

8. Literatur

Ali, S. A., Doherty, P. J., und Williams, D. F. (1993). "Mechanisms of polymer degradation in implantable devices. 2. Poly(DL-lactic acid)". *J Biomed Mater Res* 27 (11): 1409-1418.

Alkan, A., Erdem, E., Gunhan, O., und Karasu, C. (2002). "Histomorphometric evaluation of the effect of doxycycline on the healing of bone defects in experimental diabetes mellitus: a pilot study". *J Oral Maxillofac Surg* 60 (8): 898-904.

An, H. S., Simpson, J. M., Glover, J. M., und Stephany, J. (1995). "Comparison between allograft plus demineralized bone matrix versus autograft in anterior cervical fusion. A prospective multicenter study". *Spine* 20 (20): 2211-2216.

An, Y. H., Woolf, S. K., und Friedman, R. J. (2000). "Pre-clinical in vivo evaluation of orthopaedic bioabsorbable devices". *Biomaterials* 21 (24): 2635-2652.

Andriano, K. P., Taylor, M. S., Felix, B. A., Hamber, E. A., Daniels, A. U., und Heller, J. (1995). "Technical note: bioluminescent bacterial test for acute toxicity: the effect of pH and buffer solutions". *J Appl Biomater* 6 (2): 145-146.

Aronson, N., Filtzer, D. L., und Bagan, M. (1968). "Anterior cervical fusion by the smith-robinson approach". *J Neurosurg* 29 (4): 396-404.

Arrington, E. D., Smith, W. J., Chambers, H. G., Bucknell, A. L., und Davino, N. A. (1996). "Complications of iliac crest bone graft harvesting". *Clin Orthop* (329): 300-309.

Bagby, G. W. (1988). "Arthrodesis by the distraction-compression method using a stainless steel implant". *Orthopedics* 11 (6): 931-934.

Bail, H. (2000). Persönliche Mitteilung.

Banwart, J. C., Asher, M. A., und Hassanein, R. S. (1995). "Iliac crest bone graft harvest donor site morbidity. A statistical evaluation". *Spine* 20 (9): 1055-1060.

Bergsma, J., Bruijn, W. C., Rozema, F. R., und Bos, R. R. (1993). "Foreign body reaction to resorbable poly(L-lactide) bone plates and screws used for the fixation of unstable zygomatic fractures". *J Oral Maxillofac Surg* 51: 666.

Bergsma, J. E., de Bruijn, W. C., Rozema, F. R., Bos, R. R., und Boering, G. (1995). "Late degradation tissue response to poly(L-lactide) bone plates and screws". *Biomaterials* 16 (1): 25-31.

Binnington, A. G. (1990). "Bone Remodeling and Transplantation". *Canine Orthopaedics* 2: 169-189.

Blattert, T. R., Delling, G., Dalal, P. S., Toth, C. A., Balling, H., und Weckbach, A. (2002). "Successful transpedicular lumbar interbody fusion by means of a composite of osteogenic protein-1 (rhBMP-7) and hydroxyapatite carrier: a comparison with autograft and hydroxyapatite in the sheep spine". *Spine* 27 (23): 2697-2705.

Boden, S. D. (2002). "Overview of the biology of lumbar spine fusion and principles for selecting a bone graft substitute". *Spine* 27 (16 Suppl 1): S 26-31.

Bohlman, H. H., Emery, S. E., Goodfellow, D. B., und Jones, P. K. (1993). "Robinson anterior cervical discectomy and arthrodesis for cervical radiculopathy. Long-term follow-up of one hundred and twenty-two patients". *J Bone Joint Surg Am* 75 (9): 1298-1307.

Bos, G. D., Goldberg, V. M., Powell, A. E., Heiple, K. G., und Zika, J. M. (1983). "The effect of histocompatibility matching on canine frozen bone allografts". *J Bone Joint Surg Am* 65 (1): 89-96.

Bostman, O., Hirvensalo, E., Mäkinen, J., und Rokkanen, P. (1990). "Foreign-body reactions to fracture fixation implants of biodegradable synthetic polymers". *J Bone Joint Surg Br* 72 (4): 592-596.

Brantigan, J. W., McAfee, P. C., Cunningham, B. W., Wang, H., und Orbegoso, C. M. (1994). "Interbody lumbar fusion using a carbon fiber cage implant versus allograft bone. An investigational study in the Spanish goat". *Spine* 19 (13): 1436-1444.

Brodke, D. S., und Zdeblick, T. A. (1992). "Modified Smith-Robinson procedure for anterior cervical discectomy and fusion". *Spine* 17 (10 Suppl): 427-430.

Brooke, N. S., Rorke, A. W., King, A. T., und Gullan, R. W. (1997). "Preliminary experience of carbon fibre cage prostheses for treatment of cervical spine disorders". *Br J Neurosurg* 11 (3): 221-227.

Brown, M. D., Malinin, T. I., und Davis, P. B. (1976). "A roentgenographic evaluation of frozen allografts versus autografts in anterior cervical spine fusions". *Clin Orthop* (119): 231-236.

