

8. Literaturverzeichnis

ABERLE, K. WARFIELD, C. (1996)

Grundlagen der modernen Schmerztherapie in Grundlagen der Anästhesiologie.

Editor: LIU, P. Editor Gustav Fischer Verlag Stuttgart-Jena- New York pp. 429-47

ADRIANSEN, H. GYBELS, J. HANDWERKER, HO. (1980)

Latencies of chemically evoked discharges in human cutaneous nociceptors and of the concurrent subjective sensations. Neuroscience Letter **20**, pp. 55-59

AIKTENHEAD, AR. (1989)

Analgesia and sedation in intensive care. British Anaesth. **63**, pp. 196-206

AMMAN, K. (1952)

Polamivet eine Analgetikum mit Narkoseähnlicher Wirkung und dessen

Anwendung beim Hund. Schweiz. Arch. Tierheilk. **94**, pp. 806-813

APPLEBAUM, AE. BEALL, JE. FOREMANN, RD. WILLIS, WD. (1975)

Organisation and receptive fields of primate spinothalamic tract neurons. J

Neurophysiol **38**; pp. 572-586

AZAR I. OZOMEK, E. (1973)

The use of ketamine for abdominal tubal ligation.

Anesth. Analg. **52**; pp. 39-42

BECKER, K. (1995)

Eine antagonistisierbare Sedation mit Medetomidin, l-Methadon und Diazepam vor der Epiduralanästhesie beim Hund Gießen, Justus-Liebig-Universität, Diss.

BEDNARSKI, RM. (1989)

Anesthesia and Pain control Vererinary Clinics of North America: Small Animal

Practce Vol. **19**; No. 6 November pp. 1223-1237

BENEDETI, C. BUTLER, SH. FEBIGER, L. (1990)

Systemic analgesics. In BONICA JJ.ed. al. (Hrsg)

The Management of Pain, 2 end edn. Philadelphia pp.1640-1675

BENSON G. THURMON, J. (1987)

Species difference as a consideration in alleviation of animal pain and distress.

JAVMA **191**; pp. 1227-1230

BENZON, HAT. WONG, HY. BELAVIC, AM. GODMAN, I. MITCHELL, D. et al. (1993)

A randomized double-blind comparison of epidural fentanyl infusion versus patient-controlled analgesia with morphine for postthoracotomy pain. Anaesth. Analg. **76**;

pp. 316-322.

- BESSOU, P. PERL, ER. (1969)
Response of cutaneous sensory units with unmyelinated fibers to noxious stimuli.
 J. Neurophysiol. **32** pp. 1025-1043
- BEVAN, S. YEATS, J. (1991)
Protons activate a cation conductance in a sub-population of rat dorsal root ganglion neurones. Journ. Physiol. London pp.145-161
- BLOOMQUIST, EI. KREAM, RM. (1987)
Leukotriene D 4 acts in part to contract guinea pig ileum smooth muscle by releasing substance P. J Pharmacol. Exp. Therap. **240**; pp.523-528
- BOLZ, W. und SOMMER, H. (1963)
Die Abhängigkeit der Atmung, des Blutsauerstoffgehaltes und des Kreislaufes von der Injektionsgeschwindigkeit intravenöser Polamivetgaben beim Hund. Dtsch. Tierärztl. Wschr. **90**; pp. 270-274
- BONATH, K. PRIEUR, W. (1998)
Kleintierkrankheiten Band 3 Orthopädische Chirurgie und Traumatologie
 UTB Für Wissenschaft Stuttgart-Hohenheim pp. 327 ff
- BONICA, J. (1990)
General considerations of acute pain. In: BONICA JJ. Ed. *The Management of Pain.* 2nd edn. Philadelphia: LEA AND FEBIGER. pp.159-179./ 461-488
- BONICA, J. (1992)
The future of control of pain in animals used in teaching and research, in *Animal pain*, SHORT, CE. Editor Churchill-Livingstone: New York, Edinburgh, London pp.1-29
- BOOTH, NH.(1988a)
Neuroleptanalgesics, narcotic analgesics, and analgesic antagonists. In: BOOTH N. H. UND L.E.MCDONALD (Hrsg.) *Veterinary Pharmacology and Therapeutics.* Iowa State University Press, Ames, pp. 363-395
- BOOTHE, DM. (1989)
Controlling inflammation with nonsteroidal antiinflammatory drugs. Vet. Med. **184**; pp. 875-883
- BOYNTON, CS..DICK, CF. MAYOR, GH. (1988)
NSAID: An overview. Journ. Clinical. Pharmacol. **28**; pp.512-517
- BRADLEY, RL. WITHROW, SJ. HEATH, RB. PERKINS, D. KIRKWOOD, M. et al. (1980)
Epidural analgesia in the dog. Vet. Surg. **9**; pp. 153-156

- BRATER, DC. (1988)
Clinical pharmacology of NSAID. Journ. Clin. Pharmacol. **28**; pp. 518-523
- BREARLY, JC. (1994)
Sedation, premedication and analgesia. In: HALL LW, TAYLOR PM, eds.
Anesthesia of the cat. London: BAILLIERE AND TINDALL, pp. 111-128
- BROMAGE, PR. (1989)
Epidural anaesthetics and narcotics. In: Wall PD, Melzack, R. eds. *Textbook of Pain.*
Churchill and Livingstone, pp. 744-753
- BROWN, G. (1989)
Systemic Opioid Analgesia for postoperative Pain management. Anesthesiology Cl.
Of North America Vol.7 No. 1; March pp. 51-61
- BRUNE, K. Beck, W. (1993)
Nichtopioidanalgetika (antipyretische Analgetika und andere) in: *Lehrbuch der
Schmerztherapie* Editors: Zenz/Jurna
- BUDD, K. (1989)
Recent advances in the treatment of chronic pain. British Journal Anaesth. **63**; pp.
207-212
- CAMPBELL, JN. Meyer, RA. La Motte, RH. (1979)
Sensitization of myelinated nociceptive afferents that innervate monkey hand. J.
Neurophysiol. **42**; pp 1669-1679
- CAPNER, CA. LASCELLES, BDX. WATERMANN- PEARSON, A. (1999)
A survey of current British veterinary attitudes to peri-operative analgesia for dogs.
Vet. Rec. **145**; pp 95-99
- CARABINE, UA. MILLIGAN, KR. MOORE, J. (1992)
Extradural clonidine and bupivacaine for postoperative analgesia. British J. Anesth.
68; pp. 132-135
- CASTRO, J.D., MEYNADIER, and ZENZ, M. (1991)
Regional opioid analgesia. Dordrecht, Boston, London: Kluwer.
- COMMITTEE ON PAIN AND DISTRESS IN LABORATORY ANIMALS: (1987)
Recognition and Allevation of Pain and Distress in Laboratory animals.
JAVMA Vol. **19**; No. 10 Nov. 15. pp. 1186-1191
- CONLON, PD. (1988)
Nonsteroidal drugs used in the treatment of inflammation. Vet. Clin. North Americ.
Small Animal. Pract. **18**; pp. 1115-1131

