

# BOOK REVIEWS

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## VASCULAR BIOLOGY IN CLINICAL PRACTICE

Mark Houston, MD, FACP. Nashville, Tennessee, USA: Hanley & Belfus, Inc. 2002. ISBN# 1-56053-488-5, 224 pages. \$25 US.

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### Introduction

The vascular endothelium has emerged as a common denominator for almost every cardiovascular disease and, as such, has become an important therapeutic target. In addition to their local effects, endothelial-mediated substances have also been recognized to have significant impact on endocrine and paracrine function. The amount of new knowledge regarding vascular biology introduced into clinical medicine is often overwhelming. Yet, the understanding of basic physiological principles and their application in the clinic is penultimate in providing optimal therapy, as well as gaining an appreciation for newly emerging therapies. Several texts have attempted to summarize these many diverse but unified concepts, but the sheer volume have relegated these works to important library references.

The present work by Dr. Houston provides an important resource, which concisely covers the pertinent aspects of vascular biology and provides the student, clinician or scientist a succinct description of these processes. Dr. Houston also is adept at relating these basic principles to clinical outcomes. Most importantly, the book is small enough to carry for continual access during the day.

Dr. Houston provides us with an excellent, easily accessible reference source, which summarizes the advances in vascular medicine during the last 20 years. The value of the book is sum-

marized in the Foreword by Dr. Jaffe's statement, "This book is definitively the most current and up-to-date review available."

### Contents

The book is well-organized into 17 chapters, beginning with an initial overview of the spectrum of cardiovascular diseases, which underscores the importance of vascular biology in the pathophysiology of cardiovascular disease, as well as introducing the relationship of therapeutic options now employed in the treatment of vascular dysfunction. The second chapter provides a brief historical perspective of the emergence of the role of the endothelium in cardiovascular health.

Chapters 3 through 11 address various components of basic vascular biology and pathophysiology. Chapter 3 begins with a basic description of the blood vessel wall, with the subsequent 5 chapters dedicated to endothelial function, vasodilators, vasoconstrictors, angiotensins and ion channels. Chapters 9, 10 and 11 address endothelial dysfunction, atherosclerosis, and oxidative stress.

Chapters 12 through 14 provide a good transition from basic molecular vascular biology to the more integrated subjects of hemodynamics and arterial compliance. Dr. Houston completes the final chapters with comments on the application of vascular biology to practical therapeutics.

### Strengths and Weaknesses

This well-organized, illustrated and current book is of a size that makes it easily usable on a daily basis. In other texts, which have undertaken the task of providing a comprehensive review of vascular biology, the volume of material and size of the book has limited their usefulness. Dr. Houston has chosen a format that utilizes well-chosen and succinct verbiage supplemented by well-designed illustrations, charts and graphs, which aptly portray the important points in each of the chapters. The organization of the book allows one to logically understand vascular biology, keeping it in perspective with clinical applications. Additionally, the organization lends itself to quick reference for specific areas of vascular biology. Dr. Houston has referenced his text with important key words and thus, the bibliography becomes an additional resource.

The one criticism of the book is that some of the illustrations and graphs were not clear or were small, which made reading difficult. Although bothersome, it did not distract from the usefulness of the book.

### Conclusion

Dr. Houston has provided an excellent and useful book with appeal to medical students, clinicians, and researchers. His approach employs succinct text enhanced with useful and easily followed visual aids, which effectively explain complicated vascular biological principles. His

book is translational in its approach, beginning with basic research concepts and continuing through application at the bedside.