7 Literaturverzeichnis

1 Monaco AP, Kunkel LM. Cloning of the Duchenne/Becker muscular dystrophy locus. *Adv Hum Genet* 1988; **17:** 61-98.

2 Hoffman EP, Brown RH, Jr., Kunkel LM. Dystrophin: the protein product of the Duchenne muscular dystrophy locus. *Cell* 1987; **51:** 919-928.

3 Muntoni F, Torelli S, Ferlini A. Dystrophin and mutations: one gene, several proteins, multiple phenotypes. *Lancet Neurol* 2003; **2:** 731-740.

4 Huang X *et al.* Structure of a WW domain containing fragment of dystrophin in complex with beta-dystroglycan. *Nat Struct Biol* 2000; **7:** 634-638.

5 Ahn AH, Kunkel LM. Syntrophin binds to an alternatively spliced exon of dystrophin. *J Cell Biol* 1995; **128:** 363-371.

6 Crawford GE *et al.* Assembly of the dystrophin-associated protein complex does not require the dystrophin COOH-terminal domain. *J Cell Biol* 2000; **150:** 1399-1410.

7 Zubrzycka-Gaarn EE *et al.* The Duchenne muscular dystrophy gene product is localized in sarcolemma of human skeletal muscle. *Nature* 1988; **333:** 466-469.

8 Sogos V, Curto M, Reali C, Gremo F. Developmentally regulated expression and localization of dystrophin and utrophin in the human fetal brain. *Mech Ageing Dev* 2002; **123:** 455-462.

9 D'Souza VN *et al.* A novel dystrophin isoform is required for normal retinal electrophysiology. *Hum Mol Genet* 1995; **4:** 837-842.

10 Byers TJ, Lidov HG, Kunkel LM. An alternative dystrophin transcript specific to peripheral nerve. *Nat Genet* 1993; **4:** 77-81.

11 Roberts RG. Dystrophins and dystrobrevins. *Genome Biol* 2001; **2:** REVIEWS3006.

12 Ilsley JL, Sudol M, Winder SJ. The interaction of dystrophin with beta-dystroglycan is regulated by tyrosine phosphorylation. *Cell Signal* 2001; **13:** 625-632.

13 Brenman JE *et al.* Interaction of nitric oxide synthase with the postsynaptic density protein PSD-95 and alpha1-syntrophin mediated by PDZ domains. *Cell* 1996; **84:** 757-767.

14 Gee SH *et al.* Interaction of muscle and brain sodium channels with multiple members of the syntrophin family of dystrophin-associated proteins. *J Neurosci* 1998; **18:** 128-137.

15 Matsumura K, Campbell KP. Dystrophin-glycoprotein complex: its role in the molecular pathogenesis of muscular dystrophies. *Muscle Nerve* 1994; **17:** 2-15.

16 Ibraghimov-Beskrovnaya O *et al.* Primary structure of dystrophin-associated glycoproteins linking dystrophin to the extracellular matrix. *Nature* 1992; **355:** 696-702.

17 Petrof BJ *et al.* Dystrophin protects the sarcolemma from stresses developed during muscle contraction. *Proc Natl Acad Sci U S A* 1993; **90:** 3710-3714.

18 Moens P, Baatsen PH, Marechal G. Increased susceptibility of EDL muscles from mdx mice to damage induced by contractions with stretch. *J Muscle Res Cell Motil* 1993; **14:** 446-451.

19 Turner PR, Fong PY, Denetclaw WF, Steinhardt RA. Increased calcium influx in dystrophic muscle. *J Cell Biol* 1991; **115:** 1701-1712.

20 Fong PY, Turner PR, Denetclaw WF, Steinhardt RA. Increased activity of calcium leak channels in myotubes of Duchenne human and mdx mouse origin. *Science* 1990; **250:** 673-676.

21 Porter JD *et al.* A chronic inflammatory response dominates the skeletal muscle molecular signature in dystrophin-deficient mdx mice. *Hum Mol Genet* 2002; **11:** 263-272.

22 Oak SA, Zhou YW, Jarrett HW. Skeletal muscle signaling pathway through the dystrophin glycoprotein complex and Rac1. *J Biol Chem* 2003; **278:** 39287-39295.

23 Lina S, Liechti-Gallatib S, M. BJ. Neue Erkenntnisse bei den Muskeldystrophien: aktualisierter Abklärungsplan. *Schweiz Med Wochenschr* 1999**:** 1141-1151.

