

Advanced Heart Failure And Transplant Cardiology Programs

Whether you or a relative are undergoing an organ transplant or considering or planning the surgery, this book offers help. 100 Questions & Answers About Liver, Heart, and Kidney Transplantation: A Lahey Clinic Guide gives authoritative, practical answers to your questions about organ transplants. This comprehensive guide provides sources of support from both the doctor's and patient's viewpoints. An invaluable resource for anyone coping with the physical and emotional turmoil of an organ transplant!

Emergency medicine textbook on identifying and treating cardiac emergencies, includes interpretation of ECGs, use of ultrasound in diagnosis, identification of arrhythmias, shock, syncope, post-arrest syndrome and much more.

Cardiac disease is one of the leading causes of maternal morbidity and mortality. Catastrophic outcomes typically encountered are due to gaps in knowledge and communication between health care providers. There is a great need for a standardized approach for care of this very high-risk group of pregnant women. The book encompasses detailed obstetrics and cardiology perspectives that are crucial in the management of the commonly encountered cardiac conditions in pregnancy. This text aims to provide guidance to the whole team caring for a pregnant cardiac patient consisting of obstetricians, maternal-fetal medicine, hospitalists, cardiologists, obstetric anaesthesiologists, emergency physicians, primary care providers and nurses. Features: Cardio-Obstetric team organization Preconception counselling and family planning considerations Cardiovascular disease screening and risk stratification of a pregnant cardiac patient Management of a wide spectrum of cardiovascular diagnoses through use of checklists and algorithms in a simple format Essential key points for each cardiac diagnosis

Cardiomyopathies are the most featured cardiac pathologies in the twenty-first century, that threaten public health and burden healthcare budgets. This book is composed of the main topics on pathophysiology, general forms and specific types of cardiomyopathies and it also introduces new research in the field. Specific forms with or without genetic inheritance are discussed separately to attract the readers' attention on these topics. Well-known medical follow-up strategies occur ineffective at the end-stage heart failure, however, new surgical approaches can be an alternative for these patients to get a chance at the last crossroad and to improve their life quality and survival and also to gain or prolong time until possible heart transplantation.

As the first revision text aimed specifically at the Knowledge-Based Assessment, Essential Revision Notes for Cardiology KBA is the cornerstone of your revision for this new and compulsory examination. Each chapter exactly maps the core cardiology training curriculum, giving measurable assurance that you are getting the information you need to pass. Each chapter is written by a senior cardiology trainee in collaboration with a senior consultant who has expertise in that specific field, ensuring that the content is both authoritative and accessible. Drawing on the latest guidelines and documents, the concise, bullet-pointed layout allows easy access to and digestion of the key points you'll need during revision. Numerous tables, boxes and figures make this the ideal accompaniment to retaining the large and varied amount of information needed to pass the examination. This textbook offers an up-to-date, user-friendly guide on the evaluation, diagnosis and treatment of heart failure. Each chapter is dedicated to providing comprehensive coverage of every aspect of heart failure from cardiac signs and symptoms through imaging and the genetic basis for disease to surgery, interventions, treatment and preventative cardiology. Heart Failure provides the trainee and practising cardiologist, cardiac surgeon, vascular surgeon, diabetologist, cardiac radiologist and any physician who manages cardiac patients with a valuable resource featuring extensive guidance on the diagnosis and management of a range of conditions related to heart failure.

This book sheds new light on the diagnosis and treatment of Heart Failure in adult patients with congenital heart disease. This is a rapidly growing clinical issue for this group of patients and the clinical teams caring for them. The book highlights the major clinical dilemmas in diagnosing heart failure in patients with a lifelong cardiac condition and describes in details the utility of biomarkers, complex imaging and functional tests, e.g. the cardiopulmonary exercise testing. A step-wise approach to treatment is described from drug therapy through to devices and transplantation. As such, the book offers an essential guide for cardiologists and cardiac surgeons looking to optimize the management of patients with delicate physiology and complex disease.

