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Editors

Pulmonary Hypertension

Basic Science to Clinical Medicine

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Bradley Maron:
"I dedicate this book to my parents, Dr. Barry and Donna Maron, my beautiful wife Dr. Jill Maron, and, with tremendous love our children Alexis and Jack for their beautiful spirit and inspiration."
Aaron Waxman:
"For my wife, Dr. Sue J. Goldie, who has been a driving force in everything I do. In fact, without her encouragement I would not ever have been in a position to work on this book. And to my boys Jacob and Matthew, always making me proud, forever onward."
Roham Zamanian:
"To all of my mentors, especially C Kees Mahutte, an inspiring and superb teacher, and to my loving and supportive wife Julie and sons Andreas, Kamran, and Oliver."

Foreword

Since its initial description in 1891 by von Romberg (Über Sklerose der Lungenarterie. Dtsch Arch Klin Med 1891;48:197–206), pulmonary hypertension has evolved from a single disease to a complex pathophenotype of many different etiologies, ranging from intrinsic lung disease to pulmonary arterial pathobiology. The last 25 years, in particular, have led to remarkable progress in understanding subtleties in pathophysiology, the complex causative and adaptive molecular events, and therapies for many forms of pulmonary hypertension. This broad expansion of our knowledge of the classification, causation, and treatment of pulmonary hypertension has led to the establishment of a rich discipline that defines the contemporary field.

With these rapid advances in epidemiology, pathobiology, and therapeutics, the field of pulmonary hypertension clearly warrants a definitive textbook. In *Pulmonary Hypertension: Basic Science to Clinical Medicine*, Maron, Zamanian, and Waxman have provided just what the field needs at this stage in its development. Beginning with a review of historical perspective, the chapters that follow offer unique, comprehensive, and highly useful insights into the current state of the disease. How best to define the phenotype(s), disease epidemiology, and the role of inflammation, neurohumoral factors, and metabolic adaptation are summarized in clearly written, up-to-date chapters by authors who have led their respective fields in these burgeoning areas of investigation. Novel approaches to disease, including modern genomics and genetics, the role of noncoding RNAs, and network biology are also presented in well-written, clearly presented chapters on these complex topics.

These basic chapters are followed by timely, rigorous, and practical presentations on cardiopulmonary hemodynamic assessment in the evaluation of patients with dyspnea and suspected pulmonary hypertension, the challenge of relevant clinical endpoints in clinical trials of patients with pulmonary hypertension, advanced imaging strategies, and the growing field of biomarkers of disease activity and response to therapy. These initial clinical chapters are followed by up-to-date reviews of current pharmacotherapies and surgical therapies, including devices and lung or heart-lung transplantation. Chapters on newer molecular targets, special clinical considerations in subsets of patients with pulmonary hypertension of which any physician caring for these complicated patients should be aware, and what the future holds for the syndrome round out this thorough textbook.

The complexity of the pathobiology, clinical presentation, and clinical course of patients with pulmonary hypertension is what makes the syndrome interesting to study and challenging to treat. Maron, Zamanian, and Waxman have done a superb job in compiling an excellent roster of chapter contributors who provide a contemporary, comprehensive overview of the field in all of its complexity, and do so with clarity and great care. For these reasons, I believe this textbook is essential for the any physician or scientist with an interest in pulmonary hypertension that will establish itself in short order as a definitive reference for the discipline.

Boston, MA, USA — Joseph Loscalzo, MD, PhD

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