
5 Literaturverzeichnis

- ¹ Gerok W, Hartmann F, Schuster H-P, Back P. Hepatologie. In: Gerok W, ed. Innere Medizin der Gegenwart, ed. 1, vol. 1 München-Wien-Baltimore: Urban & Schwarzenberg, 1987:3-31.
- ² Wang X, Foster M, Al-Dhalimy M, Lagasse E, Finegold M, Grompe M. The origin and liver repopulating capacity of murine oval cells. *Proc Natl Acad Sci U S A* 2003;100 Suppl 1:11881-8.
- ³ König S, Krause P, Markus PM, Becker H. [Role of stem cells in adult hepatic regeneration]. *Chirurg* 2005;76(5):445-52.
- ⁴ Roskams TA, Libbrecht L, Desmet VJ. Progenitor cells in diseased human liver. *Semin Liver Dis* 2003;23(4):385-96.
- ⁵ Grompe M. The role of bone marrow stem cells in liver regeneration. *Semin Liver Dis* 2003;23(4):363-72.
- ⁶ Hui T, Rozga J, Demetriou AA. Bioartificial liver support. *J Hepatobiliary Pancreat Surg* 2001;8(1):1-15.
- ⁷ O'Grady JG. Acute liver failure. *Postgrad Med J* 2005;81(953):148-54.
- ⁸ Chapman RW, Forman D, Peto R, Smallwood R. Liver transplantation for acute hepatic failure? *Lancet* 1990;335(8680):32-5.
- ⁹ van de Kerkhove MP, Hoekstra R, Chamuleau RA, van Gulik TM. Clinical application of bioartificial liver support systems. *Ann Surg* 2004;240(2):216-30.
- ¹⁰ Boeker KHW. Akutes Leberversagen. *Der Internist* 2001;42(4):545-63.
- ¹¹ Gerlach J, Ziemer R, Neuhaus P. Fulminant liver failure: relevance of extracorporeal hybrid liver support systems. *Int J Artif Organs* 1996;19(1):7-13.
- ¹² Bismuth H, Samuel D, Castaing D, Adam R, Saliba F, Johann M, et al. Orthotopic liver transplantation in fulminant and subfulminant hepatitis. The Paul Brousse experience. *Ann Surg* 1995;222(2):109-19.
- ¹³ Schiodt FV, Atillasoy E, Shakil AO, Schiff ER, Caldwell C, Kowdley KV, et al. Etiology and outcome for 295 patients with acute liver failure in the United States. *Liver Transpl Surg* 1999;5(1):29-34.
- ¹⁴ Girlanda R, Vilca-Melendez H, Srinivasan P, Muiesan P, O'Grady JG, Rela M, et al. Immunosuppression withdrawal after auxiliary liver transplantation for acute liver failure. *Transplant Proc* 2005;37(4):1720-1.

-
- ¹⁵ Kay MA, Fausto N. Liver regeneration: prospects for therapy based on new technologies. *Mol Med Today* 1997;3(3):108-15.
- ¹⁶ Gubernatis G, Oldhafer K, Boker K, Bader A, Rodeck B, Schlitt HJ, et al. [Is "terminal" liver damage reversible? Value, practicality and future of bridging techniques for the liver]. *Langenbecks Arch Chir Suppl Kongressbd* 1996;113:380-8.
- ¹⁷ Matsumura KN, Guevara GR, Huston H, Hamilton WL, Rikimaru M, Yamasaki G, et al. Hybrid bioartificial liver in hepatic failure: preliminary clinical report. *Surgery* 1987;101(1):99-103.
- ¹⁸ Watanabe FD, Mullon CJ, Hewitt WR, Arkadopoulos N, Kahaku E, Eguchi S, et al. Clinical experience with a bioartificial liver in the treatment of severe liver failure. A phase I clinical trial. *Ann Surg* 1997;225(5):484-91; discussion 91-4.