- CONZEMIUS, MG. BROCKMANN, DJ. KING, LG. PERKOWSKI, SZ. (1994)
Analgesia in dogs after intercostal thoracotomy: A clinical trial comparing intravenous buprenorphine and interplueral bupivacaine. Veterinary Surg. **23**; pp. 291-298
- CONZEMIUS, MG. HILL, CM. SAMMARCO, JL. PERKOWSKI, SZ. (1997)
Correlation between subjective and objective measures used to determine severity of postoperative pain in dogs. JAVMA **210**; pp. 1619-1622
- COOMBS, DW. SAUNDERS, RL. LACHANCE, D. SAVAGE, S. RAGNARSON, TS. et al. (1985)
Intrathecal morphine tolerance: Use of intrathecal clonidine, DADLE, and intraventricular morphine. Anesthesiology **62**; pp. 358-363
- CRANE, S. (1987)
Perioperative analgesia: A surgeon's perspective, JAVMA **191**; pp. 1254-1257
- CULLEN, A. et al. (1985)
Continuous epidural infusion for analgesia after major abdominal operations: A randomized, prospective, double-blind study. Surgery **98**; pp. 718-26
- DAELS, PF. STABENFELDT, GH. HUGHES, JP. ODENSVIK, K. KINDAHL, H. (1991)
Effects of flunixin meglumine on endotoxine induced prostaglandin F₂ alpha secretion during early pregnancy in mares. Americ. Journ. Vet. Res. **52**; pp. 267-281
- DAHL, JB. KELHLET, H. (1991)
Non-Steroidal anti-inflammatory drugs: rationals for use in severe post-operative pain. British Journ. Anaesth. **66**; pp. 703-712
- DAHL, JB. BRENNUM, J. ARENDT-NIELSEN, L. JENSEN, T. KEHLET, H. (1993)
The effect of pre-versus postinjury infiltration with lidocaine on the thermal and mechanical hyperalgesia after heat injury to the skin. Pain **53**; pp. 43-52
- DALLMAN, MJ. MANN, FA. (1985)
Epidural or spinal anesthesia for reduction of coxofemoral luxations in the Dog. J. Am. Anim. Hosp. Assoc. **21**; pp. 485-488
- DANNEMANN, P. (1997)
Monitoring of Pain in Anaesthesia and Analgesia in Laboratory Animals. (Editors KOHN, D. WIXSON, S. u. a. American College of Laboratory Animal Medicine) pp. 83-103

- DAVIS, L.(1983)
Species Differences in Drug Disposition as Factors in Allevation of Pain. Animal Pain, Perception, and Allevation (KITCHELL; H. ERICKSON eds.) Americ. Physiologic Society, Bethesda, MD, pp. 161-178
- DAY, TK. PEPPER, WT. TOBIAS, TA. FLYNN, MF. CLARKE, KM. (1995)
Comparison of intraarticular and epidural morphine for analgesia following stifle arthotomy in dogs. Vet .Surgery **24**; pp. 522-530
- DE LEON-CASAOLA, OA. LEMA, MJ. (1996)
Postoperative epidural opioid analgesia: What are the choices? Anaesth. Analg. **83**; pp. 867-875
- DEKOCK, M. CROCHET, B. MORIMONT, C. SCHOLTES, J-L. (1993)
Intravenous or epidural clonidine for intra-and postoperative analgesia. Anesthesiology **79**; pp. 525-531
- DHOKARIKAR, P. CAYWOOD, DD. STOBIE, D. RAFFE, MR. ALBRECHT, M. et al. (1996)
Effects of intramuscular or interpleural administration of morphine and intrapleural administration of bupivacaine on pulmonary function in dogs that have undergone median sternotomy. Am. J. Vet. Res. **57**; pp. 375-380
- DICKINSON, AH. (1991)
Mechanisms of the analgesics actions of opitates and opioids: British Med. Bull **47**; pp.690-702
- DIETZ, O. SCHAEZT, F. SCHLEITER, H. TEUSCHER, R. (1981)
Anästhesie und Operationen bei Groß- und Kleintieren Dietz O. Autor Enke-Verlag Stuttgart pp. 23 ff
- DODMAN, NH. CLARK, GH. COURT, MH. FIKES, LL. BOUDREAU, RJ. (1992)
Epidural opioid administration for postoperative pain relief in the dog. In: Short, CE, van Poznak, A. eds. An animal Pain. New York: Churchill and Livingstone pp. 274-277
- DOHOO, SE. DOHOO, I. (1996)
Factors influencing the postoperative use of anlgescics in dogs and cats by canadian veterinarians. Can. Vet. J. **37**; pp. 552-556
- DOHOO, SE. DOHOO, I. (1996)
Postopertive use of analgesics in dogs and cats by Canadian veterinarians. Can. Vet Volume **37**; pp. 546 551

