

7 Literatur

- 1 Court FG, Wemyss-Holden SA, Dennison AR, Maddern GJ.. The mystery of liver regeneration. *Br J Surg* 2002, 89:1089-1095
- 2 Nagino M, Kamiya J, Uesaka K, Sano T, Yamamoto H, Hayakawa N, Kanai M, Nimura Y. Complications of hepatectomy for hilar cholangiocarcinoma. *World J Surg* 2001, 25: 1277-1283
- 3 Takeda K, Togo S, Kunihiro O, Fujii Y, Kurosawa H, Tanaka K, Endo I, Takimoto A, Sekido H, Hara M, Shimada H. Clinicohistological features of liver failure after excessive hepatectomy. *Hepatogastroenterology* 2002, 49: 354-358
- 4 Michalopoulos GK, DeFrances MC. Liver regeneration. *Science* 1997;276:60-66
- 5 Minato M, Houssin D, Morin J. Surgically induced acute hepatic failure in the rat. *Eur Surg Res* 1983;15:129-135
- 6 Blindenbacher A, Wang X, Langer I, Savino R, Terracciano L, Heim MH: Interleukin 6 is important for survival after partial hepatectomy in mice. *Hepatology*. 2003, 38: 674-682
- 7 Sato Y, Tsukada K, Hatakeyama K: Role of shear stress and immune responses in liver regeneration after a partial hepatectomy. *Surg Today*. 1999, 29: 1-9
- 8 Ibrahim S, Chen CL, Wang CC, Wang SH, Lin CC, Liu YW, Yang CH, Yong CC, Concejero A, Cheng YF. Liver regeneration and splenic enlargement in donors after living-donor liver transplantation. *World J Surg*. 2005, 29: 1658-1666.
- 9 Kountouras J, Boura P, Lygidakis NJ. Liver regeneration after hepatectomy. *Hepatogastroenterology* 2001, 48: 556-562
- 10 Takashi N, Murakami M, Aoki T et al.: Immediate increase of portal pressure, reflecting sinusoidal shear stress, induced liver regeneration after partial hepatectomy. *J Hepatobiliary Pancreat Surg* 1999, 6: 275-280
- 11 Fausto-N: Liver regeneration: from laboratory to clinic. *Liver Transplantation* 2001, 7: 835-844
- 12 Black D, Lyman S, Heider TR, Behrns KE: Molecular and cellular features of hepatic regeneration. *J Surg Res* 2004, 117: 306-315
- 13 Selzner N, Selzner M, Odermatt B, Tian Y, Van Rooijen N, Clavien PA: ICAM-1 triggers liver regeneration through leukocyte recruitment and Kupffer cell-dependent release of TNF-alpha/IL-6 in mice. *Gastroenterology*. 2003, 124: 692-700
- 14 Lesurtel M, Graf R, Aleil B, Walther DJ, Tian Y, Jochum W, Gachet C, Bader M, Clavien PA. Platelet-derived serotonin mediates liver regeneration. *Science*. 2006, 312: 104-107
- 15 Kaido T, Oe H, Imamura M: Interleukin-6 augments hepatocyte growth factor-induced liver regeneration; involvement of STAT3 activation. *Hepatogastroenterology*. 2004; 51:1667-1670
- 16 Vesey DA, Selden AC, Woodman AC, Hodgson HJ: Effect of in vivo administration of an antibody to epidermal growth factor on the rapid increase in DNA synthesis induced by partial hepatectomy in the rat. *Gut* 1992, 33:831-583
- 17 Tomiya T, Ogata I, Fujiwara K: Transforming growth factor alpha levels in liver and blood correlate better than hepatocyte growth factor with hepatocyte proliferation during liver regeneration. *Am J Pathol*. 1998, 153: 955-61

- 18 Fausto NJ. Liver regeneration. *Hepatol* 2000;32 (suppl 1):19-31
- 19 Pestell RG, Albanese C, Reutens AT, Segall JE, Lee RJ, Arnold A. The cyclin and cyclin-dependent kinase inhibitors in hormonal regulation of proliferation and differentiation. *Endocrine Reviews* 1999, 20: 501-534
- 20 Vermeulen K, VanBockstaele DR, Berneman TN. The cell cycle: a review of regulation, deregulation and therapeutic targets in cancer. *Cell Prolif* 2003, 36: 131-149
- 21 Murray AW. Recycling the cell cycle: cyclins revisited. *Cell* 2004, 116: 221-234
- 22 Nelsen CJ, Rickheim DG, Tucker MM, Hansen LK, Albrecht JH. Evidence that cyclin D1 mediates both growth and proliferation downstream of TOR in hepatocytes. *J Biol Chem* 2003, 278, 3656-3663
- 23 Campbell JS, Prichard L, Schaper F, Schmitz J, Stephenson-Famy A, Rosenfeld ME, Argast GM, Heinrich PC, Fausto N. Expression of suppressor of cytokine signalling during liver regeneration. *J Clin Invest* 2001, 107: 1285-1292
- 24 Carr BI, Hayashi I, Branum EL, Moses HL. Inhibition of DNA synthesis in rat hepatocytes by platelet-derived type beta transforming growth factor. *Cancer Res.* 1986, 46: 2330-2334