24 Cooper BJ. Animal models of Duchenne and Becker muscular dystrophy. *Br Med Bull* 1989; **45:** 703-718.

25 Cox GA *et al.* Overexpression of dystrophin in transgenic mdx mice eliminates dystrophic symptoms without toxicity. *Nature* 1993; **364:** 725-729.

26 Wells DJ *et al.* Human dystrophin expression corrects the myopathic phenotype in transgenic mdx mice. *Hum Mol Genet* 1992; **1:** 35-40.

27 Phelps SF *et al.* Expression of full-length and truncated dystrophin mini-genes in transgenic mdx mice. *Hum Mol Genet* 1995; **4:** 1251-1258.

28 DelloRusso C *et al.* Functional correction of adult mdx mouse muscle using gutted adenoviral vectors expressing full-length dystrophin. *Proc Natl Acad Sci U S A* 2002; **99:** 12979-12984.

29 Liang KW *et al.* Restoration of dystrophin expression in mdx mice by intravascular injection of naked DNA containing full-length dystrophin cDNA. *Gene Ther* 2004; **11:** 901-908.

30 Liu F, Nishikawa M, Clemens PR, Huang L. Transfer of full-length Dmd to the diaphragm muscle of Dmd(mdx/mdx) mice through systemic administration of plasmid DNA. *Mol Ther* 2001; **4:** 45-51.

31 Zhang G *et al.* Intraarterial delivery of naked plasmid DNA expressing full-length mouse dystrophin in the mdx mouse model of duchenne muscular dystrophy. *Hum Gene Ther* 2004; **15:** 770-782.

32 O'Hara AJ *et al.* The spread of transgene expression at the site of gene construct injection. *Muscle Nerve* 2001; **24:** 488-495.

33 Nowak KJ, Davies KE. Duchenne muscular dystrophy and dystrophin: pathogenesis and opportunities for treatment. *EMBO Rep* 2004; **5:** 872-876.

34 Acsadi G *et al.* Dystrophin expression in muscles of mdx mice after adenovirus-mediated in vivo gene transfer. *Hum Gene Ther* 1996; **7:** 129-140.

35 Gilbert R *et al.* Prolonged dystrophin expression and functional correction of mdx mouse muscle following gene transfer with a helper-dependent (gutted) adenovirus-encoding murine dystrophin. *Hum Mol Genet* 2003; **12:** 1287-1299.

36 Dudley RW *et al.* Sustained improvement of muscle function one year after full-length dystrophin gene transfer into mdx mice by a gutted helper-dependent adenoviral vector. *Hum Gene Ther* 2004; **15:** 145-156.

37 Cao B *et al.* The role of receptors in the maturation-dependent adenoviral transduction of myofibers. *Gene Ther* 2001; **8:** 627-637.

38 Kay MA *et al.* Evidence for gene transfer and expression of factor IX in haemophilia B patients treated with an AAV vector. *Nat Genet* 2000; **24:** 257-261.

39 Liu M *et al.* Adeno-associated virus-mediated microdystrophin expression protects young mdx muscle from contraction-induced injury. *Mol Ther* 2005; **11:** 245-256.

40 Blankinship MJ *et al.* Efficient transduction of skeletal muscle using vectors based on adeno-associated virus serotype 6. *Mol Ther* 2004; **10:** 671-678.

41 Horejsh D, Ruckwardt TJ, David Pauza C. CXCR4-dependent HIV-1 infection of differentiated epithelial cells. *Virus Res* 2002; **90:** 275-286.

42 Coffin JM, Hughes SH, Varmus HE. *Retroviruses*. Cold Spring Harbor Laboratory Press: Plainview(NY), 1997.

43 Romano G. Current development of lentiviral-mediated gene transfer. *Drug News Perspect* 2005; **18:** 128-134.

44 O'Rourke JP *et al.* Comparison of gene transfer efficiencies and gene expression levels achieved with equine infectious anemia virus- and human immunodeficiency virus type 1-derived lentivirus vectors. *J Virol* 2002; **76:** 1510-1515.

45 Li S *et al.* Stable transduction of myogenic cells with lentiviral vectors expressing a minidystrophin. *Gene Ther* 2005; **12:** 1099-1108.

46 Gregory LG *et al.* Highly efficient EIAV-mediated in utero gene transfer and expression in the major muscle groups affected by Duchenne muscular dystrophy. *Gene Ther* 2004; **11:** 1117-1125.

