9. Literaturverzeichnis

Abbott, F.V., 1988, Peripheral and central antinociceptive actions of ethylketocyclazocine in the formalin test, Eur J Pharmacol 152, 93.

Akins, P.T. and E.W. McCleskey, 1993, Characterization of potassium currents in adult rat sensory neurons and modulation by opioids and cyclic AMP, Neuroscience 56, 759.

Alvares, D. and M. Fitzgerald, 1999, Building blocks of pain: the regulation of key molecules in spinal sensory neurones during development and following peripheral axotomy, Pain Suppl 6, S71.

Antonijevic, I., S.A. Mousa, M. Schafer and C. Stein, 1995, Perineurial defect and peripheral opioid analgesia in inflammation, J Neurosci 15, 165.

Atweh, S.F. and M.J. Kuhar, 1977, Autoradiographic localization of opiate receptors in rat brain. I. Spinal cord and lower medulla, Brain Res 124, 53.

Audinot, V., N. Fabry, J.P. Nicolas, P. Beauverger, A. Newman-Tancredi, M.J. Millan, A. Try, F. Bornancin, E. Canet and J.A. Boutin, 2002, Ligand modulation of [35S]GTPgammaS binding at human alpha(2A), alpha(2B) and alpha(2C) adrenoceptors, Cell Signal 14, 829.

Ballet, S., M. Conrath, J. Fischer, T. Kaneko, M. Hamon and F. Cesselin, 2003, Expression and G-protein coupling of mu-opioid receptors in the spinal cord and dorsal root ganglia of polyarthritic rats, Neuropeptides 37, 211.

Barber, A. and R. Gottschlich, 1992, Opioid agonists and antagonists: an evaluation of their peripheral actions in inflammation, Med Res Rev 12, 525.

Befort, K., M.G. Mattei, N. Roeckel and B. Kieffer, 1994, Chromosomal localization of the delta opioid receptor gene to human 1p34.3-p36.1 and mouse 4D bands by in situ hybridization, Genomics 20, 143.

Bentley, G.A., S.H. Newton and J. Starr, 1981, Evidence for an action of morphine and the enkephalins on sensory nerve endings in the mouse peritoneum, Br J Pharmacol 73, 325.

Besse, D., M.C. Lombard, S. Perrot and J.M. Besson, 1992, Regulation of opioid binding sites in the superficial dorsal horn of the rat spinal cord following loose ligation of the sciatic nerve: comparison with sciatic nerve section and lumbar dorsal rhizotomy, Neuroscience 50, 921.

Besse, D., M.C. Lombard, J.M. Zajac, B.P. Roques and J.M. Besson, 1990, Pre- and postsynaptic distribution of mu, delta and kappa opioid receptors in the superficial layers of the cervical dorsal horn of the rat spinal cord, Brain Res 521, 15.

Blume, A.J., D. Lichtshtein and G. Boone, 1979, Coupling of opiate receptors to adenylate cyclase: requirement for Na+ and GTP, Proc Natl Acad Sci U S A 76, 5626.

Breivogel, C.S., D.E. Selley and S.R. Childers, 1997, Acute and chronic effects of opioids on delta and mu receptor activation of G proteins in NG108-15 and SK-N-SH cell membranes, J Neurochem 68, 1462.

Cesselin, J.L. Montastruc, C. Gros, S. Bourgoin and M. Hamon, 1980, Met-enkephalin levels and opiate receptors in the spinal cord of chronic suffering rats, Brain Res 191, 289.

Chakrabarti, S., P.L. Prather, L. Yu, P.Y. Law and H.H. Loh, 1995, Expression of the mu-opioid receptor in CHO cells: ability of mu-opioid ligands to promote alpha-azidoanilido[32P]GTP labeling of multiple G protein alpha subunits, J Neurochem 64, 2534.

Chavkin, C. and A. Goldstein, 1984, Opioid receptor reserve in normal and morphine-tolerant guinea pig ileum myenteric plexus, Proc Natl Acad Sci U S A 81, 7253.

Chen, Y., A. Mestek, J. Liu, J.A. Hurley and L. Yu, 1993, Molecular cloning and functional expression of a mu-opioid receptor from rat brain, Mol Pharmacol 44, 8.

Cheng, Y. and W.H. Prusoff, 1973, Relationship between the inhibition constant (K1) and the concentration of inhibitor which causes 50 per cent inhibition (I50) of an enzymatic reaction, Biochem Pharmacol 22, 3099.

