Excitation-Contraction Coupling and Cardiac Contractile Force (Developments in Cardiovascular Medicine)

Donald Bers
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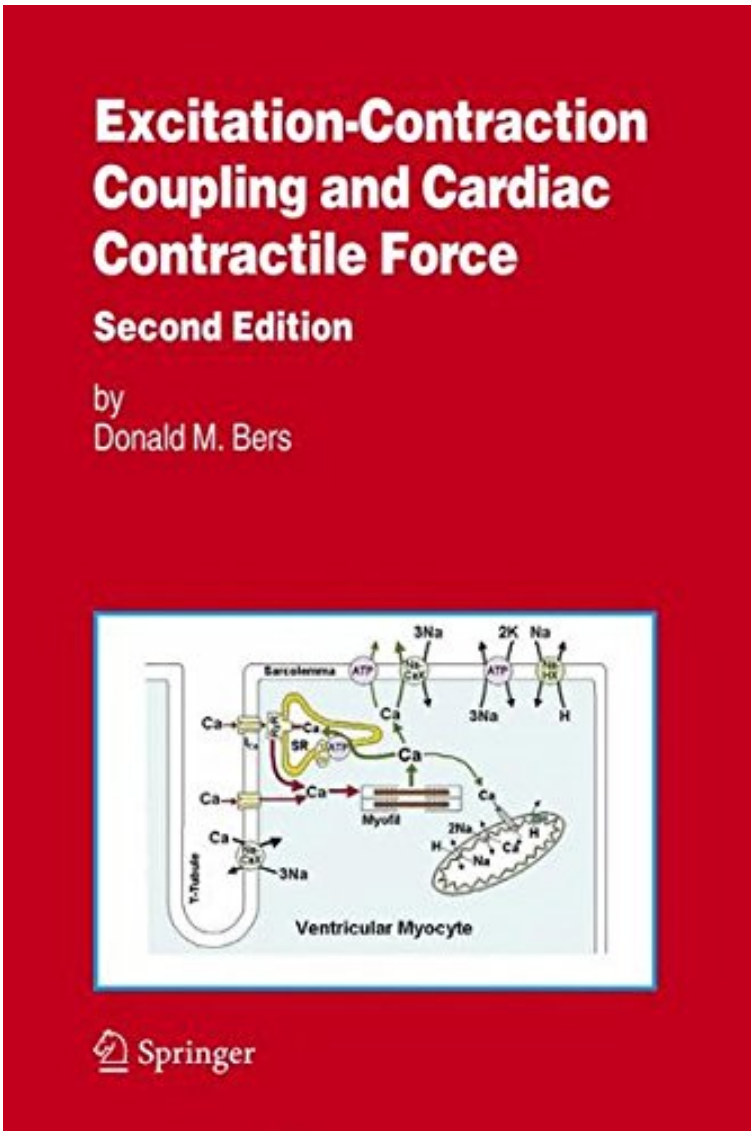

#868102 in Books Donald Bers 2001-08-31 2001-08-31Original language:EnglishPDF # 1 9.25 x 1.02 x 6.10l, 1.45 #File Name: 0792371585427 pagesExcitation contraction coupling and cardiac contractile force | File size: 45.Mb

Donald Bers : Excitation-Contraction Coupling and Cardiac Contractile Force (Developments in Cardiovascular Medicine) before purchasing it in order to gage whether or not it would be worth my time, and all praised Excitation-Contraction Coupling and Cardiac Contractile Force (Developments in Cardiovascular Medicine):

0 of 0 people found the following review helpful. Great qualityBy AprilirisIt was described as "like new". And it's exactly like a brand new book. Very clean with no notes on it. I am very satisfied with the quality.1 of 1 people found the following review helpful. The "Bers book" - Better than ever!By Lars S. MaierHere it is! The second edition of the classic "Bers book". Still easy to read, up to date information with many new references and a whole new chapter on action potential ion channels in the heart. It is longer that the first edition but still focused including more than 170 excellent figures. The new edition is even more valuable than the first one, not only for students, Post-Docs, but also for experienced researchers. It is a must read for everyone who works in the field of heart research (physiology, electrophysiology, molecular biology, pathophysiology etc.). This is the reason why it is generally accepted a classic and - without question - deserves all five stars. Thank you Don Bers!1 of 1 people found the following review helpful. Can't wait for an updated editionBy Harald P. KoglerDon Bers' precious book sets a standard for making accessible a complicated research area to a specialized scientific audience. The book does not aim at attracting readers from the general public. It is written both with scientific accuracy and in a very accessible language and must be considered a "first-read" for students in biomedical science who start working on projects in cardiovascular research. And also the more advanced scientist will frequently use this great source of information for reference. It is a pity that a more current edition is not (yet?) available. This is the one and only reason why the book failed to receive five stars.

How is the heartbeat generated? What controls the strength of contraction of heart muscle? What are the links between cardiac structure and function? How does our understanding of skeletal and smooth muscle and non-muscle cells influence our thinking about force development in the heart? Are there important species differences in how contraction is regulated in the heart? How do the new molecular data fit together in understanding the heart beat? What goes wrong in ischemia, hypertrophy, and heart failure? This book paints a modern `portrait' of how the heart works and in this picture the author shows a close-up of the structural, biochemical, and physiological links between excitation and contraction. The author takes the reader through a series of important, interrelated topics with great clarity and continuity and also includes many useful illustrations and tables. The book starts by considering the cellular structures involved in excitation-contraction coupling and then described the characteristics of the myofilaments as the end effector of excitation-contraction coupling. A general scheme of calcium regulation is described and the possible sources and sinks of calcium are discussed in simple, but quantitative terms. The cardiac action potential and its many underlying currents are reviewed. Then the characteristics of some key calcium transport systems (calcium channels, sodium/calcium exchange and SR calcium uptake and release) are discussed in detail. This is then built into a more integrated picture of calcium regulation in succeeding chapters by detailed discussions of excitation-calcium coupling mechanisms (in skeletal, cardiac, and smooth muscle), the interplay between calcium regulatory processes, and finally mechanisms of cardiac inotropy, calcium overload, and dysfunction (e.g., ischemia, hypertrophy, and heart failure). Excitation-Contraction Coupling and Cardiac Contractile Force endash; Second Edition is an invaluable source of information for anyone who is interested in how the heart beat is controlled and especially suited for students of the cardiovascular system at all levels from medical/graduate students through senior investigators in related fields.

`Since the first edition of Excitation-Contraction Coupling and Cardiac Contractile Force was published 10 years ago, it has become a classic. The second edition is stunning. It retains the zest and compact form of the first edition, contains the wealth of information and analysis that has become the Bers' hallmark and is well written. It is easy and delightful to read.' W. Jonathan Lederer (excerpted from the Introduction). `This second edition of a now classical text is both extensively revised and up-to-date. The many illustrations, a large number of which are new to this edition, supplement a clearly written text that is filled with useful information. For those who seek a lucid, comprehensive and authoritative description of the interlocked systems that control the heart beat, I know of no other source that approaches Bers' Excitation-Contraction Coupling and Cardiac Contractile Force.' Arnold M. Katz `This book is a breath of fresh (and educated and thoughtful and well-organized) air Don Bers has produced a remarkably approachable and informative volume, clearly superior to others in this field. Active researchers should buy this book for themselves and their students.' Laurence L. Brunton