

## 8. Literatur

- Aebi M, Regazzoni P, Schwarzenbach O: Segmental Bone Grafting. International Orthopaedics 13: 101-111 (1989)
- Akens M, von Rechenberg B, Bittmann P, Nadler D, Zlinszky K, Auer J: Long term in-vivo studies of a photo-oxidized bovine osteochondral transplant in sheep. BMC Musculoskelet Disord 2: 9 (2001)
- Alford J, Cole B: Cartilage restoration, part 2: techniques, outcomes, and future directions. Am J Sports Med 33: 443-460 (2005)
- Allen M, Houlton J, Adams S: The surgical anatomy of the stifle joint in sheep. Vet Surg 596-605 (1998)
- Appleyard R, Burkhardt D, Ghosh P, Read R, Cake M, Swain M, Murrell G: Topographical analysis of the structural, biochemical and dynamic biomechanical properties of cartilage in an ovine model of osteoarthritis. Osteoarthritis Cartilage 11: 65-77 (2003)
- Ashton B, Allen T, Howlett C, Eaglesom C, Hattori A, Owen M: Formation of bone and cartilage by marrow stromal cells in diffusion chambers in vivo. Clin Orthop Relat Res 294-307 (1980)
- Aspberg P, Tägli M, Kristensson C, Lidin S: Bone graft proteins influence osteoconduction. Acta orthop Scand 67: 377-382 (1996)
- Axhausen W: Die Bedeutung der Individual- und Artspezifität der Gewebe für die freie Knochenüberpflanzung. Hefte zur Unfallheilkunde 72: (1962)
- Aydelotte M, Greenhill R, Kuettner K: Differences between sub-populations of cultured bovine articular chondrocytes. II. Proteoglycan metabolism. Connect Tissue Res 18: 223-234 (1988)
- Bader D, Kempson G: The short-term compressive properties of adult human articular cartilage. Biomed Mater Eng 4: 245-256 (1994)
- Bert J, Maschka K: The arthroscopic treatment of unicompartmental gonarthrosis: a five-year follow-up study of abrasion arthroplasty plus arthroscopic debridement and arthroscopic debridement alone. Arthroscopy 5: 25-32 (1989)
- Binnet M, Gurkan I, Karaka, Scedil, Yilmaz C, Erekul S, Cetin C: Histopathologic assessment of healed osteochondral fractures. Arthroscopy 17: 278-285 (2001)
- Bobic V, Noble J: Articular cartilage--to repair or not to repair. J Bone Joint Surg Br 82: 165-166 (2000)
- Boehnisch T: Handbuch Immunhistochemische Färbemethoden, 3.Auflage. DakoCytomation Corp., Carpinteria,CA, USA, (2003)

Bonewald L: Osteocytes: a proposed multifunctional bone cell. *J Musculoskelet Neuronal Interact* 2: 239-241 (2002)

Brighton C, Kitajima T, Hunt R: Zonal analysis of cytoplasmic components of articular cartilage chondrocytes. *Arthritis Rheum* 27: 1290-1299 (1984)

Brittberg M, Lindahl A, Nilsson A, Ohlsson C, Isaksson O, Peterson L: Treatment of deep cartilage defects in the knee with autologous chondrocyte transplantation. *N Engl J Med* 331: 889-895 (1994)

Brittberg M, Nilsson A, Lindahl A: Rabbit articular cartilage defects treated with autologous cultured chondrocyten. *Clin Orthop* 270-283 (1996)

Brunn J, Behrens P, Silbermann M: The principle of autogeneic rib perichondrial transplantation in the treatment of deep articular cartilage defects. *Z Orthop Ihre Grenzgeb* 135: 138-144 (1997)

Brunn J, Steinhagen J: Der Knorpelschaden als präarthrotische Deformität. *Deutsche Zeitschrift für Sportmedizin* 2: (2000)

Buckwalter J: Activity vs. rest in the treatment of bone, soft tissue and joint injuries. *Iowa Orthop J* 15: 29-42 (1995)

Buckwalter J: Should bone, soft-tissue, and joint injuries be treated with rest or activity? *J Orthop Res* 13: 155-156 (1995)

Buckwalter J, Mankin H: Articular cartilage: degeneration and osteoarthritis, repair, regeneration, and transplantation. *Instr Course Lect* 47: 487-504 (1998)