Heart failure is epidemic throughout the world. A growing incidence and prevalence has resulted in a large population of individuals transitioning to advanced stages of the syndrome and requiring uniquely specialised therapies and cardiac transplantation. Oxford Textbook of Advanced Heart Failure and Cardiac Transplantation is a focused and comprehensive work covering this new and rapidly growing cardiovascular subspecialty. Authored by eminent international experts, it is the authoritative text on advanced heart failure and a central resource for clinicians caring for patients with this condition. By covering a range of characteristics, therapeutic challenges and practical aspects of managing patients this book provides an in-depth source for cardiologists and other related clinicians. A strong focus on the difficult decision making needed to handle advanced heart failure cases, along with specific knowledge of epidemiology, biology and pathophysiology, creates a key tool for optimally managing these complex patients.

This issue of the Heart Failure Clinics, edited by Drs. James Fang and Michael Givertz, is entitled "Advanced Heart Failure" and covers a wide array of topics relating to the subject. The issue will delve into the prevalence, history and prognosis of advanced heart failure; cardiorenal interactions; cardiohepatic interactions; the role of temporary mechanical circulatory support; guided therapy; the role of heart transplantation; palliative care; frailty; and novel biological techniques, among other topics.

This comprehensively covers everything from pathophysiology to the evaluation of patients presenting with heart failure to medical management, device therapy, heart transplantation and

mechanical circulatory support, and include relevant cardiac imaging studies such as echocardiograms and magnetic resonance imaging studies which could be seen in their entirety as well as pathology slides, hemodynamic tracings and videos of cardiac surgery such as heart transplants and ventricular assist device implantation. Finally, the book would have videos of patients with heart failure, heart transplants or ventricular assist devices, describing their clinical presentation and experiences. It is structured so that it can be used as a guide by physicians studying for the general Cardiology or Advanced Heart Failure and Cardiac Transplantations Boards.

This book focuses on how ventricular assist devices (VADs) can help provide destination therapy for patients with terminal heart failure, one of the most serious diseases in the world today because of the tremendous number of patients, the high mortality rate, and the cost of care. One means of providing cardiologic support for patients suffering from heart failure is with VADs, and more than 10,000 patients worldwide have now been implanted with these devices. Half of them already have lived more than one year, and 2,000 patients more than two years, after surgery. This improved survival means that we have reached a point where VADs can be used for destination therapy, not just for bridge-to-recovery or bridge-to-transplant. In view of the increasing number of patients with advanced-stage heart failure and the availability and longevity of transplanted hearts, VADs can solve many problems. In addition to providing information about the devices themselves, this book includes vital guidelines on long-term management and support of VAD-implanted patients' everyday lives.

This truly comprehensive reference is devoted to every aspect of heart transplantation. It not only covers the surgical procedures for the donor and recipient, but also explores pre and post operative patient management, operative techniques and non-surgical cardiac management options. The 3 reasons you need this book are: (1) Extensive outline and bolded phrases will provide you with QUICK and EASY access to the information; (2) Over 700 illustrations will provide an additional visual aid to enhance your understanding of the text; and (3) Access to information on all the most currently used immunosuppressive drugs and other modalities with helpful tables Covers the critical subjects of basic science, causation theories, clinical manifestation, and available therapies for acute and chronic allograft rejection. Devotes an entire chapter to pediatric heart transplantation and details those areas which are unique to the infant, child, and adolescent. Provides a thorough explanation of the immunologic basis of transplantation. Dedicates a chapter to techniques of analysis in outcomes research in both single and multi-institutional studies. Describes individual post-transplantation infections along with treatment options and doses. Offers detailed survival analyses with risk factors for various causes of death based on the most current data available. Includes information on all currently used immunosuppressive drugs and other modalities in helpful tables which includes data on mechanism, chemistry, metabolism, indications, and toxicities of each agent. Facilitates quick reference with extensive outlines and bolded phrases.

