

8 Literaturverzeichnis

- Ahringer, J. (2000). "NuRD and sin3 histone deacetylase complexes in development." Trends Genet **16**: 351-356.
- Berger, S. L. (2002). "Histone modifications in transcriptional regulation." Current Opinion in Genetics & Development **12**: 142-148.
- Bestor, T., A. Laudano, R. Mattaliano und V. Ingram (1988). "Cloning and sequencing of a cDNA encoding DNA methyltransferase of mouse cells. The carboxyl-terminal domain of the mammalian enzymes is related to bacterial restriction methyltransferases." J Mol Biol **203**: 971-983.
- Bestor, T. H. (2000). "The DNA methyltransferases of mammals." Hum Mol Genet **9**: 2395-2402.
- Bird, A. (1992). "The essentials of DNA methylation." Cell **70**: 5-8.
- Bird, A. (1999). "DNA methylation de novo." Science **286**: 2287-2288.
- Bird, A. und A. P. Wolffe (1999). "Methylation-induced repression-Belts, Braces and Chromatin." Cell **99**: 451-454.
- Bockamp, E., M. Maringer, C. Spangenberg, S. Fraser, L. Eshkind, F. Oesch und B. Zabel (2002). "Of mice and models: Improved animal models for biomedical research." Physiological Genomics **11**: 115-132.
- Bradford, M. M. (1976). "A rapid and sensitive method for the quantitation of microgram quantities of protein utilizing the principle of protein-dye binding." Analyt Biochem **72**: 248-254.
- Brasemann, S., P. Graninger und M. Busslinger (1993). "A selective transcriptional induction system for mammalian cells based on Gal4-estrogen receptor fusion proteins." Proc Natl Acad Sci U S A **90**(5): 1657-61.
- Braunstein, M., A. B. Rose, S. G. Holmes, C. D. Allis und J. R. Broach (1993). "Transcriptional silencing in yeast is associated with reduced nucleosome acetylation." Genes Dev **7**: 592-604.
- Buschhausen, G., B. Wittig, M. Graessmann und A. Graessmann (1987). "Chromatine structure is required to block transcription of the methylated herpes simplex virus thymidine kinase gene." Pro Natl Acad Sci USA **84**: 1177-1181.
- Carson-Jurica, M. A., W. T. Schrader und B. W. O'Malley (1990). "Steroid receptor family: structure and functions." Endocr Rev **11**(2): 201-20.
- Cooper, D. N. und M. Krawczak (1989). "Cytosine methylation and the fate of CpG dinucleotides in vertebrate genomes." Hum Genet **83**: 181-188.
- Cronin, C. A., W. Gluba und H. Scrable (2001). "The lac operator-repressor system is functional in the mouse." Genes Dev **15**(12): 1506-17.
- de Ruijter, A. J., A. H. van Gennip, S. Kemp und A. B. van Kuilenburg (2002). "Histone deacetylases: Characterization of the classical HDAC family." Biochem J.
- Deuschle, U., W. K. Meyer und H. J. Thiesen (1995). "Tetracycline-reversible silencing of eukaryotic promoters." Mol Cell Biol **15**(4): 1907-14.
- Doetschman, T., R. G. Gregg, N. Maeda, M. L. Hooper, D. W. Melton, S. Thompson und O. Smithies (1987). "Targetted correction of a mutant HPRT gene in mouse embryonic stem cells." Nature **330**(6148): 576-8.
- Emiliani, S., W. Fischle, C. van Lint, Y. Al-Abed und E. Verdin (1998). "Characterization of a human RPD3 ortholog, HDAC3." Proc Nat Acad Sci USA **95**: 2795-2800.
- Evans, M. J. und M. H. Kaufman (1981). "Establishment in culture of pluripotential cells from mouse embryos." Nature **292**(5819): 154-6.
- Evans, R. M. (1988). "The steroid and thyroid hormone receptor superfamily." Science **240**(4854): 889-95.