47 Katirji B *et al. Neuromuscular Disorders in Clinical Practice*. Butterworth-Heinemann: Boston, Oxford, Auckland, Johannesburg, Melbourne, New Delhi, 2002.

48 Rando TA, Disatnik MH, Zhou LZ. Rescue of dystrophin expression in mdx mouse muscle by RNA/DNA oligonucleotides. *Proc Natl Acad Sci U S A* 2000; **97:** 5363-5368.

49 Rando TA. Oligonucleotide-mediated gene therapy for muscular dystrophies. *Neuromuscul Disord* 2002; **12 Suppl 1:** S55-60.

50 Gebski BL, Mann CJ, Fletcher S, Wilton SD. Morpholino antisense oligonucleotide induced dystrophin exon 23 skipping in mdx mouse muscle. *Hum Mol Genet* 2003; **12:** 1801-1811.

51 van Deutekom JC *et al.* Antisense-induced exon skipping restores dystrophin expression in DMD patient derived muscle cells. *Hum Mol Genet* 2001; **10:** 1547-1554.

52 Goyenvalle A *et al.* Rescue of dystrophic muscle through U7 snRNA-mediated exon skipping. *Science* 2004; **306:** 1796-1799.

53 Heslop L, Morgan JE, Partridge TA. Evidence for a myogenic stem cell that is exhausted in dystrophic muscle. *J Cell Sci* 2000; **113 (Pt 12):** 2299-2308.

54 Partridge TA *et al.* Conversion of mdx myofibres from dystrophin-negative to -positive by injection of normal myoblasts. *Nature* 1989; **337:** 176-179.

55 Qu Z, Huard J. Matching host muscle and donor myoblasts for myosin heavy chain improves myoblast transfer therapy. *Gene Ther* 2000; **7:** 428-437.

56 Huard J *et al.* Gene transfer into skeletal muscles by isogenic myoblasts. *Hum Gene Ther* 1994; **5:** 949-958.

57 Law PK *et al.* Dystrophin production induced by myoblast transfer therapy in Duchenne muscular dystrophy. *Lancet* 1990; **336:** 114-115.

58 Law PK *et al.* First human myoblast transfer therapy continues to show dystrophin after 6 years. *Cell Transplant* 1997; **6:** 95-100.

59 Bachrach E *et al.* Systemic delivery of human microdystrophin to regenerating mouse dystrophic muscle by muscle progenitor cells. *Proc Natl Acad Sci U S A* 2004; **101:** 3581-3586.

60 Sampaolesi M *et al.* Cell therapy of alpha-sarcoglycan null dystrophic mice through intra-arterial delivery of mesoangioblasts. *Science* 2003; **301:** 487-492.

61 Blau HM, Webster C, Pavlath GK. Defective myoblasts identified in Duchenne muscular dystrophy. *Proc Natl Acad Sci U S A* 1983; **80:** 4856-4860.

62 Kambadur R, Sharma M, Smith TP, Bass JJ. Mutations in myostatin (GDF8) in double-muscled Belgian Blue and Piedmontese cattle. *Genome Res* 1997; **7:** 910-916.

63 McPherron AC, Lee SJ. Double muscling in cattle due to mutations in the myostatin gene. *Proc Natl Acad Sci U S A* 1997; **94:** 12457-12461.

64 Bogdanovich S *et al.* Myostatin propeptide-mediated amelioration of dystrophic pathophysiology. *Faseb J* 2005; **19:** 543-549.

65 Anderson JE, McIntosh LM, Poettcker R. Deflazacort but not prednisone improves both muscle repair and fiber growth in diaphragm and limb muscle in vivo in the mdx dystrophic mouse. *Muscle Nerve* 1996; **19:** 1576-1585.

66 Anderson JE, Weber M, Vargas C. Deflazacort increases laminin expression and myogenic repair, and induces early persistent functional gain in mdx mouse muscular dystrophy. *Cell Transplant* 2000; **9:** 551-564.

67 Anderson JE, Vargas C. Correlated NOS-Imu and myf5 expression by satellite cells in mdx mouse muscle regeneration during NOS manipulation and deflazacort treatment. *Neuromuscul Disord* 2003; **13:** 388-396.

68 Cox GA, Sunada Y, Campbell KP, Chamberlain JS. Dp71 can restore the dystrophin-associated glycoprotein complex in muscle but fails to prevent dystrophy. *Nat Genet* 1994; **8:** 333-339.

69 Matsumura K *et al.* Association of dystrophin-related protein with dystrophin-associated proteins in mdx mouse muscle. *Nature* 1992; **360:** 588-591.