- DOHOO, SE. DOHOO, I. (1998)
Attitudes and concerns of Canadian animal health technologists toward postoperative pain management in dogs and cats. Can. Vet. J. **39**; pp. 491-496
- DUKE, T. KOMULANINEN, COX, AM. REMIDIOS, AM. CRIBB, PH. (1994)
The analgesic effects of administering fentanyl or medetomidine in the lumbosacral space of cats. Vet. Surg. **23**; pp. 143-148
- DUNCAN, B. LASCELLES, BDX. CRIPPS, P. JONES A. WATERMAN-PEARSON (1998)
Efficacy and Kinetics of Carprofen, Administered Preoperatively or Postoperatively, for the Prevention of Pain in Dogs Undergoing Ovariohysterectomy. Vet. Surg. **27**; pp.568-582
- EBERSTEIN, W. (1999)
Das Tierschutzrecht in Deutschland bis zum Erlass des Reichs-Tierschutzgesetzes vom 24 November 1933., 1999 Christian Albrechts Universität: Kiel
- EISENACH, JC. RAUCK, RL. BUZZANELL, C. LYSAK, SZ. 1(989)
Epidural clonidine analgesia for a intractable cancer pain: Phase 1. Anesthesiology **71**; pp. 647-652
- FIRTH, AM. HALDANE, SL. (1999)
Development of scale to evaluate postoperative pain in dogs. JAVMA **214**; pp. 651-659
- FLECKNELL, PA. (1987)
Postoperative care in Laboratory animal Anesthesia, An introduction for research workers and technicians P. Flecknell Editor Academic Press London- San Diego- New- York- Boston-Sydney-Tokyo-Toronto pp. 126-57
- FLECKNELL, PA. (1992)
Postoperative care in: Laboratory Animal Anesthesia . An introduction for research workers and technicians. P. Flecknell Editor Third printing Academic Press London- San Diego- New- York- Boston-Sydney-Tokyo-Toronto pp. 80-82
- FLEETWOOD-WALKER, SM. MITCHELL, R. HOPE, PJ. MOLONY, V. IGGO, A. (1985)
An alpha 2 receptor mediates the selective inhibition by noradrenaline of nociceptive responses of identified dorsal horn neurones. Brain Res. **334**; pp. 243-254.
- FORTH, W. HENSCHLER, D. RUMMEL, W. (1987)
Pharmakologie und Toxikologie pp. 472-533

- FOX, SM. JOHNSTON, SA. (1997)
Use of carprofen for the treatment of pain and inflammation in dogs. JAVMA **210**;
 pp. 1493-1498
- FREUND, PR. MARVIN, JA. . (1990)
Postburn pain. In: Bonica. JJ. Ed . *The Management of Pain*, 2 end edn.
 Philadelphia: Lea and Febiger. pp. 481-489
- FREY, H. LÖSCHER, W. (1996)
Lehrbuch der Pharmakologie und Toxikologie für die Veterinärmedizin Ferdinand
 Enke Verlag pp.145-212
- FRUHSDORFER, H. (1996)
Somatoviszerale Sensibilität, in: *Lehrbuch der Physiologie*, R. Klinke and S.
 Silbernagl, Editors. Thime Verlag: Stuttgart-New York. pp.562-568
- GOODCHILD, CS. GUO, Z. DAVIES, A. GENT, JP. (1996)
*Antinociceptive action of intrathecal xylazine: Interactions with spinal cord opioid
 pathways.* British Journ. Anaesth. **76**; pp 544-551
- GRISNEAUX, E. PIBAROT, P. DUPUIS, J. BLAIS, D. (1999)
*Comparison of ketoprofen and carprofen administered prior to orthopedic surgery
 for controle of postoperative pain in dogs.* JAVMA **215**; pp.1105-1110
- GRUBB, TL. RIEBOLD, TW HUBER, MJ. (1992)
*Comparison of lidocaine, xylazine, and xylazine/lidocaine for caudal epidural
 analgesia in horses.* JAVMA **201**; pp. 1187-1190
- GUINARD JP.CARPENTER RL. CHASSOT PG. (1995)
Epidural and intravenous fentanyl produce equivalent effects during major surgery.
 Anaesthesiology **82**; pp. 377-382
- GUINARD, JP. CARPENTER, RL. CHASSOT, PG. (1995)
Epidural and intravenous fentanyl produce equivalent effects during major surgery.
 Anaesthesiology **82**; pp. 377-382
- HAAS, T. (1998)
Smertbehandling af hund og kat in: Danmark Dansk Veterinärskrift **81**; 22 15/11
- HALL, L. CLARKE K. (1991)
Veterinary Anaesthesia, 9 th edn. London: Bailiere Tindall,
- HARRISON, C. SMART, D. LAMBERT, DG. (1998)
Stimulatory effects of opioids. British Journal Anaesth. **81**; pp. 20-28

- HARVEY ,C. et.al.(1997)
Anesthesia and Analgesia in Dogs and Cats, and Ferrets in: Anaesthesia and Analgesia in Laboratory Animals Editors: Kohn, F. pp.285-273
- HASKINS, ST. C. (1987)
Use of analgesics postoperatively and in a small animal intensive care setting. JAVMa **191**; pp. 1266-1287; an author's experience.
- HEATH, RB. (1986)
The practicality of lumbosacral epidural analgesia. Semin. Vet. Med. Surg. (In: Small Anim.) **1(3)**; pp. 245-248
- HELLEBREKERS, L. (2001)
Die Behandlung von Schmerzen bei Katzen in: Schmerz-und Schmerztherapie beim Tier Hrsg. Hellbrekers L. Schlütersche Hannover
 pp. 1-103
- HELLYER, PW. GAYNOR, JS. (1989)
Acute postsurgical pain in dogs and cats. Comp. Contin. Educ. Small Anim.; **20**; pp. 140-153
- HENDRIX, PK. RAFFE, MR. ROBINSON, EP. FELICE, LJ. RANDALL, DA. (1996)
Epidural administration of bupivacaine, morphine, or their combination for postoperative analgesia in dogs. JAVMA **209**; pp. 598-607
- HENKE, J. ERHARDT, W. (2001)
Warum sollen Schmerzen gelindert werden? in:Schmerzmanagement bei Klein- und Heimtieren Editor Henke, J. Erhardt, W. Enke Verlag Stuttgart pp. 6-7
- HOLTON, LL. SCOTT, EM. NOLAN, AM. REID, J. WELSH, E. et al.(1998)
 Comparison of three methods used for assesment of pain in dogs. *JAVMA* pp.61-66
- HONIG, WJ. VAN, OJ. (1986)
A multiple-dose comparison of keorolac tromethamine with disflunisal and placebo in postmenisccectomy pain. J. Clin. Pharmacol. **26**; pp. 700-705
- JÄNIG, W. (1993)
Physiologische Grundlagen des Schmerzes und der Schmerztherapie, in: Lehrbuch der Schmerztherapie. Grundlagen, Theorie und Praxis für Aus- und Weiterbildende. Zenz, M. and Jurna, I. Editors. Wissenschaftliche Verlagsgesellschaft: Stuttgart

