

References

- Aitken ML, Moss RB, Waltz DA, Dovey ME, Tonelli MR, McNamara SC, Gibson RI, Ramsey BW, Carter BJ, Reynolds TC. 2001. A phase 1 study of aerosolized administration of tgAAVCF to cystic fibrosis subjects with mild lung disease. *Hum Gene Ther* 12(15):1907-16.
- Arencibia A, Gentinetta E, Cuzzoni E, Castiglione S, Kohli A, Vain P, Leech M, Christou P, Sala F. 1998. Molecular analysis of the genome of transgenic rice plants produced via particle bombardment or intact cell electroporation. *Mol Breeding* 4:99-109.
- Bartlett JS, Wilcher R, Samulski RJ. 2000. Infectious entry pathway of adeno-associated virus and adeno-associated virus vectors. *J Virol* 74(6):2777-85.
- Bayley CC, Morgan M, Dale EC, Ow DW. 1992. Exchange of gene activity in transgenic plants catalyzed by the Cre-lox site-specific recombination system. *Plant Mol Biol* 18(2):353-61
- Beaton A, Palumbo P, Berns KI. 1989. Expression from the adeno-associated virus p5 and p19 promoters is negatively regulated in trans by the rep protein. *J Virol* 63(10):4450-4.
- Beccera SP, Koczot F, Fabisch P, Rose JA. 1988. Synthesis of adeno-associated virus structural proteins requires both alternative mRNA splicing and alternative initiations from a single transcript. *J Virol* 62:2745-2754.
- Becker D, Kemper E, Schell J, Masterson R. 1992. New plant binary vectors with selectable markers located proximal to the left T-DNA border. *Plant Mol Biol* 20(6):1195-7.
- Bender J. 2001. A vicious cycle: RNA silencing and DNA methylation in plants. *Cell* 106(2):129-32.
- Berns KI, Linden RM. 1995. The cryptic life cycle of adeno-associated virus. *Bioessays* 17(3):237-45.
- Cheung AK, Hoggan MD, Hauswirth WW, Berns KI. 1980. Integration of the adeno-associated virus genome into cellular DNA in latently infected human Detroit 6 cells. *J Virol* 33(2):739-48.
- Chicas A, Macino G. 2001. Characteristics of post-transcriptional gene silencing. *EMBO* 2(11):992-6.
- Chilton MD. 1979. *Agrobacterium* Ti plasmids as a tool for genetic engineering in plants. *Basic Life Sci* 14:23-31.

Chung-Faye GA, Chen MJ, Green NK, Burton A, Anderson D, Mautner V, Searle PF, Kerr DJ. 2001. In vivo gene therapy for colon cancer using adenovirus mediated, transfer of the fusion gene cytosine deaminase and uracil phosphoribosyltransferase. *Gene Ther* 8(20):1547-54.

Clough SJ, Bent AF. 1998. Floral dip: a simplified method for *Agrobacterium*-mediated transformation of *Arabidopsis thaliana*. *Plant J* 16(6):735-43.

Cramer CL, Boothe JG, Oishi KK. 1999. Transgenic plants for therapeutic proteins: linking upstream and downstream strategies. *Curr Top Microbiol Immunol* 240:95-118.

Dale EC, Ow DW. 1991. Gene transfer with subsequent removal of the selection gene from the host genome. *Proc Natl Acad Sci* 88(23):10558-62.

Davis MD, Wu J, Owens RA. 2000. Mutational analysis of adeno-associated virus type 2 Rep68 protein endonuclease activity on partially single-stranded substrates. *J Virol* 74(6):2936-2942.

Dominguez A, Fagoaga C, Navarro L, Moreno P, Pena L. 2002. Regeneration of transgenic citrus plants under non selective conditions results in high-frequency recovery of plants with silenced transgenes. *Mol Genet Genomics* 267(4):544-56.

Dower WJ, Miller JF, Ragsdale CW. 1988. High efficiency transformation of *E. coli* by high voltage electroporation. *Nucleic Acids Res* 16(13):6127-45.

Dyall J, Szabo P, Berns KI. 1999. Adeno-associated virus (AAV) site-specific integration: formation of AAV-AAVS1 junctions in an in vitro system. *Proc Natl Acad Sci* 6(22):12849-54.