70 Tinsley JM *et al.* Amelioration of the dystrophic phenotype of mdx mice using a truncated utrophin transgene. *Nature* 1996; **384:** 349-353.

71 Gramolini AO *et al.* Muscle and neural isoforms of agrin increase utrophin expression in cultured myotubes via a transcriptional regulatory mechanism. *J Biol Chem* 1998; **273:** 736-743.

72 Perkins KJ, Davies KE. The role of utrophin in the potential therapy of Duchenne muscular dystrophy. *Neuromuscul Disord* 2002; **12 Suppl 1:** S78-89.

73 Krag TO *et al.* Heregulin ameliorates the dystrophic phenotype in mdx mice. *Proc Natl Acad Sci U S A* 2004; **101:** 13856-13860.

74 Haslett JN *et al.* Gene expression comparison of biopsies from Duchenne muscular dystrophy (DMD) and normal skeletal muscle. *Proc Natl Acad Sci U S A* 2002; **99:** 15000-15005.

75 Noguchi S *et al.* cDNA microarray analysis of individual Duchenne muscular dystrophy patients. *Hum Mol Genet* 2003; **12:** 595-600.

76 Sifringer M *et al.* Identification of transcripts from a subtraction library which might be responsible for the mild phenotype in an intrafamilially variable course of Duchenne muscular dystrophy. *Hum Genet* 2004; **114:** 149-156.

77 Bakay M, Zhao P, Chen J, Hoffman EP. A web-accessible complete transcriptome of normal human and DMD muscle. *Neuromuscul Disord* 2002; **12 Suppl 1:** S125-141.

78 Stein GH, Drullinger LF, Soulard A, Dulic V. Differential roles for cyclin-dependent kinase inhibitors p21 and p16 in the mechanisms of senescence and differentiation in human fibroblasts. *Mol Cell Biol* 1999; **19:** 2109-2117.

79 Endesfelder S *et al.* Elevated p21 mRNA level in skeletal muscle of DMD patients and mdx mice indicates either an exhausted satellite cell pool or a higher p21 expression in dystrophin-deficient cells per se. *J Mol Med* 2000; **78:** 569-574.

80 Endesfelder S *et al.* Transfection of normal primary human skeletal myoblasts with p21 and p57 antisense oligonucleotides to improve their proliferation: a first step towards an alternative molecular therapy approach of Duchenne muscular dystrophy. *J Mol Med* 2003; **81:** 355-362.

81 Johnson DG, Walker CL. Cyclins and cell cycle checkpoints. *Annu Rev Pharmacol Toxicol* 1999; **39:** 295-312.

82 Doree M, Galas S. The cyclin-dependent protein kinases and the control of cell division. *Faseb J* 1994; **8:** 1114-1121.

83 Tamrakar S, Rubin E, Ludlow JW. Role of pRB dephosphorylation in cell cycle regulation. *Front Biosci* 2000; **5:** D121-137.

84 Pardali K, Kowanetz M, Heldin CH, Moustakas A. Smad pathway-specific transcriptional regulation of the cell cycle inhibitor p21(WAF1/Cip1). *J Cell Physiol* 2005; **204:** 260-272.

85 Bornstein G *et al.* Role of the SCFSkp2 ubiquitin ligase in the degradation of p21Cip1 in S phase. *J Biol Chem* 2003; **278:** 25752-25757.

86 Napoli C, Lemieux C, Jorgensen R. Introduction of a Chimeric Chalcone Synthase Gene into Petunia Results in Reversible Co-Suppression of Homologous Genes in trans. *Plant Cell* 1990; **2:** 279-289.

87 Cogoni C, Macino G. Gene silencing in Neurospora crassa requires a protein homologous to RNA-dependent RNA polymerase. *Nature* 1999; **399:** 166-169.

88 Fire A *et al.* Potent and specific genetic interference by double-stranded RNA in Caenorhabditis elegans. *Nature* 1998; **391:** 806-811.

89 Tuschl T *et al.* Targeted mRNA degradation by double-stranded RNA in vitro. *Genes Dev* 1999; **13:** 3191-3197.

90 Zamore PD, Tuschl T, Sharp PA, Bartel DP. RNAi: double-stranded RNA directs the ATP-dependent cleavage of mRNA at 21 to 23 nucleotide intervals. *Cell* 2000; **101:** 25-33.

91 Elbashir SM *et al.* Functional anatomy of siRNAs for mediating efficient RNAi in Drosophila melanogaster embryo lysate. *Embo J* 2001; **20:** 6877-6888.