- 25 Koniaris LG, McKillop IH, Schwartz SI, Zimmers TA. Liver regeneration. *J Am Coll Surg* 2003, 197: 634-659
- 26 Shigeta H, Nagino M, Kamiya J, Uesaka K, Sano T, Yamamoto H, Hayakawa N, Kanai M, Nimura Y. Bacteremia after hepatectomy: an analysis of a single-center, 10-year experience with 407 patients. *Langenbecks Arch Surg* 2002;387:117-124
- 27 Wang X, Andersson R, Soltesz V, Bengmark S. Bacterial translocation after major hepatectomy in patients and rats. *Arch Surg* 1992;127:1101-1106
- 28 Boulton R, Woodman A, Calnan D et al.: Nonparenchymal liver cells from regenerating rat liver generate interleukin-1 α and -1 β : a mechanism of negative regulation of hepatocyte proliferation. *Hepatology* 1997, 26: 49-58
- 29 Akita K, Okuno M, Enya M, Imai S, Moriwaki H, Kawada N, Suzuki Y, Kojima S. Impaired liver regeneration in mice by lipopolysaccharide via TNF- α /Kallikrein-mediated activation of latent TGF- β . *Gastroenterology* 2002, 123: 352-364
- 30 Diehl AM. Cytokine regulation of liver injury and repair. *Immunol Rev* 2000;174:160-171
- 31 Gao C, Jokerst R, Gondipalli P et al.: Lipopolysaccharide potentiates the effect of hepatocyte growth factor on hepatocyte replication in rats by augmenting AP-1 activity. *Hepatology* 1999, 30: 1405-1416
- 32 Masson S, Deveau M, Francoids A, Bodenant C, Hiron M, Teniere P, Salier JP, Scotte M. Up-regulated expression of HGF in rat liver cells after experimental endotoxemia: a potential pathway for enhancement of liver regeneration. *Growth Factors* 2001, 18: 237-250
- 33 Yang S, Koo DJ, Zhou M, Chaudry IH, Wang P. Gut-derived norepinephrine plays a critical role in producing hepatocellular dysfunction during early sepsis. *Am J Physiol Gastrointest Liver Physiol* 2000;279:1274-1281

- 34 Weiss YG, Bellin L, Kim PK, Andrejko KM, Haaxma CA, Raj N, Furth EE, Deutschmann CS. Compensatory hepatic regeneration after mild, but not fulminant intraperitoneal sepsis in rats. *Am J Physiol Gastrointest Liver Physiol* 2001; 280: G968-G973
- 35 Nelson LA, O'Brien DP, Kemp CJ, et al. Intestinal and hepatic response to combined partial hepatectomy and small bowel resection in mice. *Am J Surg* 2002; 183:435-440
- 36 Miyazaki M, Kohda S, Itoh H. Inhibition of hepatic regeneration after 70% partial hepatectomy by simultaneous resection of the bowel in rats. *Eur Surg Res* 1995; 27:396-405
- 37 Boermeester MA, Houdijk APJ, Straatsburg IH, van Noorden CFJ, van Leeuwen PAM. Organ blood flow after partial hepatectomy in rats: modification by endotoxin-neutralizing bactericidal/permeability-increasing protein (rBPI23). *J Hepatol* 1999; 31:905-912
- 38 Furutani M, Arii S, Monden K. Immunologic activation of hepatic macrophages in septic rats: a possible mechanism of sepsis-associated liver injury. *J Lab Clin Med.* 1994, 123: 430-436
- 39 Donowitz LG, Wenzel RP, Hoyt JW. High risk of hospital acquired infection in the ICU patient. *Crit Care Med* 1982; 10:335
- 40 Bryan RB, Hosmer D, Chen HC, Teres D, Sands M, Bradley S, Opitz E, Swedzinski D, Opalenck D. A comparison of infections in different ICUs within the same hospital. *Crit Care Med* 1985; 13:472
- 41 Chandraseta PM, Kruse JA, Matthews MF. Nosocomial infection among patients in different types of intensive care unit at a city hospital. *Crit Care Med* 1986; 14:508
- 42 Sands KE, Bates DW, Lanken PN et al. Epidemiology of sepsis Syndrome in 8 academic medical centers. *JAMA* 1997, 278: 234-240
- 43 Thorp JM, Richards WC, Telfer ABM. A survey of infection in an intensive care unit. *Anaesthesia* 1979; 68:457
- 44 Wacha H, Hau T, Dittmer R, Ohmann C. Risk factors associated with intraabdominal infections: a prospective multicenter study. *Langenbeck's Arch Surg* 1999; 384:24-32
- 45 Hedberg AM, Lairson DR, Aday LA, Chow J, Suki R, Houston S, Wolf JA. Economic implications of an early postoperative enteral feeding protocol. *J Am Diet Assoc* 1999; 99:802