- JAGE, J. (1991)
Medikamente gegen Krebs Schmerzen. Wirkungen und Nebenwirkungen. Weinheim: Edition Medizin VCH
- JAGE, J. JURNA, I. (1993)
 Opiodanalgetika. In: Zenz M. Jurna I. Hrsg. Lehrbuch der Schmerztherapie. Grundlagen, Theorie und Praxis für Aus- und Weiterbildung. Stuttgart: Wissenschaftliche Verlagsgesellschaft mbH pp.137-153
- JAGE, J. AND SCHWAB, R. (1996)
Schmerztherapie nach Operationen, in Anästhesiologie, W. Dick and Brandt L. Editors Chapman & Hall: London-Glasgow Weinheim-New York-tokyo-Melborne-Madras pp.146-147
- JEAN, GS, SKARDE, RT. MUIR, WW. HOFFISIS, GF. (1990)
Caudal epidural analgesia induced by xylazine administration in cows. Americ. Journ. Vet. Res. **51**; pp 1232-1236
- JENKINS W. (1991)
Pharmacological aspects of analgesic drugs in animals: An overview. JAVMA **191**; pp. 1231-1240
- JERRAM, R. HART, C. SCHULZ, K. (1997)
Postoperative Management of the Canine Spinal Surgery Patient-Part 1
 Compendium on continuing education for practicing veterinarian **2**; pp.147-161
- JOHNSON J. (1991)
The veterinarian's Responsibility: Assessing and Managing Acute Pain in Dogs & Cats Part 1 Small animal 804 Vol **13**; No 5 May pp. 804-807
- JOHNSON; J. (1997)
The veterinarian's Responsibility: Assessing and Managing Acute Pain in Dogs & Cats Part 1 Small animal: Compendium on continuing education for practicing veterinarian Febr. pp.147-161
- JONES, RD. BAYNES, RE. NIMTIZ, CT. (1989-1990)
Nonsteroidal anti-inflammatory drug toxicosis in dogs and cats: 240 cases JAVMA (1992), **201**; pp. 475-477
- JORIS, JL. DUBNER, R. HARGREAVES, KM. (1987)
Opioid analgesia at peripheral sites: A target for opioids released during stress and inflammation? Anesth Analg **66**; pp. 1277-1281

- HERZ, A. (1981)
In vivo receptor binding of the opiate partial agonists, buprenorphine, correlated with its agonistic and antagonistic actions. British J. Pharmacol. **74**; pp. 627-633
- KARO, T.LANG, R. (2001)
Allgemeine und spezielle Pharmakologie und Toxikologie pp. 352-358
- KEHLET, H. (1989)
Surgical stress: The role of pain and analgesia. British Journal of Anesthesia; **63**; pp.189-195
- KEHLET, H. DAHL, JB. (1993)
The value of multimodal"or "balanced analgesia" in post-operative pain treatment. Anesth. Analg. **77**; pp.1048-1056
- KITCHELL, R. ERICKSON, H. (1983)
Animal Pain Perception and Alleviation, American Physiological society Bethesda, Maryland. American physiological society.
- KITCHELL, R. AND GUINAN, M. (1990)
The nature of pain in animals, in The experimental animal in biochemical research. Rollin, B. and Kesel, M. Editors. CRC Press: Boca, Raton Florida.
- KLIDE, AM. SOMA, LR. (1986)
Epidural analgesia in dog and cat. JAVMA **153**; pp. 165-173
- KOHR, R. DURIEUX, ME. (1989)
Ketamine: Teaching an old drug new tricks. Anesthes. Analg **97**; pp. 1186-1193
- KRAMER, S. NOLTE, J. ALBRECHT, A. KLEIN, L. BUSSE, S. FARLOPOULOS, P. (1998)
Schmerztherapie bei Hund und Katze- klinische Erfahrungen mit Buprenorphin (Temgesic) Berliner Münchener Tierärztl. Wschr. **111**; pp. 285-290
- LAMOTTE, RH, SHAIN, CN. SIMONE, DA. TASI, EFP. (1991)
Neurogenic hyperalgesia: Psychophysical studies of underlying mechanisms J. Neurophysiol **66**; pp.190 –211
- LANDONI, MF. CUNNINGHAM, FM. LEES, P. (1995)
Determination of pharmacokinetic/pharmacodynamic modeling. Am. J, Vet. Res. **56**; pp. 786-794
- LARSEN, R. (1995)
Postoperative Schmerztherapie, in: *Anästhesie,* Larsen R. Editor Urban & Schwarzenberg München-Wien-Baltimore. pp. 564-601

