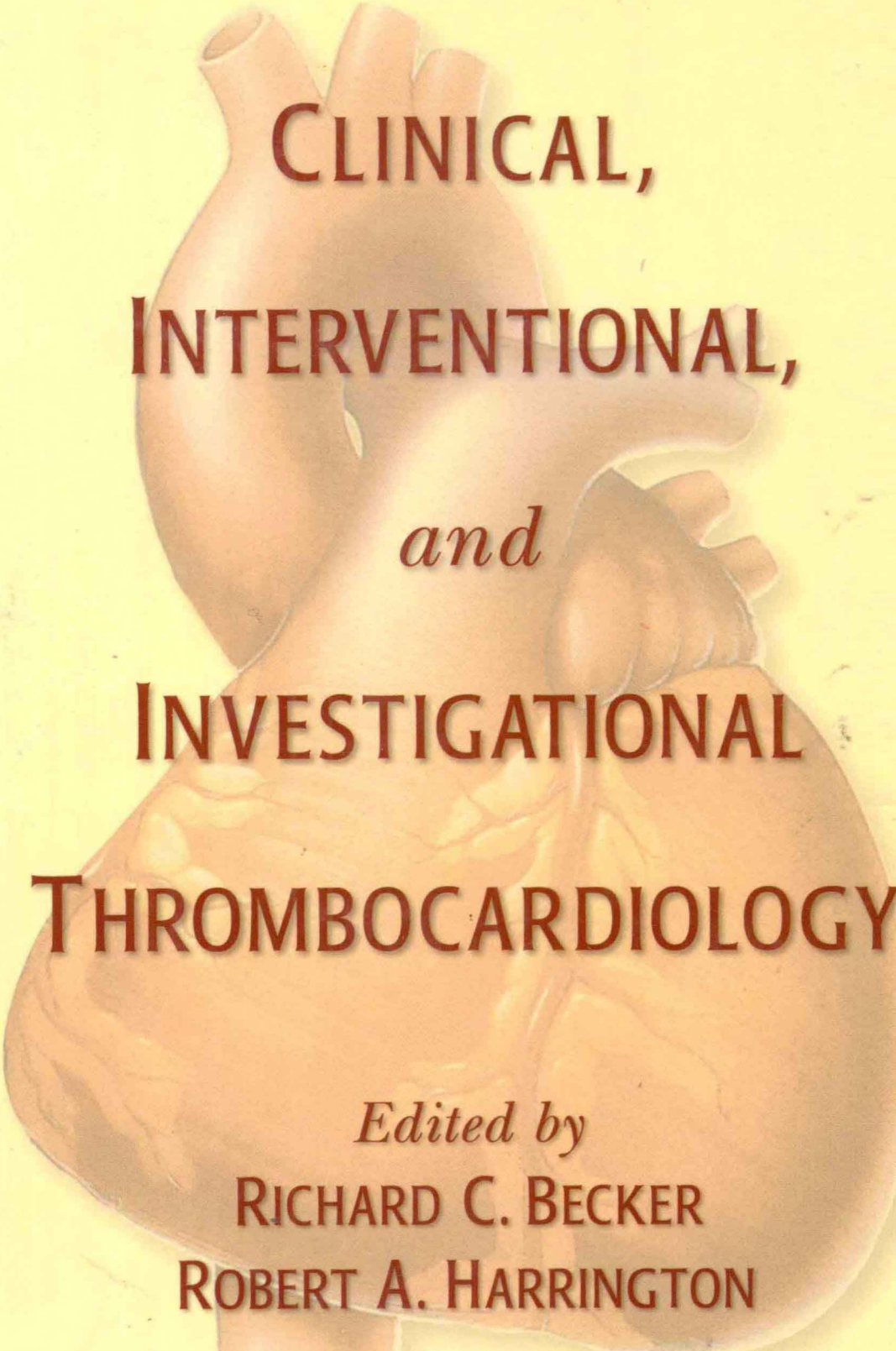

Clinical, Interventional, *and* Investigational Thrombocardiology

Edited by

Richard C. Becker

Robert A. Harrington

CLINICAL, INTERVENTIONAL, *and* INVESTIGATIONAL THROMBOCARDIOLOGY

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Taylor & Francis

Taylor & Francis Group

Boca Raton London New York Singapore

Published in 2005 by
Taylor & Francis Group
6000 Broken Sound Parkway NW, Suite 300
Boca Raton, FL 33487-2742

Printed in the United States of America on acid-free paper
10 9 8 7 6 5 4 3 2 1

International Standard Book Number-10: 0-8247-5419-0 (Hardcover)
International Standard Book Number-13: 978-0-8247-5419-8 (Hardcover)

Library of Congress Cataloging-in-Publication Data

Catalog record is available from the Library of Congress

T&F informa

Taylor & Francis Group
is the Academic Division of T&F Informa plc.