- 46 Bengmark S. Aggressive peri- and intraoperative enteral nutrition- strategy for the future. In Shikora SA, Martindale RG, Schwatzberg SD. Nutritional considerations in the intensive care unit- science, rationale and practice. Aspen 2002
- 47 Bone RC, Sibald WJ, Sprung CL. The ACCP-SCCM consensus conference on sepsis and organ failure. *Chest* 1992, 101: 1481-1483
- 48 Bartels, H., Siewert, J. R. The role of antibiotic therapy for postoperative infectious complications. *Klin Wochenschr* 1991, 69: 53-56
- 49 Wade, S., Bussow, M., Hanisch, E. Epidemiology of systemic inflammatory response syndrome, infection and septic shock in surgical intensive care patients. *Chirurg* 1998, 69: 648-655
- 50 Rüden H, Daschner F, Schumacher M. Nosokomiale Infektionen in Deutschland- Erfassung und Prävention (NIDEP Studie), Teil 1. Prävalenz nosokomialer Infektionen, Qualitätssicherung in der Krankenhaushygiene, Bd 56. Schriftenreihe des Bundesministeriums für Gesundheit. Nomos, Baden-Baden 1995

- 51 Brook I, Frazier EH. Microbiology of subphrenic abscesses: a 14-year experience. *Am Surg* 1999;65:1049-1053
- 52 Angus DC, Linde-Zwirble WT, Lidicker J, Clermont G, Carillo J, Pinsky MR. Epidemiology of severe Sepsis in the United States: analysis of incidence, outcome, and associated costs of care. *Crit Care med* 2001, 29: 1303-1310
- 53 Davies MG, Hagen PO. Systemic inflammatory response syndrome. *Br J Surg* 1997, 84: 920-935.
- 54 Volk HD, Reinke P, Krausch D, Zuckermann H, Asadullah K, Muller JM, Docke WD, Kox WJ Monocyte deactivation - rationale for a new therapeutic strategy in sepsis. *Intensive Care Med* 1996, 22 (Suppl 4): S474 - S481.
- 55 Warren HS. Strategies for the treatment of sepsis. *N Engl J Med* 1997, 336: 952-953.
- 56 Moore FA, Sauaia A, Moore EE; Haenel JB, Burch JM, Lezotte DC. Postinjury multiple organ failure: a bimodal phenomenon. *J Trauma* 40: 501-510
- 57 Baker CC, Huynh MD. Sepsis in the critically ill patient. *Curr Probl Surg* 1995, 32: 1013-1083.
- 58 Faist E. Pathogenese der Immunoinflammatorischen Abläufe in der Sepsis: Mechanismen und Monitoring. *Viszeralchirurgie* 2006, 41: 6-10
- 59 Webb S. The role of mediators in sepsis resolution . *Advances in Sepsis* 2002, 2: 8-13
- 60 Cavaillon JM, Adib-Conquy M, Fitting C, Adrie C, Payen D. Cytokine cascade in sepsis. *Scand J Infect Dis* 2003, 35: 535-544
- 61 Marshall JC. Neutrophils in the pathogenesis of sepsis. *Crit Care Med* 2005, 33(Suppl): S502-S505
- 62 Reijnen MM, Bleichrodt RP, van Goor H. Pathophysiology of intra-abdominal adhesion and abscess formation, and the effect of hyaluronan. *Br J Surg*. 2003, 90: 533-541.
- 63 Levi M, van der Poll T, ten Cate H. Tissue factor in infection and severe inflammation. *Semin Thromb Hemost*. 2006, 32: 33-39
- 64 Dellinger RP. Inflammation and coagulation: implications for the septic patient. *Clin Infect Dis* 2003, 36: 1259-1265
- 65 Gregory SH, Wing EJ. Neutrophil-Kupffer cell interaction: a critical component of host defenses to systemic bacterial infections. *J Leukoc Biol* 2002, 72: 239–248
- 66 Gregory SH, Sagnimeni AJ, Wing EJ. Bacteria in the bloodstream are trapped in the liver and killed by immigrating neutrophils. *J Immunol* 1996, 157: 2514–2520
- 67 Smith JA. Neutrophils, host defense, and inflammation: a double-edged sword. *J Leukoc Biol* 1994, 56: 672–686
- 68 Jaeschke H, Smith CW. Mechanisms of neutrophil-induced parenchymal cell injury. *J. Leukoc. Biol.* 1997, 61: 647–653
- 69 Fox ES, Thomas P, Broitman SA. Comparative studies of endotoxin uptake by isolated rat Kupffer and peritoneal cells. *Infect Immun* 1987, 55: 2962–2966
- 70 Lumsden AB, Henderson JM, Kutner MH. Endotoxin levels measured by a chromogenic assay in portal, hepatic and peripheral venous blood in patients with cirrhosis. *Hepatology* 1988, 8: 232–236
- 71 Moshage H. Cytokines and the hepatic acute phase response. *J Pathol* 1997, 181: 257-266
- 72 Baumann H, Gauldice J. The acute phase response. *Immunol Today* 1994, 15: 74-80

- 73 Moore FA. The role of the gastrointestinal tract in postinjury multiple organ failure. *Am J Surg* 1999, 178: 449-453
