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Book Review

Nucleic Acid Targeted Drug Design
Edited by C. L. Propst and Thomas J. Perun
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This book has been produced as the companion volume to Computer Aided Drug Design, published in 1989, which covered the topic of proteins (i.e. enzymes and receptors) as targets for drug action. This work has now been extended to include the nucleic acids as drug targets, and retains the successful format of the first volume. The book is split into two sections, the first six chapters summarize the 'tools of the trade' of drug/nucleic acid interactions and present good mini-reviews of techniques such as X-ray crystallography, NMR spectroscopy, computer graphics and computational chemistry, as well as more biological techniques such as footprinting and the use of sequencing gels. The remainder of the book is devoted to specific applications and examples of small molecule/nucleic acid interactions, with particular emphasis on the sequence specificity of drugs binding to DNA. The book concludes with a discussion of oligonucleotides as antisense and antigene agents.

My criticisms of the book are small. The flavour is very American with only one contributor out of 29 not based in the US and, somewhat paradoxically, protein targets for drug action such as topoisomerase I and II (DNA gyrase) are included in the book although they are not nucleic acids. These points aside, this is an excellent and up to date review of a rapidly expanding field.

The great strength of the book is that it draws together in one volume many of the techniques previously the preserve of subject specialists in individual disciplines and, as such, will rapidly become an essential text for scientists involved in medicinal and biological chemistry as well as molecular pharmacology and oncology. The price tag of $165 is hefty, but with over 600 pages, this book is worth a place in any University or departmental library.

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