

SHOCK®

Injury, Inflammation, and Sepsis: Laboratory and Clinical Approaches

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		<i>Commentary</i>
Daniel G. Remick	1	What's New in <i>Shock</i> , January 2008?
		<i>Clinical Aspects</i>
Kwok Ming Ho, Richard Harding, and Jenny Chamberlain	3	The Impact of Arterial Oxygen Tension on Venous Oxygen Saturation in Circulatory Failure
Chung-Hsi Hsing, Chiau-Juon Chiu, Lih-Yun Chang, Chuan-Chih Hsu, and Ming-Shi Chang	7	IL-19 is Involved in the Pathogenesis of Endotoxic Shock
		<i>Basic Science Aspects</i>
Idit Matot, Keren Cohen, Orit Pappo, Hila Barash, and Rinat Abramovitch	16	Liver Response to Hemorrhagic Shock and Subsequent Resuscitation: MRI Analysis
Michael A. Flierl, Mario Perl, Daniel Rittirsch, Christoph Bartl, Heike Schreiber, Vera Fleig, Gerald Schlaf, Ulrich Liener, Uwe B. Brueckner, Florian Gebhard, and Markus S. Huber-Lang	25	The Role of C5A in the Innate Immune Response After Experimental Blunt Chest Trauma
Tiziana Genovese, Emanuela Mazzon, Concetta Crisafulli, Rosanna Di Paola, Carmelo Muià, Emanuela Esposito, Placido Bramanti, and Salvatore Cuzzocrea	32	TNF- α Blockage in a Mouse Model of SCI: Evidence for Improved Outcome
Mikal Rutten, Meera Govindaswami, Peter Oeltgen, and Joan Smith Sonneborn	42	Post-Treatment with the Novel Deltorphin E, A δ_2 -Opioid Receptor Agonist, Increases Recovery and Survival After Severe Hemorrhagic Shock in Behaving Rats
Cheng-Hsing Kao, Sheng-Hsien Chen, Chung-Ching Chio, and Mao-Tsun Lin	49	Human Umbilical Cord Blood-Derived CD34 ⁺ Cells May Attenuate Spinal Cord Injury by Stimulating Vascular Endothelial and Neurotrophic Factors
Victor T. Enoch, Scott H. Lin, Anthony Etogo, Cheng Y. Lin, and Edward R. Sherwood	56	CD4 ⁺ T-Cell Depletion is Not Associated with Alterations in Survival, Bacterial Clearance, and Inflammation After Cecal Ligation and Puncture
Tao Li, Liangming Liu, Jiancang Liu, Jia Ming, Jing Xu, Guangming Yang, and Yuan Zhang	65	Mechanisms of Rho Kinase Regulation of Vascular Reactivity Following Hemorrhagic Shock in Rats
Katrin Bröking, Matthias Lange, Andrea Morelli, Christian Ertmer, Hugo Van Aken, Martin Luecke, Sebastian Rehberg, Norman Böwering, Hans-Georg Bone, Daniel L. Traber, and Martin Westphal	71	Employing Dobutamine as a Useful Agent to Reverse the Terlipressin-Linked Impairments in Cardiopulmonary Hemodynamics and Global Oxygen Transport in Healthy and Endotoxemic Sheep
Edwin A. Deitch, Eleonora Feketeova, Qi Lu, Sergy Zaets, Tamara L. Berezina, George W. Machiedo, Carl J. Hauser, David H. Livingston, and Da-Zhong Xu	78	Resistance of the Female, as Opposed to the Male, Intestine to I/R-Mediated Injury is Associated with Increased Resistance to Gut-Induced Distant Organ Injury
Madhav Bhatia, Jenab N. Sidhapuriwala, Anna Sparatore, and Philip K. Moore	84	Treatment with H ₂ S-Releasing Diclofenac Protects Mice Against Acute Pancreatitis-Associated Lung Injury

<i>Giuseppe Malleo, Emanuela Mazzon, Tiziana Genovese, Rosanna Di Paola, Carmelo Muià, Concetta Crisafulli, Ajith K. Siriwardena, and Salvatore Cuzzocrea</i>	89	Effects of Thalidomide in a Mouse Model of Cerulein-Induced Acute Pancreatitis
<i>Jonas Claesson, Stefan Lehtipalo, Göran Johansson, Pernilla Abrahamsson, Richard Palmqvist, Björn Biber, and Ola Winsö</i>	98	Evaluation of Intestinal Preconditioning in a Porcine Model Using Classic Ischemic Preconditioning or Lung Recruitment Maneuvers
<i>Rukmini Kumar, Carson C. Chow, John D. Bartels, Gilles Clermont, and Yoram Vodovotz</i>	104	A Mathematical Simulation of the Inflammatory Response to Anthrax Infection
<i>Alexander M. Mathes, Darius Kubulus, Sascha Pradarutti, Alexander Bentley, Julia Weiler, Beate Wolf, Stephan Ziegeler, Inge Bauer, and Hauke Rensing</i>	112	Melatonin Pretreatment Improves Liver Function and Hepatic Perfusion After Hemorrhagic Shock
<i>Rafael S. Saia, Janete A. Anselmo-Franci, and Evelin C. Carnio</i>	119	Hypothermia During Endotoxemic Shock in Female Mice Lacking Inducible Nitric Oxide Synthase
<i>Drew E. Carlson and William C. Chiu</i>	127	The Absence of Circadian Cues During Recovery from Sepsis Modifies Pituitary-Adrenocortical Function and Impairs Survival
<i>Johannes N. Hoffmann, Jan M. Fertmann, Brigitte Vollmar, Matthias W. Laschke, Karl W. Jauch, and Michael D. Menger</i>	133	Immunoglobulin M-Enriched Human Intravenous Immunoglobulins Reduce Leukocyte-Endothelial Cell Interactions and Attenuate Microvascular Perfusion Failure in Normotensive Endotoxemia
<i>Xiuhua Liu, Xudong Wu, Lirong Cai, and Sheng Sun</i>	140	Calreticulin Downregulation is Associated with FGF-2-Induced Angiogenesis Through Calcineurin Pathway in Ischemic Myocardium
Book Reviews		
<i>Rebecca T. Horvat</i>	149	Molecular Genetics of Bacteria, 3rd Edition
<i>J. Thomas Pierce</i>	149	Manual of Environmental Microbiology, 3rd Edition
<i>Christopher J. Destache</i>	150	Antimicrobial Pharmacodynamics in Theory and Clinical Practice, 2nd Edition
<i>David J. Dries</i>	150	Sepsis: New Insights, New Therapies

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COVER: Liver functional magnetic-resonance imaging (fMRI). Magnetic resonance imaging experiments were performed on a 4.7-T Bruker Biospec spectrometer using a birdcage coil. Changes in hepatic perfusion were evaluated from T_2^* -weighted GE images (TR/TE, 147/10 ms) acquired during breathing of air, air-carbon dioxide (5% carbon dioxide), and carbogen (95% oxygen-5% carbon dioxide). Four images were acquired from each gas mixture. Maps of mean SI values for each pixel during the different inhaled gases (S_{air} , S_{CO_2} , and S_{O_2}) were calculated from four repeats for each gas. The percentage of change of fMRI signal induced by hypercapnia (ΔS_{CO_2}) and hyperoxia (ΔS_{O_2}) was calculated using the indicated equations. ΔS is represented by colors as indicated in the color bar. See Matot et al., pages 16–24, 2008.