Buckwalter J, Mankin H: Articular cartilage: tissue design and chondrocyte-matrix interactions. *Instr Course Lect* 47: 477-486 (1998)

Burchardt H: The biology of bone graft repair. *Clin Orthop Relat Res* 28-42 (1983)

Burkart A, Schöttle P, Imhof A: Surgical therapeutic possibilities of cartilage damage. *Unfallchirurg* 104: 798-807 (2001)

Burkhart A, Imhof A: Therapie des Knorpelschadens Heute und Morgen. *Arthroskopie* 12: 279-288 (1999)

Burri C, Wolter D: Das komprimierte autologe Spongiosatransplantat. *Unfallheilkunde* 80: 169-175 (1977)

Butnariu-Ephrat M, Robinson D, Mendes D, Halperin N, Nevo Z: Resurfacing of goat articular cartilage by chondrocytes derived from bone marrow. *Clin Orthop Relat Res* 234-243 (1996)

Byers P, Maroudase A, Oztop F, Stockwell R, Venn M: Histological and biochemical studies on cartilage from osteoarthritic femoral heads with special reference to surface characteristics. *Connect Tissue Res* 5: 41-49 (1977)

Calandruccio R, Gilmer W: Proliferation, Regeneration, and Repair of Articular Cartilage of Immature Animals. *J Bone Joint Surg Am* 44A: 431-455 (1962)

Caplan A: Cartilage begets bone versus endochondral myelopoiesis. *Clin Orthop Relat Res* 257-267 (1990)

Caplan A, Elyaderani M, Mochizuki Y, Wakitani S, Goldberg V: Principles of cartilage repair and regeneration. *Clin Orthop Relat Res* 254-269 (1997)

Carranza-Bencano A, Perez-Tinao M, Ballesteros-Vazquez P, Armas-Padron J, Hevia-Alonso A, Martos Crespo F: Comparative study of the reconstruction of articular cartilage defects with free costal perichondrial grafts and free tibial periosteal grafts: an experimental study on rabbits. *Calcif Tissue Int* 65: 402-407 (1999)

Chandler H, Reineck F, Wixson R, McCarthy J: Total hip replacement in patients younger than thirty years old. A five-year follow-up study. *J Bone Joint Surg Am* 63: 1426-1434 (1981)

Chen F, Frenkel S, Di Cesare P: Repair of articular cartilage defects: part I. Basic Science of cartilage healing. *Am J Orthop* 28: 31-33 (1999)

Chevalier X: Fibronectin, cartilage, and osteoarthritis. *Semin Arthritis Rheum* 22: 307-318 (1993)

Choi K, Kuhn J, Ciarelli M, Goldstein S: The elastic moduli of human subchondral, trabecular, and cortical bone tissue and the size-dependency of cortical bone modulus. *J Biomech* 23: 1103-1113 (1990)

Convery F, Akeson W, Keown G: The repair of large osteochondral defekts. An experimental study in horses. *Clin Orthop* 253-262 (1972)

Coulson R: Relationship between fluid flow and O<sub>2</sub> demand in tissues in vivo and in vitro. *Perspect Biol Med* 27: 121-126 (1983)

Cunningham N, Paralkar V, Reddi A: Osteogenin and recombinant bone morphogenetic protein 2B are chemotactic for human monocytes and stimulate transforming growth factor beta 1 mRNA expression. *Proc Natl Acad Sci USA* 89: 11740-11744 (1992)

Dekel S, Weissman S: Joint changes after overuse and peak overloading of rabbit knees in vivo. *Acta Orthop Scand* 49: 519-528 (1978)

DePalma A, McKeever C, Subin D: Process of repair of articular cartilage demonstrated by histology and autoradiography with tritiated thymidine. *Clin Orthop Relat Res* 48: 229-242 (1966)

Dustmann H, Puhl W: Altersabhängige Heilungsmöglichkeiten von Knorpelwunden. *Z Orthop Ihre Grenzgeb* 114: 749-764 (1976)

Eckstein F, Müller-Gerbl M, Putz R: Distribution of subchondral bone density and cartilage thickness in the human patella. *J Anat* 180 (Pt 3): 425-433 (1992)