Brunon, J., Fuentes, J. M., Azan, F., Benezech, J., Duthel, R., Fotso, M. J., George, B., Lapras, C., Lesoin, F., und Robert, G. (1996). "Anterior and antero-lateral surgery of the lower cervical spine (25 years after H. Verbiest). 2: Indications, results, complications". *Neurochirurgie* 42 (4-5): 229-248.

Bucher, O., und Wartenberg, H. (1997). *Zytologie, Histologie und mikroskopische Anatomie des Menschen*, 10. Auflage, Bern, Schweiz, Hans Huber Verlag .

Burri, C., und Wolter, D. (1977). "The compressed autogenous spongiosis transplant (author's transl)". *Unfallheilkunde* 80 (5): 169-175.

Cahill, D. W., Martin, G. J., Jr., Hajjar, M. V., Sonstein, W., Graham, L. B., und Engelman, R. W. (2003). "Suitability of bioresorbable cages for anterior cervical fusion". *J Neurosurg* 98 (2 Suppl): 195-201.

Cain, C. C., und Fraser, R. D. (1995). "Bony and vascular anatomy of the normal cervical spine in the sheep". *Spine* 20 (7): 759-765.

Cizek, G. R., und Boyd, L. M. (2000). "Imaging pitfalls of interbody spinal implants". *Spine* 25 (20): 2633-2636.

Claes, L. (1993). "State of the Art: Biodegradable Implantate". *Der Unfallchirurg* 232: 455-463.

Claes, L. E. (1992). "Mechanical characterization of biodegradable implants". *Clin Mater* 10 (1-2): 41-46.

Cloward, R. B. (1988). "The anterior surgical approach to the cervical spine: the Cloward Procedure: past, present, and future. The presidential guest lecture, Cervical Spine Research Society". *Spine* 13 (7): 823-827.

Cook, S. D., Dalton, J. E., Tan, E. H., Tejeiro, W. V., Young, M. J., and Whitecloud, T. S., 3rd (1994). "In vivo evaluation of anterior cervical fusions with hydroxylapatite graft material". *Spine* 19 (16): 1856-1866.

Cunningham, B. W., Kanayama, M., Parker, L. M., Weis, J. C., Seftor, J. C., Fedder, I. L., and McAfee, P. C. (1999). "Osteogenic protein versus autologous interbody arthrodesis in the sheep thoracic spine. A comparative endoscopic study using the Bagby and Kuslich interbody fusion device.". *Spine* 24: 509-518.

Cutright, D. E., Hunsuck, E. E., and Beasley, J. D. (1971). "Fracture reduction using a biodegradable material, polylactic acid". *J Oral Surg* 29 (6): 393-397.

Cutright, D. E., Perez, B., Beasley, J. D., 3rd, Larson, W. J., and Posey, W. R. (1974). "Degradation rates of polymers and copolymers of polylactic and polyglycolic acids". *Oral Surg Oral Med Oral Pathol* 37 (1): 142-152.

Daniels, A. U., Chang, M. K., and Andriano, K. P. (1990). "Mechanical properties of biodegradable polymers and composites proposed for internal fixation of bone". *J Appl Biomater* 1 (1): 57-78.

David, A., Eitenmuller, J., Von Oepen, R., Muller, D., Pommer, A., and Muhr, G. (1994). "Mechanical strength and chemical stability of biodegradable block-polymerized and injection molded poly-L-lactide in vitro". *Unfallchirurg* 97 (5): 278-284.

DeBowes, R. M., Grant, B. D., Bagby, G. W., Gallina, A. M., Sande, R. D., und Ratzlaff, M. H. (1984). "Cervical vertebral interbody fusion in the horse: a comparative study of bovine xenografts and autografts supported by stainless steel baskets". *Am J Vet Res* 45 (1): 191-199.

DePalma, A. F., Rothman, R. H., Lewinnek, G. E., und Canale, S. T. (1972). "Anterior interbody fusion for severe cervical disc degeneration". *Surg Gynecol Obstet* 134 (5): 755-758.

Ducker, T. B., Zeidman, S. M., Smith, G. W., und Robinson, R. A. (1993). "The posterior operative approach for cervical radiculopathy. The treatment of certain cervical-spine disorders by anterior removal of the intervertebral disc and interbody fusion". *Neurosurg Clin N Am* 4(1): 61-74.

Ebersold, M. J., Pare, M. C., und Quast, L. M. (1995). "Surgical treatment for cervical spondylitic myelopathy". *J Neurosurg* 82 (5): 745-751.

Eitel, F., Klapp, F., Jacobson, W., und Schweiberer, L. (1981). "Bone regeneration in animals and in man. A contribution to understanding the relative value of animal experiments to human pathophysiology". *Arch Orthop Trauma Surg* 99 (1): 59-64.

Eitel, F., Schenk, R. K., und Schweiberer, L. (1980). "Cortical revascularization after medullary nailing in dog tibiae (author's transl)". *Unfallheilkunde* 83 (5): 202-207.