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Fundamental and Clinical Cardiology

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Series Introduction

Marcel Dekker, Inc., has focused on the development of various series of beautifully produced books in different branches of medicine. These series have facilitated the integration of rapidly advancing information for both the clinical specialist and the researcher.

My goal as editor-in-chief of the Fundamental and Clinical Cardiology Series is to assemble the talents of world-renowned authorities to discuss virtually every area of cardiovascular medicine. In the current monograph, has / have edited a much-needed and timely book. Future contributions to this series will include books on molecular biology, interventional cardiology, and clinical management of such problems as coronary artery disease and ventricular arrhythmias.

Samuel Z. Goldhaber

Dedicated to our families and
to our colleagues at
Duke University Medical Center,
the Duke Clinical Research Institute,
and throughout the world.

Foreword

The last 50 years have witnessed remarkable growth in our understanding of the underlying pathophysiology of cardiovascular disease. Furthermore, the ability of physicians to diagnose and treat patients with cardiovascular disorders has expanded in step with the enlarging knowledge concerning the causes of heart and vascular disease. Effective therapy for patients with these disorders depends on the clinician's ability to formulate an accurate diagnosis. It is equally important for the clinician to understand the pathological processes that produce the specific condition that has been diagnosed. Once both of these factors have been clearly formulated in the mind of the physician, an effective therapeutic strategy can be selected. Recently, basic and clinical investigation has helped to define the role played by abnormalities of thrombosis in the etiology of a variety of cardiovascular diseases. What has become increasingly clear from this research is that abnormalities in the clotting system often play critically important roles in the development of cardiovascular illness. Since many of these research developments are new and are often published in non-cardiovascular journals, the task undertaken by Drs. Becker and Harrington is particularly important, to produce a text for cardiologists that would elucidate the connection between disorders of clotting and cardiovascular disease. The result of their collaborative effort has been an outstanding collection of contributions from the leading authorities in this new field of thrombocardiology.

The initial chapters of this book clarify the basic, underlying scientific principles of this new interdisciplinary field. Next, a number of areas of clinical pharmacology, applicable to thrombocardiology, are reviewed. Finally, various aspects of the clinical presentation of various cardiovascular diseases, their diagnosis, therapy, as well as the most recent relevant clinical research findings are discussed in light of the new knowledge brought to bear by this new field. Drs. Becker and Harrington are to be congratulated for this monumental new work: in scope, originality, and insight, no other cardiology text currently available is comparable. I look forward to seeing the new discipline of thrombocardiology grow and prosper, and I anticipate that this textbook will become a classic in the cardiology literature.

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Preface

The active translation of scientific knowledge to safe, effective, widely available and implementable patient care represents a bidirectional, coordinated effort among clinicians, scientists, clinician-scientists, industry, governmental and private-sector funding agencies and deliverers at multiple levels of healthcare. In essence, the foundation for developing new treatments and management strategies is a hybrid of recognized needs, discovery, and modalities of application to individuals most likely to derive benefit. This requires awareness, diversity, communication, and an environment that nurtures a meaningful interaction between those skilled at the bench, clinicians with a gift at the bedside, and a messenger or master facilitator (translational scientist) who understands both disciplines in the context of a larger universe. Applied inquiry is an overriding and sustaining theme for success.

The Practice of Clinical, Interventional, and Investigational Thrombocardiology links fundamental concepts, patient care and applied research, creating a mosaic of related fields into a working paradigm for discovery, innovation and practical solutions. Having experienced several decades of medial specialization and subspecialization, driven by a rapidly expanding knowledge base at the cellular and molecular levels, we believe that the time has come to center our attention on a multidisciplinary approach to both cardiovascular disease prevention and its treatment. This philosophy, beyond offering a unified approach to healthcare delivery, can be applied seamlessly to broader constructs for education, professional training and investigating common illnesses and, through collaborative networks, rare disorders by providing an integrated and dynamic platform that stresses biology, physiology, pharmacology, genomics, proteomics, entrepreneurship and evidence obtained through validated scientific methods.

The basis of collaboration and for establishing a trusting relationship both within the academic community and between its scholarly representatives and the lay public is integrity. The ethical obligation (or "universal good" at which actions and choices are to be aimed) surrounding scientific research underlies an indelible cornerstone to human conduct that was summarized eloquently over 2,000 years ago by Aristotle during lectures to his students at the Lyceum in Athens:

> *A man must believe in basic truths more than the conclusion. Moreover, if a man sets out to acquire the scientific knowledge that comes through demonstration, he must have a better knowledge of the basic truths and a firmer conviction of them than the connection that is being demonstrated. For indeed the conviction of pure science and the virtue of those dedicated to it must forever be unshakable.*

It is our sincerest hope that we have succeeded, with the unconditional support and unfettered patience of our section editors and contributing authors, to illustrate in a succinct and practical manner the logical progression of ideas and distinguishing sequence of events which underlie a system of science created on affirmative syllogisms and an ethos committed thus – "Bench to Bedside to Bench . . ."

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Durham, North Carolina
2005

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