Heart transplantation remains one of the major scientific achievements of twentieth century medicine. During the past four decades, it has evolved from an unproven experimental surgical technique to the most effective form of therapy for refractory end-stage heart disease. It has captured the public's imagination and expanded our understanding of fundamental immunologic mechanisms that are responsible for cellular and humorally-mediated immunity. Despite its successes, many clinical and scientific problems remain. One or more bouts of acute cellular or humoral (vascular) rejection will occur in over 75% of transplant recipients despite current immunosuppressive strategies. Further, rejection directly results in approximately 20% of post-transplant deaths and is believed to play a major role in the development of late allograft dysfunction and coronary vasculopathy. This book by international experts in the fields of transplantation medicine, immunobiology and cardiac imaging provides the reader with an up-to-date, concise summary of the latest developments in the diagnosis and treatment of acute cardiac rejection. It is axiomatic that a more complete understanding of the pathogenic processes involved in rejection will ultimately lead to its prevention. This volume will be useful to transplant cardiologists, cardiovascular surgeons, cardiac pathologists and transplant scientists who seek to prolong the lifespan and improve the quality of life of their transplant recipients. One of the most interesting and at the same time most challenging fields of medicine and surgery has been that of organ donation and transplantation. It is a field that has made tremendous strides during the last few decades through the combined input and efforts of scientists from various specialties. What started as a dream of pioneers has become a reality for the thousands of our patients whose lives can now be saved and improved. However, at the same time, the challenges remain significant and so do the expectations. This book will be a collection of chapters describing these same challenges involved including the ethical, legal, and medical issues in organ donation and the technical and immunological problems the experts are facing involved in the care of these patients. The authors of this book represent a team of true global experts on the topic. In addition to the knowledge shared, the authors provide their personal clinical experience on a variety of different aspects of organ donation and transplantation.

This book is a concise, portable handbook that focuses on the clinical use of mechanical blood pumps. All aspects of mechanical circulatory support are addressed, including patient selection, preoperative preparation, operative management, anesthetic considerations and conduct of cardiopulmonary bypass, postop management including complications associated with blood pump use and long-term care and rehabilitation.

In *The Genome Odyssey*, Dr. Euan Ashley, Stanford professor of medicine and genetics, brings the breakthroughs of precision medicine to vivid life through the real diagnostic journeys of his patients and the tireless efforts of his fellow doctors and scientists as they hunt to prevent, predict, and beat disease. Since the Human Genome Project was completed in 2003, the price of genome sequencing has dropped at a staggering rate. It's as if the price of a Ferrari went from \$350,000 to a mere forty cents. Through breakthroughs made by Dr. Ashley's team at Stanford and other dedicated groups around the world, analyzing the human genome has decreased from a heroic multibillion dollar effort to a single clinical test costing less than \$1,000. For the first time we have within our grasp the ability to predict our genetic future, to diagnose and prevent disease before it begins, and to decode what it really means to be human. In *The Genome Odyssey*, Dr. Ashley details the medicine behind genome sequencing with clarity and accessibility. More than that, with passion for his subject and compassion for his patients, he introduces readers to the dynamic group of researchers and doctor detectives who hunt for answers, and to the pioneering patients who open up their lives to the medical community during their search for diagnoses and cures. He describes how he led the team that was the first to analyze and interpret a complete human genome, how they broke genome speed records to diagnose and treat a newborn baby girl whose heart stopped five times on the first day of her life, and how they found a boy with tumors growing inside his heart and traced the cause to a missing piece of his genome. These patients inspire Dr. Ashley and his team as they work to expand the boundaries of our medical capabilities and to envision a future where genome sequencing is available for

all, where medicine can be tailored to treat specific diseases and to decode pathogens like viruses at the genomic level, and where our medical system as we know it has been completely revolutionized.