Eitel, F., Seiler, H., und Schweiberer, L. (1981). "Morphologic examination of animal-experiment results: comparison with regeneration of the human bone-structure. I. Research methods (author's transl)". *Unfallheilkunde* 84 (6): 250-254.

Emery, S. E., Brazinski, M. S., Koka, A., Bensusan, J. S., und Stevenson, S. (1994). "The biological and biomechanical effects of irradiation on anterior spinal bone grafts in a canine model". *J Bone Joint Surg Am* 76 (4): 540-548.

Espersen, J. O., Klaerke, A., Buhl, M., Eriksen, E. F., Fode, K., Kroyer, L., Lindeberg, H., Madsen, C. B., Strange, P., und Wohlert, L. (1987). "Treatment of cervical disc disease using Cloward's technique. Part V. The effect of reoperations". *Acta Neurochir (Wien)* 88 (1-2): 34-38.

Evers, B., Solbach, T., Ignatius, A. A., Claes, L. E., und Gerngroß, H. (2002). "Clinical and radiological results after use of biodegradable implants in trauma and reconstruction.". *Proceedings of AAOS, Dallas*: 750.

Faensen, M., Rahmzadeh, R., und Hahn, F. (1982). *Der Einfluß des ersatzschwachen Lagers auf unterschiedlich verdichtete autologe und homologe Spongiosatransplantate.* Stuttgart-New York, Thieme Verlag.

Gerlach, K. L. (2000). "Resorbable polymers as osteosynthesis material". *Mund Kiefer Gesichtschir* 4 (Suppl 1): S91-102.

Gerlach, K. L., Eitenmuller, J., und Schmitz, H. (1987). "In vivo study of the strength properties of biodegradable polymers for application as osteosynthesis materials". *Dtsch Z Mund Kiefer Gesichtschir* 11 (3): 211-216.

Geyer, G. (1982). *Histologie und mikroskopische Anatomie.* Leipzig, Verlag Georg Thieme.

Gogolewski, S. (1992). "Resorbable polymers for internal fixation". *Clin Mater* 10 (1-2): 13-20.

Gohl, C. (2002). "Biokompatibilität und knöchernen Integration von resorbierbaren Polymeren zur Verbesserung von Implantaten zur Frakturfixation". *Inaugural-Dissertation, Fachbereich Veterinärmedizin, Tierärztliche Fakultät der Ludwig-Maximilian-Universität, München.*

Goldberg, V. M., und Stevenson, S. (1987). "Natural history of autografts and allografts". *Clin Orthop* (225): 7-16.

Goldner, J. (1938). "A modification of the Masson trichrom technique for routine laboratory purpose." *Amer J Path* 14: 237-243.

Goodship, A. E., und Kenwright, J. (1985). "The influence of induced micromovement upon the healing of experimental tibial fractures". *J Bone Joint Surg Br* 67 (4): 650-655.

Gourlay, S. J., Rice, R. M., Hegyeli, A. F., Wade, C. W., Dillon, J. G., Jaffe, H., und Kulkarni, R. K. (1978). "Biocompatibility testing of polymers: in vivo implantation studies". *J Biomed Mater Res* 12 (2): 219-232.

Hacker, R. J., Cauthen, J. C., Gilbert, T. J., und Griffith, S. L. (2000). "A prospective randomized multicenter clinical evaluation of an anterior cervical fusion cage". *Spine* 25 (20): 2646-2655.

Hafez, R. F., und Crockard, H. A. (1997). "Failure of osseous conduction with cervical interbody BOP graft". *Br J Neurosurg* 11 (1): 57-59.

Harms, J. (2000). "Interbody fusion with Meshed-Titanium-Cages". Cagemeeting 26. Oktober 2000, Hamburg.

Heggeness, M. H., und Esses, S. I. (1991). "Classification of pseudarthroses of the lumbar spine". *Spine* 16 (8 Suppl): 449-454.

Heggeness, M. H., Esses, S. I., und Mody, D. R. (1993). "A histologic study of lumbar pseudarthrosis". *Spine* 18 (8): 1016-1020.

Heidecke, V., Rainov, N. G., und Burkert, W. (2003). "Results and outcome of neurosurgical treatment for extradural metastases in the cervical spine". *Acta Neurochir (Wien)* 145 (10): 873-880.

Heidemann, W., Jeschkeit, S., Ruffieux, K., Fischer, J. H., Wagner, M., Kruger, G., Wintermantel, E., und Gerlach, K. L. (2001). "Degradation of poly(D,L)lactide implants with or without addition of calciumphosphates in vivo". *Biomaterials* 22 (17): 2371-2381.

Helling, H. J., und A., W. (1998). "Gewebereaktionen im Verlauf des Abbaus polymerer Implantate". *OP Journal* 14: 245.