- LASCELLES, BDX. CRIPPS, P. MIRCHANDI, S. WATERAMN-PEARSON, AE. et al (1995)
Carprofen as an analgesic for postoperative apin in cats. Dose titration and assessment of efficacy in comparision to pethidine hydrochloride. Journ. Small Animal Practice **36**; pp. 535-541
- LASCELLES, BDX. WATERMAN –PEARSON A. (1997)
Analgesics in cats. In Practice **19**; (4) pp. 203-213
- LEBLANC, PH. CARON, JP. PATTERSON, JS. BROWN, M. MATTA, MA. (1988)
Epidural injektion of xylazine for perineal analgesia in horses. JAVMA **193**; pp. 1405-1408
- LEVINE, JD. LAM, D. TAIWO, YO. DONATONI, P. GOETZL, EJ. (1986)
Hyperalgesic properties of 15-lipoxygenase products of arachnoid acid. Proc. Nat. Acad. USA **83**; pp. 5331-5334
- LILES, JH. FLECKNELL, PA. (1992)
The use of non-steroidal antiinflammator drugs for the relief of pain in laboratory rodents and rabbits. Lab. Animal **134**; pp. 241.255
- LIVINGSTON, A. WATERMAN, A. BOUCHENAF, O. KYLES, A. (1992)
Antinociceptive effects of intrathecal opioids and alpha 2 agonists in sheep. In: Short ,CE, Van Poznak, A. eds, *Animal Pain.* New York: Churchill and Livingstone pp. 281-291
- LIVINGSTON, A. WATERMN, A. NOLAN, A. AMIN, A. (1992)
Comparison of the thermal and mechanical antinociceptive actions of opioids and alpha 2 adrenoceptor agonists in sheep. In: Short, CE, Poznak, Van. A. eds. *Animal Pain.* New york:Churchill and Livingstone, pp. 372-377
- LIVINGSTON, A. (1994)
Neurologic conformation of the clinical signs of effective control or prevention of animal pain. In: Post Graduate Comittee in Veterinary Science, University of Sydney. *Animal Pain and ist Control: Proceedings* **226**; pp. 241-246
- LOEFFLER, K. (1972)
Schmerz und Angst beim Tier. Sonderausdruck aus: „Du und das Tier“ **4**
- LÖSCHER, W. UNGEMACH, F. KROKER, R.(1994)
Grundlagen der Pharmakotherapie bei Haus- und Nutztieren Paul- Parey Verlag Berlin Hamburg pp. 39-121

- MARCELLA, KL. (1985)
Animal Pain; Evaluation and controll: Lab. Animal May/June: pp. 20-36
- MARTINEZ, EA. HARTSFIELD, SM. MELENDEZ, ID. MATTHEWS, NS. SLATER, MR. (1997)
Cardivascular effects of buprenorphine in anesthetized dogs. Am. J. Vet. Res. **58**; pp. 1280-1284
- MATHEWS, K. (1996)
Nonsteroidal ant-inflammatory analgesics in pain management in dogs and cats. Can. Vet. Journal Vol. **37** Sept. pp. 539-545
- MAURSET, A. SKOGLUND, LA. HUSTVEIT, O. OYE, I. (1989)
Comparison of ketamine and phetidine in experimental and postoperative pain. Pain **36**; pp. 37-41
- MC CORMACK, K. BRUNE, K. (1991)
Dissociation between the antinociceptive and antiinflammatory effects of the non-steroidal anti inflammatory drugs. Drugs. **41**; pp. 533-547
- MC KELVEY, D. WAYNE HOLLINGSHEAD, K. (2000)
Small Animal Anesthesia & Analgesia McKelvey Wayne Hollingshead K. Editors
 Mosby St. Louis –Baltimore-Boston-Carlsbad-Chicago-mineapolis-New York-Philadelphia-Portland-london-Milan-Sydney-Tokyo-Toronto pp.109-110
- MC QUAY, HJ. (1991)
Opioid clinical pharmacology and routes of administration. British Med. Bull. **47**; pp.703-717
- MISRA, AL. BLOCH, R. VADLAMANI, U.MULE, SJ. (1974)
Physiological disposition and biotransformation of levo-Methadone 1-3 H in the dog. J. Pharmacol. Exp. Therap. **188**; pp. 34-44
- MITCHELL, RWD. SMITH, G. (1991)
The control of acute postoperative Pain. British Journal Anaesthe **47**; pp 690-702
- MOORE, JN. HARDEE, MM. HARDEEM, GE. (1986)
Modulation of arachidonic acid metabolism in entdotoxic horses: Comparison of flunixin meglumine, phenylbutazone, and a slective thromboxane synthetase inhibito. Am. J. Vet. Res. **47**; pp.110-113
- MORTON & GRIFFITHS (1985)
Score zur Abschätzung der Schwere von Schmerzen und Leiden bei Versuchstieren. Nature. Vet. Rec. **116** ; pp. 431-436

- MORTON, DB. GRIFFITHS, PHM. (1985)
Guidlines on the recognition of pain and distress and disscomfort in experimental animals and a hypthesis for assesment. Veterinary Record **116**; pp.431-436
- MUIR, WW. BIRCHARD, SJ. (1997)
Questions and answears on analgesia, anaesthesia, and sedation. Proceedings, The North American Veterinary Conference, Orlando, January 13.
- MUIR, WW. HUBBELL, JAE. (1991)
Anesthetic techniques. In: Muir WW. Hubbell JAE eds. Equine Anesthesia. Monotoring and Emergency Therapy. St. Louis: Mosby Year Book, . pp. 444-460
- MUIR, WW., BIRCHARD, SJ. (1997)
Questions and answers on analgesia, anesthesia, and sedation. Proceedings. North Americ. Veterinary Conference, Orlando, January 13.
- MURPHY, DF. MACGRATH, P. STRITCH, M. (1984)
Postoperative analgesia in hip surgery. A controlled comparison of epidural buprenorphine with intramuscular morphine. Anaesthesia **39**; pp. 153-156
- NOLAN, A. LIVINGSTON, A. WATERMAN-PERASON A. (1987)
Investigation of the antinoceptive activity of buprenorphine in sheep. British Journ. Pharmacol. **92**; pp. 527-533
- NOPPER, R. (2001)
 ZNS-Symposium Bayer *Von der Mikrotiterplatte zum Analgetikum Schmerzforschung bei Bayer* pp 1-10
- OTTEN, U. ERHARD, P. PECK, R. (1989)
Nerve growth factorinduces growth and differation of human B lymphocytes. Proc. Natl Academ. Sci. USA **86**; pp.10059-10063
- OTTO, K. (2001)
Anatomische und funktionelle Einrichtungen des Schmerzempfindens in Schmerztherapie bei Klein-,Heim-und Versuchstieren
 Berlin 2001 pp. 37-38/ 89-90 Berlin -Wien Parey-Verlag 2001
- OTTO, KA. GERICH, T. VOLMERT, C. (2000)
Hemodynamic and electroencephalographic effects of epidural buprenorphine during orthopedic hindlimb surgery in sheep. A comparison with intramuscular buprenorphine and epidural slaine. J. Exp. Animal Science **41**; pp. 121-132