- ¹⁹ Ellis AJ, Hughes RD, Wendon JA, Dunne J, Langley PG, Kelly JH, et al. Pilot-controlled trial of the extracorporeal liver assist device in acute liver failure. *Hepatology* 1996;24(6):1446-51.
- ²⁰ Sussman NL, Gislason GT, Kelly JH. Extracorporeal liver support. Application to fulminant hepatic failure. *J Clin Gastroenterol* 1994;18(4):320-4.
- ²¹ Sussman NL, Chong MG, Koussayer T, He DE, Shang TA, Whisennand HH, et al. Reversal of fulminant hepatic failure using an extracorporeal liver assist device. *Hepatology* 1992;16(1):60-5.
- ²² Sussman NL, Kelly JH. Improved liver function following treatment with an extracorporeal liver assist device. *Artif Organs* 1993;17(1):27-30.
- ²³ Sussman NL, Gislason GT, Conlin CA, Kelly JH. The Hepatix extracorporeal liver assist device: initial clinical experience. *Artif Organs* 1994;18(5):390-6.
- ²⁴ Xue YL, Zhao SF, Zhang ZY, Wang YF, Li XJ, Huang XQ, et al. Effects of a bioartificial liver support system on acetaminophen induced acute liver failure canines. *World J Gastroenterol* 1999;5(4):308-11.
- ²⁵ Xue YL, Zhao SF, Luo Y, Li XJ, Duan ZP, Chen XP, et al. TECA hybrid artificial liver support system in treatment of acute liver failure. *World J Gastroenterol* 2001;7(6):826-9.
- ²⁶ van de Kerkhove MP, Di Florio E, Scuderi V, Mancini A, Belli A, Bracco A, et al. Phase I clinical trial with the AMC-bioartificial liver. *Int J Artif Organs* 2002;25(10):950-9.
- ²⁷ van de Kerkhove MP, Di Florio E, Scuderi V, Mancini A, Belli A, Bracco A, et al. Bridging a patient with acute liver failure to liver transplantation by the AMC-bioartificial liver. *Cell Transplant* 2003;12(6):563-8.
- ²⁸ Flendrig LM, la Soe JW, Jorning GG, Steenbeek A, Karlsen OT, Bovee WM, et al. In vitro evaluation of a novel bioreactor based on an integral oxygenator and a spirally wound nonwoven polyester matrix for hepatocyte culture as small aggregates. *J Hepatol* 1997;26(6):1379-92.
- ²⁹ Margulis MS, Erukhimov EA, Andreiman LA, Viksna LM. Temporary organ substitution by hemoperfusion through suspension of active donor hepatocytes in a total complex of intensive therapy in patients with acute hepatic insufficiency. *Resuscitation* 1989;18(1):85-94.

-
- ³⁰ Mazariegos GV, Kramer DJ, Lopez RC, Shakil AO, Rosenbloom AJ, DeVera M, et al. Safety observations in phase I clinical evaluation of the Excorp Medical Bioartificial Liver Support System after the first four patients. *Asaio J* 2001;47(5):471-5.
- ³¹ Patzer JF, 2nd, Mazariegos GV, Lopez R, Molmenti E, Gerber D, Riddervold F, et al. Novel bioartificial liver support system: preclinical evaluation. *Ann N Y Acad Sci* 1999;875:340-52.
- ³² Tittel K. Beschreibende und funktionelle Anatomie des Menschen, ed. 14. München, Jena: Urban und Fischer, 2003.
- ³³ Lippert H. Leber (Hepar) Lehrbuch Anatomie, ed. 5 München: Urban & Fischer, 2000:291-307.
- ³⁴ Netter FH. Atlas of Human Anatomy. Basel: CIBA-GEIGY Limited, 1994.
- ³⁵ Bertolini R, Leutert G, Wendler D, Scheuner G, Rother P. Systematische Anatomie des Menschen, ed. 5. Berlin, Wiesbaden: Ullstein Mosby, 1995.