- Hilibrand, A. S., und Fye, M. A.** (2001). "Impact of smoking on the outcome of anterior cervical arthrodesis with interbody or strut-grafting". *J Bone Joint Surg Am* 83-A(5): 668-673.
- Hill, N. M., Horne, J. G., und Devane, P. A.** (1999). "Donor site morbidity in the iliac crest bone graft". *Aust N Z J Surg* 69: 726-728.
- Hoffmann, R., Weller, A., Helling, H. J., Krettek, C. und Rehm, K. E.** (1997). "Local foreign body reactions to biodegradable implants. A classification". *Unfallchirurg* 100(8): 658-666.
- Hofmann, G.** (1998). "Möglichkeiten und Grenzen des Einsatzes biodegradierbarer Oseosyntheseimplantate -State of the Art.". *Der Unfallchirurg* 265: 11.
- Hollinger, J. O.** (1983). "Preliminary report on the osteogenic potential of a biodegradable copolymer of polylactide (PLA) and polyglycolide (PGA)". *J Biomed Mater Res* 17 (1): 71-82.
- Hollinger, J. O., und Battistone, G. C.** (1986). "Biodegradable bone repair materials. Synthetic polymers and ceramics". *Clin Orthop* (207): 290-305.
- Holz, U., Weller, S., und Borell-Kost, S.** (1982). "Indications, technic and results of autogenic bone transplantations". *Chirurg* 53(4): 219-224.
- Horowitz, S. M., Gautsch, T. L., Frondoza, C. G., und Riley, L., Jr.** (1991). "Macrophage exposure to polymethyl methacrylate leads to mediator release and injury". *J Orthop Res* 9 (3): 406-413.
- Hunt, J. A., und Williams, D. F.** (1995). "Quantifying the soft tissue response to implanted materials". *Biomaterials* 16 (3): 167-170.
- Hutmacher, D., Hurzeler, M. B., und Schliephake, H.** (1996). "A review of material properties of biodegradable and bioresorbable polymers and devices for GTR and GBR applications". *Int J Oral Maxillofac Implants* 11 (5): 667-678.

Ignatius, A. (2001). Entwicklung von resorbierbaren Kompositmaterialien zur Knochen-defektauffüllung. Habilitationsschrift. Universität Ulm, Institut für Unfallchirurgische Forschung und Biomechanik.

Ignatius, A. A., und Claes, L. E. (1996). "In vitro biocompatibility of bioresorbable polymers: poly(L, DL-lactide) and poly(L-lactide-co-glycolide)". *Biomaterials* 17 (8): 831-839.

Junqueira, L. C., und Junqueira, J., C. (1991). "Histologie", 3. Auflage. Berlin - New York, Springer-Verlag : 190-217.

Kanayama, M., Cunningham, B. W., Haggerty, C. J., Abumi, K., Kaneda, K., und McAfee, P. C. (2000). "In vitro biomechanical investigation of the stability and stress-shielding effect of lumbar interbody fusion devices". *J Neurosurg* 93 (2 Suppl): 259-265.

Kandziora, F., Pflugmacher, R., Schafer, J., Born, C., Duda, G., Haas, N. P., und Mittlmeier, T. (2001 a). "Biomechanical comparison of cervical spine interbody fusion cages". *Spine* 26 (17): 1850-1857.

Kandziora, F., Pflugmacher, R., Scholz, M., Schafer, J., Schollmeier, G., Schnake, K. J., Bail, H., Duda, G., und Haas, N. P. (2002 a). "Experimental fusion of the sheep cervical spine. Part I: Effect of cage design on interbody fusion". *Chirurg* 73 (9): 909-917.

Kandziora, F., Pflugmacher, R., Scholz, M., Schnake, K., Lucke, M., Schroder, R., und Mittlmeier, T. (2001 b). "Comparison between sheep and human cervical spines: an anatomic, radiographic, bone mineral density, and biomechanical study". *Spine* 26 (9): 1028-1037.

Kandziora, F., Schmidmaier, G., Schollmeier, G., Bail, H., Pflugmacher, R., Gorke, T., Wagner, M., Raschke, M., Mittlmeier, T., und Haas, N. P. (2002 b). "IGF-I and TGF-beta1 application by a poly-(D,L-lactide)-coated cage promotes intervertebral bone matrix formation in the sheep cervical spine". *Spine* 27 (16): 1710-1723.

Kandziora, F., Schollmeier, G., Scholz, M., Schaefer, J., Scholz, A., Schmidmaier, G., Schroder, R., Bail, H., Duda, G., Mittlmeier, T., et al. (2002 c). "Influence of cage design on interbody fusion in a sheep cervical spine model". *J Neurosurg* 96 (3 Suppl): 321-332.

Kandziora, F., Scholz, M., Pflugmacher, R., Krummrey, G., Schollmeier, G., Schmidmaier, G., Schnake, K. J., Duda, G., Raschke, M., und Haas, N. P. (2002 d). "Experimental fusion of the sheep cervical spine. Part II: Effect of growth factors and carrier systems on interbody fusion". *Chirurg* 73 (10): 1025-1038.

Kitt, T., und Schulz, L. (1990). "Lehrbuch der allgemeinen Pathologie für Tierärzte und Studierende der Tiermedizin", 10.Auflage, Stuttgart, Enke Verlag.