- 74 Zhou M, Das P, Simms HH, Wang P. Gut-derived norepinephrine plays an important role in up-regulating IL-1beta and IL-10. *Biochim Biophys Acta* 2005, 1740: 446-452
- 75 Husebye E. The pathogenesis of gastrointestinal bacterial overgrowth. *Cancer Chemotherapy*. 2005, 51 (Suppl 1): 1-22
- 76 Volk HD, Reincke P, Docke WD. Clinical aspects: from systemic inflammation to „immuno-paralysis“. *Chem Immunol* 2000, 74: 162-177
- 77 Singleton KD, Wischmeyer PE: Distance of coecum ligated influences mortality, tumor necrosis factor-alpha and interleukin-6 expression following cecal ligation and puncture in the rat. *Eur Surg Res* 2003, 35: 486-491
- 78 Paumgartner G, Probst P, Kraines R, Leevy CM. Kinetics of indocyanine green removal from the blood. *Ann NY Acad Sci* 1970, 170: 134-147
- 79 Scholzen T, Gerdes J: The Ki-67 protein: from the known to the unknown. *J Cell Physiol* 182: 311-322, 2000
- 80 Prosperi E: Multiple roles of the proliferating cell nuclear antigen: DNA-replication, repair and cell cycle control. *Prog Cell Cycle Res* 3: 193-210, 1997
- 81 Endl E, Gerdes J: The Ki-67 protein: fascinating forms and an unknown function. *Exp Cell Res* 257: 231-237, 2000
- 82 Sindram D, Porte RJ, Hoffman MR, Bentley RC, Clavien PA. Platelets induce sinusoidal endothelial cell apoptosis upon reperfusion of the cold ischemic rat liver. *Gastroenterology*. 2000, 118: 183-191
- 83 Stadelmann C, Lassmann H. Detection of apoptosis in tissue sections. *Cell Tissue Res* 2000, 301: 19-31
- 84 Chomczynski P, Sacchi N. Single-step method of RNA isolation by acid guanidinium thiocyanate-phenol-chloroform extraction. *Anal Biochem*. 1987, 162: 156-159
- 85 Patel RT, Deen KI, Youngs D et al. Interleukin-6 is a prognostic indicator of outcome in severe intra-abdominal sepsis. *Br J Surg* 1994, 81: 1306-1308
- 86 Colletti LM, Kunkel SL, Green M, Burdick M, Strieter RM. Shock. Hepatic inflammation following 70% hepatectomy may be related to up-regulation of epithelial neutrophil activating protein-78. *Shock* 1996, 6: 403-404
- 87 Shaked A, Nunes FA, Olthoff KM, Lucey MR. Assessment of liver function: pre- and peritransplant evaluation. *Clinical Chemistry* 1997, 43: 1539-1545
- 88 Lowry OH, Rosenbrough NJ, Farr AL, Randall RJ. Protein measurement with the folin phenol reagent. *J Biol Chem* 1951, 193: 265-275
- 89 Otero-Anton E, Gonzales-Quintela A, Lopez-Soto A, Lopez-Ben S, Llovo J, Perez LF. Cecal ligation and puncture as a model of sepsis in the rat: influence of the puncture size on mortality, bacteremia, endotoxemia and tumor necrosis factor alpha levels. *Eur Surg Res* 2001;33:77-79
- 90 Akin ML, Uluutku H, Erenoglu C, Ilicak EN, Elbuken E, Erdemoglu A, Celenk T. Hyperbaric oxygen ameliorates bacterial translocation in rats with mechanical intestinal obstruction. *Dis Colon Rectum* 2002;45:967-972

- 91 Matsumata T, Yanaga K, Shimada M, Shirabe K, Taketomi A, Sugimachi K. Occurrence of intraperitoneal septic complications after hepatic resections between 1985 and 1990. *Surg Today* 1995, 25: 49-54
- 92 Bone RC. The pathogenesis of sepsis. *Ann Intern Med* 1991, 115: 457-469
- 93 Shalaby MR, Waage A, Espevik T. Endotoxin, tumor necrosis factor-alpha and interleukin 1 induce interleukin 6 production in vivo. *Clin Immunol Immunopathol* 1989, 53: 488-498
- 94 Fish RE, Spitzer JA. Continuous infusion of endotoxin from an osmotic pump in the conscious, unrestrained rat: a unique model of chronic endotoxemia. *Circ Shock* 1984, 12: 135-149
- 95 Waisbren BA. Gram-negative shock and endotoxin shock. *Am J Med* 1964, 36: 819-824
- 96 Rotstein O. Peritonitis and intraabdominal abscesses. Meakins JL (Editor) *Surgical infections*. Scientific American Medicine 1994, 329-351
- 97 Nakatani T, Sato T, Trump BF, Siegel JH, Kobayashi K. Manipulation of the size and clone of an intra-abdominal abscess in rats. *Res Exp Med* 1996, 196: 117-126
- 98 Clowes GH, Zuschneid W, Turner M, Blackburn G, Rubin J, Toala P, Green G. Observations on the pathogenesis of the pneumonitis associated with severe infections in other parts of the body. *Ann Surg* 167 (1968) 630-650.