Folger KR, Wong EA, Wahl G, Capecchi MR. 1982. Patterns of integration of DNA microinjected into cultured mammalian cells: evidence for homologous recombination between injected plasmid DNA molecules. *Mol Cell Biol* 2(11):1372-87.

Frugis G, Giannino D, Mele G, Nicolodi C, Chiappetta A, Bitonti MB, Innocenti AM, Dewitte W, Van Onckelen H, Mariotti D. 2001. Overexpression of KNAT1 in lettuce shifts leaf determinate growth to a shoot-like indeterminate growth associated with an accumulation of isopentenyl-type cytokinins. *Plant Physiol* 126(4):1370-80.

Gavin DK, Young SM, Xiao W, Temple B, Abernathy CR, Pereira DJ, Muzyczka N, Samulski RJ. 1999. Charge-to-alanine mutagenesis of the adeno-associated virus type 2 Rep78/68 proteins yields temperature-sensitive and magnesium-dependent variants. *J Virol* 73(11):9422-45.

Gelvin SB. 1998. The introduction and expression of transgenes in plants. *Curr Opin Biotechnol* 9(2):227-32.

- Gherbi H, Gallego ME, Jalut N, Lunchr JM, Hohn B, White CI. 2001. Homologous recombination in planta is stimulated in the absence of Rad50. *EMBO* 2(4):287-91.
- Goodin MM, Dietzgen RG, Schichnes D, Ruzin S, Jackson AO. 2002. PGD vectors: versatile tools for the expression of green and red fluorescent protein fusions in agroinfiltrated plant leaves. *Plant J* 31(3):375-83.
- Hajdekiewicz P, Svab, Z, Maliga P. 1994. The small, versatile pPZP family of *Agrobacterium* binary vectors for plant transformation. *Plant Mol Biol* 25(6):989-94.
- Halfter U, Morris PC, Willmitzer L. 1992. Gene targeting in *Arabidopsis thaliana*. *Mol Gen Genet* 231(2):186-93.
- Haseloff J, Siemering KR, Prasher DC, Hodge S. 1997. Removal of a cryptic intron and subcellular localization of green fluorescent protein are required to mark transgenic *Arabidopsis* plants brightly. *Proc Natl Acad Sci* 94:2122-2127.
- Hauswirth WW, Berns KI. 1979. Adeno-associated virus DNA replication: nonunit-length molecules. *Virology* 93(1):57-68.
- He YK, San JG, Feng XZ, Czako M, Marton L. 2001. Differential mercury volatilization by tobacco organs expressing a modified bacterial merA gene. *Cell Res* 11(3):231-6.
- Hermonat PL, Labow MA, Wright R, Berns KI, Muzyczka N. 1984. Genetics of adeno-associated virus: isolation and preliminary characterization of adeno-associated virus type 2 mutants. *J Virol* 51(2):329-39.
- Hickman A, Ronning D, Kotin R, Dyda F. 2002. Structural unity among viral origin binding proteins. Crystal structure of the nuclease domain of adeno-associated virus Rep. *Mol Cell* 10(2):327.
- Holm PB, Olsen O, Schnorf M, Brinch-Pedersen H, Knudsen S. 2000. Transformation of barley by microinjection into isolated zygote protoplasts. *Transgenic research* 9:21-32.
- Hunter LA, Samulski RJ. 1992. Colocalization of adeno-associated virus Rep and capsid proteins in the nuclei of infected cells. *J Virol* 66(1):317-24.
- Im DS, Muzyczka N. 1990. The AAV origin binding protein Rep68 is an ATP-dependent site-specific endonuclease with DNA helicase activity. *Cell* 61(3):447-57.
- Im DS, Muzyczka N. 1992. Partial purification of adeno-associated virus Rep78, Rep52, and Rep40 and their biochemical characterization. *J Virol* 66(2):119-28.
- Iyama S, Okamoto T, Sato T, Yamauchi N, Sato Y, Sasaki K, Takahashi M, Tanaka M, Adachi T, Kogawa K, Kato J, Sakamaki S, Niitsu Y. 2001. Treatment of murine

collagen-induced arthritis by ex vivo extracellular superoxide dismutase gene transfer. *Arthritis Rheum* 44(9):2160-7.

Keir SD, Xiao X, Li J, Kennedy PG. 2001. Adeno-associated virus-mediated delivery of glial cell line-derived neurotrophic factor protects motor neuron-like cells from apoptosis. *J Neurovirol* 7(5):437-46.

