

Therapeutic Strategies: Asthma. Modern Therapeutic Targets. Riccardo Polosa MD PhD and Stephen T Holgate DSc FRCP MRC, editors. Oxford: Atlas Medical Publishing/Clinical Publishing. 2007. Hard cover, illustrated, 201 pages, \$89.95.

This book provides a chapter-by-chapter survey of promising therapeutic targets currently under investigation. The information will be of interest to both basic and clinical researchers in respiratory and inflammatory disease, particularly young investigators who seek an introduction to promising drugs and novel pathways.

The need for innovative medications in asthma is clear. Asthma remains the most common of chronic respiratory illnesses and appears to be increasing in both prevalence and severity. For the typical affected individual, asthma is suboptimally controlled, despite the availability of safe and effective therapies. For a few individuals with asthma, even faithful compliance with maximal therapy fails to provide adequate control.

A broad range of topics is addressed in this small volume. Each author provides a thorough characterization of potential new compounds and the rationale for their use in asthma management. The writing style is clear and each author outlines the basic physiology targeted by each novel therapy, but the material can be challenging if the reader has no prior knowledge of the subject. The chapters are concise; most of the material is based on ongoing research, referenced to abstracts at medical meetings. The book's authors are well-known, established respiratory investigators. They make their arguments clearly, and the chapters are uniformly of excellent quality.

The authors followed a similar approach in each chapter. A pathway or mediator and its presumed role in asthma is described, then the rationale for targeting this pathway with a novel compound is discussed. This is usually followed by the description of what has already been developed and explored, noting in which phase of development each of these new compounds are.

The book has 4 sections, based on mechanisms of action, and 17 chapters. Every chapter provides good review about its subject and finishes with a concise summary. Each chapter

typically contains 1 or 2 schematic figures in black-and-white, and 48 to 191 references. On the negative side, the chapters are not always well-coordinated. Related chapters sometimes seem disconnected from each other, whereas in other sections the introductions are overlapping and repetitive.

Section I deals with autacoids and their receptors in airway diseases. Four chapters then target adenosine receptors, transforming growth factor β , transcription factors, and the transcription factor nuclear factor $\kappa\beta$.

Section II focuses on enzyme inhibitors and deals with protease-activated receptors, nitric oxide synthase, and metalloproteinases. The chapter on nitric oxide is particularly interesting; the excellent review covers how nitric oxide has been used to monitor asthma and the delicate role of endogenous nitric oxide in the airways.

Section III describes the role of the sensory neuropeptides.

Section IV provides a very complete overview on anticytokines and cytokines. This section is perhaps the most clinically relevant, as it focuses on compounds that are already used on asthma, such as omalizumab, and also on substances successfully used for other chronic inflammatory disorders.

The book is clearly laid out and well organized, and the useful index helps find specific topics and compounds quickly.

For the reader who seeks an introduction on a broad range of innovative asthma therapies, this slim volume offers a concise but comprehensive survey.

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Respiratory Care Anatomy and Physiology: Foundations for Clinical Practice, 2nd edition. Will D Beachey PhD RRT. St Louis: Mosby Elsevier. 2007. Soft cover, 313 illustrations, color, 448 pages, \$58.95.

Most students in the health professions do not fully appreciate the importance of

having a firm understanding of physiologic principles until they are confronted with complex clinical situations. Indeed, problem-based curricula are designed to narrow this gap between the basic and clinical sciences.

The premise of **Respiratory Care Anatomy and Physiology** is, "to provide respiratory therapy students, practicing therapists, critical care nurses, and medical students with a physiological foundation to support clinical practice." The book has 23 chapters in 4 sections. The first section includes 14 chapters devoted to the respiratory system. It contains a basic description of the anatomy of the lungs and thorax, and discusses the standard topics covered in most pulmonary physiology textbooks, including the mechanics of ventilation, pulmonary blood flow, diffusion, oxygen and carbon dioxide transport, acid-base regulation, control of ventilation, the ventilation-perfusion relationship, arterial blood gases, pulmonary function measurements, clinical assessment of acid-base and oxygenation status, the physiologic basis for oxygenation and lung-protection strategies, and fetal and newborn cardiopulmonary physiology.

The second section is dedicated to the cardiovascular system. The topics include functional anatomy of the cardiovascular system, cardiac electrophysiology, electrocardiography, cardiac arrhythmias, control of cardiac output, and hemodynamic measurements.

The third section includes chapters on the cardiopulmonary response to exercise in health and disease, and the effects of aging on cardiopulmonary anatomy and physiology.

The final section discusses renal anatomy and physiology, and electrolyte and acid-base regulation in health and disease.

Various pedagogical aids are used throughout the text to help develop the critical-thinking skills required in clinical practice. Each chapter begins with a general content outline, learning objectives, and key terms, and ends with a bulleted list of important points to remember. Tables and multicolor illustrations are effectively used throughout the book to enhance the text. The "Concept Questions" and "Clinical Focus" boxes interspersed throughout the text