- 99 Wichtermann KA, Baue AE, Chaudry IH. Sepsis and septic shock - a review of laboratory models and a proposal. *J Surg Res* 1980, 29: 189-201
- 100 Buras JA, Holzmann B, Sitkovsky M. Animal models of sepsis: setting the stage. *Nature Reviews* 2005, 4. (854-865
- 101 Maier S et al. Cecal ligation and puncture versus colon ascendens stent peritonitis: two distinct animal models for polymicrobial sepsis. *Shock* 2004, 21: 505-511
- 102 Yamaguchi T, Minor T, Isselhard W: Effect of glutamine or glucagon-insulin enriched total parentereral nutrition on liver and gut in 70% hepatectomized rats with colonic stenosis. *J Am Coll Surg* 1997, 185: 156-162
- 103 Deitch EA. Simple intestinal obstruction causes bacterial translocation in man. *Arch Surg* 1989;124:699-701
- 104 Scotte M, Hiron M, Masson S, Lyouri S, Banine F, Teniere P, Lebreton JP, Daveau M. Differential expression of cytokine genes in monocytes, peritoneal macrophages and liver following endotoxin- or turpentine induced inflammation in rat. *Cytokine* 1996, 8: 115-120
- 105 Pomfret EA, Pomposelli JJ, Gordon FD, Erbay N, Lyn Price L, Lewis WD, Jenkins RL. Liver regeneration and surgical outcome in donors of right liver grafts. *Transplantation* 2003, 76: 5-10
- 106 Kupiec-Weglinski JW, Busuttil RW. Ischemia and reperfusion injury in liver transplantation. *Transplant Proc* 2005, 37: 1653-1656
- 107 Fan ST. Protection of the liver during partial hepatectomy. *Hepatobiliary Pancreat Dis Int* 2004, 3: 490-494.
- 108 Lesurtel M, Selzner M, Petrowsky H, McCormack L, Clavien PA. How should transection of the liver be performed?: a prospective randomized study in 100 consecutive patients: comparing four different transection strategies. *Ann Surg* 2005 ,242: 814-822

- 109 D'Amico D, Cillo U. Impact of severe infections on the outcome of major liver surgery: a pathophysiologic and clinical analysis. *J Chemother.* 1999, 11: 513-517
- 110 Garwood RA, Sawyer RG, Thompson L, Adams RB. Infectious complications after hepatic resection. *Am Surg* 2004, 70: 787-792.
- 111 Jarnagin WR, Gonan M, Fong Y, DeMatteo RP, Ben-Porat L, Little S, Corvera C, Weber S, Blumgart LH. Improvement in perioperative outcome after hepatic resection: analysis of 1,803 consecutive cases over the past decade. *Ann Surg.* 2002, 236: 397-406
- 112 Seehofer D, Rayes N, Schiller R, Stockmann M, Muller AR, Schirmeier A, Schaeper F, Tullius SG, Bengmark S, Neuhaus P. Probiotics partly reverse increased bacterial translocation after simultaneous liver resection and colonic anastomosis in rats. *J Surg Res.* 2004, 117: 262-271.
- 113 MacDonald RA, Rogers AE, Pechet G. Regeneration of the liver. Relation of the regenerative response to size of partial hepatectomy. *Lab Invest* 1962, 11: 544-548
- 114 Corbin IR, Buist R, Volotovskyy V, Peeling J, Zhang M, Minuk GY. Regenerative activity and liver function following partial hepatectomy in the rat using (31)P-MR spectroscopy. *Hepatology* 2002, 36: 345-353
- 115 Minuk GY. Hepatic regeneration: If it ain't broke, don't fix it. *Can J Gastroenterol* 2003, 17: 418-424
- 116 Delahunty TJ, Rubinstein D. Accumulation and release of triglycerides by rat liver following partial hepatectomy. *J Lipid Res* 1970, 11: 536-543
- 117 Kitamura T, Watanabe S, Sato N. Liver regeneration, liver cancers and cyclins. *J Gastroenterol Hepatol* 1998, 13 (Suppl): S96-S99
- 118 Martinez-Hernandez A, Amenta PS. The hepatic extracellular matrix. II. Ontogenesis, regeneration and cirrhosis. *Virchows Arch A Pathol Histopathol* 1993, 423: 77-84
- 119 Nagy P, Teramoto T, Factor VM, Sanchez A, Schnur J, Paku S, Thorgeirsson SS. Reconstitution of liver mass via cellular hypertrophy in the rat. *Hepatology* 2001, 33: 339-345
- 120 Cornell RP, Liljequist BL, Bartizal KF. Depressed liver regeneration after partial hepatectomy of germ-free, athymic and lipopolysaccharide resistant mice. *Hepatology* 1990, 11: 916-922
- 121 Suzuki S, Nakamura S, Serizawa A, Sakaguchi T, Konno H, Muro H, Kosugi I, Baba S. Role of Kupffer cells and the spleen in modulation of endotoxin-induced liver injury after partial hepatectomy. *Hepatology* 1996, 24: 219-225