Ek-Rylander B, Flores M, Wendel M, Heinegard D, Andersson G: Dephosphorylation of osteopontin and bone sialoprotein by osteoclastic tartrate-resistant acid phosphatase. Modulation of osteoclast adhesion in vitro. *J Biol Chem* 269: 14853-14856 (1994)

Ekholm R, Ingelmark B: Functional thickness variations of human articular cartilage. *Acta Soc Med Ups* 57: 39-59 (1952)

England C, van der Zypen E, Fankhauser F, Fankhauser S, Schmoker R: Morphological changes elicit in skeletal muscle by a Nd:YAG laser scalpel and electrocautery during surgical reduction of the human tongue. *Anat Anz* 179: 245-254 (1997)

Fernandez-Tresguerres-Hernandez-Gil I, Alobera-Gracia M, del-Canto-Pingarron M, Blanco-Jerez L: Physiological bases of bone regeneration I. Histology and physiology of bone tissue. *Med Oral Patol Oral Cir Bucal* 11: E47-51 (2006)

Frankenburg E, Goldstein S, Bauer T, Harris S, Poser R: Biomechanical and histological evaluation of a calcium phosphate cement. *J Bone Joint Surg Am* 80: 1112-1124 (1998)

Ghadially J, Ghadially F: Evidence of cartilage flow in deep defects in articular cartilage. *Virchows Arch B Cell Pathol* 18: 193-204 (1975)

Gill T: The Role of the Microfracture Technique in the Treatment of Full-Thickness Chondral Injuries. *Operative Techniques in Orthopaedics* 8: 138-140 (2000)

Gill T, Macgillivray J: The Technique of Microfracture for the Treatment of Articular Cartilage Defects in the Knee. *Operative Techniques in Orthopaedics* 11: 105-107 (2001)

Gotterbarm T, Reizel T, Schneider U, Voß H, Stofft E, Breusch S: Einwachsverhalten von periostgedeckten Knochendübeln mit und ohne autologe Knorpelzellen. *Orthopäde* 32: 65-73 (2003)

Gray M, Pizzanelli A, Grodzinsky A, Lee R: Mechanical and physiochemical determinants of the chondrocyte biosynthetic response. *J Orthop Res* 6: 777-792 (1988)

Greenwald A, Haynes D: A pathway for nutrients from the medullary cavity to the articular cartilage of the human femoral head. *J Bone Joint Surg Br* 51: 747-753 (1969)

Guerne P, Blanco F, Kaelin A, Desgeorges A, Lotz M: Growth factor responsiveness of human articular chondrocytes in aging and development. *Arthritis Rheum* 38: 960-968 (1995)

Haisch A, Schultz O, Perka C, Jahnke V, Burmester G, Sittinger M: Tissue engineering of human cartilage tissue for reconstructive surgery using biocompatible resorbable fibrin gel and polymer carriers. HNO 44: 624-629 (1996)

Hangody L: The surgical treatment of knee chondropathy, vols 1-2 [dissertation]. Uzsoki Press, Hungary (1994)

Hangody L, Kish G, Karpati Z, Szerb I, Eberhardt R: Treatment of osteochondritis dissecans of the talus: use of the mosaicplasty technique--a preliminary report. Foot Ankle Int 18: 628-634 (1997)

Hangody L, Kish G, Karpati Z, Szerb I, Udvarhelyi I: Arthroscopic autogenous osteochondral mosaicplasty for the treatment of femoral condylar articular defects. A preliminary report. Knee Surg Sports Traumatol Arthrosc 5: 262-267 (1997)

Hangody L, Kish G, Karpati Z, Udvarhelyi I, Szigeti I, Bely M: Mosaicplasty for the treatment of articular cartilage defects: application in clinical practice. Orthopedics 21: 751-756 (1998)

Hangody L, Sukosd L, Szabo Z: Repair of cartilage defects. Technical aspects. Rev Chir Orthop Reparatrice Appar Mot 85: 846-857 (1999)

Hardingham T, Fosang A, Dudhia J: Aggrecan the chondroitin/ keratan sulfate proteoglycan from cartilage. Articular cartilage and osteoarthritis Raven Press NY 5-20 (1992)

Hascall V: Interaction of cartilage proteoglycans with hyaluronic acid. J Supramol Struct 7: 101-120 (1977)

Hesse I, Hesse W: Die Einheilung replantiertes osteochondraler Fragmente. Eine experimentelle Studie. Unfallchirurg. 88: 280-288 (1985)