92 Voinnet O. Induction and suppression of RNA silencing: insights from viral infections. *Nat Rev Genet* 2005; **6:** 206-220.
93 Verdel A *et al.* RNAi-mediated targeting of heterochromatin by the RITS complex. *Science* 2004; **303:** 672-676.
94 Dahm R, Kiebler M. Cell biology: silenced RNA on the move. *Nature* 2005; **438:** 432-435.
95 Tabara H *et al.* The rde-1 gene, RNA interference, and transposon silencing in C. elegans. *Cell* 1999; **99:** 123-132.
96 Stark GR *et al.* How cells respond to interferons. *Annu Rev Biochem* 1998; **67:** 227-264.
97 Elbashir SM *et al.* Duplexes of 21-nucleotide RNAs mediate RNA interference in cultured mammalian cells. *Nature* 2001; **411:** 494-498.
98 Huesken D *et al.* Design of a genome-wide siRNA library using an artificial neural network. *Nat Biotechnol* 2005; **23:** 995-1001.
99 Kittler R *et al.* An endoribonuclease-prepared siRNA screen in human cells identifies genes essential for cell division. *Nature* 2004; **432:** 1036-1040.
100 Gartel AL, Kandel ES. RNA interference in cancer. *Biomol Eng* 2006; **23:** 17-34.
101 Tan FL, Yin JQ. RNAi, a new therapeutic strategy against viral infection. *Cell Res* 2004; **14:** 460-466.
102 Bertrand JR *et al.* Comparison of antisense oligonucleotides and siRNAs in cell culture and in vivo. *Biochem Biophys Res Commun* 2002; **296:** 1000-1004.
103 Clayton J. RNA interference: the silent treatment. *Nature* 2004; **431:** 599-605.
104 Chiu YL, Rana TM. siRNA function in RNAi: a chemical modification analysis. *Rna* 2003; **9:** 1034-1048.
105 Layzer JM *et al.* In vivo activity of nuclease-resistant siRNAs. *Rna* 2004; **10:** 766-771.
106 Dalby B *et al.* Advanced transfection with Lipofectamine 2000 reagent: primary neurons, siRNA, and high-throughput applications. *Methods* 2004; **33:** 95-103.
107 Ovcharenko D *et al.* High-throughput RNAi screening in vitro: from cell lines to primary cells. *Rna* 2005; **11:** 985-993.
108 Brummelkamp TR, Bernards R, Agami R. A system for stable expression of short interfering RNAs in mammalian cells. *Science* 2002; **296:** 550-553.
109 Paddison PJ, Caudy AA, Hannon GJ. Stable suppression of gene expression by RNAi in mammalian cells. *Proc Natl Acad Sci U S A* 2002; **99:** 1443-1448.
110 Yu JY, DeRuiter SL, Turner DL. RNA interference by expression of short-interfering RNAs and hairpin RNAs in mammalian cells. *Proc Natl Acad Sci U S A* 2002; **99:** 6047-6052.
111 Sui G *et al.* A DNA vector-based RNAi technology to suppress gene expression in mammalian cells. *Proc Natl Acad Sci U S A* 2002; **99:** 5515-5520.
112 Wooddell CI *et al.* Long-term RNA interference from optimized siRNA expression constructs in adult mice. *Biochem Biophys Res Commun* 2005; **334:** 117-127.
113 Wiznerowicz M, Trono D. Conditional suppression of cellular genes: lentivirus vector-mediated drug-inducible RNA interference. *J Virol* 2003; **77:** 8957-8961.
114 McCaffrey AP *et al.* RNA interference in adult mice. *Nature* 2002; **418:** 38-39.
115 Lewis DL *et al.* Efficient delivery of siRNA for inhibition of gene expression in postnatal mice. *Nat Genet* 2002; **32:** 107-108.
116 Brummelkamp TR, Bernards R, Agami R. Stable suppression of tumorigenicity by virus-mediated RNA interference. *Cancer Cell* 2002; **2:** 243-247.
117 Hommel JD *et al.* Local gene knockdown in the brain using viral-mediated RNA interference. *Nat Med* 2003; **9:** 1539-1544.
118 Hino T *et al.* In vivo delivery of small interfering RNA targeting brain capillary endothelial cells. *Biochem Biophys Res Commun* 2006; **340:** 263-267.
119 Kasahara H, Aoki H. Gene silencing using adenoviral RNAi vector in vascular smooth muscle cells and cardiomyocytes. *Methods Mol Med* 2005; **112:** 155-172.