- 122 Yoshimoto N, Togo S, Kubota T, Kamimukai N, Saito S, Nagano Y, Endo I, Sekido H, Nagashima Y, Shimada H. Role of transforming growth factor- β 1 (TGF- β 1) in endotoxin-induced hepatic failure after extensive hepatectomy in rats. *Journal of Endotoxin Research* 2004, 11: 33-39
- 123 Moore TA, Lau HY, Cogan AL, Monteleon CL, Standiford TJ. Anti-tumor necrosis factor- α therapy during murine *Klebsiella pneumoniae* bacteremia: increased mortality in the absence of liver injury. *Shock* 2003, 20: 309-315
- 124 Cressmann DE, Greenbaum LE, DeAngelis RA, Ciliberto G, Furth EE, Poli V, Taub R. Liver failure and defective hepatocyte regeneration in interleukin-6 deficient mice. *Science* 1996, 274: 1379-1383

- 125 Jin X, Zimmers TA, Perez EA, Pierce RH, Zhang Z, Koniaris LG. Paradoxical effects of short- and long term interleukin-6 exposure on liver injury and repair
- 126 Selzner M, Camargo C, Clavien PA. Ischemia impairs liver regeneration following major tissue loss in the rodent. *Hepatology* 1999, 30: 469-475
- 127 El Samaloutii VT, Hamann L, Flad HD, Ulmer AJ. The biology of endotoxin. *Methods Mol Biol* 2000, 145: 287-309
- 128 Kooby DA, Fong Y, Suriawinata A, Gonan M, Allen PJ, Klimstra DS, DeMatteo RP, D'Angelica M, Blumgart LH, Jarnagin WR. Impact of steatosis on perioperative outcome following hepatic resection. *J Gastrointest Surg.* 2003, 7: 1034-1044.
- 129 Selzner M, Clavien PA. Failure of regeneration of the steatotic rat liver: Disruption at two different levels in the regeneration pathway. *Hepatology* 2000, 31: 35-42
- 130 Yang SQ, Linz HZ, Mandal AK, Huang J, Diehl AM. Disrupted signaling and inhibited regeneration in obese mice with fatty livers: implications for nonalcoholic fatty liver disease pathophysiology. *Hepatology* 2001, 34: 694-706
- 131 Albrecht JH, Meyer Ah, Hu MY: Regulation of cyclin dependent kinase inhibitor p21^{CIP/WAF1/Sdi1} gene expression in hepatic regeneration. *Hepatology* 25: 557-563, 1997
- 132 Sener G, Toklu H, Ercan F, Erkanli G. Protective effect of beta-glucan against oxidative organ injury in a rat model of sepsis. *Int Immunopharmacol* 2005, 5: 1387-1396
- 133 Andrades M, Ritter C, Moreira JC, Dal-Pizzol F. Oxidative parameters differences during non-lethal and lethal sepsis development. *J Surg Res* 2005, 125: 68-72
- 134 O'Reilly MA: Redox activation of p21^{CIP/WAF1/Sdi1}: a multifunctional regulator of cell survival and death. *Antioxidants and redox signaling* 7: 108-118, 2005
- 135 Torbenson M, Yang SQ, Liu HZ, Huang J, Gage W, Diehl AM: STAT-3 overexpression and p21 up-regulation accompany impaired regeneration of fatty livers. *Am J Pathol* 161: 155-161, 2002
- 136 Koteish A, Yang S, Lin H, Huang J, Diehl AM: Ethanol induces redox-sensitive cell-cycle inhibitors and inhibits liver regeneration after partial hepatectomy. *Alcohol Clin Exp Res* 26: 1710-1718, 2002
- 137 Crary GS, Albrecht JH: Expression of cyclin-dependent kinase inhibitor p21 in human liver. *Hepatology* 28: 738-743, 1998
- 138 Albrecht JH, Poon RYC, Ahonen CL, Rieland BM, Deng C, Crary GS: Involvement of p21 and p27 in the regulation of cdk activity and cell cycle progression in the regenerating liver. *Oncogene* 16: 2141-2150, 1998
- 139 Wu H, Wade M, Krall L, Grisham J, Xiong X, Van Dyke T: Targeted in vivo expression of the cyclin dependent kinase inhibitor p21 halts hepatocyte cell-cycle progression, postnatal liver development, and regeneration. *Genes Dev* 10: 245-260, 1996
- 140 Kato A, Bamba H, Shinohara M, Yamauchi A, Ota S, Kawamoto C, Yoshida Y. Relationship between expression of cyclin D1 and impaired liver regeneration observed in fibrotic or cirrhotic rats. *J Gastroenterol Hepatol* 2005, 20: 1198-1205
- 141 Balzan S, Belghiti J, Farges O, Ogata S, Sauvent A, Delefosse D, Durand F. The 50-50 criteria on postoperative day 5: an accurate predictor of liver failure and death after hepatectomy. *Ann Surg* 2005, 242: 824-828

- 142 Makino H, Togo S, Kubota T, Morioka D, Morita T, Kobayashi T, Tanaka K, Shimizu T, Matsuo K, Nagashima Y, Shimada H. A good model of hepatic failure after excessive hepatectomy. *J Surg Res* 2005, 127: 171-176