Knoche, H., Addicks, K., Themann, H., und Müllers, K. (1980). "Histologie und Histopathologie". Berlin-Heidelberg-New York, Springer Verlag .

Kossa, J. V. (1901). "Über die im Organismus künstlich erzeugbaren Verkalkungen." *Ziegler's Beitr path Anat* 29: 163-202.

Krall, C. "Radiologische Evaluation eines biodegradierbaren Implantats zur Spondylodese der Halswirbelsäule", (Dissertation in Vorbereitung), Berlin, Centrum für Muskuloskeletale Chirurgie, Charité – Universitäts-medizin Berlin.

Kulkarni, R. K., Pani, K. C., Neuman, C., und Leonard, F. (1966). "Polylactic acid for surgical implants". *Arch Surg* 93 (5): 839-843.

Kumaresan, S., Yoganandan, N., Pintar, F. A., und Maiman, D. J. (1999). "Finite element modeling of the cervical spine: role of intervertebral disc under axial and eccentric loads". *Med Eng Phys* 21 (10): 689-700.

Kurz, L. T., Garfin, S. R., und Booth, R. E., Jr. (1989). "Harvesting autogenous iliac bone grafts. A review of complications and techniques". *Spine* 14 (12): 1324-1331.

Kuslich, S. D., Danielson, G., Dowdle, J. D., Sherman, J., Fredrickson, B., Yuan, H., and Griffith, S. L. (2000). "Four-year follow-up results of lumbar spine arthrodesis using the Bagby and Kuslich lumbar fusion cage". *Spine* 25 (20): 2656-2662.

Kuslich, S. D., Ulstrom, C. L., Griffith, S. L., Ahern, J. W., and Dowdle, J. D. (1998). "The Bagby and Kuslich method of lumbar interbody fusion. History, techniques, and 2-year follow-up results of a United States prospective, multicenter trial". *Spine* 23 (11): 1267-1279.

Lacroix, D., and Prendergast, P. J. (2002). "A mechano-regulation model for tissue differentiation during fracture healing: analysis of gap size and loading". *J Biomech* 35 (9): 1163-1171.

Lam, K. H., Schakenraad, J. M., Esselbrugge, H., Feijen, J., and Nieuwenhuis, P. (1993). "The effect of phagocytosis of poly(L-lactic acid) fragments on cellular morphology and viability". *J Biomed Mater Res* 27 (12): 1569-1577.

Lee, C. (1987). "Lumbar Spine Surgery", *Clinical biomechanics of lumbar spine surgery*. St. Louis, Mosby CX.

Lee, E. J., Hung, Y. C., Lee, M. Y., Yan, J. J., Lee, Y. T., Chang, J. H., Chang, G. L., and Chung, K. C. (1999). "Kinematics of cervical spine discectomy with and without bone grafting: quantitative evaluation of late fusion in a sheep model". *Neurosurgery* 44(1): 139-147.

Leenslag, J. W., Pennings, A. J., Bos, R. R., Rozema, F. R., Boering, G., Pihlajamaki, H., Bostman, O., Hirvensalo, E., Tormala, P., and Rokkanen, P. (1987). "Resorbable materials of poly(L-lactide). VI. Plates and screws for internal fracture fixation. Absorbable pins of self-reinforced poly-L-lactic acid for fixation of fractures and osteotomies". *Biomaterials* 8 (1): 70-73.

Li, H., Zou, X., Laursen, M., Egund, N., Lind, M., and Bunger, C. (2002). "The influence of intervertebral disc tissue on anterior spinal interbody fusion: an experimental study on pigs". *Eur Spine J* 11 (5): 476-481.

- Li, S.** (1999). "Hydrolytic degradation characteristics of aliphatic polyesters derived from lactic and glycolic acids". *J Biomed Mater Res* 48 (3): 342-353.
- Li, S., und Vert, M.** (1994 a). "Crystalline oligomeric stereocomplex as intermediate compound in racemic Poly (DL-Lactid Acid) Degradation". *Polymer international* 33: 37-41.
- Li, S., und Vert, M.** (1994 b). "Morphological changes resulting from the hydrolytic degradation of stereocopolymers derived from L- and DL-lactides". *Macromolecules* 27: 3107-3110.
- Liebich, J.** (1999). "Funktionelle Histologie der Haussäugetiere", 3. Auflage, Stuttgart, Schattauer Verlag.
- Loboa, E. G., Beaupre, G. S., und Carter, D. R.** (2001). "Mechanobiology of initial pseudarthrosis formation with oblique fractures". *J Orthop Res* 19 (6): 1067-1072.
- Lowe, T. G., und Coe, J. D.** (2002). "Resorbable polymer implants in unilateral transforaminal lumbar interbody fusion". *J Neurosurg* 97 (4 Suppl): 464-467.
- Mainil-Varlet, P., Rahn, B., und Gogolewski, S.** (1997). "Long-term in vivo degradation and bone reaction to various polylactides. 1. One-year results". *Biomaterials* 18 (3): 257-266.
- Majd, M. E., Vadhva, M., und Holt, R. T.** (1999). "Anterior cervical reconstruction using titanium cages with anterior plating". *Spine* 24 (15): 1604-1610.
- Majola, A.** (1991 a). "Fixation of experimental osteotomies with absorbable polylactic acid screws". *Ann Chir Gynaecol* 80 (3): 274-281.
- Majola, A., Vainionpaa, S., Vihtonen, K., Mero, M., Vasenius, J., Tormala, P., und Rokkanen, P.** (1991 b). "Absorption, biocompatibility, and fixation properties of polylactic acid in bone tissue: an experimental study in rats". *Clin Orthop* (268): 260-269.
- Matge, G.** (1998). "Anterior interbody fusion with the BAK-cage in cervical spondylosis". *Acta Neurochir (Wien)* 140 (1): 1-8.