Craft, R.M., S.R. Henley, R.C. Haaseth, V.J. Hruby and F. Porreca, 1995, Opioid antinociception in a rat model of visceral pain: systemic versus local drug administration, J Pharmacol Exp Ther 275, 1535.

Curtis, R., J.R. Tonra, J.L. Stark, K.M. Adryan, J.S. Park, K.D. Cliffer, R.M. Lindsay and P.S. DiStefano, 1998, Neuronal injury increases retrograde axonal transport of the neurotrophins to spinal sensory neurons and motor neurons via multiple receptor mechanisms, Mol Cell Neurosci 12, 105.

Diaz, A. Pazos, J. Florez and M.A. Hurle, 2000, Autoradiographic mapping of mu-opioid receptors during opiate tolerance and supersensitivity in the rat central nervous system, Naunyn Schmiedebergs Arch Pharmacol 362, 101.

Diop, L., P.J. Riviere, X. Pascaud, M. Dassaud and J.L. Junien, 1994, Role of vagal afferents in the antinociception produced by morphine and U-50,488H in the colonic pain reflex in rats, Eur J Pharmacol 257, 181.

DiStefano, P.S. and R. Curtis, 1994, Receptor mediated retrograde axonal transport of neurotrophic factors is increased after peripheral nerve injury, Prog Brain Res 103, 35.

Evans, C.J., D.E. Keith, Jr., H. Morrison, K. Magendzo and R.H. Edwards, 1992, Cloning of a delta opioid receptor by functional expression, Science 258, 1952.

Ferreira, S.H. and M. Nakamura, 1979, II - Prostaglandin hyperalgesia: the peripheral analgesic activity of morphine, enkephalins and opioid antagonists, Prostaglandins 18, 191.

Fields, H.L., P.C. Emson, B.K. Leigh, R.F. Gilbert and L.L. Iversen, 1980, Multiple opiate receptor sites on primary afferent fibres, Nature 284, 351.

Goff, J.R., A.R. Burkey, D.J. Goff and L. Jasmin, 1998, Reorganization of the spinal dorsal horn in models of chronic pain: correlation with behaviour, Neuroscience 82, 559.

Goldstein, A. and A. Naidu, 1989, Multiple opioid receptors: ligand selectivity profiles and binding site signatures, Mol Pharmacol 36, 265.

Greindl, M.G. and S. Preat, 1971, [Study of analgesics according to the method of Randall and Selitto], Arch Int Pharmacodyn Ther 190, 404.

Gross, R.A., H.C. Moises, M.D. Uhler and R.L. Macdonald, 1990, Dynorphin A and cAMP-dependent protein kinase independently regulate neuronal calcium currents, Proc Natl Acad Sci U S A 87, 7025.

Gudermann, T., F. Kalkbrenner and G. Schultz, 1996, Diversity and selectivity of receptor-G protein interaction, Annu Rev Pharmacol Toxicol 36, 429.

Hassan, A.H., A. Ableitner, C. Stein and A. Herz, 1993, Inflammation of the rat paw enhances axonal transport of opioid receptors in the sciatic nerve and increases their density in the inflamed tissue, Neuroscience 55, 185.

Ji, R.R., Q. Zhang, P.Y. Law, H.H. Low, R. Elde and T. Hokfelt, 1995, Expression of mu-, delta-, and kappa-opioid receptor-like immunoreactivities in rat dorsal root ganglia after carrageenan-induced inflammation, J Neurosci 15, 8156.

Joris, J.L., R. Dubner and K.M. Hargreaves, 1987, Opioid analgesia at peripheral sites: a target for opioids released during stress and inflammation?, Anesth Analg 66, 1277.

Kayser, V., Y.L. Chen and G. Guilbaud, 1991, Behavioural evidence for a peripheral component in the enhanced antinociceptive effect of a low dose of systemic morphine in carrageenin-induced hyperalgesic rats, Brain Res 560, 237.

Kayser, V., S.H. Lee and G. Guilbaud, 1995, Evidence for a peripheral component in the enhanced antinociceptive effect of a low dose of systemic morphine in rats with peripheral mononeuropathy, Neuroscience 64, 537.