- 143 Wang P, Ba ZF, Chaudry IH. Hepatic extraction of indocyanine green is depressed early in sepsis despite increased hepatic blood flow and cardiac output. *Arch Surg* 1991, 126: 219-224
- 144 Roelofsen H, Ven Der Veere CN, Ottenhoff R, Schoemaker B, Jansen PLM, Elferink RPJO. Decreased bilirubin transport in the perfused liver of endotoxemic rats. *Gastroenterology* 1994, 107: 1075-1084
- 145 Lund M, Kang L, Tygstrup N, Wolkoff AW, Ott P. Effects of LPS on transport of indocyanine green and alanine uptake in perfused rat liver. *Am J Physiol Gastrointest Liver Physiol* 1999, 277: G91-G100
- 146 Ayala A, Perrin MM, Wang P, Chaudry IH. Sepsis induces an early increased spontaneous release of the hepatocellular stimulatory factor (IL-6) by Kupffer cells in both endotoxin tolerant or intolerant mice. *J Surg Res* 1992, 52: 635-641
- 147 Koo DJ, Chaudry IH, Wang P. Kupffer cells are responsible for producing inflammatory cytokines and hepatocellular dysfunction during early sepsis. *J Surg Res* 1999, 83: 151-157
- 148 Limuro Y, Yamamoto M, Kohno H, Itakura J, Fujii H, Matsumoto Y. Blockade of liver macrophages by gadolinium chloride reduces lethality in endotoxemic rats - analysis of mechanisms of lethality in endotoxemia. *J Leukocyte Biol* 1994, 55: 723-728
- 149 Bautista AP, Schuler A, Spolarics Z, Spitzer JJ. Tumor necrosis factor- α stimulates superoxid anion generation by perfused rat liver and Kupffer cells. *Am J Physiol Gastrointest Liver Physiol* 1991, 261: G891-G895
- 150 Wang P, Chaudry IH. Mechanism of hepatocellular dysfunction during hyperdynamic sepsis. *Am J Physiol Regulatory Integrative Comp Physiol*, 39: R927-R938
- 151 O'Leary MJ, Koll M, Ferguson CN, Coakley JH, Hinds CJ, Preedy VR, Garlick PJ. Liver albumin synthesis in sepsis in the rat: influence of parenteral nutrition, glutamine and growth hormone. *Clinical Science* 2003, 105: 691-198
- 152 Dahn MS, Hsu CJ, Lange MP, Jefferson LF. Effects of tumor necrosis factor- α on glucose and albumin production in primary cultures of rat hepatocytes. *Metabolism* 1994, 43: 476-480
- 153 Wang X, Li W, Lu J, Li N, Li J. Lipopolysaccharide suppresses albumin expression by activating NF- κ B in rat hepatocytes. *J Surg Res* 2004, 122: 274-279
- 154 Fleck A, Raines G, Hawker F, Trotter J, Wallace PI, Ledingham IM, Calman KC. Increased vascular permeability: a major cause of hypalbuminaemia in disease and injury. 1985, *Lancet* 1: 781-784
- 155 Fink MP. Cytopathic hypoxia - Mitochondrial dysfunction as mechanism contributing to organ dysfunction in sepsis. *Crit Care Clinics*. 2001, 17: 219-233
- 156 Chaudry IH, Wichtermann KA, Baue AE. Effect of sepsis on tissue adenine nucleotide levels. *Surgery* 1979, 85: 205-211
- 157 Qian D, Brosnan JT: Administration of Escherichia coli endotoxin to rat increases liver mass and hepatocyte volume in vivo. *Biochem J* 1996, 313: 479-486

- 158 Feingold KR, Grunfeld C: Tumor necrosis factor-alpha stimulates hepatic lipogenesis in the rat *in vivo*. *J Clin Invest* 1987, 80: 184-190
- 159 Kimura S, Yoshioka T, Shibuya M, Sakano T, Tanaka R, Matsuyama S. Indocyanin green elimination rate detects hepatocellular dysfunction early in septic shock and correlates with survival. *Crit Care Med* 2001, 29: 1159-1163
- 160 Schwartz DB, Bone RC, Balk RA, Szidon JP: Hepatic dysfunction in the adult respiratory distress syndrome. *Chest* 1989, 95: 871-875
- 161 Fukuhara K, Suzuki M, Unno M, Rahman MM, Endo K, Matsuno S: The degree of hepatic regeneration after partial hepatectomy in rats with peritonitis and the role of lipid peroxidation. *Free Radic Biol Med* 1999, 26: 881-886
- 162 Walker EM, Ellis H. Relationship of the constituents of bile to the biliary peritonitis in the rat. *Gut* 1978, 19: 827-830
- 163 Anderson R, Tranberg KG, Bengmark S. Roles of bile and bacteria in biliary peritonitis. *Br J Surg* 1990, 77: 36-39
- 164 Murry CE, Jennings RB, Reimer KA. Preconditioning with ischemia: a delay of lethal cell injury in ischemic myocardium. *Circulation* 1986, 74: 1124-1136
- 165 Hawaleshka A, Jacobsohn E. Ischaemic preconditioning: mechanisms and potential clinical applications. *Can J Anaesth* 1998, 45: 670-682
- 166 Pespeni M, Hodnett M, Pittet JF. In vivo stress preconditioning. *Methods* 2005, 35: 158-164.