McAfee, P. C., Regan, J. J., Farey, I. D., Gurr, K. R., und Warden, K. E. (1988). "The biomechanical and histomorphometric properties of anterior lumbar fusions: a canine model". *J Spinal Disord* 1(2): 101-110.

Melcher, A. H., und Irving, J. T. (1962). "The healing mechanism in artificially created circumscribed defects in the femora of albino rats". *J Bone Joint Surg Am* 44 B (4): 928-936.

Milachowski, K. A., Sauer, W., Wirth, C. J., Kriegel, H., und Erhardt, W. (1983). "Significance of the site of collection on the take of autologous spongiosa. Animal experiment study on the sheep tibia". *Unfallheilkunde* 86 (1): 10-15.

Minkin, C., und Shapiro, I. M. (1986). "Osteoclasts, mononuclear phagocytes, and physiological bone resorption". *Calcif Tissue Int* 39 (6): 357-359.

Mosimann, W., und Kohler, A. (1990). *Zytologie, Histologie, mikroskop Anatomie der Haussäugetiere*, Berlin, Hamburg, Germany, Paul Paray Verlag.

Murray, D. W., und Rushton, N. (1990). "Macrophages stimulate bone resorption when they phagocytose particles". *J Bone Joint Surg Br* 72 (6): 988-992.

Nickel, R., Schummer, A. und Seiferle, E. (1992). "Lehrbuch der Anatomie der Haustiere", Bd. 1., 6. Auflage, Berlin, Hamburg, Germany, Paul Parey Verlag . 34.

Parthiban, J. K., Singhania, B. K., und Ramani, P. S. (2002). "A radiological evaluation of allografts (ethylene oxide sterilized cadaver bone) and autografts in anterior cervical fusion". *Neurol India* 50 (1): 17-22.

Perren, S. M. (2002). "Evolution of the internal fixation of long bone fractures. The scientific basis of biological internal fixation: choosing a new balance between stability and biology". *J Bone Joint Surg Br* 84 (8): 1093-1110.

Pihlajamaki, H., Bostman, O., Hirvensalo, E., Tormala, P., und Rokkanen, P. (1992). "Absorbable pins of self-reinforced poly-L-lactic acid for fixation of fractures and osteotomies". *J Bone Joint Surg Br* 74 (6): 853-857.

Pihlajamaki, H., Kinnunen, J., und Bostman, O. (1997). "In vivo monitoring of the degradation process of bioresorbable polymeric implants using magnetic resonance imaging". *Biomaterials* 18 (19): 1311-1315.

Pistner, H., Stallforth, H., Gutwald, R., Muhling, J., Reuther, J., und Michel, C. (1994). "Poly(L-lactide): a long-term degradation study in vivo. Part II: Physico-mechanical behaviour of implants". *Biomaterials* 15 (6): 439-450.

Rawlinson, J. N. (1994). "Morbidity after anterior cervical decompression and fusion. The influence of the donor site on recovery, and the results of a trial of surgibone compared to autologous bone". *Acta Neurochir (Wien)* 131 (1-2): 106-118.

Ray, C. D. (1997). "Threaded titanium cages for lumbar interbody fusions". *Spine* 22 (6): 667-680.

Rehm, K. E., Helling, H. J., und Gatzka, C. (1997). "New developments in the application of resorbable implants". *Orthopade* 26 (5): 489-497.

Remedios, A. (1999). "Bone and bone healing". *Vet Clin North Am Small Anim Pract* 29 (5): 1029-1044.

Robinson, R. A. (1964). "Anterior and posterior cervical spine fusions". *Clin Orthop* 35: 34-62.

Roche Lexikon Medizin (2003), München-Roche-Online-Team, 5. Auflage, Urban & Fischer

http://www.gesundheit.de/roche/pics/a03036.000-1_big.gif

<http://www.gesundheit.de/roche/ro30000/r31638.000.html>

Romanowski, R., Jundt, G., Termine, J. D., von der Mark, K., und Schulz, A. (1990). "Immunoelectron microscopy of osteonectin and type I collagen in osteoblasts and bone matrix". *Calcif Tissue Int* 46 (6): 353-360.

Romeis, B.(1998). "Mikroskopische Technik". 17. Auflage, München-Wien-Baltimore, Urban und Schwarzenberg, S. 348; 425; 443, 498.