Kieffer, B.L., K. Befort, C. Gaveriaux-Ruff and C.G. Hirth, 1992, The delta-opioid receptor: isolation of a cDNA by expression cloning and pharmacological characterization, Proc Natl Acad Sci U S A 89, 12048.

Kitchen, I., F.M. Leslie, M. Kelly, R. Barnes, T.J. Crook, R.G. Hill, A. Borsodi, G. Toth, P. Melchiorri and L. Negri, 1995, Development of delta-opioid receptor subtypes and the regulatory role of weaning: radioligand binding, autoradiography and in situ hybridization studies, J Pharmacol Exp Ther 275, 1597.

Kitchen, I., S.J. Slowe, H.W. Matthes and B. Kieffer, 1997, Quantitative autoradiographic mapping of mu-, delta- and kappa-opioid receptors in knockout mice lacking the mu-opioid receptor gene, Brain Res 778, 73.

Kraus, J., C. Borner, E. Giannini, K. Hickfang, H. Braun, P. Mayer, M.R. Hoehe, A. Ambrosch, W. Konig and V. Hollt, 2001, Regulation of mu-opioid receptor gene transcription by interleukin-4 and influence of an allelic variation within a STAT6 transcription factor binding site, J Biol Chem 276, 43901.

Kuhar, M.J., C.B. Pert and S.H. Snyder, 1973, Regional distribution of opiate receptor binding in monkey and human brain, Nature 245, 447.

Laduron, P.M. and P.F. Janssen, 1985, Retrograde axonal transport of receptor-bound opiate in the vagus and delayed accumulation in the nodose ganglion, Brain Res 333, 389.

Lamotte, C., C.B. Pert and S.H. Snyder, 1976, Opiate receptor binding in primate spinal cord: distribution and changes after dorsal root section, Brain Res 112, 407.

Leitner, M.L., D.C. Molliver, P.A. Osborne, R. Vejsada, J.P. Golden, P.A. Lampe, A.C. Kato, J. Milbrandt and E.M. Johnson, Jr., 1999, Analysis of the retrograde transport of glial cell line-derived neurotrophic factor (GDNF), neurturin, and persephin suggests that in vivo signaling for the GDNF family is GFRalpha coreceptor-specific, J Neurosci 19, 9322.

Leslie, F.M., 1987, Methods used for the study of opioid receptors, Pharmacol Rev 39, 197.

Li, J.L., Y.Q. Ding, Y.Q. Li, J.S. Li, S. Nomura, T. Kaneko and N. Mizuno, 1998, Immunocytochemical localization of mu-opioid receptor in primary afferent neurons containing substance P or calcitonin gene-related peptide. A light and electron microscope study in the rat, Brain Res 794, 347.

Lindsay, R.M., E.M. Shooter, M.J. Radeke, T.P. Misko, G. Dechant, H. Thoenen and D. Lindholm, 1990, Nerve Growth Factor Regulates Expression of the Nerve Growth Factor Receptor Gene in Adult Sensory Neurons, Eur J Neurosci 2, 389.

Lord, J.A., A.A. Waterfield, J. Hughes and H.W. Kosterlitz, 1977, Endogenous opioid peptides: multiple agonists and receptors, Nature 267, 495.

Lorenzen, A., M. Fuss, H. Vogt and U. Schwabe, 1993, Measurement of guanine nucleotide-binding protein activation by A1 adenosine receptor agonists in bovine brain membranes: stimulation of guanosine-5'-O-(3-[35S]thio)triphosphate binding, Mol Pharmacol 44, 115.

Maekawa, K., M. Minami, T. Masuda and M. Satoh, 1996, Expression of mu- and kappa-, but not delta-, opioid receptor mRNAs is enhanced in the spinal dorsal horn of the arthritic rats, Pain 64, 365.

Maekawa, K., M. Minami, K. Yabuuchi, T. Toya, Y. Katao, Y. Hosoi, T. Onogi and M. Satoh, 1994, In situ hybridization study of mu- and kappa-opioid receptor mRNAs in the rat spinal cord and dorsal root ganglia, Neurosci Lett 168, 97.

Maher, C.E., D.E. Selley and S.R. Childers, 2000, Relationship of mu opioid receptor binding to activation of G-proteins in specific rat brain regions, Biochem Pharmacol 59, 1395.

Mansour, A., C.A. Fox, S. Burke, F. Meng, R.C. Thompson, H. Akil and S.J. Watson, 1994, Mu, delta, and kappa opioid receptor mRNA expression in the rat CNS: an in situ hybridization study, J Comp Neurol 350, 412.