- OTTO, KA, WIPPERMANN, B. (1997)
Comparison of intramuscular and epidural buprenorphine for postoperative analgesia following orthopedic hindlimb surgery in sheep.(abstract). Proceedings 6th International Congress of Veterinary Anaesthesiology, Thessaloniki. Greece Sept. **139**; pp.23-27
- OWEN, H. GLAVIN, R. SHAW, N. (1986)
Ibuprofen in the management of postoperative pain. British J. Anaesth. **58**; pp.1371-1375
- PADDLEFORD, R. ERHARD W.(1992)
Anästhesie bei Kleintieren Schattauer Stuttgart-New York pp. 19-87
- PADDLEFORD, R. ERHARDT, W. (1992)
Anästhesie bei Kleintieren Schattauer Verlag Stuttgart New York pp. 246-250
- PASCOE, D. CAYWOOD, DD, ROZANSKI, EA. BING, DR. DHOKARIKAR, P. et al. (1995)
Evaluation of pulmonary function and analgesia in dogs after intercostal thorcotomy and use of morphine administered intramuscularly or interpleurally and bupivacaine administered intrapleurally. Am.J. Vet. Res. **56**; pp.1098-1109
- PIBAROT, P. DUPUIS, J. GRISNEAUX, E. CUVELLIEZ, S. PLANTE J. et al. (1997)
Comparison of ketoprofen, oxymorphone hydrochloride, and butorphanol in the treatment of postoperative pain in dogs. Journ Am Vet Med Assoc. **211**; pp. 438-44
- POPILSKIS, S. KOHN, D. SANCHEZ, JA. GORMAN, P. (1991)
Epidural vs intramuscular oxymorphone analgesia after thoracotomy in dogs. Veterin. Surg. **20**; pp. 462-467
- POPILSKIS, S. KOHN, DF. LAURENT, L. DANILO, P. (1993)
Efficacy of epidural morphine versus intravenous morphine for post-thoracotomy pain in dogs. Journ. Vet. Anesth. **20**; pp. 21-25
- POTTHOFF, A. CARITHERS, R. (1989)
Pain and Analgesia in Dogs and Cats. Pract. Vet. Vol.**11**; Aug. 11 (8) pp. 887-897
- PRADO, M. STREETER, RN. MANDSAGER, RE. SHAWLEY, RV. CLAYPOOL, PL. (1999)
Pharmacologic effects of epidural versus intramuscular administration of detomidine in cattle. Americ. Journ. Vet. Res. **60**; pp. 1242-1247
- RAJA, SN. CAMPBELL, JN. MEYER, RA. (1984)
Evidence for different mechanisms of primary and secondary hyperalgesia following heat injury to the glabrous skin. Brain **107**; pp.1179-1188.

- RANDOLPH, M. (1992)
Postoperative care and analgesia of farm animals used in biomedical research.
 Universtiy of Oklahoma Health Sciences Center, Animal Resources Oklahoma City,
 OK 73190
- RANG, HP. BEVAN, S. DRAY, A. (1991)
Chemical activation of nociceptive peripheral neurones. Br. Med. Bull. **47**; pp.
 534-538
- RINGROSE, NH. CROSS, M. (1984)
Femoral nerve block in knee joint surgery. Amerc. Journ. Sports Med. **12**; pp. 398-
 402
- ROLLIN, B. (1992)
Animal Rights and Human Morality. Ptometheus, Buffalo, New-York
 (Originally published 1981).
- ROSS, EM. GILAMN, AG. (1985)
Opiod analgesics and antagonists. In: Gilamn, AG. Goodman, LS. Rall, TW. Murad,
 F. eds. *The Pharmacological Basis of Therapeutics*, 7 th edn. New York:
 Macmillan. pp. 35-48
- ROZE, M. THOMAS, E. DAVOT, JL. (1996)
*Tolfnamic acid in the control of ocular inflammation in the dog: Pharmacokinetics
 and clinical results obtained in an experimental model.* Journal Small Animal
 Practice pp. 371-375
- RUTBERG, H. HÅKANSON, E. ANDERBERG, B. JORFELDT, L. MÄRTENSON, J. et al.
 (1984)
*Effects of the extradural administration of morphine, or bupivacaine, on the
 endocrine response to upper abdomeinal surgery.* British J. Anaesth. **56**; pp. 233-
 238
- RYBRO, L. SCHURIZEK, BA. PETERSON, TK. WERNERG, M. (1982)
*Postoperative analgesia in lung function: A comparison of intramuscular with
 epidural morphine.* Acta Anaesth. Scand. **26**; pp.514-518
- SACKMANN, J. (1997)
Pain ans ist management. Veterinary Clinics of North America Small animal
 Practice Vol. **27**; No. 6 Nov. pp. 14871504

- SADOVE, MS. SHULMAN, M. HATANO, S. FEVOLD, N. (1971)
Analgesics effects of ketamine administered in subdissociative doses. Anesth. Analg. **50**; pp. 452-457
- SAGER, M. (1993)
Schmerzprophylaxe und Schmerztherapie bei kleinen und großen Haus-tieren
 Tierärztl.Praxis **21**; pp. 87-94
- SAMBRAUS, H. (1981)
Der Nachweis von Leiden von Leiden bei Tieren. Natur und Mensch, **23**; pp.1-11
- SALOMÄKI, TE. LAITINEN, JO. NUUTINEN, LS. (1991)
A randomized double comparisondouble-blind comparison of epidural versus intravenous fentanyl infusion for analgesia after thoracotomy. Anaesthesiology **75**; pp. 790-795
- SALOMÄKI, TE. LEPPÄLUOTO, J. LAITINEN, JO. VUOLTEENNAHO, O. NUUTINEN, LD. (1993)
Epidural responses after thoracotomy. Anaesthesiology **79**; pp. 672-679
- SCHAIBLE, H. AND SCHMIDT, R. (1997)
Nozizeption und Schmerz, in Physiologie des Menschen. R, Schmidt and g. Thews, Editors. Springer-Verlag: Berlin Heidelberg-New.
- SCHLENKER, G. (1996)
Schmerzentstehung, Schmerzwahrnehmung und Schmerzreaktion. Tierärztliche Umschau **5**; pp. 3-7
- SCHWARZ, K. (1995)
Grundlagen der Versuchstierkunde G. Fischer Verlag p. 261
- SEMRAD, SD. SAMS, RA. HARRIS, ON. ASHCRAFT, SM. (1993)
Effects of concurrent administration of phenylbutazone and flunixin meglumine on pharmacokinetic variables and in vitro generation of thromboxane B 2 in mares. Amerc. Journ. Vet. Res. **54**; pp.1901-1912
- SHIOMI, H. TAKAGI, H. (1974)
Morphine analgesia and the bulbospinal noradrenergic system: Increase in the concentration of normetanephrine in the spinal cord of the rat caused by analgesics. British J. Pharmacol. **52**; pp. 519-526
- SHORT, C. AND POZNAK, AV. (1992)
Animal pain. Vol. 1; New york, Edinburgh, London, Melbourne, Tokyo: Churchill Livingston.

