

broad series of topics ranging from communication issues with patients to helping physicians deal with psychological and ethical issues. Although it is aimed at health care providers who care for patients facing serious illnesses, it is a relevant resource for anyone who wants to learn more about palliative care. Overall, *Care at the Close of Life* is a very informative and a must-read for those who are caring for patients with life-limiting illnesses. Not only does it give health care providers an understanding of what needs to be addressed clinically, but perhaps more importantly, it allows for providers to give insight into the experience, intuition, and compassion necessary to care for patients — qualities that often take years to develop.

Michelle Mo
Department of Pharmacology
Yale University

Translational Medicine and Drug Discovery. Edited by Bruce Littman and Rajesh Krishna. New York: Cambridge University Press; 2011. 361 pp. US \$120.00, Hardcover. ISBN: 978-0521886451.

Both biotechnology and pharmaceutical companies work to generate products that will improve the quality of human life. In recent years, the development of therapeutics has evolved considerably. *Translational Medicine and Drug Discovery* explains the advances in drug development and discusses the flaws in the current methodology as well as how those flaws might be addressed.

The book begins with a brief discussion of the history of translational medicine and notes that the concept has prompted the formation of teams within pharmaceutical companies that follow drugs from early development through human trials. Subsequent chapters describe pharmaceutical advances in diabetes, atherosclerosis, obesity, bone disorders, neuroscience, and cancer. Although topics such as drug targets, modeling systems,

and imaging techniques are discussed, the primary focus of the book is the development and use of biomarkers. The work concludes with an overview of coalitions recently formed to improve health care such as the Innovative Medicines Initiative, the Critical Path Institute, and the Biomarkers Consortium.

Many of the authors and the editors of *Translational Medicine and Drug Discovery* come from a pharmaceutical or biotechnological background, which somewhat narrows the scope of the book; very little of the material is derived from academic or government institutions. These authors offer valuable insight into industry, yet they also repeatedly touch on an interesting concept: the need to generate profits. Therapeutics and biomarkers are discussed in terms of risks and profits, and special attention is paid to minimizing failed investments. Interestingly, the book also offers several examples of how economic concerns have led to suboptimal research, which has in turn impaired the evaluation of novel therapeutics. Such examples underline the difficulty of improving patient care while addressing necessary monetary concerns. Although there are no obvious solutions, the final chapter of the book discusses several possible ways of balancing economics and therapeutics, such as facilitating company collaborations and generating new testing paradigms that will weed out false leads at an early stage of development.

While it is not an overly technical or exhaustive work, *Translational Medicine and Drug Discovery* is certainly not for the casual reader. It does, however, act as a useful overview of the principles behind industrial therapeutic development and will be of use to those with a scientific or medical background. Further, those who are interested in learning about the historical and ongoing development of biomarkers will certainly benefit from reading this book.

Kathryn Tworowski
Yale University