Mansour, A., H. Khachaturian, M.E. Lewis, H. Akil and S.J. Watson, 1988, Anatomy of CNS opioid receptors, Trends Neurosci 11, 308.

Martin, W.R., C.G. Eades, J.A. Thompson, R.E. Huppler and P.E. Gilbert, 1976, The effects of morphine- and nalorphine- like drugs in the nondependent and morphine-dependent chronic spinal dog, J Pharmacol Exp Ther 197, 517.

Meng, F., G.X. Xie, R.C. Thompson, A. Mansour, A. Goldstein, S.J. Watson and H. Akil, 1993, Cloning and pharmacological characterization of a rat kappa opioid receptor, Proc Natl Acad Sci U S A 90, 9954.

Millan, M.J., A. Czlonkowski, A. Lipkowski and A. Herz, 1989, Kappa-opioid receptor-mediated antinociception in the rat. II. Supraspinal in addition to spinal sites of action, J Pharmacol Exp Ther 251, 342.

Minami, M., K. Maekawa, K. Yabuuchi and M. Satoh, 1995, Double in situ hybridization study on coexistence of mu-, delta- and kappa-opioid receptor mRNAs with preprotachykinin A mRNA in the rat dorsal root ganglia, Brain Res Mol Brain Res 30, 203.

Minami, M., T. Toya, Y. Katao, K. Maekawa, S. Nakamura, T. Onogi, S. Kaneko and M. Satoh, 1993, Cloning and expression of a cDNA for the rat kappa-opioid receptor, FEBS Lett 329, 291.

Morris, B.J. and A. Herz, 1987, Distinct distribution of opioid receptor types in rat lumbar spinal cord, Naunyn Schmiedebergs Arch Pharmacol 336, 240.

Mousa, S.A., M. Schafer, W.M. Mitchell, A.H. Hassan and C. Stein, 1996, Local upregulation of corticotropin-releasing hormone and interleukin-1 receptors in rats with painful hindlimb inflammation, Eur J Pharmacol 311, 221.

Mousa, S.A., Q. Zhang, N. Sitte, R. Ji and C. Stein, 2001, beta-Endorphin-containing memory-cells and mu-opioid receptors undergo transport to peripheral inflamed tissue, J Neuroimmunol 115, 71.

Mufson, E.J., J.S. Kroin, T.J. Sendera and T. Sobreviela, 1999, Distribution and retrograde transport of trophic factors in the central nervous system: functional implications for the treatment of neurodegenerative diseases, Prog Neurobiol 57, 451.

Mutschler, E., 1997, Arzneimittelwirkung, 7. Auflage, Wissenschaftliche Verlagsgesellschaft, Stuttgart, ISBN 3-8047-1377-7 .

Ninkovic, M., S.P. Hunt and J.R. Gleave, 1982, Localization of opiate and histamine H1-receptors in the primate sensory ganglia and spinal cord, Brain Res 241, 197.

North, R.A., J.T. Williams, A. Surprenant and M.J. Christie, 1987, Mu and delta receptors belong to a family of receptors that are coupled to potassium channels, Proc Natl Acad Sci U S A 84, 5487.

Nozaki-Taguchi, N. and T.L. Yaksh, 1999, Characterization of the antihyperalgesic action of a novel peripheral mu-opioid receptor agonist--loperamide, Anesthesiology 90, 225.

Oliveira, L., A.C. Paiva, C. Sander and G. Vriend, 1994, A common step for signal transduction in G protein-coupled receptors, Trends Pharmacol Sci 15, 170.

Pert, C.B. and S.H. Snyder, 1973, Opiate receptor: demonstration in nervous tissue, Science 179, 1011.

Raynor, K., H. Kong, Y. Chen, K. Yasuda, L. Yu, G.I. Bell and T. Reisine, 1994, Pharmacological characterization of the cloned kappa-, delta-, and mu-opioid receptors, Mol Pharmacol 45, 330.

Rios, L. and J.J. Jacob, 1982, Inhibition of inflammatory pain by naloxone and its N methyl quaternary analogue, Life Sci 31, 1209.

Scatchard, G., 1949, The attrctions of proteins for small molecules and ions, Ann Ny Acad Sci 51, 660.