Homminga G, Bulstra S, Kuijer R, van der Linden A: Repair of sheep articular cartilage defects with a rabbit costal perichondrial graft. Acta Orthop Scand 62: 415-418 (1991)

Hunziker E: Biologic repair of articular cartilage. Defect models in experimental animals and matrix requirements. Clin Orthop S135-146 (1999)

Hunziker E, Quinn T, Hauselmann H: Quantitative structural organization of normal adult human articular cartilage. Osteoarthritis Cartilage 10: 564-572 (2002)

Hunziker E, Rosenberg L: Repair of partial-thickness defects in articular cartilage: cell recruitment from the synovial membrane. J Bone Joint Surg Am 78: 721-733 (1996)

Imhof H, Breitenseher M, Kainberger F, Rand T, Trattnig S: Importance of subchondral bone to articular cartilage in health and disease. Top Magn Reson Imaging 10: 180-192 (1999)

Jackson D, Lalor P, Aberman H, Simon T: Spontaneous repair of full-thickness defects of articular cartilage in a goat model. A preliminary study. *J Bone Joint Surg Am* 83-A: 53-64. (2001)

Jurvelin J, Arokoski J, Hunziker E, Helminen H: Topographical variation of the elastic properties of articular cartilage in the canine knee. *J Biomech* 33: 669-675 (2000)

Kaar T, Fraher J, Brady M: A quantitative study of articular repair in the guinea pig. *Clin Orthop Relat Res* 228-243 (1998)

Kempson G, Muir H, Swanson S, Freeman M: Correlations between stiffness and the chemical constituents of cartilage on the human femoral head. *Biochim Biophys Acta* 215: 70-77 (1970)

Kettunen K, Rokkanen P: The repair of a full-thickness articular defect. An experimental study on growing rats. *Ann Chir Gynaecol Fenn* 62: 166-168 (1973)

Kim Y, Sah R, Grodzinsky A, Plaas A, Sandy J: Mechanical regulation of cartilage biosynthetic behavior: physical stimuli. *Arch Biochem Biophys* 311: 1-12 (1994)

Kish G, Modis L, Hangody L: Osteochondral mosaicplasty for the treatment of focal chondral and osteochondral lesions of the knee and talus in the athlete. Rationale, indications, techniques, and results. *Clin Sports Med* 18: 45-66, vi (1999)

Kreder H, Moran M, Keeley F, Salter R: Biologic resurfacing of a major joint defect with cryopreserved allogeneic periosteum under the influence of continuous passive motion in a rabbit model. *Clin Orthop Relat Res* 288-296 (1994)

Kübler N: Osteoinduktion und Reparation. *Mund Kiefer GesichtsChir* 1: 2-25 (1997)

Kübler N: Osteoinduktion: Ein Beispiel für die Differenzierung mesenchymaler Stammzellen durch Bone Morphogenetic Proteins (BMPs). Heinrich-Heine-Universität Düsseldorf, (2002)

Kurz B, Jin M, Patwari P, Cheng D, Lark M, Grodzinsky A: Biosynthetic response and mechanical properties of articular cartilage after injurious compression. *J Orthop Res* 19: 1140-1146 (2001)

Laprell H, Petersen W: Autologous osteochondral transplantation using the diamond bone-cutting system (DBCS): 6-12 years' follow-up of 35 patients with osteochondral defects at the knee joint. *Arch Orthop Trauma Surg May*: 248-253 (2001)

Leniz P, Ripalda P, Forriol F: The incorporation of different sorts of cancellous bone graft and the reaction of the host bone. A histomorphometric study in sheep. *Int Orthop* 28: 2-6 (2004)

Lewandowska K, Choi H, Rosenberg L, Zardi L, Culp L: Fibronectin-mediated adhesion of fibroblasts: inhibition by dermatan sulfate proteoglycan and evidence for a cryptic glycosaminoglycan-binding domain. *J Cell Biol* 105: 1443-1454 (1987)

Liebig H: Funktionelle Histologie der Haussäugetiere. Schattauer (1999)

Loening A, James I, Levenston M, Badger A, Frank E, Kurz B, Nuttall M, Hung H, Blake S, Grodzinsky A, Lark M: Injurious mechanical compression of bovine articular cartilage induces chondrocyte apoptosis. Arch Biochem Biophys 381: 205-212 (2000)