This book provides the most up to date information on every aspect of clinical care relating to patients with advanced heart failure who require mechanical circulatory support as a treatment strategy. The book begins with an extensive description of the preoperative patient selection process as well as preoperative medical optimization, including bridge to bridge strategies with short-term devices. The book then transitions into a description of a variety of surgical implantation techniques with special considerations for reoperative surgery. A chapter on intraoperative anesthesia management is specifically focused on intraoperative issues relating to MCS patients. Subsequent chapters focus on perioperative management as well as long-term management of patients on MCS, including optimization of a patient's LVAD speed. A dedicated chapter on the diagnosis of device thrombosis as well as surgical techniques and outcomes associated with device exchanges is also included. The book also summarizes the national and international outcomes data for using MCS as a bridge to transplant and destination therapy. There is also a chapter on the utility of stem cells as an adjunct technique for inducing myocardial recovery. Finally, the book has chapters on complications of MCS, management of right ventricular failure, and the future of MCS.

This book is a comprehensive overview of heart failure and cardiac transplantation and integrates scientific and clinical information about the physiology, pathophysiology, diagnosis, and treatment of this disorder. Organized into five parts, it reviews the history and basic mechanisms of heart failure; etiology of heart failure; heart failure disease progression; advanced therapies for heart failure; and cardiac transplantation. The book presents basic concepts in the physiology, molecular biology, pathology, and epidemiology of the normal and failing heart; known causes of heart failure, such as right heart failure, valvular cardiomyopathy, molecular mechanisms of sarcomeric cardiomyopathies, and neuromuscular cardiomyopathy; cardiorenal syndrome; neurohormonal activation; cardiac resynchronization, ventricular assist devices; regenerative mechanisms; orthotopic heart transplantation; early and late management of the post-transplant patient; heart transplantation and antibody-mediated rejections; heart-lung transplantation; and cardiac xenotransplantation. Featuring contributions from leaders in the fields of heart failure, cardiac transplantation, cardiac pathology, and cardiovascular molecular research, *Congestive Heart Failure and Cardiac Transplantation* is a valuable compendium for cardiologists, cardiothoracic surgeons, researchers, trainees, and students.

This is a concise review of up-to-date concepts and techniques in the discipline of heart transplantation. It is a review and reference for practitioners managing patients with advanced heart disease, including patients with end-stage heart failure, mechanical circulatory support or transplant recipients. Heart failure is a major public health issue, with a prevalence of over 5.8 million in the USA, and over 23 million worldwide, and rising. The lifetime risk of developing heart failure is one in five. Heart failure carries substantial morbidity and mortality, with 5-year mortality that rival those of many cancers. As heart transplantation remains the best treatment option for patients with end stage heart failure, this primer will provide valuable information and management strategies for physicians caring for these patients. Also, due to continued shortage in donor organs, heart transplantation is a limited resource – which further underscores the importance of appropriately evaluating patients for transplant candidacy and managing their pre, peri- and post-transplant care for maximum benefit and best outcomes.?

This engaging book provides a state-of-the-art introduction to the rapidly evolving field of mechanical circulatory support therapy in the care of patients with advanced heart failure. It is aimed at healthcare teams around the world who are involved in patient care, research, and teaching of advanced heart failure; healthcare professionals in training; and interested lay persons. In particular, this book? serves as a comprehensive resource and practice guide on all aspects of mechanical circulatory support therapy, starting with an overview on heart failure management and then continuing with the referral and evaluation, the care before and after mechanical circulatory support implantation, the analysis of outcomes and complications, as well as a description of research and societal perspectives in the field of mechanical circulatory support therapy;? is founded on the expertise of Columbia University Medical Center (New York City), which has one of the most renowned heart failure, mechanical circulatory support, and heart transplantation programs in the world;? takes a multidisciplinary integrated healthcare team approach, including the perspectives of cardiologists, cardiac surgeons, nurses, coordinators, social workers, psychologists, physical therapists, financial experts, and bioethicists; and? provides in a unique way the complementary viewpoints from the expert healthcare team's as well as the patient's and family's perspectives, with patient vignettes interspersed throughout the entire text.