- Fischle, W., F. Dequiedt, M. Fillion, M. J. Hendzel, W. Voelter und E. Verdin (2001). "Human HDAC7 activity is associatet with HDAC3 in vivo." J Biol Chem **277**:

- 35826-35835.
- Fisher, M. P. und C. W. Dingman (1971). "Role of molecular conformation in determining the electrophoretic properties of polynucleotides in agarose-acrylamid composite gels." Biochem. **10**: 1895-1899.
- Forster, K., V. Helbl, T. Lederer, S. Urlinger, N. Wittenburg und W. Hillen (1999). "Tetracycline-inducible expression systems with reduced basal activity in mammalian cells." Nucleic Acids Res **27**(2): 708-10.
- Freundlieb, S., C. Schirra-Muller und H. Bujard (1999). "A tetracycline controlled activation/repression system with increased potential for gene transfer into mammalian cells." J Gene Med **1**(1): 4-12.
- Fuks, F., W. A. Burgers, A. Brehm, L. Hughes-Davis und T. Kouzarides (2000). "DNA methyltransferase Dnmt1 associates with histone deacetylase activity." Nature Genet **24**: 88-91.
- Fuks, F., W. A. Burgers, N. Godin, M. Kasai und T. Kouzarides (2001). "Dnmt3a binds deacetylases and is recruited by a sequence-specific repressor to silence transcription." Embo Journal **20**: 2536-2544.
- Furth, P. A., L. St Onge, H. Boger, P. Gruss, M. Gossen, A. Kistner, H. Bujard und L. Hennighausen (1994). "Temporal control of gene expression in transgenic mice by a tetracycline-responsive promoter." Proc Natl Acad Sci U S A **91**(20): 9302-6.
- Gardner, D. P., G. W. Byrne, F. H. Ruddle und C. Kappen (1996). "Spatial and temporal regulation of a lacZ reporter transgene in a binary transgenic mouse system." Transgenic Res **5**(1): 37-48.
- Gossen, M. und H. Bujard (1992). "Tight control of gene expression in mammalian cells by tetracycline-responsive promoters." Proc Natl Acad Sci U S A **89**(12): 5547-51.
- Gossen, M., S. Freundlieb, G. Bender, G. Muller, W. Hillen und H. Bujard (1995). "Transcriptional activation by tetracyclines in mammalian cells." Science **268**(5218): 1766-9.
- Grozinger, C. M., C. A. Hassig und S. L. Schreiber (1999). "Three proteins define a class of human histone deacetylases related to yeast Hda1p." Proc Natl Acad Sci U S A **96**(9): 4868-73.
- Grunstein, M. (1997). "Histone acetylation in chromatin structure and transcription." Nature **389**(6649): 349-52.
- Gu, H., Y. R. Zou und K. Rajewsky (1993). "Independent control of immunoglobulin switch recombination at individual switch regions evidenced through Cre-loxP-mediated gene targeting." Cell **73**(6): 1155-64.
- Guarente, L. (2000). "Sir2 links chromatin silencing, metabolism, and aging." Genes Dev **14**(9): 1021-6.
- Guenther, M. G., O. Barak und M. A. Lazar (2001). "The SMRT and N-CoR corepressors are activating cofactors for HDAC3." Mol Cell Biol **21**: 6091-6101.
- Hassig, C. A. und S. L. Schreiber (1997). "Nuclear histone acetylases and deacetylases and transcriptional regulation: HATs off to HDACs." Curr Opin Chem Biol **1**(3): 300-8.
- Hassig, C. A., J. K. Tong, T. C. Fleischer, O. Takashi, P. G. Grable, D. E. Ayer und S. L. Schreiber (1998). "A role for histone deacetylase activity in HDAC1-mediated transcriptional repression." PNAS **95**: 3519-3524.
- Heinzel, T., R. M. Lavinsky, T.-M. Mullen, M. Söderström, C. D. Laherty, J. Torchia, W.-M. Yang, G. Brard, S. D. Ngo, J. V. Davie, E. Seto, R. N. Eisenman, D. W. Rose, C. K. Glass und M. G. Rosenfeld (1997). "A complex containing N-CoR, mSin3 and histone deacetylase mediates transcriptional repression." Nature **387**: 43-48.