Lyra T, Arokoski J, Oksala N, Vihko A, Hyttinen M, Jurvelin J, Kiviranta I: Experimental validation of arthroscopic cartilage stiffness measurement using enzymatically degraded cartilage samples. Phys Med Biol 44: 525-535 (1999)

Magnuson P: The classic: Joint debridement: surgical treatment of degenerative arthritis. Clin Orthop Relat Res 4-12 (1974)

Mainil-Varlet P, Monin D, Weiler A, Grogan S, Schaffner T, Zuger B, Frenz M: Quantification of laser-induced cartilage injury by confocal microscopy in an ex vivo model. J Bone Joint Surg Am 83-A: 566-571 (2001)

Mankin H: The reaction of articular cartilage to injury and osteoarthritis (first of two parts). N Engl J Med 291: 1285-1292 (1974)

Mankin H: The response of articular cartilage to mechanical injury. J Bone Joint Surg Am 64: 460-466 (1982)

Mankin H, Lippiello L: The glycosaminoglycans of normal and arthritic cartilage. J Clin Invest 50: 1712-1719 (1971)

Marlovits S, Véscei V: Möglichkeiten zur chirurgischen Therapie von Knorpeldefekten Teil 1: Grundlagen der Knorpelbiologie und der Heilung von Knorpeldefekten. Acta Chirurgica Austriaca. 32: 124 (2000)

Marlovits S, Véscei V: Möglichkeiten zur chirurgischen Therapie von Knorpeldefekten-Teil 2: Chirurgische Behandlungsoptionen zur biologischen Knorpelreparatur. Acta Chirurgica Austriaca. 32: 185-194 (2000)

Martin J, Buckwalter J: Articular cartilage aging and degeneration. Sports Med Arthros Rev 4 263-275 (1996)

Martinek V: Anatomie und Pathophysiologie des hyalinen Knorpels. Deutsche Zeitschrift für Sportmedizin 54: 166-170 (2003)

Messner K: Cartilage replacement operation using pre-cultured cells. Orthopade 28: 61-67 (1999)

Minas T: Chondrocyte implantation in the repair of chondral lesions of the knee: economics and quality of life. Am J Orthop 27: 739-744 (1998)

Minas T, Nehrer S: Current concepts in the treatment of articular cartilage defects. Orthopedics 20: 525-538 (1997)

Mitchell N, Shepard N: Healing of articular cartilage in intra-articular fractures in rabbits. 1980. Clin Orthop Relat Res 3-6 (2004)

Mobasher A, Carter S, Martin-Vasallo P, Shakibaei M: Integrins and stretch activated ion channels; putative components of functional cell surface mechanoreceptors in articular chondrocytes. Cell Biol Int 26: 1-18 (2002)

Mommsen U, Meenen N, Osterloh J, Jungbluth K: Value of homologous spongiosa in filling up subchondral bone defects. Unfallchirurgie 10: 273-277 (1984)

Moran M, Kim H, Salter R: Biological resurfacing of full-thickness defects in patellar articular cartilage of the rabbit. Investigation of autogenous periosteal grafts subjected to continuous passive motion. J Bone Joint Surg Br 74: 659-667 (1992)

Mori S, Harruff R, Burr D: Microcracks in articular calcified cartilage of human femoral heads. Arch Pathol Lab Med 117: 196-198 (1993)

Mow V, Ratcliffe A, Rosenwasser M, Buckwalter J: Experimental studies on repair of large osteochondral defects at a high weight bearing area of the knee joint: a tissue engineering study. J Biomech Eng 113: 198-207 (1991)

Nakajima H, Goto T, Horikawa O, Kikuchi T, Shinmei M: Characterization of the cells in the repair tissue of full-thickness articular cartilage defects. Histochem Cell Biol 109: 331-338 (1998)

Nam E, Makhsous M, Koh J, Bowen M, Nuber G, Zhang L: Biomechanical and histological evaluation of osteochondral transplantation in a rabbit model. Am J Sports Med 32: 308-316 (2004)

Naumann A, Dennis J, Awadallah A, Carrino D, Mansour J, Kastenbauer E, Caplan A: Immunochemical and mechanical characterization of cartilage subtypes in rabbit. J Histochem Cytochem 50: 1049-1058 (2002)

