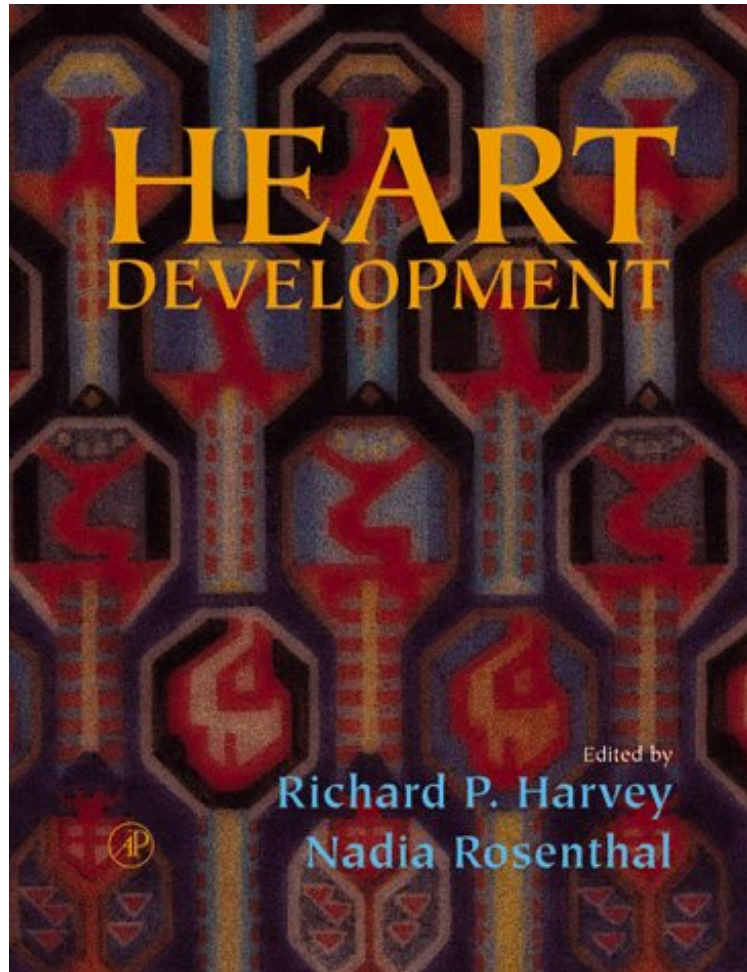


(Ebook free) Heart Development

Heart Development

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#3567087 in Books 1998-11-06 Original language: English PDF # 1 1.14 x 8.82 x 11.26l, #File Name: 0123298601530 pages | File size: 75.Mb

From Academic Press : Heart Development before purchasing it in order to gauge whether or not it would be worth my time, and all praised Heart Development:

3 of 3 people found the following review helpful. the "bible" of heart development By Laura Barbosky This book is affectionately known as the "bible" of heart development. Diagrams are excellent and very clear, and it is usable for everyone from established researchers to undergraduate students. I highly recommend this to anyone in the field of cardiology. It is well worth the hefty (to us students!) price tag.

This book examines recent studies revealing that the same genes are responsible for development of parallel features between species, and that the heart develops similarly across all species. It includes research being conducted concerning cardiac development, tissue interaction, and organ formation. The text attempts to provide a greater understanding of the underlying causes of heart failure, heart muscle diseases, congenital malformations, and other

heart diseases and defects. Key Features* Each chapter has been solicited from a recognized leader in the field, and covers a topic of active research in cardiovascular biology* Chapters incorporate a review of classical findings with comprehensive coverage of the latest advances* Abundant color plates in a consistent and professional artistic style provide clear and attractive illustrations of central concepts* Color slides of illustrations for seminars or teaching purposes are available with each volume