- ³⁶ Jones EA, Summerfield JA. Kupffer Cells. In: Arias IM, Jakoby WB, Popper H, Schachter D, Shafritz DA, eds. The Liver: Biology and Pathobiology, ed. 1 New York: Raven Press, 1988:507-24.
- ³⁷ Gumucio JJ, Chianale J. Liver Cell Heterogeneity and Liver Function. In: Arias IM, Jakoby WB, Popper H, Schachter D, Shafritz DA, eds. The Liver: Biology and Pathobiology, ed. 2 New York: Raven Press, 1988:931-47.
- ³⁸ Campra JL, Reynolds TB. The Hepatic Circulation. In: Arias IM, Jakoby WB, Popper H, Schachter D, Shafritz DA, eds. The Liver: Biology and Pathobiology, ed. 2 New York: Raven Press, 1988:911-30.
- ³⁹ Bircher J, Benhamou J-P, McIntyre N, Rizetto M, Rodés J. Liver and Biliary-Tract Histology. In: Bircher J, Benhamou J-P, McIntyre N, Rizetto M, Rodés J, eds. Oxford Textbook of Clinical Hepatology, ed. 2, vol. 1 New York: Oxford Medical Publications, 1999:18ff.
- ⁴⁰ Puhl G, Schaser KD, Vollmar B, Menger MD, Settmacher U. Noninvasive in vivo analysis of the human hepatic microcirculation using orthogonal polarized spectral imaging. *Transplantation* 2003;75(6):756-61.
- ⁴¹ Hoffmann B. Crashkurs Anatomie: Repetitorium zum Gegenstandskatalog 1 mit Einarbeitung der wichtigen Prüfungsfakten, ed. 2. München, Jena: Elsevier, Urban und Fischer, 2004.
- ⁴² Stocker E, Wullstein HK, Brau G. [Capacity of regeneration in liver epithelia of juvenile, repeated partially hepatectomized rats. Autoradiographic studies after continuous infusion of 3H-thymidine (author's transl)]. *Virchows Arch B Cell Pathol* 1973;14(2):93-103.
- ⁴³ Reifferscheid M, Schreiber HW, Klingelhofer KH. [Liver cirrhosis, resection & regeneration.]. *Langenbecks Arch Klin Chir Ver Dtsch Z Chir* 1959;290(3):315-28.
- ⁴⁴ Bartok I, Toszegi A, Torok I. [Humoral influence of regeneration of the cirrhotic liver]. *Virchows Arch Pathol Anat Physiol Klin Med* 1966;340(4):360-8.
- ⁴⁵ Bengmark S. Liver Regeneration. In: Pack GT, Islami AH, eds. Tumors of the Liver Berlin: Springer Verlag, 1970:187-210.

-
- ⁴⁶ Brune K, Beyer A, Schäfer M. Schmerz: Pathophysiologie - Pharmakologie - Therapie, ed. 1. Berlin, Heidelberg: Schäfer, Michael, 2001.
- ⁴⁷ O'Grady JG, Williams R. Management of acute liver failure. *Schweiz Med Wochenschr* 1986;116(17):541-4.
- ⁴⁸ O'Grady JG, Williams R. Acute liver failure. *Baillieres Clin Gastroenterol* 1989;3(1):75-89.
- ⁴⁹ Trey C, Davidson CS. The management of fulminant hepatic failure. *Prog Liver Dis* 1970;3:282-98.
- ⁵⁰ Bernuau J, Rueff B, Benhamou JP. Fulminant and subfulminant liver failure: definitions and causes. *Semin Liver Dis* 1986;6(2):97-106.
- ⁵¹ Herold G, Mitarbeiter. Innere Medizin. Köln: Arzt + Information, 1997.
- ⁵² Teasdale G, Jennett B. Assessment of coma and impaired consciousness. A practical scale. *Lancet* 1974;2(7872):81-4.