Kempin SA, Liljegren SJ, Block LM, Rounsley SD, Yanofsky MF, Lam E. 1997. Targeted disruption in Arabidopsis. *Nature* 389(6653):802-3.

King JA, Dubielzig R, Grimm D, Kleinschmidt JA. 2001. DNA helicase-mediated packaging of adeno-associated virus type 2 genomes into preformed capsids. *EMBO* 20(12):3282-91.

Kotin RM, Siniscalco M, Samulski RJ, Zhu XD, Hunter L, Laughlin CA, McLaughlin S, Muzyczka N, Rocchi M, Berns KI. 1990. Site-specific integration by adeno-associated virus. *Proc Natl Acad Sci* 87:2211-15.

Kyostio SR, Owens RA, Weitzman MD, Antoni BA, Chejanovsky N, Carter BJ. 1994. Analysis of adeno-associated virus (AAV) wild-type and mutant Rep proteins for their abilities to negatively regulate AAV p5 and p19 mRNA levels. *J Virol* 68(5):2947-2957.

Kyostio SR, Owens RA. 1996. Identification of adeno-associated virus Rep proteins which are dominant-negative for DNA helicase activity. *Biochem Biophys Res Commun* 220(2):294-9.

Laemmli UK. 1970. Cleavage of structural proteins during the assembly of the head of bacteriophage T4. *Nature* 227(259):680-5.

Lam E, Kato N, Lawton N. 2001. Programmed cell death, mitochondria and the plant hypersensitive response. *Nature* 411(6839):848-53.

Larson PJ, High KA. 2001. Gene therapy for hemophilia B: AAV-mediated transfer of the gene for coagulation factor IX to human muscle. *Adv Exp Med Biol* 489:45-57.

Linden RM, Ward P, Giraud C, Winocour E, Berns KI. 1996. Site-specific integration by adeno-associated virus. *Proc Natl Acad Sci* 93(21):11288-11294.

Linden RM, Winocour E, Berns KI. 1996. The recombination signals for adeno-associated virus site-specific integration. *Proc Natl Acad Sci* 93(15):7966-72.

Matzke MA, Aufsatz W, Kanno T, Mette MF, Matzke AJ. 2002. Homology-dependent gene silencing and host defense in plants. *Adv Genet* 46:235-75.

McNeil SD, Nuccio ML, Ziemak MJ, Hanson AD. 2001. Enhanced synthesis of choline and glycine betaine in transgenic tobacco plants that overexpress phosphoethanolamine N-methyltransferase. *Proc Natl Acad Sci* 98(17):10001-5.

McCarty DM, Pereira DJ, Zolotukhin I, Zhou X, Ryan JH, Muzyczka N. 1994. Identification of linear DNA sequences that specifically bind the adeno-associated virus Rep protein. *J Virol* 68(8):4988-4997.

Mendelson E, Trempe JP, Carter BJ. 1986. Identification of the trans-acting Rep proteins of adeno-associated virus by antibodies to a synthetic oligopeptide. *J Virol* 60(3):823-32.

Mengiste T, Paszkowski J. 1999. Prospects for the precise engineering of plant genomes by homologous recombination. *Biol Chem* 380(7-8):749-58.

Meyer P, Heidmann I. 1994. Epigenetic variants of a transgenic petunia line show hypermethylation in transgene DNA: an indication for specific recognition of foreign DNA in transgenic plants. *Mol Gen Genet* 243(4):390-9.

Miao ZH, Lam E. 1995. Targeted disruption of the TGA3 locus in *Arabidopsis thaliana*. *Plant J* 7(2):359-65.

Nuccio ML, Rhodes D, McNeil SD, Hanson SD. 1999. Metabolic engineering of plants for osmotic stress resistance. *Curr Opin Plant Biol* 2(2):128-34.

Paszkowski J (ed). 1994. *Homologous Recombination and Gene Silencing in Plants*. Kluwer Academic Publishers.

Pan A, Tie F, Duau Z, Yang M, Wang Z, Li L, Chen Z, Ru B. 1994. Alpha-domain of human metallothionein IA can bind to metals in transgenic tobacco plants. *Mol Gen Genet* 242(6):666-74.

