

# Contents

## Part I Wound Repair and Regeneration

<b>Mechanisms of Vessel Regression: Toward an Understanding of the Resolution of Angiogenesis</b> . . . . .	3
Mateusz S. Wietecha, Wendy L. Cerny and Luisa A. DiPietro	

<b>Wound Healing in Mammals and Amphibians: Toward Limb Regeneration in Mammals</b> . . . . .	33
Aiko Kawasumi, Natsume Sagawa, Shinichi Hayashi, Hitoshi Yokoyama and Koji Tamura	

## Part II Limb and Lens Regeneration

<b>Cellular Plasticity During Vertebrate Appendage Regeneration</b> . . . . .	53
James R. Monaghan and Malcolm Maden	

<b>Cell Signaling Pathways in Vertebrate Lens Regeneration</b> . . . . .	75
Jonathan J. Henry, Alvin G. Thomas, Paul W. Hamilton, Lisa Moore and Kimberly J. Perry	

## Part III Musculoskeletal Repair and Regeneration

<b>Regenerative Medicine: Challenges and Perspectives for Successful Therapies</b> . . . . .	101
S. Viswanathan and C. Joshi	

<b>Employing the Biology of Successful Fracture Repair to Heal Critical Size Bone Defects . . . . .</b>	<b>113</b>
Jo Ann Cameron, Derek J. Milner, Jung Seok Lee, Jianjun Cheng, Nicholas X. Fang and Iwona M. Jasiuk	
<b>Muscle Repair and Regeneration: Stem Cells, Scaffolds, and the Contributions of Skeletal Muscle to Amphibian Limb Regeneration . . . . .</b>	<b>133</b>
Derek J. Milner and Jo Ann Cameron	
 <b>Part IV Neural Regeneration</b>	
<b>Neural Regeneration . . . . .</b>	<b>163</b>
Melissa M. Steward, Akshayalakshmi Sridhar and Jason S. Meyer	
<b>Teleost Fish as a Model System to Study Successful Regeneration of the Central Nervous System. . . . .</b>	<b>193</b>
Günther K. H. Zupanc and Ruxandra F. Sîrbulescu	
 <b>Part V Epigenetics and Cell Cycle in Regeneration</b>	
<b>Epigenetics and Regeneration . . . . .</b>	<b>237</b>
Nobuyasu Maki and Hironobu Kimura	
<b>Cell Cycle Regulation and Regeneration. . . . .</b>	<b>253</b>
Ellen Heber-Katz, Yong Zhang, Khamila Bedelbaeva, Fengyu Song, Xiaoping Chen and David L. Stocum	
<b>Index . . . . .</b>	<b>277</b>



<http://www.springer.com/978-3-642-35809-8>

New Perspectives in Regeneration

Heber-Katz, E.; Stocum, D.L. (Eds.)

2013, X, 281 p., Hardcover

ISBN: 978-3-642-35809-8