120 Marwick C. First "antisense" drug will treat CMV retinitis. *Jama* 1998; **280:** 871.
121 Cejka D, Losert D, Wacheck V. Short interfering RNA (siRNA): tool or therapeutic? *Clin Sci (Lond)* 2006; **110:** 47-58.
122 Zhang Y *et al.* Intravenous RNA interference gene therapy targeting the human epidermal growth factor receptor prolongs survival in intracranial brain cancer. *Clin Cancer Res* 2004; **10:** 3667-3677.
123 Song E *et al.* Antibody mediated in vivo delivery of small interfering RNAs via cell-surface receptors. *Nat Biotechnol* 2005; **23:** 709-717.
124 Livak K. Relative Quantifikation of Gene Expression. *Applied Biosystem User Bulletin #2*, 1997.
125 Ambion. Ambion Technotes 9(6).
126 Rao A *et al.* Vitamin D receptor and p21/WAF1 are targets of genistein and 1,25-dihydroxyvitamin D3 in human prostate cancer cells. *Cancer Res* 2004; **64:** 2143-2147.
127 Harborth J *et al.* Sequence, chemical, and structural variation of small interfering RNAs and short hairpin RNAs and the effect on mammalian gene silencing. *Antisense Nucleic Acid Drug Dev* 2003; **13:** 83-105.
128 Endesfelder S *et al.* Antisense oligonucleotides and short interfering RNAs silencing the cyclin-dependent kinase inhibitor p21 improve proliferation of Duchenne muscular dystrophy patients' primary skeletal myoblasts. *J Mol Med* 2005; **83:** 64-71.
129 Zhang J *et al.* Silencing p21(Waf1/Cip1/Sdi1) expression increases gene transduction efficiency in primitive human hematopoietic cells. *Gene Ther* 2005; **12:** 1444-1452.
130 Seibler J *et al.* Single copy shRNA configuration for ubiquitous gene knockdown in mice. *Nucleic Acids Res* 2005; **33:** e67.
131 Fish RJ, Kruithof EK. Short-term cytotoxic effects and long-term instability of RNAi delivered using lentiviral vectors. *BMC Mol Biol* 2004; **5:** 9.
132 Alberts B *et al. Molekularbiologie der Zelle*. VCH-Verlag, 1995.
133 Zhang P *et al.* p21(CIP1) and p57(KIP2) control muscle differentiation at the myogenin step. *Genes Dev* 1999; **13:** 213-224.
134 Jackson AL *et al.* Expression profiling reveals off-target gene regulation by RNAi. *Nat Biotechnol* 2003; **21:** 635-637.
135 Kumar M, Carmichael GG. Antisense RNA: function and fate of duplex RNA in cells of higher eukaryotes. *Microbiol Mol Biol Rev* 1998; **62:** 1415-1434.
136 Persengiev SP, Zhu X, Green MR. Nonspecific, concentration-dependent stimulation and repression of mammalian gene expression by small interfering RNAs (siRNAs). *Rna* 2004; **10:** 12-18.
137 Scacheri PC *et al.* Short interfering RNAs can induce unexpected and divergent changes in the levels of untargeted proteins in mammalian cells. *Proc Natl Acad Sci U S A* 2004; **101:** 1892-1897.
138 Doench JG, Petersen CP, Sharp PA. siRNAs can function as miRNAs. *Genes Dev* 2003; **17:** 438-442.
139 Lee Y *et al.* MicroRNA maturation: stepwise processing and subcellular localization. *Embo J* 2002; **21:** 4663-4670.
140 Slack FJ *et al.* The lin-41 RBCC gene acts in the C. elegans heterochronic pathway between the let-7 regulatory RNA and the LIN-29 transcription factor. *Mol Cell* 2000; **5:** 659-669.
141 Sledz CA *et al.* Activation of the interferon system by short-interfering RNAs. *Nat Cell Biol* 2003; **5:** 834-839.
142 Bridge AJ *et al.* Induction of an interferon response by RNAi vectors in mammalian cells. *Nat Genet* 2003; **34:** 263-264.
143 Zhang SZ *et al.* Knockdown of c-Met by adenovirus-delivered small interfering RNA inhibits hepatocellular carcinoma growth in vitro and in vivo. *Mol Cancer Ther* 2005; **4:** 1577-1584.