- ⁵³ Starzl TE, Marchioro TL, Porter KA. Experimental and clinical observations after homotransplantation of the whole liver. *Rev Int Hepatol* 1965;15(8):1447-80.
- ⁵⁴ Gutgemann A, Schriefers KH, Esser G, Lee TS, Paquet KJ, Kaufer C. [Report of experience with homologous liver transplantation]. *Dtsch Med Wochenschr* 1969;94(35):1713-7.
- ⁵⁵ Gutgemann A, Schriefers KH, Esser G, Lie TS, Paquet KJ, Kaufer C. A case of homologous liver transplantation. *Ger Med Mon* 1969;14(11):525-8.
- ⁵⁶ Neuhaus P, Blumhardt G, Bechstein WO, Steffen R, Keck H. Side-to-side anastomosis of the common bile duct is the method of choice for biliary tract reconstruction after liver transplantation. *Transplant Proc* 1990;22(4):1571.
- ⁵⁷ Neuhaus P, Blumhardt G, Bechstein WO, Steffen R, Platz KP, Keck H. Technique and results of biliary reconstruction using side-to-side choledochocholedochostomy in 300 orthotopic liver transplants. *Ann Surg* 1994;219(4):426-34.
- ⁵⁸ Neuhaus P, Platz KP. Liver transplantation: newer surgical approaches. *Baillieres Clin Gastroenterol* 1994;8(3):481-93.
- ⁵⁹ <http://www.onmeda.de>. Entwicklung der Lebertransplantation in Deutschland. In: GmbH OM, ed. Köln: OnVista Media GmbH, 2004.
- ⁶⁰ Otto JJ, Pender JC, Cleary JH, Sensenig DM, Welch CS. The use of a donor liver in experimental animals with elevated blood ammonia. *Surgery* 1958;43(2):301-9.
- ⁶¹ Sen PK, Bhalerao RA, Parulkar GP, Samsi AB, Shah BK, Kinare SG. Use of isolated perfused cadaveric liver in the management of hepatic failure. *Surgery* 1966;59(5):774-81.
- ⁶² Eiseman B, Liem DS, Raffucci F. Heterologous liver perfusion in treatment of hepatic failure. *Ann Surg* 1965;162(3):329-45.
- ⁶³ Nose Y, Mikami J, Kasai Y, Sasaki E, Agishi T, Danjo Y. An experimental artificial liver utilizing extracorporeal metabolism with sliced or granulated canine liver. *Trans Am Soc Artif Intern Organs* 1963;9:358-62.

-
- ⁶⁴ Burnell JM, Dawborn JK, Epstein RB, Gutman RA, Leinbach GE, Thomas ED, et al. Acute hepatic coma treated by cross-circulation or exchange transfusion. *N Engl J Med* 1967;276(17):935-43.
- ⁶⁵ Tung LC, Haring R, Waldschmidt J, Weber D. [Experience in treating hepatic coma by extracorporeal liver perfusion (author's transl)]. *Zentralbl Chir* 1980;105(18):1195-205.
- ⁶⁶ Norman JC, Brown ME, Saravis CA, Ackroyd FW, McDermott WV, Jr. Perfusion techniques in temporary human-isolated ex vivo porcine liver cross circulation. Possible adjunct in the treatment of hepatic failure. *J Surg Res* 1966;6(3):121-5.
- ⁶⁷ Stockmann HB, Hiemstra CA, Marquet RL, JN IJ. Extracorporeal perfusion for the treatment of acute liver failure. *Ann Surg* 2000;231(4):460-70.
- ⁶⁸ Yamashita Y, Shimada M, Ijima H, Nakazawa K, Funatsu K, Sugimachi K. Hybrid-artificial liver support system. *Surgery* 2002;131(1 Suppl):S334-40.
- ⁶⁹ Stange J, Mitzner S, Ramlow W, Gliesche T, Hickstein H, Schmidt R. A new procedure for the removal of protein bound drugs and toxins. *Asaio J* 1993;39(3):M621-5.