Navarro R, Cohen M, Filho MC, da Silva R: The arthroscopic treatment of osteochondritis dissecans of the knee with autologous bone sticks. Arthroscopy 18: 840-844 (2002)

Niederauer G, Slivka M, Leatherbury N, Korvick D, Harroff H, Ehler W, Dunn C, Kieswetter K: Evaluation of multiphase implants for repair of focal osteochondral defects in goats. Biomaterials 21: 2561-2574 (2000)

Noguchi T, Oka M, Fujino M, Neo M, Yamamoto T: Repair of osteochondral defects with grafts of cultured chondrocytes. Comparison of allografts and isografts. Clin Orthop Relat Res 251-258 (1994)

Norrdin R, Kawcak C, Capwell B, McIlwraith C: Calcified cartilage morphometry and its relation to subchondral bone remodeling in equine arthrosis. Bone 24: 109-114 (1999)

Noyes F, Stabler C: A system for grading articular cartilage lesions at arthroscopy. Am J Sports Med 17: 505-513 (1989)

Nunamaker D: Experimental models of fracture repair. Clin Orthop Relat Res 56-65 (1998)

O'Driscoll S, Keeley F, Salter R: The Chondrogenic Potential of Free Autogenous Periosteal Grafts for Biological Resurfacing of Major Full-Thickness Defects in Joint Surfaces under the Influence of Continuous Passive Motion. J Bone Joint Surg Am 68: 1017-1035 (1986)

O'Driscoll S, Keeley F, Salter R: Durability of regenerated articular cartilage produced by free autogenous periosteal grafts in major full-thickness defects in joint surfaces under the influence of continuous passive motion. A follow-up report at one year. J Bone Joint Surg Am 70: 595-606 (1988)

O'Driscoll S, Salter R: The repair of major osteochondral defects in joint surfaces by neochondrogenesis with autogenous osteoperiosteal grafts stimulated by continuous passive motion. An experimental investigation in the rabbit. Clin Orthop Relat Res 131-140 (1986)

Outerbridge R: The etiology of chondromalacia patellae. 1961. Clin Orthop Relat Res 5-8 (2001)

Palmoski M, Brandt K: Effects of static and cyclic compressive loading on articular cartilage plugs in vitro. Arthritis Rheum 27: 675-81 (1984)

Pearce S, Hurtig M, Clarnette R, Kalra M, Cowan B, Miniaci A: An investigation of 2 techniques for optimizing joint surface congruency using multiple cylindrical osteochondral autografts. Arthroscopy 17: 50-5 (2001)

Peterson L: Articular cartilage injuries treated with autologous chondrocyte transplantation in the human knee. Acta Orthop Belg 62 Suppl 1: 196-200 (1996)

Radin E, Paul I: Does Cartilage Compliance Reduce Skeletal Impact Loads? Arthritis and Rheumatism 13: 139-144 (1970)

Radin E, Rose R: Role of subchondral bone in the initiation and progression of cartilage damage. Clin Orthop 34-40 (1986)

Rand J, Ilstrup D: Survivorship analysis of total knee arthroplasty. Cumulative rates of survival of 9200 total knee arthroplasties. J Bone Joint Surg Am 73: 397-409 (1991)

Raunest J, Derra E: Laser-assisted induction of arthrosis. Orthopade 25: 10-6 (1996)

Redler I, Mow V, Zimny M, Mansell J: The ultrastructure and biomechanical significance of the tidemark of articular cartilage. Clin Orthop Relat Res 357-62 (1975)

Rothwell A: Synovium transplantation onto the cartilage denuded patellar groove of the sheep knee joint. *Orthopedics* 13: 433-442 (1990)

Rudert M, Tillmann B: Detection of lymph and blood vessels in the human intervertebral disc by histochemical and immunohistochemical methods. *Anat Anz* 175: 237-242 (1993)

Rudert M, Wirth C: Cartilage regeneration and substitution. *Orthopade* 27: W309-21 (1998)

Russlies M, Ruther P, Koller W, Stomberg P, Behrens P: Biomechanical properties of cartilage repair tissue after different cartilage repair procedures in sheep. *Z Orthop Ihre Grenzgeb* 141: 465-471 (2003)