144 Bunz F *et al.* Requirement for p53 and p21 to sustain G2 arrest after DNA damage. *Science* 1998; **282:** 1497-1501.
145 el-Deiry WS *et al.* WAF1, a potential mediator of p53 tumor suppression. *Cell* 1993; **75:** 817-825.
146 Harper JW *et al.* Inhibition of cyclin-dependent kinases by p21. *Mol Biol Cell* 1995; **6:** 387-400.
147 Waldman T, Lengauer C, Kinzler KW, Vogelstein B. Uncoupling of S phase and mitosis induced by anticancer agents in cells lacking p21. *Nature* 1996; **381:** 713-716.
148 Hao DL *et al.* Knockdown of human p53 gene expression in 293-T cells by retroviral vector-mediated short hairpin RNA. *Acta Biochim Biophys Sin (Shanghai)* 2005; **37:** 779-783.
149 Sanders DA. No false start for novel pseudotyped vectors. *Curr Opin Biotechnol* 2002; **13:** 437-442.
150 Mitta B *et al.* Advanced modular self-inactivating lentiviral expression vectors for multigene interventions in mammalian cells and in vivo transduction. *Nucleic Acids Res* 2002; **30:** e113.
151 Wu X *et al.* Development of a novel trans-lentiviral vector that affords predictable safety. *Mol Ther* 2000; **2:** 47-55.
152 Bukovsky AA, Song JP, Naldini L. Interaction of human immunodeficiency virus-derived vectors with wild-type virus in transduced cells. *J Virol* 1999; **73:** 7087-7092.
153 Sinn PL, Sauter SL, McCray PB, Jr. Gene therapy progress and prospects: development of improved lentiviral and retroviral vectors--design, biosafety, and production. *Gene Ther* 2005; **12:** 1089-1098.
154 Miyoshi H *et al.* Development of a self-inactivating lentivirus vector. *J Virol* 1998; **72:** 8150-8157.
155 Logan AC, Haas DL, Kafri T, Kohn DB. Integrated self-inactivating lentiviral vectors produce full-length genomic transcripts competent for encapsidation and integration. *J Virol* 2004; **78:** 8421-8436.
156 Hacein-Bey-Abina S *et al.* LMO2-associated clonal T cell proliferation in two patients after gene therapy for SCID-X1. *Science* 2003; **302:** 415-419.
157 Hacein-Bey-Abina S *et al.* A serious adverse event after successful gene therapy for X-linked severe combined immunodeficiency. *N Engl J Med* 2003; **348:** 255-256.
158 Hammond SM, Crable SC, Anderson KP. Negative regulatory elements are present in the human LMO2 oncogene and may contribute to its expression in leukemia. *Leuk Res* 2005; **29:** 89-97.
159 Gaspar HB *et al.* Gene therapy of X-linked severe combined immunodeficiency by use of a pseudotyped gammaretroviral vector. *Lancet* 2004; **364:** 2181-2187.
160 Schroder AR *et al.* HIV-1 integration in the human genome favors active genes and local hotspots. *Cell* 2002; **110:** 521-529.
161 Wu X, Li Y, Crise B, Burgess SM. Transcription start regions in the human genome are favored targets for MLV integration. *Science* 2003; **300:** 1749-1751.
162 Narezkina A *et al.* Genome-wide analyses of avian sarcoma virus integration sites. *J Virol* 2004; **78:** 11656-11663.
163 Gallo-Penn AM *et al.* Systemic delivery of an adenoviral vector encoding canine factor VIII results in short-term phenotypic correction, inhibitor development, and biphasic liver toxicity in hemophilia A dogs. *Blood* 2001; **97:** 107-113.
164 Lozier JN *et al.* Toxicity of a first-generation adenoviral vector in rhesus macaques. *Hum Gene Ther* 2002; **13:** 113-124.
165 Assessment of adenoviral vector safety and toxicity: report of the National Institutes of Health Recombinant DNA Advisory Committee. *Hum Gene Ther* 2002; **13:** 3-13.
166 Bostanci A. Gene therapy. Blood test flags agent in death of Penn subject. *Science* 2002; **295:** 604-605.

167 Fields PA *et al.* Role of vector in activation of T cell subsets in immune responses against the secreted transgene product factor IX. *Mol Ther* 2000; **1:** 225-235.

168 Zabner J *et al.* Repeat administration of an adenovirus vector encoding cystic fibrosis transmembrane conductance regulator to the nasal epithelium of patients with cystic fibrosis. *J Clin Invest* 1996; **97:** 1504-1511.