- ⁷⁰ Kapoor D, Williams R, Jalan R. MARS: a new treatment for hepatorenal failure. Molecular adsorbent and recirculating system. *Gastroenterology* 2000;119(6):1799-800.
- ⁷¹ Mitzner S, Williams R. Albumin dialysis MARS 2003. Proceedings of a symposium, September 2002. *Liver Int* 2003;23 Suppl 3:3-72.
- ⁷² Novelli G, Rossi M, Pretagostini R, Novelli L, Poli L, Ferretti G, et al. A 3-year experience with Molecular Adsorbent Recirculating System (MARS): our results on 63 patients with hepatic failure and color Doppler US evaluation of cerebral perfusion. *Liver Int* 2003;23 Suppl 3:10-5.
- ⁷³ Novelli G, Rossi M, Pretagostini R, Poli L, Novelli L, Berloco P, et al. MARS (Molecular Adsorbent Recirculating System): experience in 34 cases of acute liver failure. *Liver* 2002;22 Suppl 2:43-7.
- ⁷⁴ Kapoor D. Molecular adsorbent recirculating system: Albumin dialysis-based extracorporeal liver assist device. *J Gastroenterol Hepatol* 2002;17 Suppl 3:S280-S86.
- ⁷⁵ Jalan R, Sen S, Steiner C, Kapoor D, Alisa A, Williams R. Extracorporeal liver support with molecular adsorbents recirculating system in patients with severe acute alcoholic hepatitis. *J Hepatol* 2003;38(1):24-31.
- ⁷⁶ Hughes R, Ton HY, Langley P, Davies M, Hanid MA, Mellon P, et al. Albumin-coated Amberlite XAD-7 resin for hemoperfusion in acute liver failure. Part II: in vivo evaluation. *Artif Organs* 1979;3(1):23-6.
- ⁷⁷ Doria C, Mandala L, Scott VL, Gruttadauria S, Marino IR. Fulminant hepatic failure bridged to liver transplantation with a molecular adsorbent recirculating system: a single-center experience. *Dig Dis Sci* 2006;51(1):47-53.
- ⁷⁸ Koivusalo AM, Vakkuri A, Hockerstedt K, Isoniemi H. Experience of Mars therapy with and without transplantation in 101 patients with liver insufficiency. *Transplant Proc* 2005;37(8):3315-7.

-
- ⁷⁹ Kipnowski J, Dusing R, Kramer HJ. [Hepato-renal syndrome (author's transl)]. *Klin Wochenschr* 1981;59(9):415-24.
- ⁸⁰ Bellomo R. The cytokine network in the critically ill. *Anaesth Intensive Care* 1992;20(3):288-302.
- ⁸¹ Mizoguchi Y, Kawada N, Tsutsui H, Kobayashi K. Network of cytokine and arachidonic acid cascade in acute hepatic failure. *Gastroenterol Jpn* 1993;28 Suppl 4:30-2; discussion 33-5.
- ⁸² Sekiyama KD, Yoshiba M, Thomson AW. Circulating proinflammatory cytokines (IL-1 beta, TNF-alpha, and IL-6) and IL-1 receptor antagonist (IL-1Ra) in fulminant hepatic failure and acute hepatitis. *Clin Exp Immunol* 1994;98(1):71-7.
- ⁸³ Catapano G. Mass transfer limitations to the performance of membrane bioartificial liver support devices. *Int J Artif Organs* 1996;19(1):18-35.
- ⁸⁴ Funatsu K, Ijima H, Nakazawa K, Yamashita Y, Shimada M, Sugimachi K. Hybrid artificial liver using hepatocyte organoid culture. *Artif Organs* 2001;25(3):194-200.
- ⁸⁵ Detry O, Arkadopoulos N, Ting P, Kahaku E, Watanabe FD, Rozga J, et al. Clinical use of a bioartificial liver in the treatment of acetaminophen-induced fulminant hepatic failure with a bioartificial liver. *Am Surg* 1999;65(10):934-8.