From The New England Journal of Medicine
In less than a week, amorphous clusters of mesodermal cells in an early mouse embryo are transformed into a four-chambered heart, complete with valves, coronary vessels, a pacemaker, and a specialized conducting system. At a stage of development when many other organs are barely recognizable, the heart of a mouse embryo is fully capable of pumping blood to the entire organism, and its basic design is virtually indistinguishable from that of the heart of a human adult, except of course for its diminutive size. In a human embryo, this developmental process requires just slightly longer, whereas other vertebrates such as fish, frogs, or birds manage the task even more efficiently than the mouse (though with fewer chambers in some species). Even insects get into the act: fruit flies form a rhythmically contracting, muscular structure (the dorsal vessel) in a manner that resembles several of the major events in vertebrate heart development, in both structural and molecular terms. This exquisite morphogenetic phenomenon evokes wonder and awe and probably holds within its molecular mechanisms -- if we are clever enough to decipher the complex code -- the keys to important medical advances in the next millennium. In their new book, *Heart Development*, Harvey, Rosenthal, and the contributing authors provide a comprehensive and well-balanced guide to this subject in all its current dimensions, from classic embryology to molecular signaling. The book pays appropriate homage to important recent advances that have come from studies of nonmammalian organisms, and several chapters are devoted to detailed analyses of heart development in the fruit fly, zebrafish, chick, and amphibian. The manner in which the technical or biologic advantages of each of these model systems have enhanced our understanding of mammalian cardiogenesis is readily apparent, and these chapters are purposefully and successfully integrated with those that deal specifically with murine and human heart development. Likewise, chapters that focus on the signaling pathways and transcription factors involved in cell fate and differentiation are well integrated with those that focus on morphology. The book is quite complete in scope and includes chapters devoted expressly to the coronary vasculature, the specialized conducting system of the heart, neural-crest-derived cells, the coordination of cell-cycle control with terminal differentiation in cardiac myocytes, and comparison of the molecular signals controlling cardiogenesis with those involved in the formation of skeletal muscles. The numerous illustrations are remarkably well crafted, even gorgeous. Almost every page includes full-color drawings that clarify the descriptions of complex morphogenetic or molecular events. The attention so obviously devoted by the authors and editors to these explanatory illustrations is esthetically rewarding and will be particularly valuable to readers with little background in developmental biology. Serious scholars and investigators in the field will want this book because it is the most accessible, authoritative, and complete summary of cardiac development currently available, one that can serve as a reference for themselves, their students, and their laboratory personnel. Clinicians with an interest in congenital heart disease will likewise find this book to be an invaluable resource. Other cardiovascular specialists or generalists may find the level of detail excessive for general reading. However, the sheer beauty of the book, the usefulness of the index, and the clarity of the illustrations should provide both information and pleasure to a broad readership. ed by R. Sanders Williams, M.D. Copyright 1999 Massachusetts Medical Society. All rights reserved. The New England Journal of Medicine is a registered trademark of the MMS. "The book is quite complete in scope... The numerous illustrations are remarkably well crafted, even gorgeous. The attention so obviously devoted by the authors and editors to these explanatory illustrations is esthetically rewarding and will be particularly valuable to readers with little background in developmental biology... Serious scholars and investigators in the field will want this book because it is the most accessible, authoritative, and complete summary of cardiac development currently available, one that can serve as a reference for themselves, their students, and their laboratory personnel... the sheer beauty of the book, the usefulness of the index, and the clarity of the illustrations should provide both information and pleasure to a broad readership." --NEW ENGLAND JOURNAL OF MEDICINE (April 1999) "Heart Development is therefore timely and important, and fills a void in the available literature... Often such volumes are so long in the making that they are out of date before they are published. Not this book. With up-to-date chapters written by many recognized authorities in the field of cardiac development, and clear, high quality illustrations (a particularly strong feature), the book will be valuable to graduate students, investigators in the basic sciences, and clinicians wishing to stay current in this field." --NATURE MEDICINE (March 1999) "The 28 chapters in *Heart Development* are very well written. The book is beautifully produced and contains many excellent diagrams... The volume is indispensable for those who work on the heart..." --SCIENCE (February 1999)
From the Back Cover
The development of the cardiovascular system is an exciting and rapidly advancing area of biomedical research, powered by an urgent necessity to reduce the incidence of human cardiovascular disease. It is becoming increasingly clear that many of the congenital pathologies affecting the adult heart will be best understood by tracing their origins in embryonic development. The recent fusion of classical embryology with modern molecular genetics has resulted in an explosion of information about the developing heart in

a variety of organisms. A comprehensive knowledge of the control circuitry in the cardiovascular system will form the basis for future advances in genetic therapy and organ culture. Heart Development presents a collection of chapters written by experts in the field, who describe their current insights into the molecular basis of cardiovascular development. The subject matter from the lineage origins and morphogenesis of the developing cardiovascular system, through genetic dissection of cardiovascular development in a variety of model organism, to the molecular basis of congenital heart defects. Its broad scope will appeal to the generalist or teacher seeking an overview of the subject, while also providing clinicians and medical researchers with comprehensive coverage of the most recent advances.