

# TABLE OF CONTENTS

## 1. Front Matter

Pages i-xxi

PDF

## 2. Animal Care and Surgery

### 1. Animal Protocol

- Laurel D. Schantz

Pages 3-10

### 2. Anesthesia and Analgesia for Research Animals

- Andrew R. Blickman, Lisa J. Brossia

Pages 11-18

### 3. Rodent Surgical Procedures and Tissue Collection

- Robert Ayer, Julian Cahill, Takashi Sugawara, Vikram Jadhav, John H. Zhang

Pages 19-38

### 4. Brain Monitoring

- Julian Cahill, John H. Zhang

Pages 39-45

### 5. Veterinary Care Methods for Rats and Mice in Experimental Spinal Cord Injury Studies

- Aaron H. Puckett, Christine D. Nunn, Stephen M. Onifer

Pages 47-60

## 3. Cerebral Ischemic Animal Models

### 1. Global Cerebral Ischemic Models

#### 1. Four-Vessel Occlusion Model in Rats

- Ping Deng, Zao C. Xu

Pages 65-76

#### 2. Rat Model of Global Cerebral Ischemia: The Two-Vessel Occlusion (2VO) Model of Forebrain Ischemia

- Ami P. Raval, Chunli Liu, Bingren R. Hu

Pages 77-86

**3. Asphyxial Cardiac Arrest**

- Clifton W. Callaway, Eric S. Logue

Pages 87-101

**4. Rodent Model of Pediatric Asphyxial Cardiac Arrest**

- Mioara D. Manole, Robert W. Hickey, Henry L. Alexander, Robert S.B. Clark

Pages 103-113

**5. Transient Global Cerebral Ischemia Model in Mice**

- Kuniyasu Niizuma, Hidenori Endo, Chikako Nito, D. Jeannie Myer, Gab Seok Kim, Teiji Tominaga et al.

Pages 115-125

**2. Focal Cerebral Ischemic Models**

**1. Transient Middle Cerebral Artery Occlusion Model in Rodents**

- Ying Mao, Wei Zhu, Guo-Yuan Yang

Pages 129-139

**2. Three-Vessel Middle Cerebral Artery Occlusion Model**

- T. N. Lin, S. T. Chen, Y. Y. He, W. M. Cheung, C. Y. Hsu

Pages 141-153

**3. A Thromboembolic Rat Model of Focal Cerebral Ischemia and Reperfusion with tPA**

- Yoshihiro Murata, Xiaoying Wang, Eng H. Lo

Pages 155-167

**4. Targeted Occlusion to Surface and Deep Vessels in Neocortex via Linear and Nonlinear Optical Absorption**

- David Kleinfeld, Beth Friedman, Patrick D. Lyden, Andy Y. Shih

Pages 169-185

**5. Middle Cerebral Artery Occlusion Suture Model for Mice**

- Feng Zhang, Steven H. Graham, Jun Chen

Pages 187-196

- 6. Intraluminal Middle Cerebral Artery Occlusion Model in Mice**
- Masaya Oda, Taku Sugawara, Kohei Kokubun, Kazuo Mizoi, Hiroyuki Kinouchi

Pages 197-205

- 7. Cerebral Hypoxia—Ischemia Model in Adult Mice**
- Faisal Adhami, Chia-Yi Kuan

Pages 207-217

### **3. Neonatal Hypoxia-Ischemia**

- 1. Cerebral Hypoxia—Ischemia in Neonatal Rats or Mice: A Model of Perinatal Brain Injury**

- Changlian Zhu, Xiaoyang Wang, Klas Blomgren

Pages 221-230

- 2. Cerebral Palsy Model of Uterine Ischemia in Pregnant Rabbits**

- X. Ji, M. Derrick, S. Tan

Pages 231-246.