- SHORT, C. (1997)
Pain in Animals. Monograph **971**. Las Vegas, Western Veterinary Conference.
- SILBERNAGEL, S. DESPOPOULOS, A. (1991)
Taschenatlas der Physiologie p 50 Thieme Verlag Stuttgart New York
- BARON-COHEN, S. (2003)
The Essential Difference, London: Penguin)
- SINATRA, RS. (1992)
Pathophysiology of acute pain. In: Sinatra, RS. Hord, AH. Ginsberg, B. Preble, M. eds. *Acute Pain. Mechanisms and Management*. St. Louis: Mosby Year Book. pp. 44-57
- SKARDA, RT. MUIR, WW. (1996)
Analgesic, hemodynamic, and respiratory effects of caudal epidurally administered xylazine hydrochloride in mares. *Americ. Journ. Vet. Res.* **57**; pp. 193-200
- SKARDA, RT. MUIR, WW. (1999)
Comparison of antinociceptive, cardiovascular, and respiratory effects, head ptosis, and position of pelvic limbs in mares after caudal epidural administration of xylazine and detomidine hydrochloride solution. *Americ. Journ. Vet. Res.* **60**; pp. 1338-1345
- SMITH, WL. MARNETT, L. DEWITT, DL. (1991)
Prostaglandin and thromboxane biosynthesis. *Pharmacol Therap* **49**; pp. 153-179
- SMITH, WL. MARNETT, LJ. (1991)
Prostaglandin endoperoxide synthase: Structure and catalysis. *Biochem. Biophys. Acta.* **33**; pp. 1-17
- SMITH J. ALLEN, S. QUANDT, J. RANDALL, M.. TACKETT, L. (1996)
Indicators of postoperative pain in cats and correlation with clinical criteria
American J. Vet. Res. Vol. **57**; No.11 pp. 1674-1678
- SOMA, LR. (1985)
Behavioral changes and the assesment of pain in animals. *Proceedings*, 2 end Intl. Congr. Vet. Anesth. Sacramento USA pp. 38-47
- SOUTER, AJ. FREDMAN, B. WHITE, PF. (1994)
Controversies in the perioperative use of nonsteroidal antiinflammatory drugs.
Anesth. Analg. **79**; pp.1178-119
- STEIN, C. COMISEL, K. HAIMLER, E. YASSOURIDIS, A. LEHRBERGER, K. et al. (1991)
Analgesic effect of inrtaarticular morphine after arthroscopic knee surgery. *New English J. Med.* **325**; pp. 1223-1226

- STEPIEN, RL. BONAGURA, JD.,BEDNARSKI, RM. MUIR, WW. (1995)
Cardiorespiratory effects of acepromazine maleate and buprenorphine hydrochloride in clinically normal dogs. Am. Journ. Vet. Res. **56**; pp. 78-84
- STOBIE, D. CAYWOOD, DD. ROZANSKI, EA. BING, DR. DHOKARIKAR, P. et al. (1995)
Evaluation of pulmonary function and analgesia in dogs after intercostal thoracotomy and use of morphine administered intramuscularly or intrapleurally and bupivacaine administered intrapleurally and bupivacaine administered intrapleurally. Am. Journ. Vet. Res. **56**; pp. 1098-1109
- SULLIVAN, AF. DASHWOOD, MR. DICKENSON, AH. (1987)
Alpha 2 adrenoceptor modulation of nociception in rat spinal cord: Location, effect and interactions with morphine. Eur. Journ. Pharmacol. **138**; pp. 169-177
- TACKE, S. (2004)
Der Einsatz von Nichtsteroidalen Antiphlogistika. Kleintier konkret **3** pp. 27-32
- TENDILLO, F. PERA, A. MASCIAS, A. SANTO, M. GOMEZ DE SEGURA, I. et al. (1995)
Cardiopulmonary and analgesic effects of epidural lidocaine, alfentanil, and xylazine in pigs anesthetized with isoflurane. Vet Surg. **24**; pp. 73-77
- TEUTSCH, R. (1996)
 in: *Alternativen zu Tierexperimenten*, Spielmann, H. und Gruber F. Editors.
 Springer Akademischer Verlag Berlin
- THOMPSON, S. KING, A. WOOLF, C. (1990)
Activity-dependent changes in rat ventral horn neurons in vitro; summation of prolonged afferent evoked postsynaptic depolarization produce a d-APV sensitive windup. Eur. J. Neurosc. **2**; pp. 638-649
- THURMON, JC. TRANQUILLI, W. BENSON, G. (1996)
Perioperative pain and distress. In: Thurmon JC tranquilli WJ, Benson GJ, eds.
Lumb and Jones Veterinary Anesthesia, 3 rd edn. Baltimore: Williams and Wilkins,
 pp. 494-501
- TVERSKOY, M. OZ, Y. ISAKSON, B. AFINGER, J. BRADLEY, JR. et al. (1994)
Preemptive effect of Fentanyl and ketamine on postoperative pain and wound hyperalgesia. Anesth. Analg **78**; pp.205-209
- URBAN, L. RANDIC, M. (1984)
Slow excitatory transmission in rat dorsal horn: Possible mediation by peptides:
 Brain Res. **290**; pp. 336-341