Sack, W. O., und Habe, R. E. (1994). "Nomina Anatomica Veterinaria". 4. Auflage

Sacks, S. (1965). "Anterior Interbody Fusion of the Lumbar Spine". J Bone Joint Surg Br 47: 211-223.

Saitoh, H., Takata, T., Nikai, H., und Shintani, H. (1994). "Tissue compatibility of polylactic acid in the skeletal site". J MSci 5: 194-199.

Sandhu, H. S., Kanim, L. E., Kabo, J. M., Toth, J. M., Zeegen, E. N., D., L., Delamater R. B., und Dawson, E. G. (1996). "Effective doses of recombinant human bone morphogenetic protein-2 in experimental spinal fusion.". Spine 21: 2115-2122.

Savolainen, S., Usenius, J. P., und Hernesniemi, J. (1994). "Iliac crest versus artificial bone grafts in 250 cervical fusions". Acta Neurochir (Wien) 129: 54-57.

Sawin, P. D., Traynelis, V. C., und Menezes, A. H. (1998). "A comparative analysis of fusion rates and donor-site morbidity for autogeneic rib and iliac crest bone grafts in posterior cervical fusions". J Neurosurg 88: 255-265.

Schakenraad, J. M., Hardonk, M. J., Feijen, J., Molenaar, I., und Nieuwenhuis, P. (1990). "Enzymatic activity toward poly(L-lactic acid) implants". J Biomed Mater Res 24 (5): 529-545.

Schenk, R. K., und Willenegger, H. R. (1977). "Histology of primary bone healing: modifications and limits of recovery of gaps in relation to extent of the defect (author's transl)". Unfallheilkunde 80 (5): 155-160.

Schnee, C. L., Freese, A., Weil, R. J., und Marcotte, P. J. (1997). "Analysis of harvest morbidity and radiographic outcome using autograft for anterior cervical fusion". Spine 22 (19): 2222-2227.

Schroder, J., und Wassmann, H. (2001). "Polymethylmethacrylate (PMMA) in anterior cervical spine surgery - current situation in Germany". *Zentralbl Neurochir* 62 (2): 33-36.

Schweiberer, L., und Schenk, R. (1977). "Histomorphology and vascularization of secondary healing of bone fractures with emphasis on tibial shaft fractures". *Unfallheilkunde* 80 (7): 275-286.

Shellock, F. G., Mink, J. H., Curtin, S., und Friedman, M. J. (1992). "MR imaging and metallic implants for anterior cruciate ligament reconstruction: assessment of ferromagnetism and artifact". *J Magn Reson Imaging* 2 (2): 225-228.

Shimomura, Y., Ono, K., Hukuda, S., Oda, Y., und Ota, H. (1967). "Experiences with the surgery (Cloward method) for the cervical disc syndrome". *Med J Osaka Univ* 18 (3): 269-279.

Slater, R., Nagel, D., und Smith, R. L. (1988). "Biochemistry of fusion mass consolidation in the sheep spine". *J Orthop Res* 6 (1): 138-144.

Smith, G. W., und Robinson, R. A. (1958). "The treatment of certain cervical-spine disorders by anterior removal of the intervertebral disc and interbody fusion". *J Bone Joint Surg Am* 40-A (3): 607-624.

Suganuma, J., und Alexander, H. (1993). "Biological response of intramedullary bone to poly-L-lactic acid". *J Appl Biomater* 4: 13-27.

Tabata, Y., und Ikada, Y. (1988). "Macrophage phagocytosis of biodegradable microspheres composed of L-lactic acid/glycolic acid homo- and copolymers". *J Biomed Mater Res* 22 (10): 837-858.

Taylor, M. S., und Daniels, A. U. (1994). "Six bioabsorbable polymers: in vitro acute toxicity of accumulated degradation products". *J Appl Biomater* 5 (2): 151-157.

Thomsen, J. S., Ebbesen, E. N., und Mosekilde, L. (2002). "Static histomorphometry of human iliac crest and vertebral trabecular bone: a comparative study". *Bone* 30 (1): 267-274.

Toth, J. M., Estes, B. T., Wang, M., Seim, H. B., 3rd, Scifert, J. L., Turner, A. S., and Cornwall, G. B. (2002 a). "Evaluation of 70/30 poly (L-lactide-co-D,L-lactide) for use as a resorbable interbody fusion cage". *J Neurosurg* 97 (4 Suppl): 423-432.

Toth, J. M., Wang, M., Scifert, J. L., Cornwall, G. B., Estes, B. T., Seim, H. B., 3rd, and Turner, A. S. (2002 b). "Evaluation of 70/30 D,L-PLA for use as a resorbable interbody fusion cage". *Orthopedics* 25 (10 Suppl): S1131-1140.

Tuli, S. K., Tuli, J., Chen, P., and Woodard, E. J. (2004). "Fusion rate: a time-to-event phenomenon". *J Neurosurg Spine* 1 (1): 47-51.

