

CONTENTS

	<i>Page</i>
<i>Contributors</i>	v
<i>Introduction</i>	ix
<i>Chapter</i>	
1. BIOELECTRICAL CONTROL OF GROWTH — A RETROSPECTIVE LOOK <i>Stephen D. Smith</i>	3
2. TISSUE INTERACTIONS IN MAMMALIAN REGENERATION <i>Richard J. Goss</i>	12
3. THE REGENERATION AND TRANSPLANTATION OF ENTIRE SKELETAL MUSCLES IN MAMMALS <i>Bruce M. Carlson</i>	27
4. TROPHIC FACTORS DIRECTED TO NERVE CELLS <i>Silvio Varon, Ruben Adler, and Stephen D. Shaper</i>	54
5. PROTEIN METABOLISM IN THE URODELE REGENERATING APPENDAGE <i>Anthony J. Schmidt</i>	64
6. THE ROLE OF EPENDYMA IN SPINAL CORD REGROWTH <i>Margaret Egar and Marcus Singer</i>	93
7. INJURY, IONIC CURRENT, AND REGENERATION <i>Richard B. Borgens</i>	107
8. MODULATION OF NEWT LIMB REGENERATION BY ELECTROMAGNETICALLY INDUCED LOW LEVEL PULSATING CURRENT <i>Stephen D. Smith and Arthur A. Pilla</i>	137
9. DISRUPTION OF THE EPITHELIAL-MESENCHYMAL INTERFACE OF THE RE- GENERATING NEWT LIMB WITH SALT AND STUDIES ON SALT-SEPARAT- ED TISSUES <i>Laura G. Jasch</i>	153
10. MOLECULAR CHANGES IN HARD TISSUE CELLS IN RESPONSE TO BIO- ELECTRIC PROLIFERATIVE SIGNALS <i>Louis A. Norton, Lizebeth A. Bourret, and Gideon A. Rodan</i>	180
11. PIEZOELECTRICITY OF BONE AND OSTEOGENESIS BY PIEZOELECTRIC FILMS <i>Eüchi Fukada</i>	192
12. THE RATE MODULATION OF CELL AND TISSUE FUNCTION VIA ELECTRO- CHEMICAL INFORMATION TRANSFER <i>Arthur A. Pilla</i>	211
13. MODULATION OF RAT RADIAL OSTEOTOMY REPAIR USING ELECTROMAG- NETIC CURRENT INDUCTION <i>P. Christel, G. Cerf, and A. A. Pilla</i>	237

Chapter	Page
14. THE EFFECTS OF DIRECT AND INDUCTIVELY COUPLED CURRENT, AND NERVE GROWTH FACTOR, ON NERVE REGENERATION <i>In Vitro</i> <i>Betty F. Sisken, James F. Lafferty, and Darrell Acree</i>	251
15. COMPOSITE BONE GRAFTS <i>David J. Simmons</i>	275
16. THE POTENTIAL FOR SPINAL CORD REGENERATION IN THE RHESUS MONKEY <i>Carrie L. Walters, Ayub K. Ommaya, Don Rigamonti, Lawrence Mononen, and Mark Braford</i>	290
17. NEW COMPARATIVE ASPECTS OF MYOCARDIAL REGENERATION WITH SPECIAL REFERENCE TO CARDIOMYOCYTE PROLIFERATIVE BEHAVIOR <i>Pavel P. Rumyantsev</i>	311
18. CARDIAC MUSCLE AND ITS POTENTIAL FOR REGENERATION IN THE ADULT NEWT HEART <i>John O. Oberpriller, Jean C. Oberpriller, David M. Bader, and Timothy M. McDonnell</i>	343
19. PRELIMINARY OBSERVATION OF CELLULAR REACTIONS FOLLOWING PARTIAL RESECTION OF NEWT CARDIAC VENTRICLE <i>Philip Person, Delbert E. Philpott, and Richard M. Libbin</i>	373
20. SPONTANEOUS RECONSTITUTION OF THE INTESTINAL TRACT FOLLOWING COMPLETE TRANSECTION <i>Allan E. Dumont, Amalia B. Martelli, Henny Iliescu, and Michael Baron</i>	394
21. NEW BONE FORMATION INDUCED IN POSTFETAL LIFE BY BONE MORPHOGENETIC PROTEIN <i>Marshall R. Urist</i>	406
22. MATRIX-INDUCED ENDOCHONDRAL BONE DIFFERENTIATION: A MODEL FOR REGENERATIVE GROWTH CONTROL BY EXTRACELLULAR MATRIX <i>A. H. Reddi</i>	435
23. INNATE AND INDUCED REGENERATIVE RESPONSE OF THE FORELIMB OF THE RAT <i>Richard M. Libbin and Philip Person</i>	447
24. NEURAL-EPIDERMAL JUXTAPOSITION AND ITS EFFECT ON LIMB REGENERATION IN THE RAT <i>James M. Cullen and Robert O. Becker</i>	479
<i>Index</i>	487