- Hong, L., Schroth.G.P., H. R. Matthews, P. Yan und E. M. Bradbury (1993). "Studies of the DNA binding properties of histone H4 amino terminus. Thermal denaturation studies reveal that acetylation markedly reduces the binding constant of the H4 "tail" to DNA." J Biol Chem **268**: 305-314.

- Hsieh, C. L. (1999). "In vivo activity of murine de novo methyltransferases, Dnmt3a and Dnmt3b." Mol Cell Biol **19**: 8211-8218.
- Imhof, M. O., P. Chatellard und N. Mermoud (2000). "A regulatory network for the efficient control of transgene expression." J Gene Med **2**(2): 107-16.
- Jacob, F. und J. Monod (1961). "Genetic regulatory mechanisms in the synthesis of proteins." J Mol Biol **3**: 318-356.
- Jaenisch, R. (1997). "DNA metylation and imprinting: why bother?" Trends Genet **13**: 323-329.
- Jenuwein, T. und C. D. Allis (2001). "Translating the histone code." Science **293**(5532): 1074-80.
- Jeppesen, P. und B. M. Turner (1993). "The inactive X chromosome in female mammals is distinguished by a lack of histone H4 acetylation, a cytogenetic marker for gene expression." Cell **74**: 281-289.
- Jiang, W., L. Zhou, B. Breyer, T. Feng, H. Cheng, R. Haydon, A. Ishikawa und T.-C. He (2001). "Tetracycline-regulated gene expression mediated by a novel chimeric repressor that recruits histone deacetylases in mammalian cells." The Journal of Biological Chemistry **276**: 45168-45174.
- Jiralerspong, S. und P. I. Patel (1996). "Regulation of the Hypoxanthine Phosphoribosyltransferase Gene: In vitro and in vivo approaches." P.S.E.B.M. **212**: 116-127.
- Jones, P. L., G. J. C. Veenstra, P. A. Wade, D. Vermaak, S. U. Kass, N. Landsberger, J. Strouboulis und A. P. Wolffe (1998). "Methylated DNA and MeCP2 recruit histone deacetylase to repress transcription." Nature Genet **19**: 187-191.
- Kass, S. U., N. Landsberger und A. P. Wolffe (1997). "DNA methylation directs a time-dependent repression of transcription initiation." Curr Biol **7**: 157-165.
- Keshet, I., I. Lieman-Hurwitz und H. Cedar (1986). "DNA methylation affects the formation of active chromatin." Cell **44**: 535-543.
- Kingston, R. E., C. A. Bunker und A. N. Imbalzano (1996). "Repression and activation by multiprotein complexes that alter chromatin structure." Genes & Dev **10**: 905-920.
- Kistner, A., M. Gossen, F. Zimmermann, J. Jerecic, C. Ullmer, H. Lubbert und H. Bujard (1996). "Doxycycline-mediated quantitative and tissue-specific control of gene expression in transgenic mice." Proc Natl Acad Sci U S A **93**(20): 10933-8.
- Knoepfler, P. S. und R. N. Eisenman (1999). "Sin meets NuRD and other tails of repression." Cell **99**: 447-450.
- Kouzarides, T. (2002). "Histone methylation in transcriptional control." Current Opinion in Genetics & Development **12**: 198-209.
- Krude, T. (1999). "Mimosine arrests proliferating human cells before onset of DNA replication in a dose-dependent manner." Exp Cell Res **247**(1): 148-59.
- Kuo, F. C. und C. D. Allis (1998). "Roles of histone acetyltransferases and deacetylases in gene regulation." Bioessays **20**: 615-626.
- Laherty, C. D., W.-M. Yang, J.-M. Sun, J. R. Davie, E. Seto und R. N. Eisenman (1997). "Histone deacetylases associated with the mSin3 corepressor mediate mad transcriptional repression." Cell **89**: 849-856.