Pereira DJ, McCarty DM, Muzyczka N. 1997. The adeno-associated virus (AAV) Rep protein acts as both a repressor and an activator to regulate AAV transcription during a productive infection. *J Virol* 71(2):1079-88.

Perlak FJ, Deaton RW, Armstrong TA, Fuchs RL, Sims SR, Greenplate JT, Fishchhoff DA. 1990. Insect resistant cotton plants. *Biotechnology* 8:939-43.

Ponnazhagan S, Mahendra G, Curiel DT, Shaw DR. 2001. Adeno-associated virus type 2-mediated transduction of human monocyte-derived dendritic cells: implication for ex vivo immunotherapy. *J Virol* 75(19):9493-501.

Qing K, Mah C, Hansen J, Zhou S, Dwarki V, Srivastava A. 1999. Human fibroblast growth factor receptor 1 is a co-receptor for infection by adeno-associated virus 2. *Nat Med* 5(1):71-7.

- Redemann BE, Mendelson E, Carter BJ. 1989. Adeno-associated virus rep protein synthesis during productive infection. *J Virol* 63(2):873-82.
- Rose JA, Kocot F. 1972. Adeno-associated virus multiplication. Helper requirement for viral deoxyribonucleic acid and ribonucleic acid synthesis. *J Virol* 10(1):1-8.
- Sanlioglu S, Benson PK, Yang J, Atkinson EM, Reynolds T, Engelhardt JF. 2000. Endocytosis and nuclear trafficking of adeno-associated virus type 2 are controlled by rac1 and phosphatidylinositol-3 kinase activation. *J Virol* 74(19):9184-96.
- Samani AA, Fallavollita L, Jaalouk DE, Galipeau J, Brodt P. 2001. Inhibition of carcinoma cell growth and metastasis by a vesicular stomatitis virus g-pseudotyped retrovector expressing type 1 insulin-like growth factor receptor antisense. *Hum Gene Ther* 12(16):1969-77.
- Samulski RJ, Chang LS, Shenk T. 1987. A recombinant plasmid from which an infectious adeno-associated virus genome can be excised in vitro and its use to study viral replication. *J Virol* 61(10):3096-101.
- Schmidt M, Afione S, Kotin RM. 2000. Adeno-associated virus type 2 Rep78 induces apoptosis through caspase activation independently of p53. *J Virol* 74(20):9441-50.
- Seki M, Iida A, Morikawa H. 1999. Transient expression of the beta-glucuronidase gene in tissues of *A. thaliana* by bombardment-mediated transformation. *Mol Biotechnol* 11:251-55.
- Shah J, Kachroo P, Nandi A, Klessig DF. 2001. A recessive mutation in the Arabidopsis SS12 gene confers SA-andNPR1-independent expression of PR genes and resistance against bacterial and oomycete pathogens. *Plant J* 25(5):563-74.
- Shapira G, Stachelek JL, Letsou A, Soodak LK, Liskay RM. 1983. Novel use of synthetic oligonucleotide insertion mutants for the study of homologous recombination in mammalian cells. *Proc Natl Acad Sci* 80(15):4827-31.
- Shiboleth YM, Arazi T, Wang Y, Gal-On A. 2001. A new approach for weed control in a cucurbit field employing an attenuated potyvirus-vector for herbicide resistance. *J Biotechnol* 92(1):37-46.
- Spear IS, Fife KH, Hauswirth WW, Jones CJ, Berns KI. 1977. Evidence for two nucleotide sequence orientations within the terminal repetition of adeno-associated virus DNA. *J Virol* 24(2):627-34.
- Srivastava A, Lusby EW, Berns KL. 1983. Nucleotide sequence and organization of the adeno-associated virus 2 genome. *J Virol* 45(2):555-64.