- ⁸⁶ Chen SC, Mullon C, Kahaku E, Watanabe F, Hewitt W, Eguchi S, et al. Treatment of severe liver failure with a bioartificial liver. *Ann N Y Acad Sci* 1997;831:350-60.
- ⁸⁷ Kamohara Y, Rozga J, Demetriou AA. Artificial liver: review and Cedars-Sinai experience. *J Hepatobiliary Pancreat Surg* 1998;5(3):273-85.
- ⁸⁸ LePage EB, Rozga J, Rosenthal P, Watanabe F, Scott HC, Talke AM, et al. A bioartificial liver used as a bridge to liver transplantation in a 10-year-old boy. *Am J Crit Care* 1994;3(3):224-7.
- ⁸⁹ Rozga J, Podesta L, LePage E, Hoffman A, Morsiani E, Sher L, et al. Control of cerebral oedema by total hepatectomy and extracorporeal liver support in fulminant hepatic failure. *Lancet* 1993;342(8876):898-9.
- ⁹⁰ Giorgio TD, Moscioni AD, Rozga J, Demetriou AA. Mass transfer in a hollow fiber device used as a bioartificial liver. *Asaio J* 1993;39(4):886-92.
- ⁹¹ Rozga J, Holzman MD, Ro MS, Griffin DW, Neuzil DF, Giorgio T, et al. Development of a hybrid bioartificial liver. *Ann Surg* 1993;217(5):502-9; discussion 09-11.
- ⁹² Neuzil DF, Rozga J, Moscioni AD, Ro MS, Hakim R, Arnaout WS, et al. Use of a novel bioartificial liver in a patient with acute liver insufficiency. *Surgery* 1993;113(3):340-3.
- ⁹³ Rozga J, Williams F, Ro MS, Neuzil DF, Giorgio TD, Backfisch G, et al. Development of a bioartificial liver: properties and function of a hollow-fiber module inoculated with liver cells. *Hepatology* 1993;17(2):258-65.
- ⁹⁴ Pazzi P, Morsiani E, Vilei MT, Granato A, Rozga J, Demetriou AA, et al. Serum bile acids in patients with liver failure supported with a bioartificial liver. *Aliment Pharmacol Ther* 2002;16(8):1547-54.

-
- ⁹⁵ Morsiani E, Brogli M, Galavotti D, Bellini T, Ricci D, Pazzi P, et al. Long-term expression of highly differentiated functions by isolated porcine hepatocytes perfused in a radial-flow bioreactor. *Artif Organs* 2001;25(9):740-8.
- ⁹⁶ Gerlach JC, Encke J, Hole O, Muller C, Courtney JM, Neuhaus P. Hepatocyte culture between three dimensionally arranged biomatrix-coated independent artificial capillary systems and sinusoidal endothelial cell co-culture compartments. *Int J Artif Organs* 1994;17(5):301-6.
- ⁹⁷ Gerlach JC. Development of a hybrid liver support system: a review. *Int J Artif Organs* 1996;19(11):645-54.
- ⁹⁸ Jauregui HO. Cell adhesion to biomaterials. The role of several extracellular matrix components in the attachment of non-transformed fibroblasts and parenchymal cells. *ASAIO Trans* 1987;33(2):66-74.
- ⁹⁹ Laishes BA, Williams GM. Conditions affecting primary cell cultures of functional adult rat hepatocytes. 1. The effect of insulin. *In Vitro* 1976;12(7):521-32.
- ¹⁰⁰ Neumeier R. Zell-Adhäsion und Wachstumskontrolle Biologie unserer Zeit, vol. 2 Weinheim: Verlag Chemie GmbH, 1983:33-38.
- ¹⁰¹ Mundt A, Puhl G, Muller A, Sauer I, Muller C, Richard R, et al. A method to assess biochemical activity of liver cells during clinical application of extracorporeal hybrid liver support. *Int J Artif Organs* 2002;25(6):542-8.