Schafer, M., Y. Imai, G.R. Uhl and C. Stein, 1995, Inflammation enhances peripheral mu-opioid receptor-mediated analgesia, but not mu-opioid receptor transcription in dorsal root ganglia, Eur J Pharmacol 279, 165.

Selley, D.E., Q. Liu and S.R. Childers, 1998, Signal transduction correlates of mu opioid agonist intrinsic efficacy: receptor-stimulated [35S]GTP gamma S binding in mMOR-CHO cells and rat thalamus, J Pharmacol Exp Ther 285, 496.

Sengupta, J.N., A. Snider, X. Su and G.F. Gebhart, 1999, Effects of kappa opioids in the inflamed rat colon, Pain 79, 175.

Sertümer, F.W., 1805, Trommsdorf's Journal der Pharmazie XIV 1.Teil 234,47 .

Shaqura, M.A., C. Zollner, S.A. Mousa, C. Stein and M. Schafer, 2004, Characterization of {micro} Opioid Receptor Binding and G Protein Coupling in Rat Hypothalamus, Spinal Cord, and Primary Afferent Neurons during Inflammatory Pain, J Pharmacol Exp Ther 308, 712.

Sharma, S.K., W.A. Klee and M. Nirenberg, 1977, Opiate-dependent modulation of adenylate cyclase, Proc Natl Acad Sci U S A 74, 3365.

Shubayev, V.I. and R.R. Myers, 2001, Axonal transport of TNF-alpha in painful neuropathy: distribution of ligand tracer and TNF receptors, J Neuroimmunol 114, 48.

Sim, L.J., D.E. Selley and S.R. Childers, 1995, In vitro autoradiography of receptor-activated G proteins in rat brain by agonist-stimulated guanylyl 5'-[gamma-[35S]thio]-triphosphate binding, Proc Natl Acad Sci U S A 92, 7242.

Simon, E.J., J.M. Hiller and I. Edelman, 1973, Stereospecific binding of the potent narcotic analgesic (3H) Etorphine to rat-brain homogenate, Proc Natl Acad Sci U S A 70, 1947.

Simonin, F., C. Gaveriaux-Ruff, K. Befort, H. Matthes, B. Lannes, G. Micheletti, M.G. Mattei, G. Charron, B. Bloch and B. Kieffer, 1995, kappa-Opioid receptor in humans: cDna and genomic cloning, chromosomal assignment, functional expression, pharmacology, and expression pattern in the central nervous system, Proc Natl Acad Sci U S A 92, 7006.

Smith, T.W., P. Buchan, D.N. Parsons and S. Wilkinson, 1982, Peripheral antinociceptive effects of N-methyl morphine, Life Sci 31, 1205.

Spetea, M., G. Rydelius, I. Nylander, M. Ahmed, I. Bileviciute-Ljungar, T. Lundeberg, S. Svensson and A. Kreicbergs, 2002, Alteration in endogenous opioid systems due to chronic inflammatory pain conditions, Eur J Pharmacol 435, 245.

Stein, C., 1993, Peripheral mechanisms of opioid analgesia, Anesth Analg 76, 182.

Stein, C., 1995, The control of pain in peripheral tissue by opioids, N Engl J Med 332, 1685.

Stein, C., A.H. Hassan, R. Przewlocki, C. Gramsch, K. Peter and A. Herz, 1990, Opioids from immunocytes interact with receptors on sensory nerves to inhibit nociception in inflammation, Proc Natl Acad Sci U S A 87, 5935.

Stein, C., M.J. Millan and A. Herz, 1988, Unilateral inflammation of the hindpaw in rats as a model of prolonged noxious stimulation: alterations in behavior and nociceptive thresholds, Pharmacol Biochem Behav 31, 455.

Stein, C., M.J. Millan, T.S. Shippenberg, K. Peter and A. Herz, 1989, Peripheral opioid receptors mediating antinociception in inflammation. Evidence for involvement of mu, delta and kappa receptors, J Pharmacol Exp Ther 248, 1269.

Stein, C., M. Schafer and H. Machelska, 2003, Attacking pain at its source: new perspectives on opioids, Nat Med 9, 1003.

Stevens, C.W., K.C. Kajander, G.J. Bennett and V.S. Seybold, 1991, Bilateral and differential changes in spinal mu, delta and kappa opioid binding in rats with a painful, unilateral neuropathy, Pain 46, 315.

