itis exhaustively summarizes the various studies in tables but does not provide basic clinical reference tables, such as treatment options and doses.

The book includes a useful chapter on special considerations in geriatric and immunocompromised patients. This chapter is particularly well structured, thoroughly addressing questions that typically arise in the management of respiratory conditions with these patients. Information is provided on differences in presentation, laboratory and radiographic studies, differences in infecting organisms (with an emphasis on epidemiologic risk factors), empirical therapy, and disposition. A useful algorithmic flow diagram is included, though the algorithm may be overly aggressive in its workup: do all patients suspected of having a lower respiratory tract infection need an arterial blood gas analysis as well as a chest radiograph? Obtaining an arterial blood gas sample is painful, and pulse oximetry is often a reasonable alternative. Though the basic approaches outlined in this chapter are adequate, finer points of therapy must be obtained from more detailed references, such as the use of adjunctive corticosteroids for patients severely hypoxic from pneumocystis pneumonia.

Section 4, on noninfectious acute problems, contains 2 brief chapters: one on pulmonary embolism and the other on lung cancer. They provide enough information to understand the basic pathophysiology, terms, and relevant diagnostic studies, but they lack the detail and tables found in prior chapters. In addition, the algorithm for pulmonary embolus emphasizes the use of ventilation/perfusion scans, though spiral tomograms are frequently used nowadays in the initial evaluation. Also, the recently-published clinical prediction rules for deep vein thrombosis and pulmonary embolism are not discussed.

In Part 5, on noninfectious chronic conditions, the book is back to its best form, offering satisfying detail, clinically relevant tables, and pictures of clinical findings on the topics of allergic rhinitis, asthma, and chronic obstructive pulmonary disease. The chapter on immunizations provides information on disease burden, vaccine efficacy, usage guidelines, and adverse reactions, which providers will find invaluable when discussing these vaccines with their patients. The final chapter draws appropriate attention to the health threat of cigarette smoking, which is the leading cause of preventable death in the United States and a contributor to all respiratory ailments.

This book is not without flaws, though they are generally minor. In addition to the shortfalls already noted, the book suffered some internal inconsistencies by allowing different authors to handle the same subjects. For example, a discussion of influenza in the chapter on pharyngitis uses a definition from a review article from 1976 and is somewhat at odds with the information found in the chapter that is specifically about influenza, which used more recent citations.

We highly recommend this book to all health care providers in training, as well as to experienced clinicians and ancillary staff who want a concise reference. The information is generally current, evidence-based, and exceedingly relevant. The book is attractive, well organized, and overall an enjoyable read.

Valentine Paredes MD MPH
Division of Emergency Medicine
Department of Medicine
University of Washington School of Medicine
Seattle, Washington

Christopher Behrens MD
Division of Allergy and Infectious Disease
Department of Medicine
University of Washington School of Medicine
Seattle, Washington

Chemokines in the Lung. Robert M Strieter MD, Steven L Kunkel PhD, and Theodore J Standiford MD, editors. (Lung Biology in Health and Disease series, Volume 172, Claude Lenfant, executive editor). New York: Marcel Dekker. 2003. Hard cover, illustrated, 399 pages, $195.

The highly regarded book series Lung Biology in Health and Disease, under the executive editorship of Claude Lenfant, has added a new volume entitled **Chemokines in the Lung,** edited by Robert Strieter, Steven Kunkel, and Theodore Standiford. These outstanding experts have compiled a comprehensive review that is in keeping with the excellence of the series. This volume, like others in the series, will be of interest primarily to investigators and physicians interested in lung cell biology, but some others will find it of interest as it relates to the roles of chemokines in specific diseases and their potential roles in therapy.

The book has 3 introductory chapters on general characteristics of chemokines, chemokine receptors, and intracellular signaling mechanisms. Two additional interesting chapters discuss the role of chemokines in lymphocyte trafficking and genetic models of chemokine biology in the lung. The remainder of the chapters are devoted to specific conditions and diseases, including asthma, chronic obstructive pulmonary diseases, cystic fibrosis, infectious disease, human immunodeficiency virus, acute lung injury, granulomatous lung inflammation, pulmonary fibrosis, lung allograft rejection, lung cancer, and pleural disorders.

Each chapter is written by experts in the field, and each stands alone as an excellent topical disease-oriented review. The primary literature cited is comprehensive and accurately and critically presented, with extensive references for readers interested in more in-depth research. Although there are predominant chemokines in certain diseases, there is considerable overlap in chemokines related to many disease processes, so there is some overlap in discussion of chemokines in the context of specific diseases. Rather than viewing this as a weakness, I think this overlap helps emphasize the complex nature of chemokines and their complex, interacting roles in the pathogenesis of diverse conditions.

One current problem in chemokine biology is the movement away from acronyms that have been commonly used for chemokines, such as MCP-1 (monocyte chemotactic protein) and IP-10 (interferon-γ inducible protein). A systematic chemokine ligand naming system, which is based on their receptors, was recently adopted, so MCP-1 is now known as CCL2, and IP-10 is CXCL10. By and large the authors and editors dealt with this nomenclature transition effectively by using tables, both terms, and the preferred new systematic name after defining the common acronym.

I found the chapter on lung allograft rejection (by Belperio, Keane, Ross, and Strieter) to exemplify the high quality of the reviews. The authors draw on an extensive literature on skin rejection, cardiac allograft rejection, and renal allograft rejection, and they integrate diverse investigations into a comprehensive overview and relate the findings to acute lung allograft rejection and bronchiolitis obliterans syndrome. Much of the lung allograft data are from human stud-

ies, and translational studies in animal models are original work of the chapter authors. Presented in the broader context of transplantation biology, the importance of the experiments is highlighted and points strongly toward the potential for targeting chemokines and their receptors for therapies.