- ¹⁰² Sauer IM, Zeilinger K, Pless G, Kardassis D, Theruvath T, Pascher A, et al. Extracorporeal liver support based on primary human liver cells and albumin dialysis--treatment of a patient with primary graft non-function. *J Hepatol* 2003;39(4):649-53.
- ¹⁰³ Sauer IM, Kardassis D, Zeillinger K, Pascher A, Gruenwald A, Pless G, et al. Clinical extracorporeal hybrid liver support--phase I study with primary porcine liver cells. *Xenotransplantation* 2003;10(5):460-9.
- ¹⁰⁴ Stoll P. Untersuchungen zur Hepatozytenkompatibilität verschiedener Membranen für Leberzellperfusionssysteme Chirurgische Klinik und Poliklinik des Klinikums Charlottenburg Berlin: Freie Universität Berlin, 1993.
- ¹⁰⁵ Auth MK, Okamoto M, Ichida Y, Auth SH, Gerlach J, Encke A, et al. [Use of normal human hepatocytes in a hybrid organ system]. *Langenbecks Arch Chir Suppl Kongressbd* 1998;115(Suppl I):665-8.
- ¹⁰⁶ Lentner C. Wissenschaftliche Tabellen Geigy Teilband Hämatologie und Humangenetik, vol. 8 Basel: Internationale medizinisch-pharmazeutische Informationen CIBA-GEIGY AG, 1979.
- ¹⁰⁷ Zeilinger K, Holland G, Sauer IM, Efimova E, Kardassis D, Obermayer N, et al. Time course of primary liver cell reorganization in three-dimensional high-density bioreactors for extracorporeal liver support: an immunohistochemical and ultrastructural study. *Tissue Eng* 2004;10(7-8):1113-24.
- ¹⁰⁸ Gerlach JC, Mutig K, Sauer IM, Schrade P, Efimova E, Mieder T, et al. Use of primary human liver cells originating from discarded grafts in a bioreactor for liver support therapy and the prospects of culturing adult liver stem cells in bioreactors: a morphologic study. *Transplantation* 2003;76(5):781-6.

-
- ¹⁰⁹ Gerlach JC, Zeilinger K, Grebe A, Puhl G, Pless G, Sauer I, et al. Recovery of preservation-injured primary human hepatocytes and nonparenchymal cells to tissuelike structures in large-scale bioreactors for liver support: an initial transmission electron microscopy study. *J Invest Surg* 2003;16(2):83-92.
- ¹¹⁰ Clemen HJ. Strömungssimulation des Einlaufbereichs einer künstlichen Leber mittels Finite Elemente Methode und versuchstechnische Überprüfung Verfahrens- und Umwelttechnik Berlin: Technische Fachhochschule Berlin, 1998.
- ¹¹¹ Chmiel H. Bioprozeßtechnik I. Einführung in die Bioverfahrenstechnik. Stuttgart: UTB Gustav Fischer Verlag, 1991.
- ¹¹² Pfaff M, Toepfer S, Zeilinger K, Roth S, Driesch D, Woetzel D, et al. Systems analysis of the dynamic input/output behaviour of a multi-compartment capillary membrane bioreactor for high-density liver cell cultur. *Biomedizinische Technik* 2005;50((Suppl 1)):1617-18.
- ¹¹³ Catapano G, Euler M, Gaylor JDS, Gerlach J. Characterization of the distribution of matter in hybrid liver support devices where cells are cultured in a 3-D membrane network or on flat substrata. *Int J Artif Organs* 2001;24(2):102-9.
- ¹¹⁴ Reininger G, Schubert V. Allgemeine und Anorganische Chemie Paderborn: Universität Paderborn, 1997.
- ¹¹⁵ <http://chemdat.merck.de>. Produkt Informationen Darmstadt: Merck KGaA, 2003.