James C. Fang, MD, and Gregory S. Couper, MD, have assembled a panel of prominent surgeons and cardiologists to review the latest clinical, scientific, and investigational surgical and mechanical approaches to heart failure in hopes of improving the lives of this challenging group of patients. Topics range from such traditional strategies as high-risk surgical revascularization in advanced coronary artery disease, to more novel approaches such as ventricular reconstruction and mechanical assist devices. Many chapters are contributed by the original pioneers of specific surgical techniques, which provide s invaluable perspective from personal experience.

This book will provide a unique approach to cardiovascular genetics and genomics through utilizing clinical cases to illustrate the basic science concepts as the practitioner will encounter them in regular clinical practice. Through the teaching value of real-world case discussions, the principles of cardiovascular genetics and genomics can be illustrated clearly and memorably, and the clinician will be able to relate the cases shown in the book with those seen in direct experience. The book opens with a "primer" of the basic scientific concepts, providing the reader with a clear, easy to understand "toolkit" for the discussions of the genetic science in clinical practice.

Written by internationally renowned leaders in their field and relevant to all practicing clinicians, this textbook comprehensively covers all aspects of heart failure, and suggests the optimal evidence-based management for heart failure patients.

Management of Heart Failure: Surgical will provide the full spectrum of surgical options, ICU management and rehabilitation, while also referencing heavily the companion volume of *Management of Heart Failure: Medical* by introducing the medical options in heart failure . The contributing authors are all key opinion leaders in the medical management of heart failure. This volume is designed to integrate with its sister medical title, but also alone be the definitive guide to the surgical management of heart failure.

The Oxford Textbook of Advanced Heart Failure and Cardiac Transplantation is the authoritative text on advanced heart failure and a key resource for clinicians caring for heart failure patients.

The treatment of end-stage heart failure with advanced surgical therapies has evolved significantly over the last several years and is a dynamic subspecialty within cardiac surgery. Surgical Treatment for Advanced Heart Failure describes the surgical management of advanced heart failure, including coronary artery revascularization, mitral valve repair, aortic valve replacement, ventricular remodeling, cardiac resynchronization, mechanical circulatory support with short-term devices for acute stabilization, long-term mechanical support as a bridge to transplant and for destination therapy, left ventricular assist devices, complete cardiac replacement with the total artificial heart, and cardiac transplantation. With contributions from a distinguished group of heart failure cardiologists and transplant surgeons, it is an authoritative resource for cardiac surgeons, cardiologists, and surgeons.

This new third edition of The ESC Textbook of Cardiovascular Medicine is a ground breaking initiative from the European Society of Cardiology that is transforming reference publishing in cardiovascular medicine in order to better serve the changing needs of the global cardiology community. Providing the evidence-base behind clinical practice guidelines, with in-depth peer-reviewed articles and broad coverage of this fast-moving field, both the print and digital publication are invaluable resources for cardiologists across the world. Overseen by Professors A. John Camm, Thomas F. Lüscher, Patrick W. Serruys, and Gerald Maurer, supported by an editorial board of subject experts, and more than 900 of the world's leading specialists from research and the clinic contributing, this dynamic encyclopaedic resource covers more than 63 disciplines within cardiology. Split into six key parts; Introduction to the cardiovascular system; Investigations; Heart diseases; Vascular disease; Special populations, and Other aspects of cardiology, providing readers with a trustworthy insight into all aspects of cardiovascular medicine. To respond nimbly to the rapid evolution of the field the digital publication, ESC CardioMed, is continuously updated by the author teams. With expert editors and authors, and stringent peer-review, the publication combines the discoverability of digital with the highest standards of academic publishing. Highly illustrated with embedded multi-media features, along with cross-referenced links to ESC Clinical Practice Guidelines, related content and primary research data in European Heart Journal, as well as all other major journals in the field, ESC CardioMed provides users with the most dynamic and forward thinking digital resource at the heart of cardiology. As a consistently evolving knowledge base, the ESC Textbook of Cardiovascular Medicine 3e together with the online counterpart ESC CardioMed, equips all those, from trainees and consultants, to device specialists and allied healthcare professionals with a powerful, multifaceted resource covering all aspects of cardiovascular medicine.

