
Table of Contents

Setting the Scene	1
<i>J.L. Vincent</i>	
 The Inflammatory Response	
Genetics and Severe Sepsis	17
<i>J. Texereau, V. Lemiale, J.-P. Mira</i>	
Cell Signaling Pathways of the Innate Immune System During Acute Inflammation	35
<i>S.M. Opal, P.A. Cristofaro</i>	
Early-Onset Pro-inflammatory Cytokines	55
<i>C. Kaech, T. Calandra</i>	
The Significance of HMGB1, a Late-Acting Pro-inflammatory Cytokine	67
<i>E. Abraham</i>	
Nitric Oxide	77
<i>J. Carré, M. Singer, S. Moncada</i>	
Involvement of Reactive Oxygen and Nitrogen Species in the Pathogenesis of Acute Lung Injury	97
<i>S. Matalon, I.C. Davis, J.D. Lang Jr</i>	
Heat Shock Proteins in Inflammation	113
<i>Z. Bromberg, Y.G. Weiss, C.S. Deutschman</i>	
Fibrosis in the Acute Respiratory Distress Syndrome	123
<i>D.C.J. Howell, R.C. Chambers, G.J. Laurent</i>	
Resolution of Inflammation	137
<i>G. Bellingan</i>	

The Cellular Immune Response

Compartmentalized Activation of Immune Cells During Sepsis and Organ Dysfunction	161
<i>J.-M. Cavaillon, M. Adib-Conquy</i>	

The Neutrophil in the Pathogenesis of Multiple Organ Dysfunction Syndrome	183
<i>Z. Malam, J.C. Marshall</i>	

The Role of the Macrophage	203
<i>J. Pugin</i>	

The Role of the Endothelium	211
<i>W.C. Aird</i>	

Differential Effects of Pro-Inflammatory Mediators on Alveolar Epithelial Barrier Function	229
<i>M.A. Matthay, J.-W. Lee</i>	

Mechanisms and Pathways of Dysfunction

Macrocirculatory Disturbances	239
<i>D. De Backer</i>	

The Microcirculation Is a Vulnerable Organ in Sepsis	249
<i>P.W.G. Elbers, C. Ince</i>	

The Cholinergic Anti-inflammatory Pathway: Connecting the Mind and Body	263
<i>C.J. Czura, S.G. Friedman, K.J. Tracey</i>	

Coagulation in Sepsis	273
<i>W.J. Wiersinga, M. Levi, T. van der Poll</i>	

The Role of Insulin and Blood Glucose Control	287
<i>L. Langouche, I. Vanhorebeek, G. Van den Berghe</i>	

Dysfunction of the Bioenergetic Pathway	299
<i>M. Singer</i>	

Metabolic Pathways	311
<i>O. Rooyackers, J. Wernerman</i>	

Cell Death and Acute Lung Injury	321
<i>T.R. Martin, N. Hagimoto, G. Matute-Bello</i>	
Mechanisms of Immunodepression after Central Nervous System Injury ...	335
<i>C. Meisel, H.-D. Volk</i>	
 Organ-specific Mechanisms of Dysfunction	
Pulmonary Dysfunction	353
<i>N.S. MacCallum, G.J. Quinlan, T.W. Evans</i>	
The Gut	369
<i>M.P. Fink</i>	
Endogenous Danger Signals in Liver Injury:	
Role of High Mobility Group Box Protein-1	383
<i>A. Tsung, G. Jeyabalan, T.R. Billiar</i>	
Sepsis-induced Acute Renal Failure and Recovery	393
<i>M. Raghavan, R. Venkataraman, J.A. Kellum</i>	
Sepsis-Induced Brain Dysfunction	407
<i>C. Guidoux, T. Sharshar, D. Annane</i>	
Myocardial Depression in Sepsis and Septic Shock	415
<i>A. Kumar, J.E. Parrillo</i>	
Skeletal Muscle	437
<i>R.D. Griffiths, T. Bongers, A. McArdle</i>	
Subject Index	449