- ¹¹⁶ Aldrich Katalog Handbuch Feinchemikalien und Laborgeräte. Taufkirchen, 2003-2004.
- ¹¹⁷ Wille R. Strömungslehre. In: Albrecht P, Lacarelle A, Garczynska M, Moeck J, eds., ed. 8 Berlin: TU Berlin, 2005.
- ¹¹⁸ Lentner C. Wissenschaftliche Tabellen Geigy Teilband Körperflüssigkeiten, vol. 8 Basel: Internationale medizinisch-pharmazeutische Informationen CIBA-GEIGY AG, 1977.
- ¹¹⁹ Deetjen P, Speckmann E-J. Physiologie, ed. 2. München-Wien-Baltimore: Urban & Schwarzenberg, 1995.
- ¹²⁰ Reynolds O. An experimental investigation of the circumstances which determine whether the motion of water in parallel channels shall be direct or sinuous and of the law of resistance in parallel channels. *Phil. Transaction of the Royal Society* 1883(174).
- ¹²¹ Siekmann HE. Strömungslehre für den Maschinenbau. Berlin, Heidelberg, New york: Springer, 2001.
- ¹²² Bohl W, Elmendorf W. Technische Strömungslehre. Chemnitz: Vogel Fachbuch Kamprath Reihe.
- ¹²³ Föll H. Einführung in die Materialwissenschaften, vol. I Kiel.
- ¹²⁴ Catapano G, Wodetzki A, Baurmeister V. Blood flow outside regularly spaced hollow fibers: the future concept of membrane devices? *Int J Artif Organs* 1992;15(6):327-30.

-
- ¹²⁵ Bessems M, t Hart NA, Tolba R, Doorschodt BM, Leuvenink HG, Ploeg RJ, et al. The isolated perfused rat liver: standardization of a time-honoured model. *Lab Anim* 2006;40(3):236-46.
- ¹²⁶ Busse B, Smith MD, Gerlach JC. Treatment of acute liver failure: hybrid liver support. A critical overview. *Langenbecks Arch Surg* 1999;384(6):588-99.
- ¹²⁷ Czermak P, Razcuhn B, Walz M, Catapano G. Feasibility of continuous CO₂ removal with hydrophilic membranes at low blood flow rates. *Int J Artif Organs* 2005;28(3):264-9.
- ¹²⁸ Farber E. Similarities in the sequence of early histological changes induced in the liver of the rat by ethionine, 2-acetylamino-fluorene, and 3'-methyl-4-dimethylaminoazobenzene. *Cancer Res* 1956;16(2):142-8.
- ¹²⁹ Sell S. The role of progenitor cells in repair of liver injury and in liver transplantation. *Wound Repair Regen* 2001;9(6):467-82.
- ¹³⁰ Avital I, Feraresso C, Aoki T, Hui T, Rozga J, Demetriou A, et al. Bone marrow-derived liver stem cell and mature hepatocyte engraftment in livers undergoing rejection. *Surgery* 2002;132(2):384-90.
- ¹³¹ Theise ND, Nimmakayalu M, Gardner R, Illei PB, Morgan G, Teperman L, et al. Liver from bone marrow in humans. *Hepatology* 2000;32(1):11-6.
- ¹³² Wang X, Willenbring H, Akkari Y, Torimaru Y, Foster M, Al-Dhalimy M, et al. Cell fusion is the principal source of bone-marrow-derived hepatocytes. *Nature* 2003;422(6934):897-901.
- ¹³³ Mizuguchi T, Hui T, Palm K, Sugiyama N, Mitaka T, Demetriou AA, et al. Enhanced proliferation and differentiation of rat hepatocytes cultured with bone marrow stromal cells. *J Cell Physiol* 2001;189(1):106-19.
- ¹³⁴ Gerlach JC, Zeilinger K. Adult stem cell technology--prospects for cell based therapy in regenerative medicine. *Int J Artif Organs* 2002;25(2):83-90.