- Lakso, M., B. Sauer, B. Mosinger, Jr., E. J. Lee, R. W. Manning, S. H. Yu, K. L. Mulder und H. Westphal (1992). "Targeted oncogene activation by site-specific recombination in transgenic mice." Proc Natl Acad Sci U S A **89**(14): 6232-6.
- Lee, L. G., C. R. Connell, S. L. Woo, R. D. Cheng, B. F. McArdle, C. W. Fuller, N. D. Halloran und R. K. Wilson (1992). "DNA-sequencing with dye-labeled terminators and T7-polymerase: effect of dyes and dNTPs on incorporation of dye-terminators and probability analysis of termination fragments." NAR **20**: 2471-2483.
- Lei, H., S. P. Oh, M. Okano, R. Juttermann, K. A. Gooss, R. Jaenisch und E. Li (1996). "De novo DNA cytosine methyltransferase activities in mouse embryonic stem cells."

- Development **122**: 3195-3205.
- Leonhardt, H., A. W. Page, H. U. Weier und T. H. Bestor (1992). "A targeting sequence directs DNA methyltransferase to sites of DNA replication in mammalian nuclei." Cell **71**: 865-873.
- Li, B., C. Beard und R. Jaenisch (1993). "Role for DNA methylation in genomic imprinting." Nature **366**: 362-365.
- Liu, Y., E. J. Oakeley, L. Sun und J. P. Jost (1998). "Multiple domains are involved in the targeting of the mouse DNA methyltransferase to the DNA replication foci." Nucl Acid Res **26**: 1038-1045.
- Luger, K., A. W. Mader, R. K. Richmond, D. F. Sargent und R. T.J. (1997). "Crystal structure of the nucleosome core particle at 2,8 Angstrom resolution." Nature **389**: 251-260.
- Martin, G. R. (1981). "Isolation of a pluripotent cell line from early mouse embryos cultured in medium conditioned by teratocarcinoma stem cells." Proc Natl Acad Sci U S A **78**(12): 7634-8.
- Melton, D. W., A.-M. Ketchen und J. Selfridge (1997). "Stability of HPRT marker gene expression at different gene-targeted loci: observing and overcoming a position effect." Nucl Acid Res **25**: 3937-3943.
- Melton, D. W., C. McEwan, A. B. McKie und A. M. Reid (1986). "Expression of the mouse HPRT gene: deletional analysis of the promoter region of an X-chromosome linked housekeeping gene." Cell **44**(2): 319-28.
- Miska, E. A., C. Karlsson, E. Langley, S. J. Nielsen, J. Pines und T. Kouzarides (1999). "HDAC4 deacetylase associates with and represses the MEF2 transcription factor." Embo J **18**(18): 5099-107.
- Nan, X., F. J. Campoy und A. Bird (1997). "MeCP2 is a transcriptional repressor with abundant binding sites in genomic chromatin." Cell **88**: 471-481.
- Nan, X., H. H. Ng, C. A. Johnson, C. D. Laherty, B. M. Turner, R. N. Eisenman und A. Bird (1998). "Transcriptional repression by the methyl-CpG-binding protein MeCP2 involves a histone deacetylase complex." Nature **393**: 386-389.
- Nan, X., P. Tate, E. Li und A. Bird (1996). "DNA methylation specifies chromosomal localization of MeCP2." Mol Cell Biol **16**: 414-421.
- Ng, H. H. und A. Bird (1999). "DNA methylation and chromatin modifications." Curr Opin Genet Dev **9**: 158-163.
- Ng, H. H. und A. Bird (2000). "Histone deacetylases: silencers for hire." Trends Biochem Sci **25**(3): 121-6.
- Niwa, H., K. Yamamura und J. Miyazaki (1991). "Efficient selection for high-expression transfectants with a novel eukaryotic vector." Gene **108**(2): 193-9.