Vaccaro, A. R., Chiba, K., Heller, J. G., Patel, T., Thalgott, J. S., Truumees, E., Fischgrund, J. S., Craig, M. R., Berta, S. C., and Wang, J. C. (2002). "Bone grafting alternatives in spinal surgery". *Spine J* 2 (3): 206-215.

van den Bent, M. J. , Oosting, J., Wouda, E. J., van Acker, E. H., Ansink, B. J., and Braakman, R. (1996). "Anterior cervical discectomy with or without fusion with acrylate. A randomized trial". *Spine* 21 (7): 834-840.

van der Elst, M., Klein, C. P., de Blicck-Hogervorst, J. M., Patka, P. und Haarman, H. J. (1999). "Bone tissue response to biodegradable polymers used for intra medullary fracture fixation: a long-term in vivo study in sheep femora". *Biomaterials* 20 (2): 121-128.

van Dijk, M., Smit, T. H., Arnoe, M. F., Burger, E. H., and Wuisman, P. I. (2003). "The use of poly-L-lactic acid in lumbar interbody cages: design and biomechanical evaluation in vitro". *Eur Spine J* 12 (1): 34-40.

van Dijk, M., Smit, T. H., Burger, E. H., and Wuisman, P. I. (2002 a). "Bioabsorbable poly-L-lactic acid cages for lumbar interbody fusion: three-year follow-up radiographic, histologic, and histomorphometric analysis in goats". *Spine* 27 (23): 2706-2714.

van Dijk, M., Tunc, D. C., Smit, T. H., Higham, P., Burger, E. H., and Wuisman, P. I. (2002 b). "In vitro and in vivo degradation of bioabsorbable PLLA spinal fusion cages". *J Biomed Mater Res* 63 (6): 752-759.

- Villas, C., Martinez-Peric, R., Preite, R., und Barrios, R.** (1994). "Union after multiple cervical spine fusion. 21 cases followed for 1-6 years". *Acta Orthop Scand* 65: 620-622.
- Weiler, A., Helling, H. J., Kirch, U., Zirbes, T. K., und Rehm, K. E.** (1996). "Foreign-body reaction and the course of osteolysis after polyglycolide implants for fracture fixation: experimental study in sheep". *J Bone Joint Surg Br* 78 (3): 369-376.
- Weiler, A., Hoffmann, R. F., Stahelin, A. C., Helling, H. J., und Sudkamp, N. P.** (2000). "Biodegradable implants in sports medicine: the biological base". *Arthroscopy* 16(3): 305-321.
- Wigfield, C. C., und Nelson, R. J.** (2001). "Nonautologous interbody fusion materials in cervical spine surgery: how strong is the evidence to justify their use?". *Spine* 26 (6): 687-694.
- Wilke, H. J., Kettler, A., und Claes, L. E.** (1997 a). "Are sheep spines a valid biomechanical model for human spines?". *Spine* 22(20): 2365-2374.
- Wilke, H. J., Kettler, A., Wenger, K. H., und Claes, L. E.** (1997 b). "Anatomy of the sheep spine and its comparison to the human spine". *Anat Rec* 247 (4): 542-555.
- Willenegger, H., Perren, S. M., und Schenk, R.** (1971). "Primary and secondary healing of bone fractures". *Chirurg* 42 (6): 241-252.
- Williams, W.I.** (1983). "Nomina Anatomica". 6. Auflage, Baltimore, Lippincot, Williams und Wilkins.
- Winiwarter, H. v., und G. Sainmout** (1908). "Erfahrungen über die Flemmingsche Dreifachfärbung." *Z wiss Mikr* 25: 157-162.
- Wissing, H., Stürmer, K. M., und Breidenstein, G.** (1990). "Die Wertigkeit verschiedener Versuchstierspezies für experimentelle Untersuchungen am Knochen". *Unfallheilkd.* 212: 479-488.

Wolff, J. (1892). "Das Gesetz der Transformation der Knochen", Hirschwald, Berlin, Germany, 1-152.

Wuisman, P. I., van Dijk, M., und Smit, T. H. (2002). "Resorbable cages for spinal fusion: an experimental goat model." *J Neurosurg* 97 (4 Suppl): 433-439.

Young, W. F., und Rosenwasser, R. H. (1993). "An early comparative analysis of the use of fibular allograft versus autologous iliac crest graft for interbody fusion after anterior cervical discectomy". *Spine* 18 (9): 1123-1124.

Zdeblick, T. A., Cooke, M. E., Wilson, D., Kunz, D. N., und McCabe, R. (1993). "Anterior cervical discectomy, fusion, and plating. A comparative animal study". *Spine* 18 (14): 1974-1983.

Zdeblick, T. A., und Ducker, T. B. (1991). "The use of freeze-dried allograft bone for anterior cervical fusions". *Spine* 16 (7): 726-729.

Zdeblick, T. A., Wilson, D., Cooke, M. E., Kunz, D. N., McCabe, R., Ulm, M. J., und Vanderby, R. (1992). "Anterior cervical discectomy and fusion. A comparison of techniques in an animal model". *Spine* 17 (10 Suppl): S418-426.