

CONTENTS

Preface	v
Contributors	ix
Part I. Introduction and Perspective	
1 Antisense Methodology: <i>An Assessment After 25 Years</i>	3
<i>Fritz Eckstein</i>	
2 Nucleic Acid Therapeutics: <i>An Introduction</i>	15
<i>Alan M. Gewirtz</i>	
Part II. Basic Methodology	
3 Targeted Genome Modification Via Triple Helix Formation	27
<i>Faye A. Rogers and Peter M. Glazer</i>	
4 Therapeutic Applications of Ribozymes	45
<i>John J. Rossi</i>	
5 Use of Catalytic DNA in Target Validation and Therapeutics	65
<i>Lun-Quan Sun</i>	
6 Targeted Destruction of Small, Stable RNAs:	
<i>Principles Applicable to Antisense Therapies</i>	81
<i>David A. Dunbar and Susan J. Baserga</i>	
7 Mechanism of Action of Antisense RNA in Eukaryotic Cells	89
<i>Zuo Zhang and Gordon G. Carmichael</i>	
Part III. Delivery	
8 The Transport of Oligonucleotides Into Cells	107
<i>R. L. Juliano</i>	
9 Peptide-Mediated Delivery of Antisense Oligonucleotides	
and Related Material	115
<i>Eric Vivès, Jean Philippe Richard, and Bernard Lebleu</i>	
10 Molecular Vectors for Gene Delivery to Cancer Cells	129
<i>Guy Zuber, Jean-Serge Remy, Patrick Erbacher,</i>	
<i>Pascale Belguise, and Jean-Paul Behr</i>	
Part IV. Targeting	
11 Considerations on the Design of Antisense Oligonucleotides	143
<i>Rosel Kretschmer-Kazemi Far, Jens M. Warnecke,</i>	
<i>and Georg Sczakiel</i>	

12	Identification of Hybridization Accessible Sequence in Messenger RNA	155
	<i>Lida K. Gifford, Ponzy Lu, and Alan M. Gewirtz</i>	
Part V. Clinical Targets		
13	Nucleic Acids As Gene Targeting Therapeutics	167
	<i>Joanna B. Opalinska and Susan E. Shetzline</i>	
14	LY900003 (Isis 3521) and G3139 (Genasense; Oblimersen): Phosphorothioate Antisense Oligonucleotides With Pleiotropic Mechanisms of Action	177
	<i>C. A. Stein, Nathalie Dias, Luba Benimetskaya, Jan S. Jepsen, Johnathan C. H. Lai, and Anthony J. Raffo</i>	
15	Antisense Protein Kinase A-RI α Restores Normal Signal Transduction Signatures to Inhibit Tumor Growth	199
	<i>Yoon S. Cho-Chung</i>	
	Index	213

Nucleic Acid Therapeutics in Cancer

Gewirtz, A.M. (Ed.)

2004, X, 221 p. 49 illus., 5 illus. in color., Hardcover

ISBN: 978-1-58829-258-2

A product of Humana Press