Swett, J.E., Y. Torigoe, V.R. Elie, C.M. Bourassa and P.G. Miller, 1991, Sensory neurons of the rat sciatic nerve, Exp Neurol 114, 82.

Taddese, A., S.Y. Nah and E.W. McCleskey, 1995, Selective opioid inhibition of small nociceptive neurons, Science 270, 1366.

Terenius, L., 1973, Characteristics of the "receptor" for narcotic analgesics in synaptic plasma membrane fraction from rat brain, Acta Pharmacol Toxicol (Copenh) 33, 377.

Thompson, R.C., A. Mansour, H. Akil and S.J. Watson, 1993, Cloning and pharmacological characterization of a rat mu opioid receptor, Neuron 11, 903.

Traynor, J.R. and S.R. Nahorski, 1995, Modulation by mu-opioid agonists of guanosine-5'-O-(3-[35S]thio)triphosphate binding to membranes from human neuroblastoma SH-SY5Y cells, Mol Pharmacol 47, 848.

Wang, J.B., Y. Imai, C.M. Eppler, P. Gregor, C.E. Spivak and G.R. Uhl, 1993, mu opiate receptor: cDna cloning and expression, Proc Natl Acad Sci U S A 90, 10230.

Wang, J.B., P.S. Johnson, J.M. Wu, W.F. Wang and G.R. Uhl, 1994, Human kappa opiate receptor second extracellular loop elevates dynorphin's affinity for human mu/kappa chimeras, J Biol Chem 269, 25966.

Woolf, C.J. and M.W. Salter, 2000, Neuronal plasticity: increasing the gain in pain, Science 288, 1765.

Yaksh, T.L., 1988, Substance P release from knee joint afferent terminals: modulation by opioids, Brain Res 458, 319.

Yaksh, T.L., T.M. Jessell, R. Gamse, A.W. Mudge and S.E. Leeman, 1980, Intrathecal morphine inhibits substance P release from mammalian spinal cord in vivo, Nature 286, 155.

Yaksh, T.L. and T.A. Rudy, 1977, Studies on the direct spinal action of narcotics in the production of analgesia in the rat, J Pharmacol Exp Ther 202, 411.

Yaksh, T.L. and T.L. Yaksh, 1993, The spinal pharmacology of facilitation of afferent processing evoked by high-threshold afferent input of the postinjury pain state

The spinal pharmacology of facilitation of afferent processing evoked by high-threshold afferent input of the postinjury pain state, Curr Opin Neurol Neurosurg 6, 250.

Yasuda, K., R. Espinosa, 3rd, J. Takeda, M.M. Le Beau and G.I. Bell, 1994, Localization of the kappa opioid receptor gene to human chromosome band 8q11.2, Genomics 19, 596.

Zajac, J.M., M.C. Lombard, M. Peschanski, J.M. Besson and B.P. Roques, 1989, Autoradiographic study of mu and delta opioid binding sites and neutral endopeptidase-24.11 in rat after dorsal root rhizotomy, Brain Res 477, 400.

Zhang, X., L. Bao, T.J. Shi, G. Ju, R. Elde and T. Hokfelt, 1998, Down-regulation of mu-opioid receptors in rat and monkey dorsal root ganglion neurons and spinal cord after peripheral axotomy, Neuroscience 82, 223.

Zhao, G.M., X. Qian, P.W. Schiller and H.H. Szeto, 2003, Comparison of [Dmt1]DALDA and DAMGO in binding and G protein activation at mu, delta, and kappa opioid receptors, J Pharmacol Exp Ther 307, 947.

Zhou, L., Q. Zhang, C. Stein and M. Schafer, 1998, Contribution of opioid receptors on primary afferent versus sympathetic neurons to peripheral opioid analgesia, J Pharmacol Exp Ther 286, 1000.

Zimmermann, M., 1983, Ethical guidelines for investigations of experimental pain in conscious animals, Pain 16, 109.

Zollner, C., M.A. Shaqura, C.P. Bopaiah, S. Mousa, C. Stein and M. Schafer, 2003, Painful inflammation-induced increase in mu-opioid receptor binding and G-protein coupling in primary afferent neurons, Mol Pharmacol 64, 202.

Zwissler, B., C. Werner and R. Rossaint, 2003, Die Anästhesiologie, Auflage 2003, Springer-Veralg, Heidelberg, ISBN 3-540-00077-1 .