- Okano, M., S. Xie und E. Li (1998). "Cloning and characterization of a family of novel mammalian DNA (cytosine-5) methyltransferases." Nature Genet **19**: 219-220.
- Orban, P. C., D. Chui und J. D. Marth (1992). "Tissue- and site-specific DNA recombination in transgenic mice." Proc Natl Acad Sci U S A **89**(15): 6861-5.
- Palmiter, R. D., R. L. Brinster, R. E. Hammer, M. E. Trumbauer, M. G. Rosenfeld, N. C. Birnberg und R. M. Evans (1982). "Dramatic growth of mice that develop from eggs microinjected with metallothionein-growth hormone fusion genes." Nature **300**: 611-615.
- Pazin, M. J. und J. T. Kadonaga (1997). "What's up and down with histone deacetylation and transcription." Cell **89**: 325-328.
- Pirrotta, V. (1997). "PcG complexes and chromatin silencing." Curr Opin Genet Dev **7**: 249-258.
- Pratt, W. B. und D. O. Toft (1997). "Steroid receptor interactions with heat shock protein and immunophilin chaperones." Endocr Rev **18**(3): 306-60.
- Rao, G., L. Alland, N. Schreiber-Agus, K. Chen, L. Chin, J. M. Rochelle, M. F. Seldin, A. I.

- Skoutchi und R. A. Depinho (1996). "mSin3A interacts with and can functionally substitute for the amino terminal repression of the Myc antagonist Mxi1." Oncogene **12**: 1165-1172.
- Razin, A. (1998). "CpG methylation, chromatin structure and gene silencing-a three-way connection." EMBO J **17**: 4905-4908.
- Razin, A. und H. Cedar (1977). "Distribution of 5-methylcytosine in chromatin." Proc Nat Acad Sci USA **74**: 2725-2728.
- Rice, J. C. und C. D. Allis (2001). "Histone methylation versus histone acetylation: new insights into epigenetic regulation." Curr Opin Cell Biol **13**(3): 263-73.
- Richards, E. J. und S. C. Elgin (2002). "Epigenetic codes for heterochromatin formation and silencing: rounding up the usual suspects." Cell **108**(4): 489-500.
- Robertson, K. D., S. Ait-Si-Ali, T. Yokochi, P. A. Wade, P. L. Jones und A. P. Wollfe (2000). "Dnmt1 forms a complex with Rb, E2F1 and HDAC1 and represses transcription from E2F-responsive promoters." Nature Genetics **25**: 338-342.
- Roth, S. Y. und C. D. Allis (1996). "Histone acetylation and chromatin assembly: a single escort, multiple dances?" Cell **87**: 5-8.
- Rountree, M. R., K. E. Bachmann und S. B. Baylin (2000). "Dnmt1 binds HDAC2 and a new co-repressor, DMAP1, to form a complex at replication foci." Nature Genetics **25**: 269-277.
- Rundlett, S. E., A. A. Carmen, R. Kobayashi, S. Bavykin, B. M. Turner und M. Grunstein (1996). "HDA1 and RPD3 are members of distinct yeast histone deacetylase complexes that regulate silencing and transcription." Proc Natl Acad Sci U S A **93**(25): 14503-8.
- Ryu, J.-R., L. K. Olson und D. N. Arnosti (2001). "Cell-type specificity of short-range transcriptional repressors." PNAS **98**: 12960-12965.
- Saez, E., M. C. Nelson, B. Eshelman, E. Banayo, A. Koder, G. J. Cho und R. M. Evans (2000). "Identification of ligands and coligands for the ecdysone-regulated gene switch." Proc Natl Acad Sci U S A **97**(26): 14512-7.
- Saiki, R. K., D. H. Gelfand, S. Stoffel, S. J. Scharf, R. Higushi, G. T. Horn, K. B. Mullis und H. A. Erlich (1988). "Primer-directed enzymatic amplification of DNA with a thermostable DNA-polymerase." Science **239**: 487-491.