This issue of Heart Failure Clinics, guest edited by Drs. Giuseppe Pacileo, Daniele Masarone, Francesco Grigioni and Luciano Potena, will cover key topics in Advanced Heart Failure: From Pathophysiology to Clinical Management. This issue is one of four issues selected each year by our series consulting editor, Dr. Eduardo Bossone. Topics discussed in this issue include (but are not limited to):

Pathophysiology of advanced heart failure: what I need to know for clinical management?, Advanced heart failure: definition, epidemiology and clinical course, Echocardiography in advanced heart failure: beyond diagnosis, Disease modifier drugs in patients with advanced heart failure: How to optimize their use?, Congestion in patients with advanced heart failure: Assessment and treatment, Inotropes in patients with advanced heart failure: Not only palliative care, Cardiac resynchronization therapy and cardiac contractility modulation in patients with advanced heart failure: How to select the right candidate?, Mitral and tricuspid valves percutaneous repair in patients with advanced heart failure: Panacea, or Pandora's box?, Left ventricular assist device: Indication, timing and management, Listing criteria for heart transplant: Role of cardiopulmonary exercise test and of prognostic scores, Right heart catheterization in patients with advanced heart failure: when to perform, how to interpret?, Advanced heart failure in special population: Cardiomyopathies, Advanced heart failure in special population: Pediatric age, Advanced heart failure in special population: Heart failure with preserved ejection fraction and Treatment of advanced heart failure: What future holds?. Provides in-depth, clinical reviews on advanced heart failure, providing actionable insights for clinical practice. Presents the latest information on this timely, focused topic under the leadership of experienced editors in the field; Authors synthesize and distill the latest research and practice guidelines to create these timely topic-based reviews.

Each year over 400,000 people have a new onset of heart failure in the United States, adding to a current patient population of over 4.8 million Americans. Basics of Heart Failure takes a problem-solving approach to examining heart failure and to providing the reader with an up-to-date account of our knowledge in this area. Chapters on the diagnosis and therapy of heart failure emphasize data from recent multicenter trials.

A frank and honest account of one patient's journey: from end-stage congestive heart failure, to artificial heart-assist-pump implantation, and eventually, to heart transplantation, recovery, and health. This memoir shares a first-hand perspective of the fears, challenges, and joys of facing a life-threatening illness, and being given the gift of a second chance at life. For all those who face organ failure and transplantation, for their loved ones, for those who work in the transplant healthcare arena, and for organ donors and their families.

This work provides a one-of-a-kind volume that includes all aspects of heart transplantation from its historic beginning to its current day standards which now make the procedure a long-term treatment option for heart failure patients. The subjects covered include technical aspects of the procurement and implant procedures, as well as the medical nuances of pre-operative preparation and post-transplant immunosuppression management; the current day multi-disciplinary make up of the transplant team along with information on the keys to building and running a successful transplant program; regulatory standards and listing policies and the impact of the growing mechanical circulatory support technologies on the transplant field; and emerging technologies and future possibilities. All chapters are written by experts in the field and include the most up-to-date peer reviewed studies and clinical guidelines. This book gives an ever-changing reference that will become the text of choice for those beginning or continuing their transplant careers.

Oxford Textbook of Advanced Heart Failure and Cardiac Transplantation Oxford University Press

The first book of its kind, this reference describes current diagnostic and treatment strategies for acute and chronic heart failure in the fetus, neonate, child, and young adult-encompassing every aspect of pediatric heart failure including historical perspectives, the latest technologies in mechanical circulatory support, and recent information on the psychosocial aspects of heart failure in children.