- Summerford C, Bartlett JS, Samulski RJ. 1999. AlphaVbeta5 integrin: a co-receptor for adeno-associated virus type 2 infection. *Nat Med* 5(1):78-82.
- Summerford C, Samulski RJ. 1998. Membrane-associated heparan sulfate proteoglycan is a receptor for adeno-associated virus type 2 virions. *J Virol* 72(2):1438-45.
- Surosky RT, Urabe M, Godwin SG, McQuiston SA, Kurtzman GJ, Ozawa K, Natsoulis G. 1997. Adeno-associated virus Rep proteins target DNA sequence to a unique locus in the human genome. *J Virol* 71(10):7951-59.
- Ten Hoopen R, Montijn BM, Veuskens JTM, Oud OJL, Nanninga N. 1999. The spatial localization of T-DNA insertions in petunia interphase nuclei: Consequences for chromosome organization and transgene insertion sites. *Chromosome Research* 7:611-23.
- Tratschin JD, Miller IL, Carter BJ. 1984. Genetic analysis of adeno-associated virus: properties of deletion mutants constructed in vitro and evidence for an adeno-associated virus replication function. *J Virol* 51(3):611-9.
- Trempe JP, Mendelson E, Carter BJ. 1987. Characterization of adeno-associated virus rep proteins in human cells by antibodies raised against rep expressed in *E. coli*. *Virology* 161(1):18-28.
- Urabe M, Hasumi Y, Kume A, Surosky RT, Kurtzman GJ, Tobita K, Ozawa K. 1999. Charged-to-alanine scanning mutagenesis of the N-terminal half of adeno-associated virus type 2 Rep78 protein. *J Virol* 73(4):2682-93.
- Vance V, Vaucheret H. 2001. RNA silencing in plants-defense and counterdefense. *Science* 292(5525):2277-80.
- Van Montegu M, Holsters M, Zambryski P, Hernalsteens JP, Depicker A, De Beuckeleer M, Engler G, Lemmers M, Willmitzer L, Schell J. 1980. The interaction of *Agrobacterium* Ti-plasmid DNA and plant cells. *Proc R Soc Lond* 210:351-65.
- Walker SL, Wonderling RS, Owens RA. 1997. Mutational analysis of the adeno-associated virus type 2 Rep68 protein helicase motifs. *J Virol* 71(9):6996-7004.
- Weitzman MD, Kyostio SR, Kotin RM, Owens RA. 1994. Adeno-associated virus (AAV) Rep proteins mediate complex formation between AAV DNA and its integration site in human DNA. *Proc Natl Acad Sci* 91(13):5808-12.
- Wilke D. 1999. Chemicals from biotechnology: molecular plant genetics will challenge the chemical and fermentation industry. *Appl Microbiol Biotechnol* 52(2):135-45.
- Willmitzer L, Depicker A, Dhaese P, De Greve H, Hernalsteens JP, Holsters M, Leemans J, Otten L, Schroder J, Schroder G, Zambryski P, van Montagu M, Schell J. 1983. The use of Ti-plasmids as plant-directed gene vectors. *Folia Biol (Praha)* 29:106-14.

- Yakobson B, Koch T, Winocour E. 1987. Replication of adeno-associated virus in synchronized cells without the addition of a helper virus. *J Virol* 61(4):972-81.
- Yang Q, Kadam A, Trempe JP. 1992. Mutational analysis of the adeno-associated virus rep gene. *J Virol* 66(10):6058-69
- Yoon M, Smith DH, Ward P, Medrano FJ, Aggarwal AK, Linden RM. 2001. Amino-terminal domain exchange redirects origin-specific interactions of adeno-associated virus rep78 in vitro. *J Virol* 75(7):3230-9.
- Young SM Jr, Samulski RJ. 2001. Adeno-associated virus (AAV) site-specific recombination does not require a Rep-dependent origin of replication within the AAV terminal repeat. *Proc Natl Acad Sci* 98(24):13525-30.
- Young SM, Xiao W, Samulski RJ. 2000. Site-specific targeting of DNA plasmids to chromosome 19 AAV cis and trans sequences. *Methods Mol Biol* 133:111-26.
- Yusibov V, Modelska A, Steplewski K, Agadjanyan M, Weiner D, Hooper DC, Koprowski H. 1997. Antigens produced in plants by infection with chimeric plant viruses immunize against rabies virus and HIV-1. *Proc Natl Acad Sci* 94(11):5784-8.
- Zambryski P. 1992. Chronicles from the *Agrobacterium*-plant cell DNA transfer story. *Annu. Rev. Plant Physiol Plant Biol* 43:465-90.
- Zhou C, Trempe JP. 1999. Induction of apoptosis by cadmium and the adeno-associated virus Rep proteins. *Virology* 261(2):280-7.
- Zupan JR, Zambryski P. 1995. Transfer of DNA from *Agrobacterium* to the plant cell. *Plant physiol* 107:1041-47.