- Sambrook, J., E. F. Fritsch und T. Maniatis (1989). Molecular Cloning : A Laboratory Manual. Cold Spring Harbor, NY, Cold Spring Harbor Laboratory.
- Sanger, F., S. Nicklen und A. R. Coulson (1977). "DNA-sequencing with chain-terminating inhibitors." PNAS **74**: 5463-5467.
- Schumacher, A. und T. Magnuson (1997). "Murine Polycomb- and trithorax-group genes regulate homeotic pathways and beyond." Trends Genet **13**: 167-170.
- Sewart, R. G., Dummy und Dummy (1998). "Characterization of interactions between the mammalian Polycomb-group proteins Enx1/Ezh2 and EED suggests the existence of different mammalian Polycomb-group protein complexes." Mol Cell Biol **18**: 3586-3595.
- Smithies, O., R. G. Gregg, S. S. Boggs, M. A. Koralewski und R. S. Kucherlapati (1985). "Insertion of DNA sequences into the human chromosomal beta-globin locus by homologous recombination." Nature **317**(6034): 230-4.
- Surani, M. A. (1998). "Imprinting and the initiation of gene silencing in the germ line." Cell **93**: 309-312.
- Tate, P., W. C. Skarnes und A. Bird (1996). "The methyl-CpG binding protein MeCP2 is essential for embryonic development in the mouse." Nature Genet **12**: 205-208.
- Thomas, K. R. und M. R. Capecchi (1987). "Site-directed mutagenesis by gene targeting in mouse embryo-derived stem cells." Cell **51**(3): 503-12.
- van der Vlag, J. und A. P. Otte (1999). "Transcriptional repression mediated by the human polycomb-group protein EED involves histone deacetylation." Nature Genet **23**: 474-

478.

- Verreault, A. (2000). "De novo nucleosome assembly: new pieces in an old puzzle." Genes Dev **14**(12): 1430-8.
- Vettese-Dadey, M., P. A. Grant, T. R. Hebbes, C. Crane-Robinson, C. D. Allis und J. L. Workman (1996). "Acetylation of histone H4 plays a primary role in enhancing transcription factor binding to nucleosomal DNA in vitro." EMBO J **15**: 2508-2518.
- Vidal, M. und R. F. Gaber (1991). "RPD3 encodes a second factor required to achieve maximum positive and negative transcriptional states in *Saccharomyces cerevisiae*." Mol Cell Biol **11**(12): 6317-27.
- Wade, P. A. und A. P. Wolffe (1997). "Histone acetyltransferases in control." Curr Biol **7**: 82-84.
- Wang, A. H., N. R. Bertos, M. Vezmar, N. Pelletier, M. Crosato, H. H. Heng, J. Th'ng, J. Han und X. J. Yang (1999). "HDAC4, a human histone deacetylase related to yeast HDA1, is a transcriptional corepressor." Mol Cell Biol **19**(11): 7816-27.
- Wolffe, A. P. (1997). "Histone H1." J Bioch Cell Biol **29**: 1463-1466.
- Wolffe, A. P. und D. Pruss (1996). "Targeting chromatin disruption: Transcription regulation that acetylate histones." Cell **84**: 817-819.
- Workman, J. L. und R. E. Kingston (1998). "Alteration of nucleosome structure as a mechanism of transcriptional regulation." Annu Rev Biochem **67**: 545-79.
- Yang, W. M., Y. D. Tsai, G. Fejer und E. Seto (2002). "Functional domains of HDAC3." J Biol Chem **277**: 9447-9454.
- Yang, W.-M., Y.-L. Yao, J.-M. Sun, J. R. Davie und E. Seto (1997). "Isolation and characterization of cDNAs corresponding to an additional member of the human histone deacetylase gene family." J Biol Chem **272**: 28001-28007.
- Zhu, Z., B. Ma, R. J. Homer, T. Zheng und J. A. Elias (2001). "Use of the tetracycline-controlled transcriptional silencer (tTS) to eliminate transgene leak in inducible overexpression transgenic mice." J Biol Chem **276**(27): 25222-9.