This concise practical guide is designed to facilitate the clinical decision-making process by reviewing a number of cases and defining the various diagnostic and management decisions open to clinicians. It is well illustrated and diverse in scope, enabling the reader to obtain relevant clinical information regarding both standard and unusual cases in heart failure in a rapid, easy to digest format. Clinical cases are a key component in modern medical education, assisting the trainee or recertifying clinician to work through unusual cases using best practice techniques. Cardiology is a key discipline in this regard and is a highly visual subject requiring the reader to describe often very subtle differences in the presentation of patients and define accurately the diagnostic and management criteria on which to base their clinical decision-making. This title therefore provides valuable assistance to trainees and clinicians alike in evaluating patients and defining an appropriate procedure for each case covered.

Heart Failure in the Child and Young Adult: From Bench to Bedside combines multiple etiologies for pediatric heart failure, including congenital heart disease, cardiomyopathies, infectious diseases and metabolic abnormalities. This comprehensive resource combines research from multiple contributors with current guidelines to bridge the knowledge gap for the recognition and management of heart failure in children. Coverage begins with the basic science of heart failure, then progresses through diagnosis, management, treatment and surgery, finally concluding with advanced special topics, including genetics, self-management and nanomedicine. Provides coverage of the basic science of heart failure, its epidemiology and economic aspects, outpatient and inpatient management, and advanced therapies, including

mechanical circulatory support and heart transplantation Combines cutting-edge research with current guidelines from the field

If you understand heart failure, you understand cardiology This book applies practical clinical concepts to the latest four-stage model of heart failure from preclinical risk and early asymptomatic disease to classic symptomatic heart failure and finally advanced heart failure. This framework emphasizes a tailored approach to ongoing heart failure assessment to guide therapy and improve outcomes. Features: Illustrated with over 250 full-color figures Specific recommendations backed by clinical trial data Practical algorithms for diagnosis and therapy Topics include: Prevention of heart failure Identification and treatment of structural heart disease prior to heart failure How to combine lifestyle changes, medications, and devices to improve outcomes Reversing decompensated heart failure Key indicators of advanced heart failure and appropriate treatment options Emerging new therapies "This book will be valuable to all training and practicing clinicians. He writes as if you and he are both completing patient rounds together. Brian E. Jaski is to be commended for capturing the essence of treating this formidable clinical challenge and demystifying the stages of heart failure." --From the foreword by Sidney C. Smith, Jr. MD FACC, FAHA, FESC, FACP Professor of Medicine, University of North Carolina at Chapel Hill Past President, American Heart Association Past President, World Heart Federation "The culmination of Dr. Jaski's 25 years of teaching experience and clinical acumen is now available in one highly readable text designed to highlight key information and stimulate the learning process." --Dylan E. Wessman, MD, FACC, FACP Program Director, Cardiovascular Disease Fellowship Naval Medical Center San Diego San Diego, California

It is a pleasure to introduce Volume 5 in the Methods in Pharmacology series. In 1971, Volume 1 of this series was published while I was Head of the Division of Myocardial Biology in the Department of Pharmacology at Baylor College of Medicine in Houston, Texas. I dedicated that first volume to Sir Henry Hallet Dale, who died on July 23, 1968. In the Preface I pointed out that many of the pharmacological advancements that occurred during the last century were direct descendants from the classic paper published in 1910 by Professor Dale and his colleague, Dr. Barger. In this paper, the concept of "specific receptor sites" was introduced by the statement that "the relationship of the repected mechanism to the base [i. e. , drug base] may well be one of solid solution of adsorption and, therefore, more analogous to that of an enzyme to its substrate" I also pointed out at that time that the search for drug receptors continues and that fundamental knowledge of the nature of receptors and drug-receptor interaction will eventually lead to a rational approach to drug design. Since 1971, the study of receptors and their interaction with specific chemical substances has continued at an accelerated pace and this is due, in particular, to the introduction of new and exciting methodologies. The death last year of Professor Raymond P. Ahlquist, who pioneered the introduction of specific adrenergic receptors, represents the close of yet another era.

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