Sah R, Kim Y, Doong J, Grodzinsky A, Plaas A, Sandy J: Biosynthetic response of cartilage explants to dynamic compression. *J Orthop Res* 7: 619-636 (1989)

Salter R, Simmonds D, Malcolm B, Rumble E, MacMichael D, Clements N: The biological effect of continuous passive motion on the healing of full-thickness defects in articular cartilage. An experimental investigation in the rabbit. *J Bone Joint Surg Am* 62: 1232-1251 (1980)

Sato K, Urist M: Bone morphogenetic protein-induced cartilage development in tissue culture. *Clin Orthop Relat Res* 180-187 (1984)

Schafer D, Seidel J, Martin I, Jundt G, Heberer M, Grozinsky A, Vunjak-Novakovic G, Freed L: Engineering and characterization of functional osteochondral repair tissue. *Orthopade* (2004)

Schenk R: Zur Problematik der Knochenersatzstoffe: Histophysiologie des Knochenumbaus und der Substitution von Knochenersatzstoffen. *Hefte zur Unfallheilkunde* 216: 23-35 (1991)

Schmid T, Conrad H: A unique low molecular weight collagen secreted by cultured chick embryo chondrocytes. *J Biol Chem* 257: 12444-12450 (1982)

Schmid T, Linsenmayer T: Type X Collagen. Academic Press, NY 223-259 (1987)

Schweiberer L: Der heutige Stand der Knochentransplantation. *Der Chirurg* 42: 252-257 (1971)

Schweiberer L, Hallfeldt K, Mandelkow H: Osteoid induction. *Orthopade* 15: 3-9 (1986)

Scott J: Proteoglycan histochemistry--a valuable tool for connective tissue biochemists. *Coll Relat Res* 5: 541-575 (1985)

Sellards R, Nho S, Cole B: Chondral injuries. *Curr Opin Rheumatol* 14: 134-141 (2002)

Shahgaldi B, Amis A, Heatley F, McDowell J, Bentley G: Repair of cartilage lesions using biological implants. A comparative histological and biomechanical study in goats. *J Bone Joint Surg Br* 73: 57-64 (1991)

Shapiro F, Koide S, Glimcher M: Cell origin and differentiation in the repair of full-thickness defects of articular cartilage. *J Bone Joint Surg Am* 75: 532-553 (1993)

Shimizu T, Videman T, Shimazaki K, Mooney V: Experimental study on the repair of full thickness articular cartilage defects: effects of varying periods of continuous passive motion, cage activity, and immobilization. *J Orthop Res* 5: 187-197 (1987)

Siebert C, Miltner O, Schneider U, Wahner T, Koch S, Niedhart C: Healing of osteochondral transplants--animal experiment studies using a sheep model. *Z Orthop Ihre Grenzgeb* 139: 382-386. (2001)

Siebert C, Miltner O, Schneider U, Weber M, Wahner T, Niedhart C: Filling of osteochondral donor site defects. Experimental study with tricalcium phosphate cement and BMP-2. *Z Orthop Ihre Grenzgeb* 141: 227-232 (2003)

Siebert C, Miltner O, Weber M, Sopka S, Koch S, Niedhart C: Healing of osteochondral grafts in an ovine model under the influence of bFGF. *Arthroscopy* 19: 182-187. (2003)

Sittinger M, Bujia J, Minuth W, Hammer C, Burmester G: Engineering of cartilage tissue using bioresorbable polymer carriers in perfusion culture. *Biomaterials* 15: 451-456 (1994)

Solursh M, Reiter R, Ahrens P, Pratt R: Increase in levels of cyclic AMP during avian limb chondrogenesis in vitro. *Differentiation* 15: 183-186 (1979)

Soost F: Validierung des Knochenumbaus von Knochenersatzmaterialien in der Mund-, Kiefer- und Gesichtschirurgie. Medizinische Fakultät Charité. Berlin, Humboldt- Universität, (2001)

Spangenberg K, Peretti G, Trahan C, Randolph M, Bonassar L: Histomorphometric analysis of a cell-based model of cartilage repair. *Tissue Eng* 8: 839-846 (2002)

Steadman J, Rodkey W, Briggs K, Rodrigo J: The microfracture technic in the management of complete cartilage defects in the knee joint. *Orthopade* 28: 26-32 (1999)