- 167 McDonough KH, Causey KM. Effects of sepsis on recovery of the heart from 50 min ischemia. *Shock* 1994, 1: 432-437
- 168 Maulik N, Watanabe M, Engelmann D et al. Myocardial adaption to ischemia by oxidative stress induced by endotoxin. *Am J Physiol* 1995, 269: C 907-C916
- 169 Brown JM, White CW, Terada LS et al. Interleukin 1 pretreatment decreases ischemia/reperfusion injury. *Proc Natl Acad Sci USA* 1990, 87: 5026-5030
- 170 Glanemann M, Strenziok R, Kuntze R, Munchow S, Dikopoulos N, Lippek F, Langrehr JM, Dietel M, Neuhaus P, Nussler AK. Ischemic preconditioning and methylprednisolone both equally reduce hepatic ischemia/reperfusion injury. *Surgery* 2004, 135: 203-214.
- 171 Miyawaki H, Ashraf M. Ca²⁺ as a mediator of ischemic preconditioning. *Circ Res* 1997, 80: 790-799
- 172 Gross GJ, Auchampach JA. Blockade of ATP-sensitive potassium channels prevents myocardial preconditioning in dogs. *Circ Res* 1992, 70: 223-233
- 173 Pitcher JM, Wang M, Tsai BM, Kher A, Turrentine MW, Brown JW, Meldrum DR. Preconditioning: gender effects. *J Surg Res* 2005, 129: 202-220
- 174 Peralta C, Closa D, Hotter G, Gelpi E, Prats N, Rosello-Catafau J. Liver ischemic preconditioning is mediated by the inhibitory action of nitric oxide on endothelin. *Biochem Res Commun* 1996, 229: 264-269
- 175 West MA, Heagy W. Endotoxin tolerance: a review. *Crit Care Med* 2002, 30 (Suppl): S64-S73

- 176 Moolton FL, Oakman NL, Bucher NLR. Accelerated response of hepatic DNA synthesis to partial hepatectomy in rats pretreated with growth hormone or surgical stress. *Cancer Res* 1970, 30: 2353-2357
- 177 Lambotte L, Saliez A, Triest S, Maiter D, Baranski A, Barker A et al. Control rate and extent of the proliferative response after partial hepatectomy. *Am J Physiol* 1997, 273: G905-G912
- 178 Sakamoto Y, Jehn D, Nicolson MO, Ohashi E, Hays DM. The acceleration of hepatic regeneration by prior laparotomy. *J Surg Res* 1977, 23: 306-310
- 179 Laurent S, Stärkel S, Leclercq IA, Lambotte L, Maiter D, Horsmans Y. Molecular events associated with accelerated proliferative response in rat livers when partial hepatectomy is preceded by sham operation. *Eur J Clin Invest* 2005, 35: 140-147
- 180 Parker LC, Jones EC, Prince LR, Dower SK, Whyte MKB, Sabore I. Endotoxin tolerance induces selective alterations in neutrophil function. *J Leukoc Biol* 2005, 78: 1301-1305
- 181 Ozawa S, Uchiyama K, Nakamori M, Ueda K, Iwahashi M, Ueno H, Muragaki Y, Ooshima A, Yamaue H. Combination gene therapy of HGF and truncated type II TGF-beta receptor for rat liver cirrhosis after partial hepatectomy. *Surgery*. 2006, 139: 563-573
- 182 Minnich DJ, Moldawer LL. Anti-cytokine and anti-inflammatory therapies for the treatment of severe sepsis: progress and pitfalls. *Proc Nutr Soc*. 2004, 63: 437-441.
- 183 Bengmark S. Curcumin, an atoxic antioxidant and natural NFkappaB, cyclooxygenase-2, lipoxygenase, and inducible nitric oxide synthase inhibitor: a shield against acute and chronic diseases. *JPEN J Parenter Enteral Nutr*. 2006, 30: 45-51
- 184 Yanagida H, Kaibori M, Hijikawa T, Kwon AH, Kamiyama Y, Okumura T. Administration of rhHGF-activator via portal vein stimulates the regeneration of cirrhotic liver after partial hepatectomy in rats. *J Surg Res*. 2006, 130: 38-44
- 185 Oishi K, Hayamizu K, Aihaiti X, Itamoto T, Arihiro K, Asahara T. G-CSF-induced evacuation of sinusoidal NK cells and the facilitation of liver regeneration in a partial hepatectomy. *Cytokine*. 2006, 34: 66-75
- 186 Theocharis SE, Agapitos E, Margeli AP, Goutas N, Kittas C, Davaris P: Effect of two forms of granulocyte-colony stimulating factor on hepatic regeneration after 70% partial hepatectomy in rats. *Clin Sci* 1997, 92: 315-320