As stated by the series editor, Dr Lenfant, in his introduction, the volume as a whole, "takes the reader to the forefront of the field of chemokines. . . and opens the door on new research questions and ideas." Accordingly, the reader will probably have an appreciation of chemokines as natural targets for interventions in lung disease.

In summary, **Chemokines in the Lung** continues the excellence in the Lung Biology in Health and Disease series. It will serve as a valuable introduction to chemokines as well as an authoritative reference to the role of chemokines in lung disease.

Joan G Clark MD
Division of Pulmonary and
Critical Care Medicine
Fred Hutchinson Cancer Research Center
University of Washington
Seattle, Washington

Gene Therapy in Lung Disease. Steven M Albelda, editor. (Lung Biology in Health and Disease series, Volume 169, Claude Lenfant, executive editor). New York: Marcel Dekker. 2002. Hard cover, illustrated, 555 pages, $185.

The National Heart, Lung and Blood Institute at the National Institutes of Health publishes a series entitled Lung Biology in Health and Disease, under the guidance of the institute's director, Dr Claude Lenfant. For each volume Dr Lenfant selects a specific topic and an editor, who solicits contributions from leaders in the field and combines the contributions to make the final product. The goal is to produce a focused review on the most recent research, a thorough and balanced discussion of newer concepts and controversies, and future directions for research. Thus, these monographs are primarily intended for basic scientists and clinical researchers, as updates on the state of research in their field, and for researchers in training as reference tools.

Volume 169 in this series, **Gene Therapy in Lung Disease**, is edited by Steven Albelda. The book begins with an excellent historical overview that gives some fascinating details on early events in gene therapy and important information on public policies about gene therapy clinical trials with humans. However, there is disappointingly little discussion on the events that led up to what many would consider the biggest setback to date—the death of a 19-year-old man in a trial of gene transfer of an adenoviral vector delivered into the liver, intended as therapy for ornithine transcarbamylase deficiency. That death put all human gene therapy trials on hold in the United States and precipitated intense public and government scrutiny of how these trials are conducted. Wivel, the author of the chapter on that subject, describes the important regulatory changes that followed the man's death, but given Wivel's experience in the field, I wished for some discussion on why that tragic event occurred and on what more we scientists can do to protect our research subjects from harm.

The next 4 chapters give extensive details on the major vector systems under development for gene therapy of the lung. The quality of these 4 chapters differs tremendously. For example, Duan, Yue, and Engelhardt's chapter on adeno-associated virus vectors is outstanding: there is an incredible amount of detail and elegant discussion on the problems and limitations of adeno-associated virus vectors, and possible solutions. The chapter gives a balanced view of the advantages and disadvantages of that vector.

In contrast, the chapter on cationic liposome/plasmid deoxyribonucleic complexes as a gene delivery vehicle is far from balanced. For example, much of the data on the liposome component of the complex is devoted to studies that used GL67, a lipid developed by the pharmaceutical company Genzyme. Another example of lack of balance is that the author used as evidence for efficacy of aerosol plasmid/liposome complexes a publication that deals primarily with the pro-inflammatory effect of the Genzyme GL67 lipid in humans. In that study 4 of the 8 cystic fibrosis patients who received an aerosol of a cystic fibrosis transmembrane conductance regulator-encoding plasmid complexed with GL-67 had a "pronounced clinical syndrome of fever (maximum of 39.6°C), myalgia, and arthralgia" (reference 57, Chapter 4). However, Scheule references this publication as a human study that "demonstrated that vector-specific transgene expression" had occurred and therefore supports the claim of potential efficacy of the GL67 lipid.

This lack of balance is somewhat disturbing, and it may be partially explained by the fact that the chapter author is the scientific director of gene transfer research at Genzyme. There is no disclaimer that the author is a paid employee of the company and therefore has a potential for conflict of interest. It is now standard practice for peer-reviewed medical articles and reports from research seminars to state at the very beginning any relationship (including financial) the scientist has with an industry sponsor, to warn the audience of a potential bias, and such disclaimers should have been included.

I wondered how many of the other chapter authors are paid consultants to pharmaceutical companies and have a financial interest in developing certain vectors and genes treatments for lung disease. Another question is how many of the authors have themselves founded companies based on their discoveries and thus have potential for financial gain if their technology becomes the "most favored?" At this point I must give my disclaimer: I am a liposome researcher and I founded a biotechnology company, the main focus of which is the development of plasmid liposome complexes for genetic therapy to the lungs. And so how balanced will my review of this volume be? That is not a question I can answer, but the reader should at least know my bias and judge accordingly.

Developing a gene therapy requires enormous amounts of money, which, currently, only industry is willing to invest. The collaboration of industry and academia can achieve that balance of translational research (ie, the academician's goal of conducting hypothesis-driven research that has a direct pathway to clinical applications) and drug development (ie, industry's goal of bringing to market an effective and safe therapeutic agent that grabs the market share for a particular disease/indication) that will improve the quality of life for our patients. We just need to be honest about our scientific and fiscal biases.

The next section of the book focuses on using gene transfer as a tool to study lung disease pathogenesis. I was excited at the prospect of reading these chapters, because I envisioned that they would contain much information that was new to me, as this area has not gotten much attention in the gene therapy literature until rather recently. I was not disappointed.