Steadman J, Rodkey W, Singelton S, Briggs K: Microfracture Technique for Full-Thickness Chondral Defects: Technique and Clinical Results. *Operative Techniques in Orthopaedics* 7: 300-304 (1997)

Stockwell R: Chondrocytes. *J Clin Pathol Suppl (R Coll Pathol)* 12: 7-13 (1978)

Störig E: Knorpeltransplantation im Tierexperiment und Erfahrungen über ihre klinische Anwendung. *Z.Orthop.* 110: 685-690 (1972)

Tagaki M: Ultrastructural cytochemistry of cartilage proteoglycans and their relation to the calcification processl. Kluwer Academic Publishers, (1990)

Trippel S: Growth factor actions on articular cartilage. J Rheumatol Suppl 43: 129-132 (1995)

Trueta J: Studies on the etiopathology of osteoarthritis of the hip. Clin Orthop Relat Res 31: 7-19 (1963)

Uchida A, Yamashita K, Hashimoto K, Shimomura Y: The effect of mechanical stress on cultured growth cartilage cells. Connect Tissue Res 17: 305-311 (1988)

Ulrich-Vinther M, Maloney M, Schwarz E, Rosier R, O'Keefe R: Articular cartilage biology. J Am Acad Orthop Surg 11: 421-430 (2003)

van Dyk G, Dejardin L, Flo G, Johnson L: Cancellous bone grafting of large osteochondral defects: an experimental study in dogs. Arthroscopy 14: 311-320 (1998)

van Saase J, van Romunde L, Cats A, Vandenbroucke J, Valkenburg H: Epidemiology of osteoarthritis: Zoetermeer survey. Comparison of radiological osteoarthritis in a Dutch population with that in 10 other populations. Ann Rheum Dis 48: 271-280 (1989)

von der Mark K, Gluckert K: Biochemical and molecular biologic aspects of early detection of human arthroses. Orthopade 19: 2-15 (1990)

von der Mark K: Chondrozytendifferenzierungsprozesse im Gelenkknorpel. Zeitschrift für Rheumatologie 59: 391-393 (2000)

von Rechenberg B, Akens M, Nadler D, Bittmann P, Zlinszky K, Kutter A, Poole A, Auer J: Changes in subchondral bone in cartilage resurfacing--an experimental study in sheep using different types of osteochondral grafts. Osteoarthritis Cartilage 11: 265-277 (2003)

Wakitani S, Goto T, Pineda S, Young R, Mansour J, Caplan A, Goldberg V: Mesenchymal cell-based repair of large, full-thickness defects of articular cartilage. J Bone Joint Surg Am 76: 579-592 (1994)

Wei N, Delauter S, Erlichman M: The holmium YAG laser in office based arthroscopy of the knee: comparison with standard interventional instruments in patients with arthritis. J Rheumatol 24: 1806-1808 (1997)

Wei X, Gao J, Messner K: Maturation-dependent repair of untreated osteochondral defects in the rabbit knee joint. J Biomed Mater Res 34: 63-72 (1997)

Weiland A, Moore R, Daniel R: Vascularized Bone Autografts. Clin Orthop Relat Res 174: 87-95 (1983)

Weiler A, Helling HJ, Kirch U, Zirbes TK, Rehm KE: Foreign-body reaction and the course of osteolysis after polyglycolide implants for fracture fixation: experimental study in sheep. *J Bone Joint Surg Br* 78: 369-376 (1996)

Werner A, Fuß M, Krauspe R: Operative gelenkerhaltende Verfahren bei Gelenkknorpelschäden. *Deutsches Ärzteblatt* 100: (2003)

Wildner M, Sangha O, Behrend C: Wirtschaftlichkeitsuntersuchung zur autologen Chondrozytentransplantation. *Arthroskopie* 13: 123-131 (2000)

Winet H: The role of microvasculature in normal and perturbed bone healing as revealed by intravital microscopy. *Bone* 19: 39S-57S (1996)

Wong M, Wuethrich P, Eggli P, Hunziker E: Zone-specific cell biosynthetic activity in mature bovine articular cartilage: a new method using confocal microscopic stereology and quantitative autoradiography. *J Orthop Res* 14: 424-432 (1996)

Yamashita F, Sakakida K, Suzu F, Takai S: The transplantation of an autogeneic osteochondral fragment for osteochondritis dissecans of the knee. *Clin Orthop* 43-50 (1985)