

CONTENTS

Preface	ix
Chapter 1	1
International Chinese Hard Tissue Society — The Power that Connects the World of Science and Culture <i>Darren X Ji, Webster SS Jee</i>	
Chapter 2	11
Integrated Bone Tissue Anatomy and Physiology <i>Xiao-Jian Li, Webster SS Jee</i>	
Chapter 3	57
Skeletal Stem Cells <i>Martin Connolly, Gang Li</i>	
Chapter 4	71
Osteoclast Biology <i>Xu Feng, Hong Zhou</i>	
Chapter 5	95
Intercellular Communication of Osteoblast and Osteoclast in Bone Diseases <i>Jiake Xu, Tony CA Phan, Ming H Zheng</i>	
Chapter 6	125
Osteoclasts and Inflammatory Osteolysis <i>Lianping Xing, Qian Zhang, Zhenqiang Yao</i>	
Chapter 7	145
Endochondral Bone Formation and Extracellular Matrix <i>Qian Chen, Zhengke Wang, Xiaojuan Sun, Junming Luo, Xu Yang</i>	

Chapter 8	163
Bone Morphogenetic Proteins in Bone Formation and Development <i>Xiu-Jie Qi, Philip R Bell, Gang Li</i>	
Chapter 9	177
Mechanical Testing for Bone Specimens <i>Ling Qin, Ming Zhang</i>	
Chapter 10	213
Estrogens and Androgens on Bone Metabolism <i>Annie Kung and Jing Gu</i>	
Chapter 11	251
Phytoestrogens and Bone Health: Mechanisms of Action <i>Zhi Chao Dang</i>	
Chapter 12	279
Regulation of Bone Remodeling <i>Di Chen, Mo Chen, Ying Yan, Yong-Jun Wang, Tian-Hui Zhu</i>	
Chapter 13	299
TGFB in Chondrocyte Biology and Cartilage Pathology <i>Tian Fang Li, J O'Keefe, Di Chen</i>	
Chapter 14	313
Bone Health in Children and Adolescents <i>Joan M Lappe</i>	
Chapter 15	353
The Mechanostat Hypothesis For Bones and Other Skeletal Organs <i>Harold M Frost</i>	
Chapter 16	365
Mechanotransduction and Its Role in Bone Adaptation <i>Yixian Qin, Clinton Rubin</i>	
Chapter 17	413
Bio-pathology of Bone Tumors <i>Lin Huang, Jiake Xu, Ming Hao Zheng</i>	

Chapter 18	435
Bone Tissue Engineering <i>Xuebin Yang, Richard O C Oreffo</i>	
Chapter 19	461
Bone Genetic Factors Determined Using Mouse Models <i>Weikuan Gu, Yan Jiao</i>	
Chapter 20	497
Recent Advances in Bone Biology Research <i>Di Chen, Ying Yan, Mo Chen, Hui Shen, Hong-Wen Deng</i>	
Appendix	513
An Introduction to Hologic Technology	
Index	515