169 Follenzi A *et al.* Efficient gene delivery and targeted expression to hepatocytes in vivo by improved lentiviral vectors. *Hum Gene Ther* 2002; **13:** 243-260.

170 Sung VM, Lai MM. Murine retroviral pseudotype virus containing hepatitis B virus large and small surface antigens confers specific tropism for primary human hepatocytes: a potential liver-specific targeting system. *J Virol* 2002; **76:** 912-917.

171 Jung C *et al.* Lentiviral vectors pseudotyped with envelope glycoproteins derived from human parainfluenza virus type 3. *Biotechnol Prog* 2004; **20:** 1810-1816.

172 Sherr CJ, Roberts JM. CDK inhibitors: positive and negative regulators of G1-phase progression. *Genes Dev* 1999; **13:** 1501-1512.

173 Deng C *et al.* Mice lacking p21CIP1/WAF1 undergo normal development, but are defective in G1 checkpoint control. *Cell* 1995; **82:** 675-684.

174 Brugarolas J *et al.* Radiation-induced cell cycle arrest compromised by p21 deficiency. *Nature* 1995; **377:** 552-557.

175 Philipp J *et al.* Tumor suppression by p27Kip1 and p21Cip1 during chemically induced skin carcinogenesis. *Oncogene* 1999; **18:** 4689-4698.

176 Balomenos D *et al.* The cell cycle inhibitor p21 controls T-cell proliferation and sex-linked lupus development. *Nat Med* 2000; **6:** 171-176.

177 Shiohara M, Koike K, Komiyama A, Koeffler HP. p21WAF1 mutations and human malignancies. *Leuk Lymphoma* 1997; **26:** 35-41.

178 Franklin DS *et al.* Functional collaboration between different cyclin-dependent kinase inhibitors suppresses tumor growth with distinct tissue specificity. *Mol Cell Biol* 2000; **20:** 6147-6158.

179 Adnane J *et al.* Loss of p21WAF1/CIP1 accelerates Ras oncogenesis in a transgenic/knockout mammary cancer model. *Oncogene* 2000; **19:** 5338-5347.

180 Yang WC *et al.* Targeted inactivation of the p21(WAF1/cip1) gene enhances Apc-initiated tumor formation and the tumor-promoting activity of a Western-style high-risk diet by altering cell maturation in the intestinal mucosal. *Cancer Res* 2001; **61:** 565-569.

181 Martin-Caballero J, Flores JM, Garcia-Palencia P, Serrano M. Tumor susceptibility of p21(Waf1/Cip1)-deficient mice. *Cancer Res* 2001; **61:** 6234-6238.

182 Hueber AO, Evan GI. Traps to catch unwary oncogenes. *Trends Genet* 1998; **14:** 364-367.

183 Halevy O *et al.* Correlation of terminal cell cycle arrest of skeletal muscle with induction of p21 by MyoD. *Science* 1995; **267:** 1018-1021.

184 Hawke TJ *et al.* p21 is essential for normal myogenic progenitor cell function in regenerating skeletal muscle. *Am J Physiol Cell Physiol* 2003; **285:** C1019-1027.

185 Worgall S. A realistic chance for gene therapy in the near future. *Pediatr Nephrol* 2005; **20:** 118-124.

186 Bujold M *et al.* Autotransplantation in mdx mice of mdx myoblasts genetically corrected by an HSV-1 amplicon vector. *Cell Transplant* 2002; **11:** 759-767.

187 Huang X *et al.* Stable gene transfer and expression in human primary T-cells by the Sleeping Beauty transposon system. *Blood* 2005.

188 Karpati G *et al.* Myoblast transfer in Duchenne muscular dystrophy. *Ann Neurol* 1993; **34:** 8-17.

189 Skuk D *et al.* Dystrophin expression in myofibers of Duchenne muscular dystrophy patients following intramuscular injections of normal myogenic cells. *Mol Ther* 2004; **9:** 475-482.

190 Coutelle C *et al.* Gene therapy progress and prospects: fetal gene therapy--first proofs of concept--some adverse effects. *Gene Ther* 2005; **12:** 1601-1607.

191 Waddington SN *et al.* Long-term transgene expression by administration of a lentivirus-based vector to the fetal circulation of immuno-competent mice. *Gene Ther* 2003; **10:** 1234-1240.
192 Coutelle C, Rodeck C. On the scientific and ethical issues of fetal somatic gene therapy. *Gene Ther* 2002; **9:** 670-673.