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initial development of the linear heart tube; 10. The role of the extracellular matrix (ECM) in cardiac development; 11. Teratogenic effects of bis-diamine on the developing myocardium
12 Proliferative responses to myocardial remodeling in the developing heart
PART 3: Formation of endocardial cushions and valves; Editorial perspective; 13. TGFB signaling during atrioventricular cushion transformation; 14. The endocardium as a unique modulator of in utero cardiovascular form and function; 15. Valvulogenesis: role of periostin in cushion tissue differentiation; 16. Role of fibroblast growth factors in early valve leaflet formation; 17. Msx1 expression during chick heart development: possible role in endothelial-mesenchymal transformation during cushion tissue formation
PART 4: Segment and chamber specification
Editorial perspective; 18. Tbx5 specifies the left/right ventricles and ventricular septum position during cardiogenesis; 19. Transcriptional regulation of ventricular morphogenesis; 20. Fgf10 and the embryological origin of outflow tract myocardium; 21. Evolutionary conservation of atrial natriuretic factor (Anf) expression, cardiac chamber formation, and the heart-forming region; PART 5: Formation of specialized conduction tissues; Editorial perspective; 22. Induction and patterning of the impulse conducting Purkinje fiber network
23. Spatial correlation of conduction tissue in the ventricular trabeculae of the developing zebrafish
24. Development of the cardiac conduction system and contribution of neural crest and epicardially derived cells; 25. The development of the cardiac conduction system: an old story with a new perspective; 26. The role of calreticulin in cardiac development and function; PART 6: Coronary artery development; Editorial perspective; 27. Development of proximal coronary artery in quail embryonic heart; 28. Possible roles of the extracellular matrix in coronary vasculogenesis of mouse
29. Abnormal coronary development in bis-diamine treated embryo

Sommario/riassunto

Congenital cardiovascular malformations are the single most common form of birth defect. Therefore a better understanding of the mechanisms involved in both normal cardiac development and the formation of cardiovascular structural defects is of tremendous importance. This book brings together the leading scientists from around the world who are actively engaged in studies of the etiology, morphogenesis and physiology of congenital cardiovascular diseases. A broad variety of approaches, techniques, experimental models and studies of human genetics combine to make this a truly outstanding