990; 4:793-799
- 137 Heldin NE, Cvejic D, Smeds, et al. Coexpression of functionally active receptors for thyrotropin and platelet-derived growth factor in human thyroid carcinoma cells. *Endocrinology* 1991; 129:2187-2193
- 138 Derwahl M, Kuemmel M, Goretzki P, et al. Expression of the human TSH receptor in a human thyroid carcinoma cell line that lacks an endogenous TSH receptor: growth inhibition by cAMP. *Biochem Biophys Res Commun* 1993; 191:1131-1138
- 139 Sambrook J, Fritsch EF, Maniatis T. *Molecular cloning-a laboratory manual*, second edition. Cold Spring Harbour, New York: Cold spring harbour laboratory press, 1989

- 140 Grillo M, Margolis FL. Use of reverse transcriptase polymerase chain reaction to monitor expression of intronless genes 1990; *Biotechniques* 9:262-268
- 141 Mullis KB. Target amplification for DNA analysis by the polymerase chain reaction. *Ann Biol Clin (Paris)* 1990; 48:579-582
- 142 Saiki RK, Gelfand DH, Stoffel S, et al. Primer-directed enzymatic amplification of DNA with a thermostable DNA polymerase. *Science* 1988; 239:487-491
- 143 Shamblott MJ, Axelman J, Littlefield JW, et al. Human embryonic germ cell derivatives express a broad range of developmentally distinct markers and proliferate extensively in vitro. *Proc Nat Acad Sci U S A* 2001; 98:113-118
- 144 Hagiwara K, McMenamin MG, Miura K, et al. Mutational analysis of the p63/p73L/p51/p40/CUSP/KET gene in human cancer cell lines using intronic primers. *Cancer Res* 1999; 59:4165-4169
- 145 Trosko JE, Chang CC, Wilson MR, Upham B, Hayashi T, Wade M. Gap junctions and the regulation of cellular functions of stem cells during development and differentiation. *Methods* 2000; 20:245-264
- 146 De Paiva, Chen Z, Corrales RM, Pflugfelder SL, Li D-Q. ABCG2 transporter identifies a population of clonogenic human limbal epithelial cells. *Stem cells* 2005; 23:63-73
- 147 Stryer L *Biochemie*. 4.Auflage. Heidelberg, Berlin, Oxford: Akademischer Verlag GmbH, 1996
- 148 Polak JM, Van Noorden S *Immunocytochemistry: Modern methods and applications*. Bristol:Wright:1986
- 149 Hsu SM, Raine L, DeLellis RA *Advances in Immunohistochemistry* . New York:Mason:1984
- 150 Stull RA, Hyun WC, Pallavicini MG. Simultaneous flow cytometric analyses of enhanced green and yellow fluorescent proteins and cell surface antigens in doubly transduced immature

hematopoietic cell populations. *Cytometry* 2000; 40:126-134

151 Taniguchi H, Suzuki A, Zheng Y, et al. Usefulness of flow-cytometric cell sorting for enrichment of hepatic stem and progenitor cells in the liver. *Transplant Proc* 2000; 32:249-251

152 Hisatomi Y, Okumura K, Nakamura K, Matsumoto S, Satoh A, Nagano K, Yamamoto T, Endo F. Flow cytometric isolation of endodermal progenitors from mouse salivary gland differentiate into hepatic and pancreatic lineages. *Hepatology* 2004; 39:667-675

153 Lassalle B, Ziyyat A, Testart J, Finanz C, Lefevre A. Flow cytometric method to isolate round spermatids from mouse testis. *Human Reproduction* 1999; 14:388-394

154 Lan HY, Hutchinson P, Tesch GH, Mu W, Atkins RC. A novel method of microwave treatment for detection of cytoplasmatic and nuclear antigens by flow cytometry. *J Immunol Methods* 1996; 190:1-10

155 Millard J, Degrave E, Phillippe M, Gala JL. Detection of intracellular antigens by flow cytometry: comparison of two chemical methods and microwave heating. *Clin Chemistry* 1998; 44:2320-2330

156 Presnell SC, Petersen B, Heidaran M. Stem cells in adult tissues. *Cell Dev Biol* 2002; 13:369-376

157 Kountouras J, Boura P, Lygidakis NJ. Liver regeneration after hepatectomy. *Hepatology* 2001; 48:556-562

158 CY, Nemata K, Oakley CS, et al. Two types of normal human breast epithelial cells derived from reduction mammoplasty: phenotype characterization and response to SV40 transfection. *Carcinogenesis* 1995; 16:531-538

159 Schuldiner M, Yanuka O, Itskovitz-Eldor J, et al. Effects of eight growth factors on the differentiation of cells derived from human embryonic stem cells. *Proc Natl Acad Sci U S A* 2000; 97:11307-11312

160 Reya T, Morrison SJ, Clarke MF, Weissman IL. Stem cells, cancer, and cancer stem cells. *Nature* 2001; 414:105-111

- 161 Reya T, Clevers H. Wnt in stem cells and cancer. *Nature* 2005; 434:843-850
- 162 Ho JH, Jung SH, Yun JL. Estradiol-17 β stimulates proliferation of mouse embryonic stem cells: Involvement of MAPKs and CDKs as well as protooncogenes. *Am J Physiol Cell Physiol* 2005;16:1-44
- 163 Nakauchi H. Isolation and clonal characterization of hematopoietic and liver stem cells. *Cornea* 2004; 23:S2-S7
- 164 Derwahl M, Studer H. Pathogenesis and treatment of multinodular goiter. In: Fagin JA, ed. *Thyroid cancer*. Boston: Kluwer 1998; 59-84
- 165 Yane K, Kitahori Y, Konishi N, et al. Expression of the estrogen receptor in human thyroid neoplasms. *Cancer Lett* 1994;84:59-66
- 166 Zhang P, Zuo H, Ozaki T, Nakagomi N, Kakudo K. Cancer stem cell hypothesis in thyroid cancer. *Pathol Int* 2006; 56:485-489
- 167 Mitsutake N, Iwao A, Nagai K, Namba H, Ohtsuru A, Saenko V, Yamashita S. Characterization of side population in thyroid cancer cell lines: cancer stem-like cells are enriched partly but not exclusively. *Endocrinology* 2007
- 168 Patrawala L, Calhoun T, Schneider-Broussard R, Zhou J, Jax TW, Gobel U, Goodell MA, Brenner MK. Side population is enriched in tumorigenic, stem-like cancer cells, whereas ABCG2+ and ABCG2- cancer cells are similarly tumorigenic. *Cancer Res* 2005; 65:6207-6219
- 169 Ain KB. Anaplastic thyroid carcinoma: behavior, biology, and therapeutic approaches. *Thyroid* 1998;8:715-726
- 170 Moore KA, Lemischka IR. Stem cells and their niches. *Science* 2006; 311:1880-1885
- 171 Li L, Xi T. Stem Cell Niche: Structure and Function. *Annu Rev Cell Dev Biol* 2005; 21:605-631