- Vähä-Vahe, T. (1989)
Clinical evaluation of medetomidine, a novel sedative and analgesic drug for dogs and cats. Br. Journ. Vet. Pharmacol. Therap. **13**; pp. 198-205
- VÄHÄ-VAHE, T. (1989a)
The clinical efficacy of medetomidine Acta vet. Scand. **85**; pp. 151-153
- VAINIO, O. PALMU, R. VIRTANAN UND WECKSELL, J. (1986/87)
Medetomidine, a new sedative and analgesic drug for dogs and cats. Journ. Ass. vet. Anesth. **14**; pp. 53-55
- VAINIO, O. VÄHÄ-VAHE, T. PALMU, L. (1989)
Sedative and analgesic effects of medetomidine in dogs. Journ. Vet. Pharm. Therap. **12**; pp. 225-231
- VANE, JR. (1971)
Inhibition of prostaglandin synthesis as a mechanism of action for a aspirin like drugs. Nat. New . Bilog. **231**; pp. 232-235
- VASSUER, PB. JOHNSON, AL. BUDSBERG, SC. LINCOLN, JD. TOOMBS, JP. et. al (1995)
Randomized, controlled trial of the efficacy of carprofen, a nonsteroidal anti-inflammatory drug, in the treatment of osteoarthritis in dogs. JAVMA **26**; pp. 807-811
- VESAL, N. CRIBB, PH. FRKETIC, M. (1996)
Postoperative analgesic and cardiopulmonary effects in dogs of oxymorphone administered epidurally and intramuscularly, and medetomidine administered epidurally: A comparative clinical study. Vet. Surg. **25**; pp. 361-369
- VIERCK, C. (1976)
Extrapolations from the pain research literature to the problems of adequate veterinary care. JAVMA **168**; pp.510-513
- VIRTANEN, R. SAVOLA, JM. SAANO, V. NYMAN, L. (1988)
Characterization of the selectivity, specificity and potency of medetomidine as an alpha 2 adrenoceptor agonist. Eur. J. Pharmacol. **150**; pp. 9-14
- VIRTANEN, R. SAVOLA, JM. AND SAANO, V. (1989)
Highly selective and specific antagonism of central and peripheral alpha 2 adrenoceptors by atipamezole. Arch. Int. Pharmacodyn. **297**; pp.190-204

- WATERMAN-PEARSON AE. LIVINGSTON, A. LEY, SJ. BRANDT, S. (1992)
Changes in nociceptive shresholds associated with chronic pain in sheep. In: Short Van Poznak A. eds. *Animal pain* New.York: Churchill Livingstone. pp. 378-385
- VICKLICKY, L. (1984)
Methods of testing pain mechanisms in animals, in *Textbook of pain,* WALL, P. and MELZACK, R: Editors Churchill Livingstone: Edinburgh
- WATERMAN-PEARSON AE. (1997)
Post-operative central hypersensivitiy and pain: the pre.emptive value of pethidine for ovariohysterectomy. *Pain;* **73**; pp. 461-471
- WATSON A. NICHOLSON A. CHURCH D. PEARSON M. (1996)
Use of anti-inflammatory and analgesics drugs in dogs and cats. *Aust. Vet. J.* **74**; pp. 203-210
- WILDSMITH, JAW. (1989)
Developements in local anesthetic drugs and techniques for pain relief. *British J. Anaesth.* **63**; pp. 159-164
- WILLIS, D. AND CHUNG, J. (1987)
Central mechanisms of pain. *JAVMA* Vol. 191, No. 10 Noveber **15**; pp.1200-1202
- WOOLF, CJ. (1983)
Evidence for a central component of post-injury pain hypersensitivity. *Nature.* **306**; pp. 686-688
- WOOLF, CJ. WALL, PD. (1986)
Relative effectiviness of C primary afferent fibers of different origins in evoking a prolonged facilitation of the reflex in the rat. *Journ. Neurosci;* **70**; pp. 29-35
- WOOLF, CJ. WALL, PD. (1986)
Morphin-sensitive and morphine-intensive actions of C-fiber input on the rat spinal cord. *Neurosci. Lett.* **64**; pp. 221-225
- WOOLF, CJ. (1987)
Physiological, inflammatory and neuropatic pain. *Adv. Tech. Stand. Neurosurg.* **15**; pp. 39-62
- WOOLF, CJ. (1989)
Recent advances in the pathophysiology of acute pain. *Br. J. Anaesth* **63**; pp 139-146
- WOOLF, CJ. (1991)
Generation of acute pain: Central Mechanisms. *Br. Med Bull* **47**; pp. 523-533

- WOOLF, C.J. CHING, M-S. (1993)
Preemptive analgesia-treating postoperative pain by preventing the establishment of central sensitization. Anesth. Analg **77**; pp. 362-379
- WOOLF, C.J. (1994)
A new strategy for the treatment of inflammatory pain. Prevention or elimination of central sensitization. Drugs (Suppl. 5) **47**; pp. 1-9
- WOOLF C.J. DECOSTERD I. (1999)
Implications of recent advances in the understanding of pain pathophysiology for the assesment of pain in patients. Pain Suppl. **6**;
pp.141-147
- YAKSH, TL. RUDY, TA. (1976)
Analgesia mediated by a direct spinal action of narcotcs. Science **192**; pp.1357-1358
- YAKSH, TL. (1982)
Central and peripheral mechanisms for the antialgesics action of acetylsalicylic acid. In Barnett HMJ. Hirsh J.Mustard JF. Eds. Acetylsalicylic Acid: New Uses for an Old Drug: New York: Raven Press, pp.137-151
- ZIMMERMANN, M. (1983)
Physiologische Mechanismen von Schmerz und Schmerztherapie Der praktische Tierarzt **1**; pp. 10-25
- ZIMMERMANN, M. (1993)
Physiologische Grundlagen des Schmerzes und der Schmerztherapie In: Zens Jurna I. Hrsg. Lehrbuch der Schmerztherapie. Grundlagen Theorie, und Praxis für Aus- und Weiterbildung Wissenschaftliche Verlagsgesellschaft: Stuttgart.