



Book Review

La Thangue NB, Bandara LR. *Targets for Cancer Chemotherapy: Transcription Factors and Other Nuclear Proteins*. Totowa, NJ: Humana Press, Inc; 2002. 352 pages. Casebound, \$165.00 US.

The preface of this book reminds us of the edict “chance favors the prepared mind.” As pointed out by the editors, this is nowhere better illustrated than in the realm of drug discovery. This book provides 16 short reviews on various nuclear oncogenes and tumor suppressor proteins that are clearly theoretical targets in cancer chemotherapy. Although the book is not necessarily comprehensive (some important nuclear proteins and transcription factors are not included), it does provide a thorough sampling of molecular targets that are at the forefront of cancer molecular biology. The audience for this text would include upper level graduate students, postdoctoral researchers, and investigators actively working in the areas of molecular oncology or drug discovery. This book also would be recommended to those who lecture on the topic of transcription factors in cancer.

The strengths of the book include strong contributing authors and a focus on mechanisms. Two chapters (one by Kaelin and another by Banerjee and Bertino) on the E2F/Rb pathway are particularly strong. In each case, the authors provide a strong molecular background and then proceed to describe not only what has been accomplished, but also what might be done to target these important molecules pharmacologically. The chapters on histone deacetylase (Jung) and cyclin-dependent kinase inhibitors (Rao and Patel) are timely and provide important reviews of the known compounds and future possibilities.

The book’s weaknesses center on chapters that do not live up to the purpose of the book. For examples, the chapters on Myc (Berwanger and Eilers) and AP-1 (Schorpp-Kistner, Herrlich, and Angel) are simply up-to-date reviews of the molecular biology of these transcription factors, and little is said about how either has been (or may be) targeted pharmacologically. Given the abundance of general reviews on the topics on Myc and AP-1, chapters describing actual drug discovery efforts might have added more to the book than these reviews offer.

Most of the reviews in the book fall between these two extremes. In general, all chapters provide good mechanistic reviews of the topic at hand and make some significant attempt to discuss how these molecules might be targeted. For example, the chapter on the hypoxia-induced factor-1 (HIF-1) by Bhattacharya considers in depth the pros and cons of targeting HIF-1, but it could have gone deeper into how HIF-1 might be targeted pharmacologically. Likewise, the chapter on β -catenin (Chung, Bonvini, Oh, Neckers, and Trepel) presents an in-depth discussion on how β -catenin signaling is targeted indirectly but does not discuss how the molecule itself might be targeted pharmacologically.

Transcription factors and other nuclear proteins represent a vast and untapped well of targets for cancer chemotherapy. This book makes a good attempt at presenting the “state of the art” as to how well we are doing at targeting these molecules. Though several chapters fall short of this mark, these shortcomings may represent a challenge to workers in these areas to catch up in their attempts to target these molecules that play such a key role in tumorigenesis.

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